# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents</td>
<td>1</td>
</tr>
<tr>
<td>MnSCU Nondiscrimination—Equal Opportunity Statement</td>
<td>5</td>
</tr>
<tr>
<td>Important Information</td>
<td>6</td>
</tr>
<tr>
<td>Accreditation</td>
<td>6</td>
</tr>
<tr>
<td>General Phone Numbers</td>
<td>7</td>
</tr>
<tr>
<td>Instructional Services</td>
<td>8</td>
</tr>
<tr>
<td>Office of Academic Affairs</td>
<td>8</td>
</tr>
<tr>
<td>Contacting Faculty</td>
<td>8</td>
</tr>
<tr>
<td>Library</td>
<td>8</td>
</tr>
<tr>
<td>College Computer Services</td>
<td>8</td>
</tr>
<tr>
<td>Bookstore</td>
<td>8</td>
</tr>
<tr>
<td>Desire to Learn (D2L)</td>
<td>9</td>
</tr>
<tr>
<td>MCTC Academies</td>
<td>10</td>
</tr>
<tr>
<td>MCTC Academies by Award</td>
<td>11-13</td>
</tr>
<tr>
<td>The Academy of Business and Service</td>
<td></td>
</tr>
<tr>
<td>The Academy of Education and Public Services</td>
<td></td>
</tr>
<tr>
<td>The Academy of Nursing, Counseling and Allied Healthcare</td>
<td></td>
</tr>
<tr>
<td>The Academy of Media and Technology</td>
<td></td>
</tr>
<tr>
<td>The Academy of Manufacturing and Building Sciences</td>
<td></td>
</tr>
<tr>
<td>The Academy of Liberal Arts and Transfer</td>
<td></td>
</tr>
<tr>
<td>The Academy of Science and Mathematics</td>
<td></td>
</tr>
<tr>
<td>Registering for Classes</td>
<td>14</td>
</tr>
<tr>
<td>Registration Process</td>
<td>14</td>
</tr>
<tr>
<td>New Students</td>
<td>14</td>
</tr>
<tr>
<td>Continuing and Returning Students</td>
<td>14</td>
</tr>
<tr>
<td>Adding and Dropping Classes</td>
<td>14</td>
</tr>
<tr>
<td>Credit Load Limitations</td>
<td>14</td>
</tr>
<tr>
<td>Multiple Sections Prohibited</td>
<td>15</td>
</tr>
<tr>
<td>Course Cancellations</td>
<td>15</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>15</td>
</tr>
<tr>
<td>Taking a Class Pass/Fail</td>
<td>16</td>
</tr>
<tr>
<td>Auditing a Class</td>
<td>16</td>
</tr>
<tr>
<td>Repeating a Course</td>
<td>16</td>
</tr>
<tr>
<td>Withdrawing from a Class</td>
<td>16</td>
</tr>
<tr>
<td>Deadlines for Withdrawing</td>
<td>16</td>
</tr>
<tr>
<td>Procedure for Withdrawing</td>
<td>17</td>
</tr>
<tr>
<td>Attendance</td>
<td>17</td>
</tr>
<tr>
<td>Taking Classes</td>
<td>17</td>
</tr>
<tr>
<td>Academic Credits</td>
<td>17</td>
</tr>
<tr>
<td>Course Options</td>
<td>17</td>
</tr>
<tr>
<td>Online Courses</td>
<td>18</td>
</tr>
<tr>
<td>Directed Study</td>
<td>18</td>
</tr>
<tr>
<td>Credit by Exam</td>
<td>18</td>
</tr>
<tr>
<td>Internships, Practicums and Clinicals</td>
<td>18</td>
</tr>
<tr>
<td>Service Learning and Project SHINE</td>
<td>18</td>
</tr>
<tr>
<td>Continuing Education and Customized Training</td>
<td>19</td>
</tr>
<tr>
<td>Evaluating Academic Performance</td>
<td>19</td>
</tr>
<tr>
<td>Class Syllabus</td>
<td>19</td>
</tr>
<tr>
<td>Grading System</td>
<td>19</td>
</tr>
<tr>
<td>Incomplete Grades</td>
<td>20</td>
</tr>
<tr>
<td>Cancellation of a Class Session</td>
<td>20</td>
</tr>
<tr>
<td>Earning an Award</td>
<td>20</td>
</tr>
<tr>
<td>MCTC Awards</td>
<td>20</td>
</tr>
<tr>
<td>Associate in Arts Degree</td>
<td>21</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis</td>
<td>21</td>
</tr>
<tr>
<td>Online Associate in Arts Degree</td>
<td>22</td>
</tr>
<tr>
<td>Associate in Fine Arts Degree</td>
<td>22</td>
</tr>
<tr>
<td>Associate in Science Degree</td>
<td>22</td>
</tr>
<tr>
<td>Associate in Applied Science Degree</td>
<td>23</td>
</tr>
<tr>
<td>Diploma</td>
<td>23</td>
</tr>
<tr>
<td>Certificate</td>
<td>23</td>
</tr>
<tr>
<td>General Education</td>
<td>23</td>
</tr>
<tr>
<td>Minnesota General Education Transfer</td>
<td>24</td>
</tr>
<tr>
<td>Curriculum Competencies</td>
<td></td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>38</td>
</tr>
<tr>
<td>Credit-Earning Options</td>
<td>38</td>
</tr>
<tr>
<td>Graduation Application</td>
<td>39</td>
</tr>
<tr>
<td>Credits Earned at MCTC</td>
<td>39</td>
</tr>
<tr>
<td>Catalog Requirements</td>
<td>39</td>
</tr>
<tr>
<td>Articulation Agreements</td>
<td>40</td>
</tr>
<tr>
<td>Programs and Credentials</td>
<td>44</td>
</tr>
<tr>
<td>Associate in Arts Degree</td>
<td>44</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis</td>
<td>45</td>
</tr>
<tr>
<td>African Diaspora Studies</td>
<td></td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in African Diaspora Studies</td>
<td>45</td>
</tr>
<tr>
<td>American Indian Studies</td>
<td>47</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in American Indian Studies</td>
<td></td>
</tr>
<tr>
<td>Communication Studies</td>
<td>49</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Communication Studies</td>
<td></td>
</tr>
<tr>
<td>Creative Writing</td>
<td>51</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Creative Writing</td>
<td></td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Education</td>
<td>53</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Global Studies</td>
<td>55</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Philosophy</td>
<td>57</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Psychology</td>
<td>59</td>
</tr>
<tr>
<td>Accounting</td>
<td>62</td>
</tr>
<tr>
<td>Addiction Counseling</td>
<td>68</td>
</tr>
<tr>
<td>Air Traffic Control</td>
<td>73</td>
</tr>
<tr>
<td>American Indian Studies</td>
<td>76</td>
</tr>
<tr>
<td>Apparel Technologies</td>
<td>78</td>
</tr>
<tr>
<td>Architectural Technology</td>
<td>81</td>
</tr>
<tr>
<td>Barbering</td>
<td>84</td>
</tr>
<tr>
<td>Biology</td>
<td>86</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>91</td>
</tr>
<tr>
<td>Business Management</td>
<td>94</td>
</tr>
<tr>
<td>Business Office Administration</td>
<td>101</td>
</tr>
<tr>
<td>Central Services Technician</td>
<td>105</td>
</tr>
<tr>
<td>Chemistry</td>
<td>107</td>
</tr>
<tr>
<td>Cinema: Cinema Production</td>
<td>111</td>
</tr>
<tr>
<td>Cinema: Cinema Studies</td>
<td>114</td>
</tr>
</tbody>
</table>
Programs and Credentials continued

Cinema: Visual Effects ........................................... 117
Cinema: Cinematography ...................................... 121
Cinema: Digital Animation ...................................... 125
Cinema: Directing ................................................. 129
Cinema: Editing and Post-Production .................... 133
Cinema: Producing ............................................... 137
Cinema: Screenwriting ......................................... 141
Cinema: Sound for Cinema .................................... 145
Communication Studies Certificate ....................... 149
Community Development ................................... 150
Community Health Worker .................................. 154
Computer Forensics ............................................. 156
Computer Science ............................................... 159
Computer Software Development ....................... 160
Computer Support & Network Administration ....... 172
Criminal Justice .................................................... 188
Culinary Arts ......................................................... 191
Dental Assistant .................................................... 199
Early Childhood Education .................................. 206
Education ............................................................. 213
Electrical Construction and Technology ............... 220
Electroneurodiagnostic Technology ..................... 223
Global Studies ..................................................... 227
Graphic Design: Print Media .................................. 229
Graphic Design: Web and Interactive Media .......... 234
Healthcare Core Curriculum ................................ 239
Heating, Ventilation, Air Conditioning and Refrigeration 241
Herbal Studies ....................................................... 246
Human Services .................................................... 248
Law Enforcement .................................................. 253
Legal Administrative Assistant ............................. 257
Library Information Technology ......................... 259
Machine Tool Technology ...................................... 264
Mathematics ......................................................... 267
Medical Office ....................................................... 271
Professional Nursing ............................................ 275
Nursing Assistant/Home Health Aide .................... 280
Personal Trainer and Group Exercise Instruction ..... 284
Phlebotomy .......................................................... 285
Photography and Digital Imaging ......................... 287
Polysomnographic (Sleep) Technology .................. 294
Restaurant Management ....................................... 297
Sound Arts ............................................................ 301
Theater Arts ......................................................... 304
Visual Arts ........................................................... 307
Welding and Metal Fabrication ............................. 310
Women’s Studies .................................................. 315
Yoga and Teacher Training ................................... 317

Course Descriptions ............................................. 318

Accounting .......................................................... 318
Addiction Counseling .......................................... 319
Air Traffic Control ............................................... 321
American Indian Studies ...................................... 323
American Sign Language ...................................... 323
American Studies ............................................... 324
Anthropology ....................................................... 325
Apparel Technologies .......................................... 326
Arabic ................................................................. 328
Architectural Technology ...................................... 329
Art ...................................................................... 331
Astronomy ............................................................ 334
Barbering ............................................................. 334
Biology ................................................................. 336
Biotechnology ...................................................... 339
Business Management ......................................... 341
Business Office Technology .................................. 344
Central Services Technician ................................ 348
Chemistry .............................................................. 349
Chinese ............................................................... 353
Cinema Production .............................................. 353
Cinema Studies .................................................... 354
Cinematography ................................................. 355
Cinema: Digital Animation .................................. 355
Cinema: Directing ............................................... 356
Cinema: Editing and Post-Production ................. 357
Cinema: Producing .............................................. 357
Cinema: Screenwriting ....................................... 358
Cinema: Sound for Cinema .................................. 359
Cinema: Visual Effects ........................................ 360
Communication Studies ....................................... 360
Community Health Worker ................................ 362
Computer Literacy ............................................... 363
Computer Science ............................................... 364
Culinary Arts ......................................................... 365
Dakota ................................................................. 367
Dental Assistant .................................................... 368
Early Childhood Education .................................. 371
Economics ........................................................... 375
Education ............................................................. 376
Electrical Construction and Technology .............. 379
Electroneurodiagnostic Technology .................... 382
Accelerated College English ................................ 384
English ................................................................. 384
English as a Second Language ............................. 388
First Year Experience Student Transitions .......... 390
French ................................................................. 391
Geography ........................................................... 392
<table>
<thead>
<tr>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology</td>
<td>393</td>
</tr>
<tr>
<td>Global Studies</td>
<td>394</td>
</tr>
<tr>
<td>Global Health and Healing Arts</td>
<td>395</td>
</tr>
<tr>
<td>Graphic Design: Print Media</td>
<td>396</td>
</tr>
<tr>
<td>Graphic Design: Web and Interactive Media</td>
<td>399</td>
</tr>
<tr>
<td>Health</td>
<td>401</td>
</tr>
<tr>
<td>Healthcare Core Curriculum</td>
<td>403</td>
</tr>
<tr>
<td>Heating, Ventilation, Air Conditioning and Refrigeration</td>
<td>405</td>
</tr>
<tr>
<td>Herbal Studies</td>
<td>408</td>
</tr>
<tr>
<td>History</td>
<td>409</td>
</tr>
<tr>
<td>Homeland Security</td>
<td>412</td>
</tr>
<tr>
<td>Human Services</td>
<td>414</td>
</tr>
<tr>
<td>Information Studies</td>
<td>416</td>
</tr>
<tr>
<td>Information Technology</td>
<td>417</td>
</tr>
<tr>
<td>Japanese</td>
<td>427</td>
</tr>
<tr>
<td>Journalism</td>
<td>427</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>427</td>
</tr>
<tr>
<td>Library Information Technology</td>
<td>428</td>
</tr>
<tr>
<td>Machine Tool Technology</td>
<td>430</td>
</tr>
<tr>
<td>Mathematics</td>
<td>432</td>
</tr>
<tr>
<td>Music</td>
<td>437</td>
</tr>
<tr>
<td>Music Lessons and Ensembles</td>
<td>438</td>
</tr>
<tr>
<td>Nursing</td>
<td>439</td>
</tr>
<tr>
<td>Professional Nursing</td>
<td>443</td>
</tr>
<tr>
<td>Nursing Assistant/Home Health Aide</td>
<td>443</td>
</tr>
<tr>
<td>Ojibwe</td>
<td>444</td>
</tr>
<tr>
<td>Philosophy</td>
<td>445</td>
</tr>
<tr>
<td>Phlebotomy</td>
<td>447</td>
</tr>
<tr>
<td>Photography</td>
<td>447</td>
</tr>
<tr>
<td>Photography and Digital Imaging</td>
<td>448</td>
</tr>
<tr>
<td>Physical Education</td>
<td>452</td>
</tr>
<tr>
<td>Physics</td>
<td>456</td>
</tr>
<tr>
<td>Political Science</td>
<td>457</td>
</tr>
<tr>
<td>Polysomnographic (Sleep) Technology</td>
<td>460</td>
</tr>
<tr>
<td>Psychology</td>
<td>462</td>
</tr>
<tr>
<td>Reading</td>
<td>464</td>
</tr>
<tr>
<td>Restaurant Management</td>
<td>465</td>
</tr>
<tr>
<td>Sociology</td>
<td>465</td>
</tr>
<tr>
<td>Sound Arts</td>
<td>467</td>
</tr>
<tr>
<td>Spanish</td>
<td>468</td>
</tr>
<tr>
<td>Study Skills</td>
<td>470</td>
</tr>
<tr>
<td>Theater Arts</td>
<td>470</td>
</tr>
<tr>
<td>Welding and Metal Fabrication</td>
<td>475</td>
</tr>
<tr>
<td>Women's Studies</td>
<td>477</td>
</tr>
</tbody>
</table>

**Cover photography:**

—Nik Linde

MCTC Student
This catalog is for informational purposes only and does not constitute a contract. The College makes every effort to ensure that this catalog contains complete and accurate information at the time of printing. However, circumstances may arise that require the College to change existing policies, rules or program information prior to the printing of the next catalog. The College reserves the right to change, modify or alter information in this catalog.

**MnSCU Nondiscrimination—Equal Opportunity Statement**

Minneapolis Community and Technical College and the Minnesota State Colleges and Universities are committed to a policy of nondiscrimination in employment and educational opportunities. No person shall be discriminated against in terms and conditions of employment, personnel practices, or access to and participation in programs, services, and activities with regard to race, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, or sexual orientation. In addition, discrimination in employment based on membership or activity in a local commission as defined by law is prohibited.

This policy is directed at verbal or physical conduct that constitutes discrimination/harassment under state and federal law and is not directed at the content of speech. In cases in which verbal statements and other forms of expression are involved, Minneapolis Community and Technical College and Minnesota State Colleges and Universities will give due consideration to an individual’s constitutionally protected rights to free speech and academic freedom. However, discrimination and harassment are not within the protections of academic freedom or free speech.

Harassment of an individual or group on the basis of race, sex, color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance, sexual orientation, or membership or activity in a local commission has no place in a learning or working environment and is prohibited. Sexual violence has no place in a learning or work environment. Further, the College shall work to eliminate violence in all its forms. Physical contact by designated system, college and university staff members may be appropriate if necessary to avoid physical harm to persons or property.

Lack of English skills will not be a barrier to admission or participation. In order to eliminate barriers, the College takes appropriate measures to assess each student’s ability to participate and benefit through placement testing and counseling. Based on the assessment and counseling, students are then provided with campus services or a referral to community services to be better prepared for successful participation.

If you need assistance to access college programs, services or activities, please contact:

Courses in this program require achievement of the following program admission requirements:

- Disability Services Office, suite, T.2400, phone: 612-659-6730 or
- Betty Benson, interim director of Disability Services
  Phone: 612-659-6733

For more information concerning the provisions and rights provided there under of the Americans with Disabilities Act, Title VI of the Civil Rights act of 1964, Title IX of the 1972 Education Amendments, and/or Section 504 of the 1973 Rehabilitation Act, please contact the Coordinator:

- Dianna Cusick, director of Legal Affairs
  Suite: K.3000
  Phone: 612-659-6319

This document is available in alternative formats to individuals with disabilities by calling Disability Services at 612-659-6730 or Minnesota Relay Service at 711 or 1-800-627-3529 or emailing disability.services@minneapolis.edu.
Important Information

Accreditation
Minneapolis Community and Technical College (MCTC) is accredited by The Higher Learning Commission and is a member of the North Central Association (30 N. LaSalle St., Suite 2400; Chicago, IL 60602-2504; 312-263-0456; www.ncahigherlearningcommission.org).

MCTC is also approved by the U.S. Office of Education for participation in federal programs, by the U.S. Department of Immigration for international students, and by the Minnesota State Approving Agency for Veterans’ Educational Benefits. The Nursing program is approved by the Minnesota Board of Nursing and accredited by the National League for Nursing Accrediting Commission. The Law Enforcement program is accredited by the Minnesota Board of Peace Officer Standards and Training. The Dental Assistant program is accredited by the Commission on Dental Accreditation of the American Dental Association. The Electroneurodiagnostic Technology and Polysomnographic Technology programs are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The Phlebotomy program is approved by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Security and Compliance Reports
State and federal governments require that colleges inform prospective students of various policies and security information. If you wish to receive information about these reports, including the campus security report, crime statistics, procedures for reporting crime and emergencies, campus public safety efforts and programs, drug- and alcohol-free schools policy, equity in athletics disclosure information, the discrimination/harassment reporting process, the student code of conduct, notification of student rights under Family Educational Rights and Privacy Act (FERPA), voter registration information, MCTC graduation rates as reported in the Student Right to Know, and the Withdrawing from Classes and Refund Policies, please visit our website at www.minneapolis.edu. Select any heading under “MCTC Main Menu,” then select “Compliance and Security Reports.” If you do not have access to the Web, you may request a printed copy of these reports by contacting the Public Safety Office at Minneapolis Community and Technical College, 1501 Hennepin Ave., Minneapolis, MN 55403 or by calling 612-659-6910.

Disability Services
If you need assistance to access college programs, services or activities, contact Disability Services at 612-659-6730 (voice).

Equal Opportunity Statement
MCTC will not discriminate against any person because of race, color, creed, religion, national origin, gender, disability, age, marital status, sexual orientation or status with regard to public assistance.

MCTC is an equal opportunity educator and employer, and a member of the Minnesota State Colleges and Universities (MnSCU) system.

Information in this catalog can be made available in alternate format on request by calling 612-659-6730 (voice) or by calling that number through Minnesota Relay Services at 711 or 1-800-627-3529.
General Phone Numbers

General Information ................................................................. 612-659-6000
Toll Free .................................................................................. 1-800-247-0911
Academic Affairs ................................................................ 612-659-6100
Admissions ........................................................................... 612-659-6200
Aviation Center ...................................................................... 952-826-2400
Bookstore ............................................................................... 612-659-6850
Business Services .................................................................. 612-659-6880
City College News ................................................................. 612-659-6796
Computer Lab .......................................................................... 612-659-6000 x4604
Continuing Education and Training ...................................... 612-659-6500
Counseling and Advising ...................................................... 612-659-6700
Disability Services (voice) .................................................... 612-659-6730
MN Relay Services ............................................................... 800-627-3529
Educational Opportunity Center ......................................... 612-659-6543
Financial Aid ........................................................................... 612-659-6240
High School Upward Bound ............................................... 612-659-6555
Human Resources ................................................................... 612-659-6840
Law Enforcement and
  Criminal Justice Center ..................................................... 763-657-3700
Learning Center ................................................................... 612-659-6140
Legal Affairs ........................................................................... 612-659-6319
Library ................................................................................... 612-659-6290
Multicultural Student Services ........................................... 612-659-6700
Students Rights and Responsibilities ................................ 612-659-6709
President’s Office (voice) .................................................... 612-659-6300
Public Safety .......................................................................... 612-659-6910
Public Safety: Emergency Only .......................................... 612-659-6900
Registrar ............................................................................... 612-659-6250
Service Learning .................................................................... 612-659-6114
Starting Point ......................................................................... 612-659-6565
Student Life ............................................................................ 612-659-6761
Student Senate ....................................................................... 612-659-6799
Talent Search .......................................................................... 612-659-6568
Testing Center ......................................................................... 612-659-6262
Veterans Upward Bound ..................................................... 612-659-6580
Veterans Upward Bound-Certifying Official ...................... 612-659-6579
### Instructional Services

#### Office of Academic Affairs

The Office of Academic Affairs consists of the offices of the departmental deans, judicial affairs and support staff. This office addresses student concerns related to instructional services. The approval of the departmental dean is required:

- To add or withdraw from a course after the deadline;
- For a waiver of requirement;
- For directed study proposals; and/or
- To take a credit by examination.

The Office of Academic Affairs can be reached at 612-659-6100 and is open Monday–Thursday, 8:00 a.m.–6:00 p.m. and Friday, 8:00 a.m.–4:30 p.m.

#### Contacting Faculty

Each instructor at the College has an assigned office, phone number and email address. Every instructor’s office hours are published in the course syllabus and posted on the respective instructor’s office door. It is recommended, however, that students discuss with the instructor their preferred method of contact. Information on the location of faculty offices, phone numbers and email accounts is available in the online directory, at the Student Services Center or the Office of Academic Affairs.

#### Library

The MCTC Library is open Monday–Saturday during the regular academic year. A reference librarian is available to assist students during normal library hours. A valid Student ID is required to check out materials from the library and to use reserve materials for courses. The library provides access to a multilibrary online database, numerous full-text periodical databases and the Internet. Library databases are also available to search from off campus via the library’s proxy server. The library collection includes books, reference materials, periodicals, newspapers, videotapes, DVDs and magazines. Items not found in the MCTC Library can be requested from other libraries in the state through interlibrary loan. Course reserve materials are available for use at the circulation desk.

#### College Computer Services

Currently enrolled students may use the computers in any of the College’s Open Computer labs for college coursework. PC-based Open Computer Labs are located in T.3200 and L.1300. The labs are open throughout the term, including day, evening and Saturday hours. Official lab hours are posted online at www.minneapolis.edu/support/computerlabs.cfm.

#### Bookstore

The MCTC Bookstore is located on the T-building plaza (T.1800). Bookstore hours are 8:00 a.m.–6:00 p.m. Monday–Thursday and 8:00 a.m.–4:30 p.m. on Friday. MCTC’s Bookstore provides a variety of products and services to our students, faculty and staff, including: Textbooks, General books, Apparel, Computer products, Supplies. Visit www.mctcbookstore.com to view and purchase books and more.

#### MCTC eStore

Students are encouraged to avoid lines by purchasing textbooks and supplies online at www.mctcbookstore.com. When purchasing textbooks, students should have their registrations form listing courses, course numbers and course sections. For questions pertaining to online orders or to pick up your processed order, visit the Bookstore e-Commerce department in T.2020.

#### MCTC cStore

The MCTC cStore is located on the first floor of the Helland Student Center. The cStore carries a variety of snacks and beverages, as well as school supplies, and is home to the MCTC Campus Card Operations.
Desire to Learn (D2L)

D2L lets instructors enhance their courses using the Web by the creation and distribution of course elements online. It provides a variety of online options, including uploading assignments, taking quizzes and listening to course lectures, all through a standard Web browser.

There are several resources available to help you get started on D2L at the web links listed below:

Student D2L Resources: http://www.minneapolis.edu/D2L-Resources

For technical assistance, visit MnSCU’s D2L Help Desk at: https://d2l.custhelp.com/. MnSCU also offers a Live Chat support at: https://d2l.custhelp.com/app/chat/chat_launch every day from 7:30 a.m. to 11:30 p.m. CST. If you’re looking for an immediate answer to your question, try there first. You may also search for an answer to your question, or submit your question to the D2L support staff, and they will be in touch with you via email within 24 hours.
### MCTC Academies

<table>
<thead>
<tr>
<th>Academy Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Academy of Business and Service:</strong></td>
<td>This Academy prepares students through certificates, diplomas, and associate degrees for successful careers and further education in commerce and service industries.</td>
</tr>
<tr>
<td><strong>The Academy of Education and Public Services:</strong></td>
<td>This Academy prepares students through certificates, diplomas, and associate degrees for careers and further education in the fields of education, law enforcement, community development, library technology services, and fitness training.</td>
</tr>
<tr>
<td><strong>The Academy of Nursing, Counseling and Allied Healthcare:</strong></td>
<td>This Academy prepares students through certificates, diplomas, and associate degrees for successful careers and further education in nursing, counseling, and other healthcare-related fields.</td>
</tr>
<tr>
<td><strong>The Academy of Media and Technology:</strong></td>
<td>This academy prepares students interested in sound, cinema, photography, digital media and graphic or web design to work as part of a media or design team within small to large corporations or as independent entrepreneurs. The academy also prepares students to work in the ever-growing information technology arena, including specialties in software development, networking, information assurance and security, and mobile applications.</td>
</tr>
<tr>
<td><strong>The Academy of Manufacturing and Building Sciences:</strong></td>
<td>This Academy prepares students through certificates, diplomas, and associate degrees for successful careers and further education in the manufacturing and building sciences professions.</td>
</tr>
<tr>
<td><strong>The Academy of Liberal Arts and Transfer:</strong></td>
<td>This academy includes degree and certificate programs designed to prepare students for transfer and careers in the arts and humanities. Students may seek transfer through the Minnesota Cooperative Admissions Program (MnCAP) for the University of Minnesota, through articulation agreements MCTC has with four-year institutions, or to other public and private baccalaureate institutions.</td>
</tr>
<tr>
<td><strong>The Academy of Science and Mathematics:</strong></td>
<td>This Academy prepares students through certificates, diplomas, and associate degrees for transfer and careers in science, engineering and math. This academy also prepares students for higher learning and professions in fields such as research, mathematics and statistics, microbiology, biotechnology and physics.</td>
</tr>
</tbody>
</table>
## MCTC Academies by Award

<table>
<thead>
<tr>
<th>Academy of Business and Service:</th>
<th>Academy of Education and Public Services:</th>
<th>Academy of Nursing, Counseling and Allied Healthcare:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Technician A.A.S.</td>
<td>Early Childhood Education A.S.</td>
<td>Addiction Counseling A.S.</td>
</tr>
<tr>
<td>Accounting Clerk Certificate</td>
<td>Early Childhood Education A.A.S.</td>
<td>Addiction Counseling Diploma</td>
</tr>
<tr>
<td>Accounts Payable/Receivable</td>
<td>Early Childhood Education Diploma</td>
<td>Central Services Technician Certificate</td>
</tr>
<tr>
<td>Certificate</td>
<td>Early Childhood Education Certificate</td>
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<tr>
<td>Payroll Accounting Certificate</td>
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<tr>
<td>Business Management A.S.</td>
<td>Education A.S.</td>
<td>Community Health Worker Certificate</td>
</tr>
<tr>
<td>Banking and Finance Concentration A.S.</td>
<td>ESOL Education Certificate</td>
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</tr>
<tr>
<td>Banking and Finance Certificate</td>
<td>Special Education Certificate</td>
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<tr>
<td>Entrepreneurship Certificate</td>
<td>Community Development A.S.</td>
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</tr>
<tr>
<td>Administrative Assistant/Software Support Specialist A.A.S.</td>
<td>Air Traffic Control A.A.S.</td>
<td></td>
</tr>
<tr>
<td>Administrative Assistant/Software Support Specialist Certificate</td>
<td>Criminal Justice A.S.</td>
<td></td>
</tr>
<tr>
<td>Legal Administrative Assistant Certificate</td>
<td>Law Enforcement A.S.</td>
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<tr>
<td>Medical Office Assistant A.A.S.</td>
<td>Library Information Technology A.A.S.</td>
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<tr>
<td>Medical Office Receptionist Certificate</td>
<td>Technical Information Services Certificate</td>
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<tr>
<td>Apparel Technologies Diploma</td>
<td>Dental Assistant Diploma</td>
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<tr>
<td>Barbering Diploma</td>
<td>Dental Assistant Expanded Functions Certificate</td>
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<tr>
<td>Culinary Arts A.A.S.</td>
<td>Lucrative Training Certificate</td>
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<tr>
<td>Culinary Arts Diploma</td>
<td>Personal Trainer and Group Exercise Instruction Certificate</td>
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<tr>
<td>Culinary Arts Certificate</td>
<td>Yoga Teacher Training Certificate</td>
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<tr>
<td>Culinary Certificate in Baking</td>
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<tr>
<td>Restaurant Management A.A.S.</td>
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<tr>
<td>Restaurant Management Certificate</td>
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<tr>
<td>MCTC Academies by Award</td>
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<tr>
<td>Academy of Media and Technology 1 and 2:</td>
<td>Academy of Manufacturing and Building Sciences:</td>
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</tr>
<tr>
<td>1. Cinema Production Certificate</td>
<td>Architectural Technology Diploma</td>
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<tr>
<td>Cinema Studies Certificate</td>
<td>Electrical Construction and Technology Diploma</td>
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<tr>
<td>Cinematography A.S.</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration A.A.S.</td>
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</tr>
<tr>
<td>Digital Animation Diploma</td>
<td>Heating, Ventilation, Air Conditioning and Refrigeration Diploma</td>
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<tr>
<td>Directing A.S.</td>
<td>Machine Tool Technology Diploma</td>
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<tr>
<td>Editing and Post-Production A.S.</td>
<td>Welding and Metal Fabrication A.A.S.</td>
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<tr>
<td>Producing A.S.</td>
<td>Welding and Metal Fabrication Certificate</td>
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<tr>
<td>Screenwriting A.S.</td>
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<tr>
<td>Sound for Cinema Diploma</td>
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<tr>
<td>Visual Effects A.S.</td>
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<tr>
<td>Graphic Design Core Certificate</td>
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<tr>
<td>Graphic Design: Print Media A.A.S. and Certificate</td>
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<tr>
<td>Web and Interactive Media Core Certificate</td>
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<tr>
<td>Web and Interactive Media A.A.S. and Certificate</td>
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<tr>
<td>Photography and Digital Imaging A.A.S., Diploma and Certificate</td>
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<tr>
<td>Dynamic Media Certificate</td>
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<tr>
<td>Sound Arts A.S.</td>
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<tr>
<td>2. Software Development A.A.S. and Diploma</td>
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<tr>
<td>Java, Open Source, and Mobile Applications, Developer Certificates</td>
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<tr>
<td>Visual C# Certificate</td>
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<tr>
<td>Database Specialist and Administrator Certificates</td>
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<tr>
<td>Computer Forensics A.A.S.</td>
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<tr>
<td>Computer Support and Network Administration A.A.S. and Diploma</td>
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<tr>
<td>Information Assurance Professional Diploma</td>
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<tr>
<td>Cisco, Microsoft and Linux Network Administrator Certificates</td>
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<tr>
<td>Computer Security Specialist Certificate</td>
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<tr>
<td>Wireless Network Administrator Certificate</td>
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<tr>
<td>Macintosh Support and Network Administration Certificate</td>
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<tr>
<td>Information Technology Fundamentals Certificate</td>
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</tbody>
</table>
## MCTC Academies by Award

<table>
<thead>
<tr>
<th>Academy of Liberal Arts and Transfer:</th>
<th>Academy of Science &amp; Mathematics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate in Arts</td>
<td>Biology A.S.</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in American Indian Studies</td>
<td>Biotechnology A.S.</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in African Diaspora Studies</td>
<td>Chemistry A.S.</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Communication Studies</td>
<td>Mathematics A.S.</td>
</tr>
<tr>
<td>Associate of Arts with an Emphasis in Creative Writing</td>
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<tr>
<td>Associate of Arts with an Emphasis in Education</td>
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<tr>
<td>Associate of Arts with an Emphasis in Global Studies</td>
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<tr>
<td>Associate of Arts with an Emphasis in Philosophy</td>
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<tr>
<td>Associate of Arts with an Emphasis in Psychology</td>
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<tr>
<td>American Indian Studies Certificate</td>
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<tr>
<td>Communication Studies Certificate</td>
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</tr>
<tr>
<td>Theater Arts A.F.A.</td>
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<tr>
<td>Visual Arts A.F.A.</td>
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<tr>
<td>Women’s Studies Certificate</td>
<td></td>
</tr>
</tbody>
</table>
Registering for Classes

Registration Process

Students register online through their e-services account. Computer terminals are available in the student computer labs and in Student Services Center (T.2200). The procedure and dates for class registrations vary depending upon the number of accumulated credits and whether a student is seeking an award. Refer to the college website www.minneapolis.edu for specific registration dates.

New Students

New students will be provided with an MCTC student ID number and Password and will register for classes at the New Student Orientation. Non-degree-seeking students will receive their MCTC student ID number and password in the mail after application.

Continuing and Returning Students

The registration dates for continuing and returning students will be determined according to the number of credits earned at the time of registration. Registration dates for upcoming terms will be posted to the MCTC website. Students can check e-services to find out when their online registration window will open. Students are encouraged to meet with a counselor/advisor for assistance in selecting courses for the next term.

Holds Affecting Registration

Students may check their e-services dashboard to determine if there are any holds associated with their record that will affect registration for the upcoming term. Common holds that affect registration include:

- Outstanding financial obligations to MCTC or any other MnSCU institution
- Academic suspension at MCTC or any other MnSCU institution

Adding and Dropping Classes

Full-term classes may be added and dropped by the student through the first five business days of the school term. The add/drop deadlines for short-term courses will vary; see the current online class schedule for course-specific information. MCTC Procedure 4.05.01.

The add window is shorter for the summer term. See the class schedule for course-specific information.

The drop deadline for short-term classes (less than 13 weeks in length) is midnight of the business day following the first day of classes.

Special Exceptions:

- Classes that begin on a Saturday have a drop deadline of midnight the following Monday (business day); and
- Nursing Assistant/Home Health Aide classes must be dropped before the first class meeting.

Dropped classes do not appear on the student’s transcript, nor do they affect the Satisfactory Academic Progress percent of completion requirement.

Credit Load Limitations

A student may not take more than 19 credits per fall or spring term, or 10 credits per summer term, without permission from the Registrar’s Office. See MCTC Policy 4.05.

The Registrar’s Office uses the following criteria to determine eligibility to exceed these credit load limits:

- The student has a cumulative GPA of at least 2.75 at the College and has accumulated 20 credits;
- A student transfers in with a 3.0 GPA and an accumulation of 20 credits; and
- If there are other documentable circumstances that justify the exception.

It is recommended that students considering exceeding credit load limits review their academic plans with a counselor.
Multiple Sections Prohibited

Students may not register for more than one section of a class. Students who register for multiple sections of the same course may be subject to discipline and will have their duplicate enrollments cancelled.

- Students who register in two or more sections of the same course will have the earlier registration removed. Students will be notified by mail.

- Students who register in two or more lab sections of the same course will have the earlier of the lab registrations removed, resulting in registration in only one lab. Students will be notified by mail.

- For courses requiring concurrent registration in lab and lecture, students who register in the lab only will have their registration removed without notice.

Course Cancellations

The Office of Academic Affairs reserves the right to cancel a course or course section after the schedule has been published if the vice president of Academic and Student Affairs determines that it would be in the best interest of the College.

Students who registered for a course that has been cancelled will be notified via phone and mail.

Prerequisites

A prerequisite is a requirement that must be satisfactorily completed before a student may enroll in another class or program. Examples of prerequisites include successful completion of a class, achievement of a specified grade in a class, test placement into a specified class, and program admission or instructor permission to enroll. Prerequisites are listed in the college catalog.

Students are responsible for completing any prerequisites listed for a course prior to enrolling in the course. Not meeting all course prerequisites will result in the student’s registration being blocked.

Students may register for a course if they are in the process of completing a prerequisite for a course to begin the next term. It is the student’s responsibility to cancel enrollment prior to the end of the drop/add period if the required course is not completed satisfactorily or the required grade for the next course in the sequence is not earned. Grades of fail (F), incomplete (I), or withdrawal (W) are all considered noncompletion. Students who have not cancelled their enrollment for the next course may have the course dropped by the College.

Under special circumstances, students who have completed the placement requirement and had their official transcripts evaluated (applicable to all transfer students) may petition to meet a course prerequisite by other documentable means. See the Student Services Center (T.2200) to determine if special registration using a Prerequisite Screening Form will be allowed.

Non-award-seeking students may not take courses with placement or program admission requirements unless they have completed placement testing and/or had their official transcript evaluated. Non-award-seeking students are not eligible to receive financial aid for any courses in which they enroll.

Failure to meet prerequisites for a class may result in cancellation of enrollment in the course, denial of tutoring services for that class, dismissal of any grievance for that class and unsuccessful appeal of an academic suspension.
Taking a Class Pass/Fail

Students may elect to take a class on a pass/fail (P/F) basis. See MCTC Policy 3.08. The student must select a P/F option via the web. Instructions for web use and deadline dates for filing for the P/F option are listed on the college’s website.

No more than one-third of a student’s resident credit load may be “P” grades for certificate, diploma or degree credit. Classes that have an assigned grade of “P” are not included in these restrictions.

Students who choose the P/F option and complete the class with a grade equivalent to A, B or C will receive a “P” on their transcript. The “P” grade does not affect the grade point average (GPA). Students who complete the class with a grade equivalent to D or F will receive an “F” on their transcript. The “F” grade will affect the GPA.

Students who choose the pass/fail option will not be allowed to petition at a later date to have a letter grade entered on their transcripts.

Some MCTC programs do not accept “P” grades for particular classes. This information is available in the specific program brochures and course outlines. “P” grades may not transfer to another college or university and are at the discretion of the receiving institution. Please review each institution’s catalog for information on course transfer.

Auditing a Class

Students wishing to attend a course without receiving a letter grade may request to audit the course. Students wishing to audit a course must request an audit online. Deadline dates for filing the audit option are listed on the college’s website. Financial aid cannot be awarded for audited courses. PSEO students are not eligible to audit a course. Audited courses generally do not transfer to other colleges. Full tuition is charged for audited courses. See MCTC Policy 3.08A. Students must meet all prerequisites for the audited course.

Repeating a Course

Students in technical programs may, with permission from their advisor and the instructor, repeat any course. A student may repeat a course a maximum of two times. Liberal arts courses do not require permission to be repeated and may be repeated more than twice. Exception: Addiction Counseling courses may only be repeated once, and the internship may not be repeated.

A course may be repeated for an improved grade. Only the highest grade earned will be counted toward certificate, diploma, or degree credit and in the computation of the overall numeric GPA. This policy applies to all grades, including “F” grades. Both the original and the repeated grade will appear on the student’s transcript. Tuition and fees will be charged each time. Students repeating a course will have their GPA recalculated at the end of each term by the Registrar’s Office. If the course was originally taken under the quarter system, the student should contact the Registrar’s Office, located in (T.2200) to have the GPA recalculated.

Financial aid will pay for repeated courses that a student does not pass. Once the student passes the course with a grade of “D” or higher, financial aid will pay for only one more repetition of that course.

Withdrawing from a Class

Deadlines for Withdrawing

The withdrawal period begins after the fifth day of a term and extends until the last day to withdraw as listed in the Academic Calendar for full-term classes. See MCTC Procedure 4.05.01.

The deadlines to withdraw from short-term classes are as follows:

- Classes one–three weeks in length: two days after the class begins;
- Classes four–six weeks in length: 10 days after the class begins;
- Classes seven–nine weeks in length: four weeks after the class begins; and
- Classes 10–13 weeks in length: six weeks after the class begins.
Procedure for Withdrawing

A withdrawal:

- Is grade of “W” that does not affect a student’s GPA;
- Will appear on the student’s transcript; and
- Is calculated against the Satisfactory Academic Progress percent of completion requirement.

A student may withdraw from a course online through their e-services account before the deadline to withdraw published on the college website.

Students are responsible for paying all tuition and fees for courses in which they enrolled, even if they withdraw from the course. Students who enroll in a course but never attend or stop attending prior to the end of the term are still responsible for full payment of all tuition and fees for that course.

PSEO students may change their registration on and after the first day of the term only with their PSEO advisor’s signature.

Attendance

Students are expected to regularly attend classes in which they are enrolled and abide by MCTC Policy 4.05.01 Procedures for Changing Enrollment. Students who decide to stop attending courses should immediately drop/withdraw from their course(s). Students who fail to officially withdraw from a course (or courses) they are not attending, as defined by “Last Date of Attendance” (MCTC policy 4.16 Last Date of Attendance) may be administratively withdrawn from those courses. The student will remain responsible for any financial liability, less applicable refunds they have incurred, and for any academic consequences due to this administrative withdrawal.

Taking Classes

Academic Credits

There are three types of academic credits: lecture credits, lab credits and internship credits. For each credit type there is a required number of minutes that a student must be in the classroom, laboratory or working at an internship:

- 50 minutes per lecture credit per week;
- 100 minutes per lab credit per week; and/or
- 150 minutes per internship credit per week.

For example, a 3-credit lecture class that meets twice per week would meet for 75 minutes each class period (3 credits × 50 minutes ÷ two class sessions). To receive 2 credits for an internship, a student would need to work at the site for 300 minutes (five hours) per week.

Course Options

In addition to the extensive selection of traditional course offerings available each semester at MCTC, a student has a number of other educational opportunities available. See MCTC Policy 3.02.
Online Courses

MCTC offers many of its courses fully or partially online. Those courses with laboratory requirements offer the lecture portion of the course online but require students to come to campus to work in the laboratory.

Students contemplating taking an online course are advised to take a personal inventory to assess their readiness for this method of learning. Beyond the equipment and Internet requirements (computer hardware and software, a printer with adequate capacity, and an Internet connection of sufficient reliability and speed), online students should be skilled independent learners with a demonstrated history of self-discipline to succeed in the course without face-to-face interaction with an instructor and student peers.

If the instructor believes that any student has violated the Student Code of Conduct (e.g., committed academic dishonesty) in an online course, the instructor may require the students to complete some or all of the course activities on campus. See MCTC Policy 4.04.01.

Directed Study

As allowed in MCTC Policy 3.02, a student may earn up to four semester credits for an approved directed study project. Directed study credits apply only to the elective credits of a program.

A student must submit a project proposal and receive approval from the instructor and departmental dean prior to beginning coursework to receive credit. Project proposals will not be approved when the same course is offered in the current term. Directed study forms are available in the Office of Academic Affairs.

Credit by Exam

As allowed in MCTC Policy 3.02, upon approval of an instructor and departmental dean, a student may earn credit for a course by taking an exam. Unless specifically prohibited by the award requirements, credits earned by exam may be applied to meet award requirements. Credits earned by exam are ineligible for financial aid.

Internships, Practicums and Clinicals

Experience in the field is a mandatory component for some technical and liberal arts program awards and is optional for others. It is the student’s responsibility to know and observe all program guidelines and policies related to internships and clinicals. Contact the program instructor or a counselor for more information.

Service Learning and Project SHINE

A program or instructor may require, or provide as an option, student participation in a service learning activity. Participating in a service learning activity provides an opportunity for a student to apply in a community setting what he or she is learning in the classroom. This experience enhances and deepens learning for the student and provides some relief where there is an identified need in the community.

Credit for a service learning activity is based on an evaluation of learning via a method established by the instructor and not on the number of hours of service.

Project SHINE (Students Helping in the Naturalization of Elders) is a national service learning initiative that links college students with elder immigrants and refugees seeking to learn English and navigate the complex path to U.S. citizenship. Students tutor immigrant learners in English, as well as teach them the history and civics needed to pass the U.S. citizenship exam. Student participants gain knowledge of diverse cultures and life experiences, and they develop skills beyond the textbook. Students can enroll in designated classes wherein the instructor has incorporated Project SHINE into the course curriculum. Students complete 20 hours of service work and four hours of training and orientation. To find out more about Project SHINE at MCTC, contact the program coordinator at 612-659-6135.
Continuing Education and Customized Training

An education doesn’t end with a diploma or degree—it prepares students for a lifetime of learning. Continuing to expand their skills and knowledge is the key that unlocks the door to success. Learning that engages the heart and soul and mind can keep one fulfilled in one’s work and personal life.

The mission of MCTC’s Continuing Education and Customized Training program is to advance economic development and community vitality by providing innovative continuing education, training, and personal enrichment courses to individuals and organizations throughout the Twin Cities metropolitan area.

We offer a spectrum of unique continuing education classes and programs to help students learn new skills, make career transitions, expand their perspectives on the world around them, and explore their creativity and imaginations. We are committed to offering quality programs that promote professional and personal growth—now and in the future. Organizations and individuals have benefited from our courses and training programs in:

- Architectural Technology
- Business and Finance
- Communications and Writing
- International Business
- Information Technology
- Graphic Design
- Web Design and Development
- Microsoft Applications
- Nursing and Healthcare
- Counseling and Social Work
- Language and Travel
- Screenwriting and Film
- Dance, Photography and Culinary Arts
- Welfare-to-Work

When employers come to us for help in maximizing the potential of their greatest competitive advantage—their employees—we respond quickly, capably and affordably with training solutions to today’s business challenges. Visit www.minneapolis.edu/cect for course offerings, or call 612-659-6500.

Evaluating Academic Performance

Class Syllabus

An instructor is required to provide to students a written syllabus on the first day of class that outlines:

- Contact information for the instructor and his or her office hours;
- Course objectives and procedures for reaching those objectives;
- Standards for classroom participation, behavior and attendance;
- Types of assignments and tests;
- Due dates of assignments and policies on accepting late or inadequate work; and
- Criteria for evaluating student work and grade determination.

Grading System

As outlined in MCTC Policy 3.08, the instructor of a course will evaluate each student’s performance relative to the established criteria for the course and assign one of the following grades:

- A—Superior (4 grade points per credit)
- B—Above Average (3 grade points per credit)
- C—Average (2 grade points per credit)
- D—Below Average (1 grade point per credit)
- F—Failure to meet criteria (0 grade points per credit)
- P—Pass with credit (No grade points, but credit granted)
- NC—No credit (No grade point, no credit given)
Some programs require that all course work must be completed with a grade of C or higher. Some programs require a letter grade of A–F for program course work. See specific programs for actual grade requirements.

Specific dates for changing a grade option or withdrawing are listed on the college website. If a student fails to withdraw from a course in which the student is no longer participating, the instructor will record an “F” for the student at the end of the term. See instructions on how to withdraw from a course and its potential impact on your academic progress.

**Grade Point Average (GPA)**

To calculate a cumulative GPA, divide the total number of grade points earned by the total number of credits taken for a letter grade (A, B, C, D or F).

The grade point average and completion rate at MCTC determines academic standing. See MCTC Policy 4.13. A minimum GPA of 2.0 in courses taken at MCTC is required for graduation.

**Incomplete Grades**

As permitted in MCTC Policy 3.08, a student may be granted an incomplete when the instructor believes there is a reasonable expectation that the student can complete the work for a course. An “I” will appear on the student’s transcript until a grade has been determined or the deadline to complete the work has passed.

The instructor and student should identify in writing expectations for completing the work. The deadline to complete coursework is determined by the instructor but may be no later than the end of the eighth week of the next semester, not including summer session. If the instructor has not submitted a letter grade by the eighth week of the next semester, a grade of “F” or “NC,” as applicable, will be entered by the Registrar’s Office.

**Cancellation of a Class Session**

In the event of an instructor’s illness, inclement weather or unforeseen circumstances, a class session may be cancelled. When possible, efforts will be made to contact students in advance.

College closings due to inclement weather or other emergencies will be announced on WCCO AM 830 radio, and will be posted on the college website.

**Earning an Award**

**MCTC Awards**

As governed by MCTC Policies 3.03 and 3.09, the following awards are conferred by MCTC faculty to students who successfully complete:

1. The requirements of the award program; and
2. The graduation requirements outlined in this catalog.

As governed by MCTC Policy 3.05, most awards have Minnesota General Education Transfer Curriculum (MnTC) requirements. Eligible courses have an MnTC designation in brackets after the course description that identifies the goal area or areas to which the course can be applied. Unless otherwise specified, a course cannot be used to meet the requirements of more than one goal area.
**Associate in Arts Degree**

As governed by MCTC Policies 3.03 and 3.05, students seeking an Associate in Arts (A.A.) degree from MCTC must successfully complete a total of 60 college-level credits as outlined below.

**MnTC Requirements: 40 Credits**

Students must successfully complete a total of 40 credits of coursework in all MnTC goal areas.

- **Goal Area 1. Written and Oral Communication**
  A minimum of 9 credits, which must include ENGL 1110 or ENGA 1110, and ENGL 1111, as well as an eligible speech communications course.
- **Goal Area 2. Critical Thinking**
  Completion of 30 MnTC credits accomplishes this goal.
- **Goal Area 3. Natural Sciences**
  A minimum of two courses in different disciplines, one a lab science.
- **Goal Area 4. Mathematical and Logical Reasoning**
  A minimum of one course.
- **Goal Area 5. History and the Social and Behavioral Sciences**
  A minimum of three courses, in three different disciplines.
- **Goal Area 6. Humanities and Fine Arts**
  A minimum of three courses, in three different disciplines.
- **Goal Areas 7–10. Human Diversity, et. al.**
  A minimum of one course in each goal area 7–10.

**Required Coursework: 5 credits**

- Health: 2 credits
- Physical Education: 1 credit
- INFS 1000: 2 credits

**Elective Credits**

The number of elective credits required will vary depending on the number of MnTC and required coursework credits a student accumulates.

**Completion Requirement**

Students seeking an A.A. degree must complete ENGL 1110 or ENGA 1110 and information literacy requirements within their first 24 college-level course credits (those courses numbered 1000 or above).

**Associate of Arts with an Emphasis**

As governed by MCTC Policies 3.03 and 3.05 students seeking an associate of arts with an emphasis degree from MCTC must successfully complete a total of 60 college credits and the degree requirements, which include MnTC-required credits. Refer to the Programs and Credentials section of the catalog for specific requirements.

**MnTC Requirements: 40 Credits**

Students must successfully complete a total of 40 credits of coursework in all MnTC Goal Areas: (See Associate in Arts Degree on page 44.) This coursework will include at least 9 credits of specific coursework in the emphasis.

**Elective Credits**

The number of elective credits will vary depending on the number of MnTC-required courses a student satisfactorily completes.
Online Associate in Arts Degree
The online Associate in Arts (Online A.A.) degree program involves taking online courses that are required for earning the A.A. degree. For more information, go to www.minneapolis.edu.

Like the on-campus A.A. degree program, you can transfer to a college or university to finish a bachelor’s degree after you complete the Online A.A. degree at MCTC.

Overview of Online A.A.
For an overview of the Online A.A. degree, do the following:

1. View the virtual Get Started session.
2. Take an online course self-assessment to see if you’re ready for taking online classes.
3. Read about the A.A. degree requirements.
4. View a list of online classes that are available by term.
5. Use the Online A.A. course menu as a planning worksheet. (Students seeking the Online A.A. degree at MCTC must choose online courses from this course menu.)
6. Learn how to register for classes online.
7. Read the Desire2Learn/eLearning support web page to learn more about Desire2Learn (D2L), the course management system MCTC uses to deliver online courses.
8. Preview an online (D2L) course. Use onlinestudent (all lower case) for both the Username and Password.
9. If you want to be admitted to the Online A.A. degree program, or continue your A.A. degree online, follow the steps listed in the Online A.A. degree checklist.

e-Advisor for Online Students
MCTC’s e-Advisor is a trained academic advisor from MCTC’s Office of Counseling and Advising who specializes in helping students in the Online A.A. program.

The e-Advisor can answer your questions about the application process, guide you through registering for classes, help you plan for both your short- and long-term academic goals, and much more.

Whatever your question or concern about the Online A.A. program, the e-Advisor can help; contact the e-Advisor via email at e.Advisor@minneapolis.edu.

Transferring MnTC Credits to Another Institution
Students who complete the MnTC coursework required for an A.A. degree as outlined above may transfer these credits to another MnSCU institution and receive credit for all lower division general education courses upon admission to that institution.

Associate in Fine Arts Degree
As governed by MCTC Policies 3.03 and 3.05, students seeking an Associate in Fine Arts (A.F.A.) degree from MCTC must successfully complete the degree requirements determined by the Fine Arts faculty, which include MnTC-required credits. Refer to the Programs and Credentials (pages 44–317) section of the catalog for specific requirements.

Associate in Science Degree
As governed by MCTC Policies 3.03 and 3.05, students seeking an Associate in Science (A.S.) degree from MCTC must successfully complete the degree requirements determined by the specific program, which include MnTC-required credits.

Refer to the Programs and Credentials section of the catalog for specific degree requirements.

MnTC Requirements: 30 Credits
Students must successfully complete 30 credits of coursework in a minimum of six MnTC goal areas. Of these credits, students must earn a minimum of three credits in MnTC Goal Area 1 and three credits in MnTC Goal Areas 7, 8, 9 or 10.
Associate in Applied Science Degree
As governed by MCTC Policies 3.03 and 3.05, students seeking an Associate in Applied Science (A.A.S.) degree from MCTC must successfully complete the degree requirements determined by the specific program, which include MnTC-required credits. Refer to the Programs and Credentials section of the catalog for specific degree requirements.

MnTC Requirements: 25 Percent of Required Credits
Students must successfully complete MnTC requirements equal to 25 percent of the required award credits in a minimum of three MnTC goal areas. Of these credits, students must earn a minimum of three credits in MnTC Goal Area 1 and three credits in MnTC Goal Areas 7, 8, 9 or 10.

Diploma
As governed by MCTC Policies 3.03 and 3.05, students seeking a two-year diploma from MCTC must successfully complete the diploma requirements determined by the specific program, which include MnTC-required credits. Refer to the Programs and Credentials section of the catalog for specific diploma requirements.

Two-Year Diploma MnTC Requirements: 9 Credits
Students seeking a two-year diploma must successfully complete nine credits of coursework in the MnTC goal areas. Of these credits, students must earn a minimum of three credits in MnTC Goal Area 1 and three credits in MnTC Goal Areas 7, 8, 9 or 10.

Three-Semester Diploma MnTC Requirements: 6 Credits
Students seeking a three-semester diploma must successfully complete six credits of coursework in the MnTC goal areas. Of these credits, students must earn a minimum of three credits in MnTC Goal Area 1.

Two-Semester Diploma MnTC Requirements: 3 Credits
Students seeking a two-semester diploma must successfully complete three credits of coursework in MnTC Goal Area 1.

Certificate
As governed by MCTC Policies 3.03 and 3.05, students seeking a certificate from MCTC must successfully complete the certificate requirements determined by the specific program, which may include MnTC required credits. Refer to the Programs and Credentials section of the catalog for specific award requirements.

MnTC Requirements: 3 credits
Students seeking a two-semester certificate must successfully complete three credits of coursework in MnTC Goal Area 1.

General Education
Why is general education important? The consensus among educators and employers is that knowledge of human cultures and the physical and natural world, intellectual and practical skills, personal and social responsibility, and integrative learning are needed for a 21st-century education. According to the American Association of Colleges and Universities, “This new consensus reflects a dawning awareness that America’s future will depend on an unprecedented determination to develop human talent as broadly and fully as possible:

• In an era when knowledge is the key to the future, all students need the scope and depth of learning that will enable them to understand and navigate the dramatic forces—physical, cultural, economic, technological—that directly affect the quality, character and perils of the world in which they live;

• In an economy wherein every industry—from the trades to advanced technology enterprises—is challenged to innovate or be displaced, all students need the kind of intellectual skills and capacities that enable them to get things done in the world, at a high level of effectiveness;
In a democracy that is diverse, globally engaged, and dependent on citizen responsibility, all students need an informed concern for the larger good because nothing less will renew our fractured and diminished commons;

In a world of daunting complexity, all students need practice in integrating and applying their learning to challenging questions and real-world problems; and

In a period of relentless change, all students need the kind of education that leads them to ask not just ‘how do we get this done?’ but also ‘what is most worth doing?’.

With organizations constantly reinventing their products and their processes, and with questions about public and life choices more complex than ever, the world itself is setting higher expectations for knowledge and skill.” (From College Learning for the New Global Century, published by the American Association of Colleges and Universities, 2007.)

To those ends, the faculty of MCTC have adopted the following four general education competencies appropriate to all instructional programs at the College:

- Communications
- Critical Thinking
- Life Skills/Personal Responsibility
- Social Responsibility

See MCTC Policy 3.04.

These core competencies are a means to enhance lifelong education by making it possible for students to communicate effectively, think critically, solve problems, and develop and demonstrate effective life skills, personal responsibility, and social responsibility.

**Minnesota General Education Transfer Curriculum Competencies**

Most awards have General Education Transfer Curriculum (MnTC) requirements. Students seeking an Associate in Arts degree must successfully complete a total of 40 credits of MnTC coursework (See Associate in Arts Degree on page 44 for specific MnTC goal area requirements). The A.F.A., A.S. and the A.A.S. degrees and the Diplomas and Certificates at MCTC also use MnTC courses to fulfill their General Education requirements.

Below is a list of courses eligible for each of the MnTC goal areas.

### MnTC Goal Area 01: Written and Oral Communication

To develop writing, speaking and critical listening skills in the English language. As a base, you should complete introductory communication requirements early in your collegiate studies. Writing competency is an ongoing process to be reinforced through writing-intensive courses and writing across the curriculum. Speaking and listening skills need reinforcement through multiple opportunities for interpersonal communication, public speaking and discussion.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication Studies</td>
</tr>
<tr>
<td>CMST 1005</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>CMST 1013</td>
<td>Introduction to Family</td>
</tr>
<tr>
<td>CMST 1650</td>
<td>Environmental Communication</td>
</tr>
<tr>
<td>CMST 2005</td>
<td>Communication and Gender</td>
</tr>
<tr>
<td>CMST 2010</td>
<td>Argumentation and Advocacy</td>
</tr>
<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
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</table>
MnTC Goal Area 01: Written and Oral Communication Continued

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<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
</tr>
<tr>
<td>ENGA 1110</td>
<td>College English 1 (MnTC 1 requires ENGA 0900 and ENGA 1110)</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
</tr>
</tbody>
</table>

MnTC Goal Area 02: Critical Thinking

To help you become a thinker who is able to unify factual, creative, rational and value-sensitive modes of thought. Critical thinking will be taught and used throughout the general education curriculum in order to develop your awareness of your own thinking and problem-solving procedures. To integrate new skills into your customary ways of thinking, you must be actively engaged in practicing thinking skills and applying them to open-ended problems.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>FYST 1000</td>
<td>Orientation to Higher Education</td>
</tr>
<tr>
<td>FYST 1010</td>
<td>Career Planning</td>
</tr>
<tr>
<td>FYST 1015</td>
<td>ESOL Strategies for College Success</td>
</tr>
<tr>
<td>FYST 1100</td>
<td>Strategies for College Success</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
</tr>
<tr>
<td>PHIL 1110</td>
<td>Critical Thinking</td>
</tr>
<tr>
<td>READ 1300</td>
<td>Critical Reading of Academic Texts</td>
</tr>
</tbody>
</table>

MnTC Goal Area 03: Natural Science

To improve your understanding of natural science principles and of the methods of scientific inquiry, i.e. the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, you need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today’s scientists, you will learn to appreciate the importance of science in your life and to understand the value of a scientific perspective. You are encouraged to study both the biological and physical sciences.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>ASTR 1110 and ASTR 1115</td>
<td>Astronomy and Astronomy Lab</td>
</tr>
<tr>
<td>BIOL 1100</td>
<td>Introduction to Biology</td>
</tr>
<tr>
<td>BIOL 1120</td>
<td>Nutrition (Includes Lab-like experience)</td>
</tr>
<tr>
<td>BIOL 1127 and BIOL 1128</td>
<td>Human Biology and Human Biology Lab</td>
</tr>
<tr>
<td>BIOL 1136 and BIOL 1137</td>
<td>Environmental Science and Environmental Science Lab</td>
</tr>
<tr>
<td>BIOL 1160</td>
<td>Biology of Women (Includes Lab-like experience)</td>
</tr>
<tr>
<td>BIOL 2200</td>
<td>Principles of Biology</td>
</tr>
<tr>
<td>COURSE #</td>
<td>TITLE</td>
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<tr>
<td>BIOL 2205</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 2224</td>
<td>Anatomy</td>
</tr>
<tr>
<td>BIOL 2225</td>
<td>Physiology</td>
</tr>
<tr>
<td>BIOL 2226</td>
<td>Pathophysiology</td>
</tr>
<tr>
<td>BIOL 2230</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOL 2231</td>
<td>Microbiology Lab</td>
</tr>
<tr>
<td>BIOL 2250</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 2260</td>
<td>Animal Biology</td>
</tr>
<tr>
<td>BIOL 2500</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>CHEM 1020</td>
<td>Introduction to Chemistry</td>
</tr>
<tr>
<td>CHEM 1140</td>
<td>Chemistry in Your Life</td>
</tr>
<tr>
<td>CHEM 1145</td>
<td>Forensic Science 1</td>
</tr>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
</tr>
<tr>
<td>CHEM 1152</td>
<td>Principles of Chemistry 2</td>
</tr>
<tr>
<td>CHEM 2204</td>
<td>Organic Chemistry 1</td>
</tr>
<tr>
<td>CHEM 2205</td>
<td>Organic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 2224</td>
<td>Organic Chemistry 1 Lab</td>
</tr>
<tr>
<td>CHEM 2225</td>
<td>Organic Chemistry 2 Lab</td>
</tr>
<tr>
<td>GEOL 1120 and GEOL 1130</td>
<td>Physical Geology and Physical Geology Lab</td>
</tr>
<tr>
<td>GEOL 1140 and GEOL 1150</td>
<td>Historical Geology and Historical Geology Lab</td>
</tr>
<tr>
<td>PHYS 1100</td>
<td>Introduction to Physics</td>
</tr>
<tr>
<td>PHYS 1131</td>
<td>College Physics 1</td>
</tr>
<tr>
<td>PHYS 1132</td>
<td>College Physics 2</td>
</tr>
<tr>
<td>PHYS 1211</td>
<td>Physics for Science and Engineering 1</td>
</tr>
<tr>
<td>PHYS 1221</td>
<td>Physics for Science and Engineering 2</td>
</tr>
</tbody>
</table>
MnTC Goal Area 04: Mathematical and Logical Reasoning

To increase your knowledge about mathematical and logical modes of thinking. This will enable you to appreciate the breadth of applications of mathematics, evaluate arguments and detect fallacious reasoning. You will learn to apply mathematics, logic and/or statistics to help them make decisions in your life and career. Minnesota’s public higher education systems have agreed that developmental mathematics includes the first three years of a high school mathematics sequence through intermediate algebra.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>CSCI 2011</td>
<td>Discrete Mathematics</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MATH 1116</td>
<td>College Algebra with ALEKS</td>
</tr>
<tr>
<td>MATH 1120</td>
<td>College Trigonometry</td>
</tr>
<tr>
<td>MATH 1125</td>
<td>Pre-calculus</td>
</tr>
<tr>
<td>MATH 1130</td>
<td>Finite Mathematics</td>
</tr>
<tr>
<td>MATH 1140</td>
<td>Introductory Statistics</td>
</tr>
<tr>
<td>MATH 1145</td>
<td>Statway 2 (MnTC 4 requires MATH 0145 and MATH 1145)</td>
</tr>
<tr>
<td>MATH 1150</td>
<td>Statistical Analysis</td>
</tr>
<tr>
<td>MATH 1160</td>
<td>Mathematical Ideas</td>
</tr>
<tr>
<td>MATH 1165</td>
<td>Mathematics for Teachers</td>
</tr>
<tr>
<td>MATH 1170</td>
<td>Calculus for Business and Social Sciences</td>
</tr>
<tr>
<td>MATH 1180</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 1190</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 2011</td>
<td>Discrete Mathematics</td>
</tr>
<tr>
<td>PHIL 2110</td>
<td>Logic</td>
</tr>
</tbody>
</table>

MnTC Goal Area 05: History and the Social and Behavioral Sciences

To increase your knowledge of how historians and social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events and ideas. Such knowledge will better equip you to understand yourself and the roles people play in addressing the issues facing humanity.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>AMIS 1000</td>
<td>Native America</td>
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<tr>
<td>AMIS 1120</td>
<td>Community Development and Indigenous Culture</td>
</tr>
<tr>
<td>AMIS 1350</td>
<td>American Indian Education: Past and Present</td>
</tr>
<tr>
<td>AMST 1000</td>
<td>American Radicalism</td>
</tr>
<tr>
<td>AMST 1100</td>
<td>Contemporary American Culture: Survival in a Changing World</td>
</tr>
<tr>
<td>ANTH 1104</td>
<td>Human Origins</td>
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<tr>
<td>ANTH 1105</td>
<td>Introduction to Cultural Anthropology</td>
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<tr>
<td>ANTH 1110</td>
<td>Introduction to Archaeology</td>
</tr>
<tr>
<td>ANTH 1150</td>
<td>Women Across Cultures</td>
</tr>
<tr>
<td>ANTH 2105</td>
<td>Globalization and Culture Change</td>
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### MnTC Goal Area 05: History and the Social and Behavioral Sciences Continued

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<tbody>
<tr>
<td>ECON 1000</td>
<td>Consumer Economics</td>
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<tr>
<td>ECON 2000</td>
<td>Principles of Macroeconomics</td>
</tr>
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<td>ECON 2200</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECON 2500</td>
<td>Contemporary Economic Problems</td>
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<tr>
<td>GEOG 1101</td>
<td>Human Geography</td>
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<tr>
<td>GEOG 1102</td>
<td>The Physical Environment</td>
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<td>GEOG 1103</td>
<td>The Global Economy</td>
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<td>GEOG 1104</td>
<td>Minnesota</td>
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<td>GEOG 2204</td>
<td>Peoples of the World</td>
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<tr>
<td>GLOS 1120</td>
<td>Community Development and Indigenous Cultures</td>
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<tr>
<td>GLOS 1500</td>
<td>Introduction to Global Studies</td>
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<tr>
<td>HIST 1000</td>
<td>World History 1: Ancient and Pre-Modern World</td>
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<tr>
<td>HIST 1010</td>
<td>World History 2</td>
</tr>
<tr>
<td>HIST 1020</td>
<td>Contemporary World History: Issues and Themes</td>
</tr>
<tr>
<td>HIST 1100</td>
<td>American History 1</td>
</tr>
<tr>
<td>HIST 1110</td>
<td>American History 2</td>
</tr>
<tr>
<td>HIST 1200</td>
<td>European History to 1500: Ancient Greece and Rome to Medieval Europe</td>
</tr>
<tr>
<td>HIST 1210</td>
<td>European History since 1500: The Age of Global Contact to the Present</td>
</tr>
<tr>
<td>HIST 1300</td>
<td>African-American History 1</td>
</tr>
<tr>
<td>HIST 1310</td>
<td>African-American History 2</td>
</tr>
<tr>
<td>HIST 1320</td>
<td>African Historical Experience and Legacy in Latin America</td>
</tr>
<tr>
<td>HIST 1500</td>
<td>Native American History</td>
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<tr>
<td>HIST 1510</td>
<td>Caribbean History</td>
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<td>HIST 1520</td>
<td>History of Mexico</td>
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<tr>
<td>HIST 1600</td>
<td>History of Work and American Workers</td>
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<tr>
<td>HIST 2241</td>
<td>Women in Early America</td>
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<td>HIST 2242</td>
<td>Women in Modern America</td>
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<tr>
<td>HIST 2243</td>
<td>Contemporary China: from 1949 to present</td>
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<td>INFS 2510</td>
<td>Necessary Illusions: Media in the Information Age</td>
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<tr>
<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
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<td>INFS 2610</td>
<td>Common Knowledge: A Critical Examination of Intellectual Property</td>
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<td>PSCI 1101</td>
<td>American Government and Politics</td>
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<td>PSCI 1102</td>
<td>State and Local Government</td>
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<td>Comparative Government</td>
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### MnTC 05: History and the Social and Behavioral Sciences Continued

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<td>World Politics</td>
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MnTC Goal Area 06: Humanities and Fine Arts

To expand your knowledge of the human condition and human cultures, especially in relation to behavior, ideas and values expressed in works of human imagination and thought. Through study in disciplines such as literature, philosophy, and the fine arts, you will engage in critical analysis, form aesthetic judgments and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. You should have experiences in both the arts and humanities.

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MnTC Goal Area 06: Humanities and Fine Art Continued

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MnTC Goal Area 07: Human Diversity

To increase your understanding of individual and group differences (e.g. race, gender and class), your knowledge of the traditions and values of various groups in the United States. You should be able to evaluate the United States’ historical and contemporary responses to group differences.

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MnTC Goal Area 08: Global Perspective
To increase your understanding of the growing interdependence of nations and peoples, as well as develop your ability to apply a comparative perspective to cross-cultural social, economic and political experiences.

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### MnTC Goal Area 08: Global Perspective Continued

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<td>European History since 1500: The Age of Global Contact to the Present</td>
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<td>Contemporary China: from 1949 to present</td>
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<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
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<td>INFS 2610</td>
<td>Common Knowledge: A Critical Examination of Intellectual Property</td>
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<td>SPAN 1300</td>
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<td>Acting in Multicultural Theater</td>
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<td>WOST 2235</td>
<td>Women Poets of the World</td>
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MnTC Goal Area 09: Ethical and Civic Responsibility

To develop your capacity to identify, discuss and reflect upon the ethical dimensions of political, social and personal life and to understand the ways in which you can exercise responsible and productive citizenship. While there are diverse views of social justice or the common good in a pluralistic society, you should learn that responsible citizenship requires you to develop skills to understand your own and others’ positions in order to be part of the free exchange of ideas and function as a public-minded citizen.

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<td>Argumentation and Advocacy</td>
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<td>Alternative Knowledge: How Radical Ideas are Communicated in Society</td>
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<td>PSCI 1111</td>
<td>Reclaiming Democracy: An Introduction to Civic Engagement</td>
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<td>PSCI 1170</td>
<td>Community Organizing: History, Theory and Practice</td>
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<td>PSCI 1180</td>
<td>Politics, Media and Community Organizing: Indigenous Understandings and Applications</td>
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<td>PSCI 1200</td>
<td>Introduction to Public Policy</td>
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<td>Introduction to Women’s Studies</td>
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<td>WOST 2211</td>
<td>Women’s Response to Violence</td>
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<td>WOST 2213</td>
<td>Women and Empowerment</td>
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MnTC Goal Area 10: People and the Environment

To improve your understanding of today’s complex environmental challenges, you will examine the interrelatedness of human society and the natural environment. Knowledge of both bio-physical principles and socio-cultural systems is the foundation for integrative and critical thinking about environmental issues.

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<td>The Physical Environment</td>
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<td>Environmental Ethics</td>
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<td>WOST 2212</td>
<td>Ecofeminism</td>
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</table>

Graduation Requirements

MCTC confers three types of awards: associate degrees, diplomas and certificates. See MCTC Policies 3.03 and 3.05. In order to receive an award from MCTC, a student must:

- Complete the specific award requirements;
- Have a cumulative grade point average (GPA) of 2.0 or better for coursework completed at MCTC;
- Complete the intent-to-graduate process; (see below)
- Earn a specified number of credits from MCTC; (see below) and
- Meet all financial obligations.

See MCTC Policy 3.09 for additional information on graduation requirements.

Credit-Earning Options

Within the limitations of MCTC Policy 3.02, a student may earn credits toward an award and graduation by:

1. Successfully completing an MCTC course taken for credit;
2. Successfully completing an approved directed study proposal;
3. Transferring approved credits from another institution;
4. Earning credit by examination;
5. Completing some or all of the College Level Exam Program (CLEP) with sufficient scores;
6. Receiving required scores in some or all of the International Baccalaureate program; and/or
7. Receiving required scores on Advanced Placement exams.
Graduation Application

Students who are completing a degree, diploma or certificate must submit a Graduation Application during the last semester of their program by the deadline listed on the Academic Calendar. MCTC does not charge a fee to submit a Graduation Application.

Prior to submitting a Graduation Application, students should also review their degree audit through MCTC e-Services and verify the following:

- Degree, major and catalog year are listed correctly;
- Transcripts from other colleges/universities have been evaluated; and
- All academic petitions have been recorded on the degree audit.

Students should meet with their Academic Advisor to review their degree audit prior to submitting a Graduation Application and discuss any possible issues that may prevent program completion.

Forms are available in the Counseling and Advising Office and the Student Services Center. Completed Graduation Applications should be submitted to the Student Services Center (T.2200) or may be faxed to 612-659-6245.

Applications received after the published deadline will be processed during the next term.

The display award and cover is not provided to the student at the graduation ceremony. They are mailed four–six weeks after the letter of congratulations and transcript are sent to the student.

Credits Earned at MCTC

As required by MCTC Policy 3.09, in order to receive an award from MCTC, a student must earn a minimum number of credits from MCTC as follows:

- 20 credits for students seeking an Associate in Fine Arts (A.F.A.), Associate in Science (A.S.) or Associate in Applied Science (A.A.S.) degree;
- 12 credits for students seeking an A.A. degree, and transferring from another MnSCU institution or the University of Minnesota;
- 13 MnTC credits for students seeking the MnTC only; and
- One-third of the credits required for a diploma or certificate.

Catalog Requirements

Students may graduate either under the requirements in effect at the time the degree, diploma, or certificate is awarded or under the requirements in effect in any of the four previous academic years.

Students whose initial enrollment at MCTC was prior to fall 2001 semester may graduate under the requirements in effect at the time of their initial enrollment at MCTC.

Students must meet the requirements in one college catalog and may not combine requirements from more than one catalog.
Articulation Agreements

The following MCTC programs have articulation agreements with other colleges and universities. See www.mntransfer.org for further details. Programs noted with an asterisk are pending MnSCU approval.

<table>
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### Articulation Agreements Continued

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Articulation Agreements Continued

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<td>Diploma, A.A.S.</td>
<td>Minnesota State University, Moorhead</td>
<td>Industrial Technology—HVAC</td>
<td>B.S.</td>
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<td>Heating, Ventilation, Air Conditioning and Refrigeration</td>
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<td>General Technology—HVAC</td>
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<td>Information Technology: Computer Programming</td>
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<td>College of St. Scholastica</td>
<td>Computer Science/Information Systems</td>
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<td>Industrial Technology: General Technology</td>
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<td>Information Technology: Computer Support and Network Administration</td>
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<td>Information Technology: Computer Support and Network Administration</td>
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<td>Industrial Technology: General Technology</td>
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<td>MCTC Program</td>
<td>MCTC Degree</td>
<td>Transfer Institution</td>
<td>Program</td>
<td>Degree</td>
</tr>
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<td>Machine Tool Technologies</td>
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<td>Industrial Technology - General Technology</td>
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<td>Nursing</td>
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<td>Nursing Online RN to B.S.N. Program</td>
<td>B.S.N.</td>
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<td>Minnesota State University, Moorhead</td>
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<td>A.A.S.</td>
<td>Metropolitan State University</td>
<td>Individualized Bachelor's Degree</td>
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<td>A.A.S.</td>
<td>Minnesota State University, Moorhead</td>
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<td>Psychology</td>
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<td>Argosy University</td>
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<td>B.A.</td>
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<td>Augsburg College</td>
<td>Film Performance</td>
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<td>Screenwriting</td>
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<td>Screenwriting</td>
<td>B.A.</td>
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<td>Operations Management</td>
<td>B.S.</td>
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<td>Sound Arts</td>
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<td>Metropolitan State University</td>
<td>Individualized Bachelor's Degree</td>
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<td>Web Design</td>
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<td>B.A.</td>
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<td>Web Design</td>
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<td>Minnesota State University, Moorhead</td>
<td>Operations Management</td>
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<td>Women’s Studies</td>
<td>B.A.</td>
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</table>
# Programs and Credentials

## Associate in Arts Degree

### 60 Credits

As governed by MCTC Policy 3.05 and 3.09, students seeking an associate in arts (A.A.) degree from MCTC must successfully complete a total of 60 college-level credits as outlined below.

### MnTC Requirements: 40 Credits

Students must successfully complete a total of 40 credits of coursework in all MnTC goal areas as follows:

See Minnesota General Education Transfer Curriculum Competencies for the list of eligible courses. One course may meet more than one MnTC Goal Area; however, credits may only be counted once.

<table>
<thead>
<tr>
<th>MnTC Goal Area</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MnTC Goal Area 1: Written and Oral Communication</td>
<td>A minimum of 9 credits, which must include ENGL 1110, ENGL 1111, as well as an eligible Communication Studies (CMST) course</td>
</tr>
<tr>
<td>MnTC Goal Area 2: Critical Thinking</td>
<td>Any course from MnTC Goal Area 2 or completion of all other MnTC Goal Areas and 40 MnTC credits</td>
</tr>
<tr>
<td>MnTC Goal Area 3: Natural Sciences</td>
<td>A minimum of two courses in different disciplines, one a lab science</td>
</tr>
<tr>
<td>MnTC Goal Area 4: Mathematics/Logical Reasoning</td>
<td>A minimum of one course totaling 3 credits</td>
</tr>
<tr>
<td>MnTC Goal Area 5: History and the Social and Behavioral Sciences</td>
<td>A minimum of three courses, in three different disciplines totaling 9 credits</td>
</tr>
<tr>
<td>MnTC Goal Area 6: Humanities and Fine Arts</td>
<td>A minimum of three courses, in three different disciplines totaling 9 credits</td>
</tr>
<tr>
<td>MnTC Goal Area 7: Human Diversity</td>
<td>A minimum of one course</td>
</tr>
<tr>
<td>MnTC Goal Area 8: Global Perspective</td>
<td>A minimum of one course</td>
</tr>
<tr>
<td>MnTC Goal Area 9: Ethical and Civic Responsibility</td>
<td>A minimum of one course</td>
</tr>
<tr>
<td>MnTC Goal Area 10: People and the Environment</td>
<td>A minimum of one course</td>
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<tr>
<td>Required Coursework: 5 Credits</td>
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<tr>
<td>Health</td>
<td>One course from any of the HLTH offerings</td>
</tr>
<tr>
<td>Physical Education</td>
<td>One course from any of the PHED offerings</td>
</tr>
<tr>
<td>Information Studies</td>
<td>INFS 1000</td>
</tr>
<tr>
<td>Elective Credits</td>
<td>The number of elective credits will vary depending on the number of MnTC and required coursework credits a student takes.</td>
</tr>
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</table>

**TOTAL CREDITS: 60.00**

### Completion Requirements:

Students seeking an A.A. degree must complete ENGL 1110 and the Information Literacy requirement within their first 24 college-level credits (those courses are numbered 1000 or above). It is recommended that students take ENGL 1110 and INFS 1000 in the same semester or take ENGL 1111 and INFS 1000 during the same term.

One course may meet more than one MnTC Goal Area; however, credits may only be counted once.
Associate of Arts with an Emphasis in African Diaspora Studies

60 Credits

Recommended Course Sequence

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

By completing the recommended for emphasis courses, you will complete the necessary requirements for the A.A. with an Emphasis in African Diaspora Studies and the entire Minnesota Transfer Curriculum.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HIST 1300 Or</td>
<td>African American History 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HIST 1310</td>
<td>African American History 2</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 1132</td>
<td>Managing Stress, Managing Life (recommended for emphasis or choose any 2-credit course from Health offerings)</td>
<td>2.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>**MATH 1140</td>
<td>Introduction to Statistics (recommended for emphasis or choose any course from MnTC Goal Area 4)</td>
<td>3.00</td>
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<tr>
<td>PHED 1138</td>
<td>World Dance (recommended for emphasis or choose any course from the Physical Education offerings)</td>
<td>1.00</td>
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**TOTAL CREDITS:** **14.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 2261 Or</td>
<td>African American Literature 1 Or</td>
<td>3.00</td>
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<tr>
<td>ENGL 2262</td>
<td>African American Literature 2</td>
<td>3.00</td>
</tr>
<tr>
<td>*CHEM 1140</td>
<td>Chemistry in your Life (recommended for emphasis or choose any course from MnTC Goal Area 3)</td>
<td>3.00</td>
</tr>
<tr>
<td>MUSC 1140</td>
<td>Music of Africa</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 1110</td>
<td>Introduction to Psychology</td>
<td>4.00</td>
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**TOTAL CREDITS:** **16.00**
### Third Semester

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<tr>
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<th>CREDITS</th>
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<tbody>
<tr>
<td>*BIOL 1136</td>
<td>Environmental Science <em>(recommended for emphasis or choose any course from MnTC Goal Area 3 with a lab)</em></td>
<td>3.00</td>
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<tr>
<td>*BIOL 1137</td>
<td>Environmental Science Lab <em>(recommended for emphasis)</em></td>
<td>1.00</td>
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<tr>
<td>**MUSC 1010</td>
<td>American Popular Music 1 <em>(recommended for emphasis)</em></td>
<td>3.00</td>
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<tr>
<td>PSYC 2280</td>
<td>Cross-Cultural Psychology</td>
<td>3.00</td>
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<tr>
<td>**SOCI 2145</td>
<td>American Minority Relations <em>(recommended for emphasis or choose any course from MnTC Goal Area 5 other than Psychology or History)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1163</td>
<td>Mixed Blood Theater</td>
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**TOTAL CREDITS: 14.00**

### Fourth Semester

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<tbody>
<tr>
<td>AMST 1132</td>
<td>Introduction to Ethnic America</td>
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<tr>
<td>**CMST 2012</td>
<td>Intercultural Communication <em>(recommended for emphasis)</em></td>
<td>3.00</td>
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<tr>
<td>ENGL 1162</td>
<td>Introduction to Literature of African Diaspora</td>
<td>3.00</td>
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<tr>
<td>**GLOS 1300</td>
<td>Race and Culture: A Global Perspective <em>(recommended for emphasis)</em></td>
<td>3.00</td>
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<tr>
<td>**MUSC 1020</td>
<td>American Popular Music 2: The History and Development of Rock 'n' Roll <em>(recommended for emphasis)</em></td>
<td>3.00</td>
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<tr>
<td>THTR 1170</td>
<td>Penumbra Theater <em>(recommended for emphasis)</em></td>
<td>1.00</td>
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</table>

**TOTAL CREDITS: 16.00**

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in African Diaspora Studies.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines, and at least one course must include a lab from MnTC Goal Area 3. By taking the *(recommended for emphasis)* courses, these two goal areas will be fulfilled.

**To complete the A.A. with an Emphasis in African Diaspora Studies, students must complete at least three courses from 3 different disciplines in MnTC Goal Areas 5 and 6. By completing the *(recommended for emphasis)* courses, students will satisfy these two MnTC Goal Areas.
### Associate of Arts with an Emphasis in American Indian Studies

**60 Credits**

*Pending MnSCU Approval*

**Recommended Course Sequence**

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

You need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the Associate of Arts with an Emphasis in American Indian Studies.

#### First Semester

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<th>COURSE #</th>
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<td>AMIS 1000</td>
<td>Native America</td>
<td>3.00</td>
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<td>*CMST 2012</td>
<td>Choose any CMST course from MnTC Goal Area 1. (CMST 2012: Intercultural Communication is recommended)</td>
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<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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<tr>
<td>HLTH Course</td>
<td>Choose any course from the Health offerings</td>
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<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
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<tr>
<td>General Education</td>
<td>Choose any MnTC Goal Area 10 course. (WOST 2212: Ecofeminism is recommended)</td>
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**TOTAL CREDITS: 16.00**

#### Second Semester

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<td>ENGL 1111</td>
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<td>Choose one of the courses from the list below</td>
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<tr>
<td>AMIS 1100 Or</td>
<td>Native American Literature</td>
<td>3.00</td>
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<tr>
<td>AMIS 1120 Or</td>
<td>Community Development</td>
<td></td>
</tr>
<tr>
<td>AMIS 1200 Or</td>
<td>Native American Art and Art History</td>
<td></td>
</tr>
<tr>
<td>AMIS 1300 Or</td>
<td>Native Americans in Cinema and Popular Culture</td>
<td></td>
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<tr>
<td>AMIS 1350</td>
<td>Native American Education: Past and Present</td>
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<td>General Education</td>
<td>Choose any MnTC Goal Area 3 course with a lab science</td>
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<td>PSCI 1180</td>
<td>Politics, Media and Community Organizing: Indigenous Understandings and Applications</td>
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**TOTAL CREDITS: 14.00**
### Third Semester

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<td>AMIS 1350 Or</td>
<td>American Indian Education: Past and Present</td>
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<tr>
<td>SOCI 2145</td>
<td>American Minority Relations</td>
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<tr>
<td><strong>AMIS 1120</strong></td>
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<tr>
<td><strong>AMIS 1350</strong></td>
<td>American Indian Education: Past and Present</td>
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<tr>
<td><strong>SOCI 2145</strong></td>
<td>American Minority Relations</td>
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<tr>
<td><strong>DAKO 1900</strong></td>
<td>Dakota Culture and History</td>
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<td><strong>DAKO 1000 Or</strong></td>
<td>Dakota 1</td>
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<tr>
<td><strong>OJIB 1000</strong></td>
<td>Ojibwe 1</td>
<td></td>
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<td>Native American Literature</td>
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<tr>
<td><strong>AMIS 1120 Or</strong></td>
<td>Community Development</td>
<td></td>
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<tr>
<td><strong>AMIS 1200 Or</strong></td>
<td>Native American Art and Art History</td>
<td></td>
</tr>
<tr>
<td><strong>AMIS 1300 Or</strong></td>
<td>Native Americans in Cinema and Popular Culture</td>
<td></td>
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<tr>
<td><strong>AMIS 1350</strong></td>
<td>Native American Education: Past and Present</td>
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<tr>
<td><strong>DAKO 1100 Or</strong></td>
<td>Dakota 2 (recommended) 5.00 credits</td>
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<tr>
<td><strong>OJIB 1100 Or</strong></td>
<td>Ojibwe 2 (recommended) 5.00 credits</td>
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<td><strong>Choose any MnTC Goal Area courses to bring your total credits to 6.00</strong></td>
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**TOTAL CREDITS: 15.00**

### Fourth Semester

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<td>MATH 1140 Or</td>
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<td>MATH 1160 Or</td>
<td>Mathematical Ideas</td>
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<tr>
<td>PHIL 2110</td>
<td>Logic</td>
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<tr>
<td><strong>OJIB 1800</strong></td>
<td>Ojibwe Culture and History</td>
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<tr>
<td><strong>AMIS 1100</strong></td>
<td>Native American Literature</td>
<td></td>
</tr>
<tr>
<td><strong>AMIS 1120 Or</strong></td>
<td>Community Development</td>
<td></td>
</tr>
<tr>
<td><strong>AMIS 1200 Or</strong></td>
<td>Native American Art and Art History</td>
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<td><strong>AMIS 1300 Or</strong></td>
<td>Native Americans in Cinema and Popular Culture</td>
<td></td>
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<tr>
<td><strong>AMIS 1350</strong></td>
<td>Native American Education: Past and Present</td>
<td></td>
</tr>
<tr>
<td><strong>DAKO 1100 Or</strong></td>
<td>Dakota 2 (recommended) 5.00 credits</td>
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</tr>
<tr>
<td><strong>OJIB 1100 Or</strong></td>
<td>Ojibwe 2 (recommended) 5.00 credits</td>
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<tr>
<td><strong>Choose any MnTC Goal Area courses to bring your total credits to 6.00</strong></td>
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**TOTAL CREDITS: 15.00**

Students need to complete the entire 40 credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in American Indian Studies.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines and at least one course must include a lab from MnTC Goal Area 3.

**To complete the A.A. with an Emphasis in American Indian Studies, students must complete at least three courses from 3 different disciplines in MnTC Goal Areas 5 and 6. By completing the recommended for emphasis courses, students will satisfy these two MnTC Goal Areas.
Associate of Arts with an Emphasis in Communication Studies

60 Credits

Recommended Course Sequence
This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

You need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Communication Studies.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>CMST 1005</td>
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</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH Course</td>
<td>Choose any course from the Health offerings</td>
<td>2.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>PHED Course</td>
<td>Choose any course from the Physical Education offerings</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course in MnTC Goal Area 6</td>
<td>3.00</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 14.00

Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course in MnTC Goal Area 4</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course in MnTC Goal Area 5</td>
<td>3.00</td>
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</table>

TOTAL CREDITS: 15.00

Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 2010</td>
<td>Argumentation and Advocacy</td>
<td>3.00</td>
</tr>
<tr>
<td>Choose one of the courses from the list below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMST 1013 Or</td>
<td>Family Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1650 Or</td>
<td>Environmental Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2000 Or</td>
<td>Speaking in the Community</td>
<td></td>
</tr>
<tr>
<td>CMST 2005 Or</td>
<td>Communication and Gender</td>
<td></td>
</tr>
<tr>
<td>CMST 2011 Or</td>
<td>Small Group Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2012 Or</td>
<td>Intercultural Communication (recommended)</td>
<td></td>
</tr>
<tr>
<td>JOUR 1000</td>
<td>Introduction to Mass Communication</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 15.00
### Third Semester Continued

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*General Education</td>
<td>Choose any MnTC Goal Area 3 course</td>
<td>3.00</td>
</tr>
<tr>
<td>**General Education</td>
<td>Choose any MnTC Goal Area 5 course (choose a different discipline)</td>
<td>3.00</td>
</tr>
<tr>
<td>**General Education</td>
<td>Choose any MnTC Goal Area 6 course (choose a different discipline)</td>
<td>3.00</td>
</tr>
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</table>

**Total Credits:** 15.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose two of the courses below that were not taken in the third semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMST 1013 Or</td>
<td>Family Communication</td>
<td>6.00</td>
</tr>
<tr>
<td>CMST 1650 Or</td>
<td>Environmental Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2000 Or</td>
<td>Speaking in the Community</td>
<td></td>
</tr>
<tr>
<td>CMST 2005 Or</td>
<td>Communication and Gender</td>
<td></td>
</tr>
<tr>
<td>CMST 2011 Or</td>
<td>Small Group Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2012 Or</td>
<td>Intercultural Communication (recommended)</td>
<td></td>
</tr>
<tr>
<td>CMST 2011 Or</td>
<td>Introduction to Mass Communication</td>
<td></td>
</tr>
<tr>
<td>*General Education</td>
<td>Choose any MnTC Goal Area 3 course with a lab and it must be a different discipline than the MnTC Goal Area 3 course taken in third semester</td>
<td>4.00</td>
</tr>
<tr>
<td>**General Education</td>
<td>Choose any MnTC Goal Area 5 course (choose a different discipline)</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>If CMST 2012 and CMST 2005 were not taken you will need to take a course that meets MnTC Goal Area 7 and MnTC Goal Area 8 to satisfy the degree requirements</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Total Credits:** 16.00

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Communication Studies.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines, and at least one course must include a lab from MnTC Goal Area 3.

**To complete the A.A. with an Emphasis in Communication Studies, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6.
Associate of Arts with an Emphasis in Creative Writing  

60 Credits

Recommended Course Sequence

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

By completing the recommended for emphasis courses, you will complete the necessary requirements for the A.A. with an Emphasis in Creative Writing and the entire Minnesota Transfer Curriculum.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CMST</strong> 1000</td>
<td>Introduction to Communication Studies <em>(recommended for emphasis or choose any course from the CMST offerings)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 1132</td>
<td>Managing Stress, Managing Life <em>(recommended for emphasis or choose any 2.00 credit course from Health offerings)</em></td>
<td>2.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>MATH</strong> 1160</td>
<td>Mathematical Ideas <em>(recommended for emphasis or choose any course from MnTC Goal Area 4)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>PHED 1101</td>
<td>Archery <em>(recommended for emphasis or choose any course from the Physical Education offerings)</em></td>
<td>1.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 14.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANTH</strong> 1104</td>
<td>Human Origins <em>(recommended for emphasis or choose any course from MnTC Goal Area 5 other than Sociology or Women’s Studies)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1151</td>
<td>Introduction to Literature: Short Story</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1152</td>
<td>Introduction to Literature: Novel</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1153</td>
<td>Introduction to Literature: Poetry</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1154</td>
<td>Introduction to Literature: Drama</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**English Electives:** Students must take three of the English writing courses to complete the degree. *(Recommended: students take at least one of these courses in semester 2, 3 and 4)*

| ENGL 2212 | Introduction to Creative Nonfiction Writing | 3.00 |
| ENGL 2213 | Introduction to Creative Writing | 3.00 |
| ENGL 2214 | Introduction to Writing Poetry | 3.00 |
| ENGL 2215 | Introduction to Writing Fiction | 3.00 |
| *GEOL 1120 | Physical Geology *(recommended for emphasis or choose any course from MnTC Goal Area 3)* | 3.00 |
| *GEOL 1130 | Physical Geology lab | 1.00 |

**TOTAL CREDITS: 16.00**
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1136</td>
<td>Environmental Science <em>(recommended for emphasis)</em></td>
<td>3.00</td>
</tr>
</tbody>
</table>

**English Electives:** Students must take three of the English writing courses to complete the degree. *(Recommended: students take at least one of these courses in semester 2, 3 and 4)*

| ENGL 2213 Or | Introduction to Creative Writing | 3.00 |
| ENGL 2212 Or | Introduction to Creative Nonfiction Writing | 3.00 |
| ENGL 2214 Or | Introduction to Writing Poetry | 3.00 |
| ENGL 2215 | Introduction to Writing Fiction | 3.00 |

| ENGL Literature Elective | Take any of the 2XXX level Literature courses | 3.00 |

**SOCI 2145**

American Minority Relations Origins *(recommended for emphasis)* or choose any course from MnTC Goal Area 5 other than Anthropology or Women's Studies

**WOST 1101**

Introduction to Women’s Studies *(recommended for emphasis)* or choose any course that meets both MnTC Goal Areas 5 and 9

**TOTAL CREDITS: 15.00**

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AMST 1155</strong></td>
<td>Culture vs. Counterculture <em>(recommended for emphasis)</em> or choose any course that meets both MnTC Goal Area 6 and 8</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>CIST 1101</strong></td>
<td>Cinema History 1 <em>(recommended for emphasis)</em> or choose any course that meets MnTC other than AMST and WOST</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**English Electives:** Students must take three of the English writing courses to complete the degree. *(Recommended: students take at least one of these courses in semester 2, 3 and 4)*

| ENGL 2213 Or | Introduction to Creative Writing | 3.00 |
| ENGL 2212 Or | Introduction to Creative Nonfiction Writing | 3.00 |
| ENGL 2214 Or | Introduction to Writing Poetry | 3.00 |
| ENGL 2215 | Introduction to Writing Fiction | 3.00 |

| ENGL Literature Elective | Take any of the 2XXX level Literature courses | 3.00 |

| General Education | Choose courses from any of the MnTC Goal Areas to bring credit total to 60. | 3.00 |

**TOTAL CREDITS: 15.00**

Students need to complete the entire 40 credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Creative Writing.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines, and at least one course must include a lab from MnTC Goal Area 3. By taking the *(recommended for emphasis)* courses, these two Goal Areas will be fulfilled.

**To complete the A.A. with an Emphasis in Creative Writing, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By completing the *(recommended for emphasis)* courses, students will satisfy these two MnTC Goal Areas.
## Associate of Arts with an Emphasis in Education

**60 Credits**

*Pending MnSCU Approval*

### Recommended Course Sequence

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

You need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Education.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1400</td>
<td>Technology for Educators</td>
<td>2.00</td>
</tr>
<tr>
<td>EDUC 1500</td>
<td>Introduction to Education and Reflective Practice</td>
<td>3.00</td>
</tr>
<tr>
<td>AMIS 1350</td>
<td>American Indian Education: Past and Present</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1005</td>
<td>Public Speaking</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>INF 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
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</table>

**TOTAL CREDITS:** **16.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1100 Or</td>
<td>Introduction to Biology (4.00 credits/lab science)</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 1120 Or</td>
<td>Biology of Women (3.00 credits)</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1160</td>
<td>Biology of Women (recommended for emphasis) or choose any course from MnTC Goal Area 3</td>
<td></td>
</tr>
</tbody>
</table>

| ECED 1215 Or | Growth and Development for Educators (recommended for emphasis). | 3.00–4.00 |
| PSYC 1100   | Applying Psychology (4.00 credits)                                  |         |
| EDUC Elective | Choose any courses from any of the EDUC courses other than EDUC 1400, EDUC 1500, EDUC 2350 or EDUC 2650. | 3.00    |
| ENGL 1111   | College English 2                                                   | 3.00    |

**TOTAL CREDITS:** **15.00–16.00**
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*CHEM 1140</td>
<td>Chemistry in Your Life (<em>recommended for emphasis</em> or choose any course from MnTC Goal Area 3) Choose a different discipline.</td>
<td>4.00</td>
</tr>
<tr>
<td>EDUC 2350</td>
<td>Introduction to Pedagogical Practices</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1161</td>
<td>Children’s Literature</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 2255</td>
<td>Effects of Drugs on Children and Adolescent Health</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 2350</td>
<td>Introduction to Educational Psychology</td>
<td>4.00</td>
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</table>

**TOTAL CREDITS:** 17.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>EDUC 2650</td>
<td>Education Capstone and Field Work</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1165</td>
<td>Math for Teachers</td>
<td>4.00</td>
</tr>
<tr>
<td>PHED 1100</td>
<td>Foundations of Fitness and Health or choose any course from the Physical Education offerings</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>THTR 1161</strong> Or <strong>THTR 1162</strong> Or <strong>THTR 1163</strong> Or <strong>THTR 1164</strong></td>
<td>Guthrie Theater, Children’s theater Company, Mixed Blood Theater, Theater in the Round (<em>recommended for emphasis</em> or choose any course that meets MnTC Goal Area 6)</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>PHIL 2171</strong></td>
<td>Environmental Ethics (<em>recommended for emphasis</em> or choose any course that meets MnTC Goal Areas 6 and 10.</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 12.00 or 15.00

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Education.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines, and at least one course must include a lab science from MnTC Goal Area 3.

**To complete the A.A. with an Emphasis in Education, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By completing the *recommended for emphasis* courses you will fulfill both of these goal areas and the entire Minnesota Transfer Curriculum.
Associate of Arts with an Emphasis in Global Studies

60 Credits

Pending MnSCU Approval

Recommended Course Sequence

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Global Studies.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>GLOS 1500</td>
<td>Introduction to Global Studies</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any MnTC Goal Area 5 course other than ANTH, GLOS or PSCI</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH Course</td>
<td>Choose any MnTC Goal Area 4 course</td>
<td>3.00–4.00</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 14.00–15.00

Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication or choose any CMST course that meets MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
<tr>
<td>GLOS 1300 Or GLOS 1190</td>
<td>Race and Culture: A Global Perspective World Religions</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 2171 Or WOST 2211</td>
<td>Environmental Ethics Ecofeminism</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any MnTC Goal Area 7 course</td>
<td>3.00</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 15.00

Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1136</td>
<td>Environmental Science</td>
<td>3.00</td>
</tr>
<tr>
<td>*BIOL 1137</td>
<td>Environmental Science Lab</td>
<td>1.00</td>
</tr>
<tr>
<td>HLTH Course</td>
<td>Choose any course from the Health offerings. (HLTH 2210: Infectious Diseases: An Application to Everyday Life is recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1110</td>
<td>Introduction to Political Science</td>
<td>3.00</td>
</tr>
</tbody>
</table>
### Third Semester Continued

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education: Global Studies Elective</strong></td>
<td>Choose one GLOS course other than the GLOS course taken in second semester or Choose one course from any of these disciplines AMSL, ARAB, CHIN, DAKO, FREN, JAPN, OJIB or SPAN</td>
<td>3.00–5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 16.00–18.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2105</td>
<td>Globalization and Culture Change</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC 3 other than BIOL</td>
<td>4.00</td>
</tr>
<tr>
<td>PHED</td>
<td>Choose any course from the PHED offerings</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any MnTC Goal Area 6 course other than GLOS. It must also be a different discipline from your second semester choice between PHIL 2171 or WOST 2211. Example: If you took PHIL 2171, choose a different discipline. If you took WOST 2211, choose a different discipline.</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>Choose courses from any of the MnTC Goal Areas to bring credit total to 60.</td>
<td>1.00–4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 12.00–16.00

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Global Studies.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines and at least one course must include a lab science from MnTC Goal Area 3.

**To complete the A.A. with an Emphasis in Global Studies, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6.
## Associate of Arts with an Emphasis in Philosophy

### 60 Credits

#### Recommended Course Sequence

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Philosophy.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1005</td>
<td>Public Speaking</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>PHIL 1115</td>
<td>Introduction to Philosophy</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course from MnTC Goal Area 5. (PSYC 1110: Introduction to Psychology is recommended)</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any MnTC Goal Area 9 course. (GLOS 1190 World Religions is recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td><em>General Education</em>*</td>
<td>Choose any MnTC Goal Area 3 course with a lab science. (GEOL 1140: Historical Geology and GEOL 1150 lab is recommended)</td>
<td>4.00</td>
</tr>
<tr>
<td>HLTH Course</td>
<td>Choose any course from the Health offerings. (HLTH 1140: Grief, Loss and Growth is recommended)</td>
<td>2.00</td>
</tr>
<tr>
<td>PHIL 1171</td>
<td>Ethics</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>General Education</em>*</td>
<td>Choose any MnTC Goal Area 3 course. You must choose a different discipline. (BIOL 1136 and BIOL 1137 Environmental Science is recommended)</td>
<td>4.00</td>
</tr>
<tr>
<td>ENGL 1157</td>
<td>Choose any MnTC Goal Area course that meets MnTC 6 and 7. (ENGL 1157: Cross Cultural Literature is recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 1110 Or PHIL 2110</td>
<td>Critical Thinking Logic (recommended since this completes Goal Area 4.) If you do not choose PHIL 2110, you need to choose another course from MnTC Goal Area 4.</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**
### Third Semester Continued

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course that meets MnTC Goal Areas 5 and 8. (PSCI 1110: Introduction to Political Science is recommended for emphasis)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course that meets MnTC 5 other than a PSCI or PSYC course. (HIST 1210: European History Since 1500: The Age of Global Contact to the Present is recommended for emphasis)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>PHED</strong></td>
<td>Choose any Physical Education course from the PHED offerings. (PHED 1109: Beginning T'ai Chi is recommended for emphasis)</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Choose **two** of the courses from the list below that was not taken in the second and third semester.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOS 1190 Or</td>
<td>World Religions</td>
<td>6.00</td>
</tr>
<tr>
<td>PHIL 1110 Or</td>
<td>Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>PHIL 1130 Or</td>
<td>African American Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 2110 Or</td>
<td>Logic</td>
<td></td>
</tr>
<tr>
<td>PHIL 2115 Or</td>
<td>Medical Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL 2121 Or</td>
<td>Environmental Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL 2181 Or</td>
<td>Social Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL 2215 Or</td>
<td>Feminist Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 1172</td>
<td>Topics in Contemporary Philosophy</td>
<td></td>
</tr>
</tbody>
</table>

**Total General Education** | Choose courses from any of the MnTC Goal Areas to bring credit total to 60 | 4.00 |

**TOTAL CREDITS: 14.00**

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Philosophy.

* MnTC Goal Area 3: Student must complete at least two courses from two different disciplines, and at least one course must include a lab science from MnTC Goal Area 3. By completing the recommended courses for this emphasis, these two goal areas will be fulfilled.

**To complete the A.A. with an Emphasis in Philosophy, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By completing the recommended courses, students will satisfy these two MnTC Goal Areas.**
**Associate of Arts with an Emphasis in Psychology**

**60 Credits**

*Pending MnSCU Approval*

**Recommended Course Sequence**

This award is designed to ease transfer and help you earn a four-year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with an Emphasis in Psychology.

### First Semester

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<tr>
<th>COURSE #</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>INF 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>MATH 1140 Or MATH 1145</td>
<td>Introductory Statistics (3.00 credits) Statway 2 (4.00 credits) (You must take MATH 0145 Statway 1 in order to take Statway 2.)</td>
<td>3.00 Or 4.00</td>
</tr>
<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>GLOS 1121</strong></td>
<td>World Cultures 1 (recommended for emphasis or choose any course that meets both MnTC Goal Area 6 and 8)</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS:** 15.00 or 16.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1100 Or BIOL 1120 Or BIOL 1160</td>
<td>Introduction to Biology (4.00 credits) Nutrition (3.00 credits) Biology of Women (3.00 credits) (recommended for emphasis or choose any course from MnTC Goal Area 3)</td>
<td>4.00 Or 3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 1132</td>
<td>Managing Stress, Managing Life (recommended for emphasis or choose any 2.00-credit course from Health offerings)</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>PSCI 1104</strong></td>
<td>World Politics (recommended for emphasis or choose any MnTC Goal Area 5 course)</td>
<td>3.00</td>
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</tbody>
</table>

Choose one of the courses from the list below.

<table>
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<tr>
<th>COURSE #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1100 Or PSYC 2215 Or PSYC 2240 Or PSYC 2250 Or PSYC 2260 Or PSYC 2275 Or PSYC 2280</td>
<td>Applying Psychology (3.00 credits) Child and Adolescent Psychology (3.00 credits) Lifespan Development (4.00 credits) Abnormal Psychology (3.00 credits) Social Psychology (3.00 credits) Positive Psychology: The Study of Happiness and Well-Being (3.00 credits) Cross-Cultural Psychology (4.00 credits)</td>
<td>3.00–4.00</td>
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</table>

**TOTAL CREDITS:** 14.00–16.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication or choose any of CMST courses that satisfies MnTC Goal Area 1.</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Choose two of the courses from the list below that were not taken in the second semester.

| PSYC 1100 Or | Applying Psychology (3.00 credits) | 6.00–8.00 |
| PSYC 2215 Or | Child and Adolescent Psychology (3.00 credits) | |
| PSYC 2240 Or | Lifespan Development (4.00 credits) | |
| PSYC 2250 Or | Abnormal Psychology (3.00 credits) | |
| PSYC 2260 Or | Social Psychology (3.00 credits) | |
| PSYC 2275 Or | Positive Psychology: The Study of Happiness and Well-Being (3.00 credits) | |
| PSYC 2280   | Cross-Cultural Psychology (4.00 credits) | |
| *CHEM 1140  | Chemistry in Your Life (recommended for emphasis or choose any course from MnTC Goal Area 3. Choose a different discipline) | 4.00 |
| **SOCI 1105 | Introduction to Sociology (recommended for emphasis or choose any course from MnTC Goal Areas 5 and 7) | 3.00 |

**TOTAL CREDITS:** 16.00–18.00
### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>Choose one of the courses from the list below that were not taken in the second semester.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSYC 1100 Or</td>
<td>Applying Psychology (3.00 credits)</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 2215 Or</td>
<td>Child and Adolescent Psychology (3.00 credits)</td>
<td>Or 4.00</td>
</tr>
<tr>
<td>PSYC 2240 Or</td>
<td>Lifespan Development (4.00 credits)</td>
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</tr>
<tr>
<td>PSYC 2250 Or</td>
<td>Abnormal Psychology (3.00 credits)</td>
<td></td>
</tr>
<tr>
<td>PSYC 2260 Or</td>
<td>Social Psychology (3.00 credits)</td>
<td></td>
</tr>
<tr>
<td>PSYC 2275 Or</td>
<td>Positive Psychology: The Study of Happiness and Well-Being (3.00 credits)</td>
<td></td>
</tr>
<tr>
<td>PSYC 2280</td>
<td>Cross-Cultural Psychology (4.00 credits)</td>
<td></td>
</tr>
<tr>
<td>PHED 1100</td>
<td>Foundations of Fitness and Health or choose any course from the Physical Education offerings</td>
<td>1.00</td>
</tr>
<tr>
<td>**PHIL 1171</td>
<td>Ethics (recommended for emphasis or choose any course that meets both MnTC Goal Area 6 and 9)</td>
<td>3.00</td>
</tr>
<tr>
<td>**ENGL 1150 Or</td>
<td>Literature and the Environment</td>
<td>3.00</td>
</tr>
<tr>
<td>**WOST 2212</td>
<td>Ecofeminism (Either is recommended for emphasis or choose any course from MnTC Goal Area 6). Both of these courses satisfy MnTC Goal Areas 6 and 10.</td>
<td></td>
</tr>
<tr>
<td>***General Education</td>
<td>Choose courses from any of the MnTC Goal Areas to bring credit total to 60.</td>
<td>1.00–5.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS: 11.00–16.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the A.A. with and Emphasis in Psychology.

* MnTC Goal Area 3: Students must complete at least two courses from two different disciplines, and at least one course must include a lab science from MnTC Goal Area 3.

**To complete the A.A. with an Emphasis in Psychology, students must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By taking the recommended for emphasis courses, students will fulfill both of these Goal Areas.

*** By completing the recommended for emphasis courses, students will complete the necessary requirements for the A.A. with an Emphasis in Psychology and the entire Minnesota Transfer Curriculum.
Accounting

What You Will Learn
MCTC’s Accounting programs will prepare you to use software to document original transactions and maintain records such as bank accounts, merchandise inventories, accounts receivable, accounts payable, and payroll for various organizations.

The program offers three certificate credentials and an Accounting Technician A.A.S. degree. The certificate coursework will introduce you to the principles of accounting, business communication, problem-solving and accounting math.

The A.A.S. coursework will include the additional topics of managerial accounting, critical thinking, intermediate accounting, and interpretation and analysis of financial information.

You will have the opportunity to learn journal entry preparation, financial statement preparation, computerized accounting systems using Peachtree and QuickBooks software, and electronic spreadsheets using Microsoft Excel. You also will learn 10-key operation by touch.

Experienced instructors will assign you real-world accounting challenges to resolve and will encourage you to work in teams, similar to those formed in the workplace.

The Accounting Clerk program is the first level in the program; all Accounting Clerk coursework applies toward the more advanced Accounting Technician program.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Awards or Credentials You Could Earn

- Accounting Technician A.A.S. Degree—60 credits
- Accounting Clerk Certificate—29 credits
- Accounts Payable/Receivable Certificate—16 credits
- Payroll Accounting Certificate—14 credits

Where You Could Work

- Small and medium-sized businesses
- Government agencies
- Nonprofit organizations
Accounting Technician A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. Students will meet with their assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, students can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700. Not all courses are offered every semester.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1215</td>
<td>Accounting Cycle</td>
<td>1.00</td>
</tr>
<tr>
<td>ACCT 1222</td>
<td>Business Math</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1140</td>
<td>Introduction to Business</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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</tbody>
</table>

**TOTAL CREDITS:** 14.00

**Second Semester**

<table>
<thead>
<tr>
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<th>CREDITS</th>
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<tbody>
<tr>
<td>ACCT 1230</td>
<td>Payroll Accounting</td>
<td>3.00</td>
</tr>
<tr>
<td>ACCT 1261</td>
<td>Spreadsheets for Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>ACCT 1272</td>
<td>Computerized Accounting–Peachtree</td>
<td>2.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1154 or BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

**Third Semester**

<table>
<thead>
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<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ACCT 1270</td>
<td>Computerized Accounting–QuickBooks</td>
<td>2.00</td>
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<tr>
<td>ACCT 2230</td>
<td>Intermediate Accounting 1</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2224</td>
<td>Managerial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from any of the MnTC Goal Areas</td>
<td>3.00</td>
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**TOTAL CREDITS:** 16.00
### Fourth Semester

<table>
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<tbody>
<tr>
<td>ACCT 1280</td>
<td>Income Tax</td>
<td>3.00</td>
</tr>
<tr>
<td>ACCT 2240</td>
<td>Intermediate Accounting 2</td>
<td>4.00</td>
</tr>
<tr>
<td>ACCT 2295</td>
<td>Accounting Technical Review</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Recommended Business and/or General Education Electives:** Choose three credits from the list below or choose any ACCT or BUSN course that is not already part of the required courses.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1142 Or</td>
<td>Principles of Marketing</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2252 Or</td>
<td>Principles of Management</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2260 Or</td>
<td>Legal Environment of Business</td>
<td>4.00</td>
</tr>
<tr>
<td>ECON 2000 Or</td>
<td>Principles of Macroeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 2200 Or</td>
<td>Principles of Microeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>College Algebra</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**General Education Electives (15 Credits):**

The Accounting Technician A.A.S. degree requires that students successfully complete CMST 1010 and ENGL 1110 (MnTC Goal Area 1) as listed. Nine additional credits of General Education coursework are required from at least two other MnTC Goal Areas, with a minimum of three credits from Goal Areas 7, 8, 9 or 10.
Accounting Clerk Certificate

29 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<tr>
<th>COURSE #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1215</td>
<td>Accounting Cycle</td>
<td>1.00</td>
</tr>
<tr>
<td>ACCT 1222</td>
<td>Business Math</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
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</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00

**Second Semester**

<table>
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<tbody>
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<td>Spreadsheets for Accounting</td>
<td>4.00</td>
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<td>Computerized Accounting–QuickBooks</td>
<td>2.00</td>
</tr>
<tr>
<td>ACCT 1272</td>
<td>Computerized Accounting–Peachtree</td>
<td></td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

**General Education Electives (6 Credits)**

The Accounting Clerk Certificate requires that students successfully complete ENGL 1110 and CMST 1010 as listed above.
Accounts Payable/Receivable Certificate

16 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>Business Math</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communications</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong> 14.00</td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1270 Or ACCT 1272</td>
<td>Computerized Accounting—QuickBooks Computerized Accounting—Peachtree</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong> 2.00</td>
<td></td>
</tr>
</tbody>
</table>

**General Education Electives (3 Credits):**

The Accounts Payable/Receivable Certificate requires that students successfully complete CMST 1010 as listed above.
Payroll Accounting Certificate

14 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Not all courses are offered every semester.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 1215</td>
<td>Accounting Cycle</td>
<td>1.00</td>
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<tr>
<td>ACCT 1230</td>
<td>Payroll Accounting</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communications</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Total Credits:** 14.00

General Education Electives (3 Credits)

The Payroll Accounting Certificate requires that students successfully complete CMST 1010 as listed above.
Addiction Counseling

Admission Requirements

*NOTE: As of July 1, 2008, minimum qualifications for licensure have changed. Bachelor’s degrees in any field and MCTC diploma requirements will be required for permit licensure. An associate degree in Addiction Counseling will allow graduates to apply for a temporary permit to work in the field for no more than five years until a bachelor’s degree is obtained.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

**The Addiction Counseling Program requires:**

- Grades of “C” (2.0) or above in all COUN theory courses
- Pass (P) grades in the in the practicum courses
- Passing of a criminal background check prior to being placed in a COUN internship

The College cannot guarantee placement in practicums for students who do not have a clear criminal background check. If you have questions about your eligibility, please consult an Addiction Counseling instructor before beginning the program or, at the latest, when beginning COUN 2510: Introduction to Addictionology.

For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services, at 651-296-3802.

**Awards or Credentials You Could Earn**

- Addiction Counseling A.S. Degree—60 credits
- Addiction Counseling Diploma—36 credits
Addiction Counseling A.S. Degree

**60 Credits**

This A.S. degree is designed for persons without a degree.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

**Recommended Course Sequence**

First semester students should meet with Addiction Counseling faculty for program courses and Advising staff for MnTC general education credits.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2510</td>
<td>Introduction to Addictionology</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2520</td>
<td>Psychopharmacology</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2540</td>
<td>Multicultural Counseling Skills</td>
<td>4.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>4.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 17.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2620</td>
<td>Assessment and Interviewing</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2630</td>
<td>Case Management and Legal and Ethical Standards</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2640</td>
<td>Group Counseling</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2650</td>
<td>Practicum Assessment and Preparation</td>
<td>1.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 1171</td>
<td>Ethics</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 16.00

### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>COUN 2730</td>
<td>Addiction Counseling Group Practicum 1</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas other than MnTC Goal Areas 1 and 7</td>
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**TOTAL CREDITS:** 14.00
Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2830</td>
<td>Addiction Counseling Group Practicum 2</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>8.00</td>
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</table>

**TOTAL CREDITS: 13.00**

**General Education Courses (30 Credits)**

To complete the Addiction Counseling A.S. degree, students are required to complete 30 credits of General Education coursework. This coursework must be selected from at least six of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are ENGL 1110 and ENGL 1111, which satisfy Goal Area 1, and PHIL 1171 which satisfies Goal Area 7.
Addiction Counseling Diploma

36 Credits

This Diploma is designed for persons that already have an advanced degree. Passing a criminal background check is required prior to practicum placement. The College cannot guarantee placement in practicums for students who do not have a clear criminal background check.

For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services, at 651-296-3802.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

First semester students should meet with Addiction Counseling faculty for program courses and Advising staff for MnTC general education credits.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2510</td>
<td>Introduction to Addictionology</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2520</td>
<td>Psychopharmacology</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2540</td>
<td>Multicultural Counseling Skills</td>
<td>4.00</td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>10.00</strong></td>
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**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>COUN 2620</td>
<td>Assessment and Interviewing</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2630</td>
<td>Case Management and Legal and Ethical Standards</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2640</td>
<td>Group Counseling</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 2650</td>
<td>Practicum Assessment and Preparation</td>
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<td><strong>10.00</strong></td>
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**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2730</td>
<td>Addiction Counseling Group Practicum 1</td>
<td>5.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1 (Recommended or choose any course from MnTC Goal Area 1)</td>
<td>3.00</td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>8.00</strong></td>
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### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 2830</td>
<td>Addiction Counseling Group Practicum 2</td>
<td>5.00</td>
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<tr>
<td>General Education</td>
<td>Choose a course from any of the MnTC Goal Areas</td>
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</table>

**TOTAL CREDITS:** 8.00

**General Education Courses (6 Credits):**

To complete the Addiction Counseling Diploma, students are required to successfully complete six credits of general education coursework. You can request transfer of advanced degree general education courses to satisfy these credits. This coursework must be selected from at least two of the MnTC goal areas. A minimum of three credits must be completed from MnTC Goal Area 1.
Air Traffic Control

What You Will Learn
MCTC’s Air Traffic Control Training program will prepare you in skills related to the aviation industry and to meet minimum standards for eligibility to enter the Federal Aviation Administration (FAA) air traffic control career field. You will start by learning basic aviation terms and how weather conditions are applied and interpreted in the aviation environment. Additional coursework will teach you to use the necessary rules and procedures to direct the safe, orderly and expeditious flow of air traffic in the different air traffic facilities in the National Airspace System, including terminal and en route center environment. You will study valuable human factors related to the career field and learn individual and group problem-solving techniques during complex air traffic control exercises. These will enable you to make sound decisions no matter what the situation. You will receive extensive hands-on training to operate the computer and radar system in use today by the National Airspace System.

MCTC’s three-semester program is an FAA-approved Collegiate Training Initiative (CTI) program specifically designed to offer students foundational air traffic control training and general aviation education.

Graduates of this program must meet FAA requirements, be U.S. citizens, meet the FAA age restriction and provide proof of meeting FAA ATCS medical standards (e.g. Class II medical certificate). FAA requires all students to take and receive a satisfactory score on the FAA pre-employment examination, pass a security background screen and obtain a College advisor’s recommendation.

Admission Requirements
Courses in this program require achievement of the following program admission requirements:

- **Reading:** To enroll in these program courses, students must have successfully completed READ 1300 on the basis of their reading placement test scores.
- **Writing:** To enroll in these program courses, students must have successfully completed of ENGL 1110 or MnTC Goal Area 1.
- **Math:** To enroll in these program courses, students must have successful completion of MATH 1110 or another MnTC Goal Area 4 course.

How to Apply
For detailed information, visit www.minneapolis.edu/airtrafficcontrol/ or call 1-800-475-2828. In addition to College/ATC applications, program assessment is required.

Students entering the in-residence program (one year duration) must meet the following requirements: (1) They must take the air traffic control Aptitude Test and score 40 or higher (see program admissions for details); and (2) They must have completed the following online aviation courses from MCTC or approved courses from another accredited institution.

- Introduction to ATC—3 credits;
- Introduction to Aviation Weather—3 credits; and
- Aviation Knowledge—3 credits
- Aviation Law—3 credits

Transfer students with a B.S./B.A. degree must meet the 18 General Education credit requirement.

For complete program entry requirements, visit www.minneapolis.edu/airtrafficcontrol/.

Awards or Credentials You Could Earn

- Air Traffic Control A.A.S. Degree—60 credits

Where You Could Work

- Government and military aviation facilities
- Airports
- Regional and major airlines
Air Traffic Control A.A.S. Degree

60 Credits

All courses must be completed with a grade of “C” or better.

Courses in these programs require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Completion of READ 1300 on the basis of Reading placement test scores.

- **WRITING**—one of the following:
  - Completion of ENGL 1110
  - Completion of MnTC Goal Area 1

- **MATH**—one of the following:
  - Completion of MATH 1110
  - Completion of another MnTC Goal Area 4 course

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General Education</td>
<td>MnTC Goal Area 1 (ENGL 1110 is Recommended)</td>
</tr>
<tr>
<td></td>
<td>General Education</td>
<td>MnTC Goal Area 4 (MATH 1110 is Recommended)</td>
</tr>
<tr>
<td></td>
<td>General Education</td>
<td>Choose courses from MnTC Goal Areas 7, 8, 9 or 10</td>
</tr>
<tr>
<td></td>
<td>General Education</td>
<td>Choose a course from any MnTC Goal Areas (CMST 2012 or PHIL 1110 is Recommended)</td>
</tr>
<tr>
<td>Elective</td>
<td>Recommend (*COML 1100)</td>
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<td><strong>TOTAL CREDITS:</strong></td>
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**Second Semester**

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<tbody>
<tr>
<td>ATCT 2000</td>
<td>Introduction to Air Traffic Control</td>
<td>3.00</td>
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<tr>
<td>ATCT 2100</td>
<td>Introduction to Aviation Weather</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2110</td>
<td>Aviation Knowledge</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2135</td>
<td>Aviation Law</td>
<td>3.00</td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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**Third Semester**

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<tbody>
<tr>
<td>ATCT 2120</td>
<td>Basic Navigation/Flight Operations</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2310</td>
<td>Principles of En Route Non-Radar</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2350</td>
<td>Principles of Terminal ATC</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>9.00</strong></td>
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### Fourth Semester

<table>
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<tbody>
<tr>
<td>ATCT 2415</td>
<td>ATC Computers and Flight Data</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2425</td>
<td>Application of En Route Non-Radar</td>
<td>6.00</td>
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<tr>
<td>ATCT 2355</td>
<td>Advanced Terminal ATC</td>
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**TOTAL CREDITS: 12.00**

### Fifth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>ATCT 2445</td>
<td>Human Factors in ATC</td>
<td>3.00</td>
</tr>
<tr>
<td>ATCT 2500</td>
<td>Advanced Radar and Radar Associate Application</td>
<td>9.00</td>
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**TOTAL CREDITS: 12.00**

### General Education Courses (18 Credits)

Students must successfully complete or transfer 18 credits of General Education coursework. Coursework must be selected from at least three of the MnTC goal areas. A minimum of three credits must be completed from both MnTC Goal Areas 1 and 4 and three credits from MnTC Goal Areas 7, 8, 9 or 10.

Recommended courses meeting the stated goal area requirements:

- Three credits from MnTC Goal Area 1—ENGL 1110 (3 credits)
- Three credits from MnTC Goal Area 4—MATH 1110 (4 credits)
- Three credits from MnTC Goal Area 7, 8, 9, or 10, with the following recommended:
  - CMST 2012 Intercultural Communication—3 credits
  - PHIL 1110 Critical Thinking Skills—3 credits
  - *COML 1100 Computer Literacy Basics with Keyboarding—2 credits (is also recommended, but does NOT meet a General Education requirement).
American Indian Studies

What You Will Learn
A certificate in American Indian Studies offers an academic award for students interested in a concentrated study of the historical and contemporary issues of Native American peoples and cultures. These courses can satisfy a number of lower-division courses for students interested in going on to a four-year major or minor program in American Indian Studies.

Awards or Credentials You Could Earn
- American Indian Studies Certificate—12 credits

Where You Could Work
- Nonprofit agencies
- Social service centers
- Advocacy groups
- Cultural resource organizations
American Indian Studies Certificate

12 Credits

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Required Course

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIS 1000</td>
<td>Native America</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 3.00**

Elective Courses

Students should choose any nine credits from the courses listed below.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIS 1100</td>
<td>Native American Literature</td>
<td>3.00</td>
</tr>
<tr>
<td>AMIS 1120</td>
<td>Community Development and Indigenous Cultures</td>
<td>3.00</td>
</tr>
<tr>
<td>AMIS 1200</td>
<td>Native American Art and Art History</td>
<td>3.00</td>
</tr>
<tr>
<td>AMIS 1300</td>
<td>Native Americans in Cinema and Popular Culture</td>
<td>3.00</td>
</tr>
<tr>
<td>DAKO 1000</td>
<td>Dakota 1</td>
<td>5.00</td>
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<td>DAKO 1100</td>
<td>Dakota 2</td>
<td>5.00</td>
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<td>DAKO 1900</td>
<td>Dakota Culture and History</td>
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<td>OJIB 1000</td>
<td>Ojibwe 1</td>
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<td>OJIB 1100</td>
<td>Ojibwe 2</td>
<td>5.00</td>
</tr>
<tr>
<td>OJIB 1800</td>
<td>Ojibwe Culture and History</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 9.00**
Apparel Technologies

What You Will Learn
MCTC’s Apparel Technologies program prepares you to produce a finished, professional garment from pattern to final product.

Program coursework covers apparel design, using both traditional pattern-making and computer-aided design methods, development, and grading. Standard industry software is used to automate the design process. You will learn industrial sewing methods and study textiles, product development, the sewn-goods manufacturing process, alteration techniques, and proper garment fit and proportion.

The Apparel Technologies Advanced Certificate is designed for students desiring advanced skills. To be eligible to take these advanced courses, students must have completed the Apparel Technologies diploma or have industrial experience as determined by an Apparel Technologies faculty member.

MCTC’s program—the only one in the state—provides extensive hands-on training by industry-experienced instructors. You will gain a sense of personal accomplishment with the completion of each garment.

You will need good eyesight and good hand-eye coordination to successfully participate in this program. You must purchase sewing and drafting tool kits, fabrics and notions for class projects, as well as pattern paper.

Admission Requirements
Students are accepted into this program both fall and spring semesters.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Awards or Credentials You Could Earn

- Apparel Technologies Diploma—32 credits
- Apparel Technologies Advanced Certificate—14 credits

Where You Could Work

- Small to mid-sized apparel and sewn-product manufacturers
- Alteration, bridal and tailor shops
- Theaters and costume houses
- Technical specifications and pattern-making facilities or departments of corporations
Apparel Technologies Diploma

32 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRL 1000</td>
<td>Industrial Sewing Methods</td>
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<tr>
<td>APRL 1100</td>
<td>Textiles</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 1025</td>
<td>Fashion Imaging</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 1360</td>
<td>Pattern Development 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication Studies</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRL 1400</td>
<td>Garment Construction</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 2015</td>
<td>Knitwear</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 2150</td>
<td>Computer Aided Design</td>
<td>4.00</td>
</tr>
<tr>
<td>APRL 2350</td>
<td>Pattern Development 2</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 2750</td>
<td>Product Development and Manufacturing</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Total Credits: 16.00**

**General Education Courses (3 Credits)**

Students must successfully complete three credits of General Education coursework. CMST 1000 is required and satisfies Goal Area 1.
Advanced Apparel Technologies Certificate

14 Credits

To be admitted to the Apparel Technologies Advanced Certificate, you must have completed the Apparel Technologies Diploma or have the approval of an Apparel Technologies faculty member.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRL 1660</td>
<td>Fitting Analysis and Applications</td>
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</tr>
<tr>
<td>APRL 1800</td>
<td>Draping and Pattern Construction</td>
<td>4.00</td>
</tr>
<tr>
<td>APRL 2420</td>
<td>Advanced Garment Construction</td>
<td>3.00</td>
</tr>
<tr>
<td>APRL 2550</td>
<td>Clothing Line Design</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00
Architectural Technology

What You Will Learn
MCTC’s Architectural Technology program will prepare you to work closely and effectively with architects to produce construction drawings for use by contractors.

You will learn traditional sketching techniques and then receive extensive training in computer-aided design (CAD) technology. Throughout the program, you will use a variety of computer aided design software, both two and three dimensional, for residential and commercial projects.

The coursework will cover architectural history as well as modern architectural standards. You will develop skills in model building, building code analysis, structural design, mechanical systems and legal contracts. You will also be trained to solve problems that arise during the assembly of building components.

The architectural technology classroom is designed to resemble a typical architectural firm’s office. You will be assigned an individual drafting station and a computer with the latest versions of AutoCAD, REVIT, SketchUp and the Adobe Suite. The learning environment and your coursework will help prepare you to work in collaboration with architects and engineers.

Instructors are all registered, practicing architects who are committed to enhancing your employability with Minnesota’s architectural firms—60 percent of which are located within blocks of MCTC’s campus.

For a tour of the classroom and individual student workstations, contact Tracy Boyle at 612-200-5200.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
  - Successful completion of ESOL 0041
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Architectural Technology Diploma—64 credits

Where You Could Work

- Architectural firms
- Engineering firms
- Facilities-planning organizations
- Interior design firms
- Landscape firms
- Building-products manufacturers
Architectural Technology Diploma

64 Credits

Courses in these programs require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Completion of READ 0100
  - Be declared ready to enroll in READ 0200 or ESOL 0052 on the basis of reading assessment test scores

- **WRITING**—one of the following:
  - Completion of ESOL 0041
  - Be declared ready to enroll in ENGL 0900 or ESOL 0051 on the basis of writing placement test scores

- **MATH**—one of the following:
  - Completion of MATH 0060
  - Be declared ready to enroll in MATH 0070 on the basis of math placement test scores

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ARCH 1000</td>
<td>Architectural Technology Lab 1</td>
<td>6.00</td>
</tr>
<tr>
<td>ARCH 1010</td>
<td>Architectural Orientation</td>
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</tr>
<tr>
<td>ARCH 1020</td>
<td>Building Technology</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 1030</td>
<td>AutoCAD 1</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
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**TOTAL CREDITS:** 15.00

### Second Semester

**If Fall Term**

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ARCH 1200</td>
<td>Architectural Technology Lab 2</td>
<td>6.00</td>
</tr>
<tr>
<td>ARCH 1220</td>
<td>Building Technology 2</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 1230</td>
<td>REVIT I</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**If Spring Term**

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ARCH 1500</td>
<td>Building Structures</td>
<td>3.00</td>
</tr>
<tr>
<td>ARCH 1510</td>
<td>Mechanical and Electrical Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ARCH 1520</td>
<td>Building Codes, Zoning and Specifications</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 1530</td>
<td>Architect’s Professional Practice</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 1540</td>
<td>Architectural History</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS (if Fall):** 16.00  
**TOTAL CREDITS (if Spring):** 17.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If Fall Term</td>
<td>ARCH 1500 and 1510 only offered Fall Semesters</td>
</tr>
<tr>
<td></td>
<td>If Spring Term</td>
<td>ARCH 1520, 1530 and 1540 only offered Spring Semesters</td>
</tr>
<tr>
<td>ARCH 2000 Or</td>
<td>Architectural Technology Lab 3</td>
<td>6.00</td>
</tr>
<tr>
<td>ARCH 2200</td>
<td>Architectural Technology Lab 4</td>
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</tr>
<tr>
<td>ARCH 2020 Or</td>
<td>Building Technology 3</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 2220</td>
<td>Building Technology 4</td>
<td></td>
</tr>
<tr>
<td>ARCH 2030 Or</td>
<td>REVIT Families</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 2230</td>
<td>Advanced Computer Modeling</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS (if Fall): 16.00
TOTAL CREDITS (if Spring): 17.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 2000 Or</td>
<td>Architectural Technology Lab 3</td>
<td>6.00</td>
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<tr>
<td>ARCH 2200</td>
<td>Architectural Technology Lab 4</td>
<td></td>
</tr>
<tr>
<td>ARCH 2020 Or</td>
<td>Building Technology 3</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 2220</td>
<td>Building Technology 4</td>
<td></td>
</tr>
<tr>
<td>ARCH 2030 Or</td>
<td>REVIT Families</td>
<td>2.00</td>
</tr>
<tr>
<td>ARCH 2230</td>
<td>Advanced Computer Modeling</td>
<td></td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas and at least one course must be from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>6.00</td>
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TOTAL CREDITS: 16.00

### Elective Courses

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 2500</td>
<td>Office Internship</td>
<td>7.00</td>
</tr>
<tr>
<td>ARCH 2550</td>
<td>Independent Study</td>
<td>3.00</td>
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TOTAL CREDITS: 10.00

### General Education Courses (9 Credits)

To complete the Architectural Technology Diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from at least two of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10.
Barbering

What You Will Learn

MCTC’s Barbering program helps you develop the knowledge and skills needed to provide hair, beard and skin-care services for a diverse clientele.

You will be instructed in all skills related to barbering: contemporary haircutting and styling, shaving, facials, massage, chemical services, scalp treatments and hairpieces. To ensure your health and well-being and that of your customers, you will learn proper sanitation and hygiene practices, safety measures and first-aid techniques. You also will study anatomy, shop management, and business and professional ethics.

Under the direction of an instructor with many years of experience, you will serve clients in the College barbering clinic. The clinic provides an opportunity to fine-tune your skills and serve diverse customers who have a variety of skin and hair types.

To qualify to enter the Barbering program, you must have completed the 10th grade, and you must meet a reading requirement. To carry out tasks essential to the practice of barbering, you need to have good hand-eye coordination and be in sufficiently good physical condition to tolerate long periods of time spent standing. You will be required to purchase a smock, a barbering kit with clippers, shears, combs, hairdryer and supplies, as well as textbooks.

Upon completion of the Barbering program, you will be prepared to take the Minnesota State Barber Board Apprentice Exam, which you must pass to practice as a barber.

Admission Requirements

Students are accepted into this program both at the beginning and middle of fall and spring semesters.

Admission to this program is on a space-available basis only.

Courses in this program require achievement of the following program minimum:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100

Awards or Credentials You Could Earn

- Barbering Diploma—56 credits

Where You Could Work

- Barber shops in Minnesota and in states with reciprocity
Barbering Diploma

56 Credits

Courses in this program require achievement of the following program minimum:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### Introductory Courses

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARB 1000</td>
<td>Introduction to Barbering and Histology</td>
<td>4.00</td>
</tr>
<tr>
<td>BARB 1050</td>
<td>Basic Lab 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BARB 1100</td>
<td>Basic Lab 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BARB 1150</td>
<td>Basic Fundamentals of Barbering Services</td>
<td>4.00</td>
</tr>
<tr>
<td>BARB 1200</td>
<td>Survey Lab 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 1101</td>
<td>Personal and Community Health</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 1150</td>
<td>First Aid and CPR</td>
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**TOTAL CREDITS: 22.00**

### Advanced Courses

<table>
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<tr>
<th>COURSE #</th>
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</thead>
<tbody>
<tr>
<td>BARB 1250</td>
<td>Survey Lab 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BARB 1300</td>
<td>Anatomy and Physiology In Barbering</td>
<td>2.00</td>
</tr>
<tr>
<td>BARB 1350</td>
<td>Chemical Services</td>
<td>2.00</td>
</tr>
<tr>
<td>BARB 1360</td>
<td>Intermediate Lab 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BARB 1370</td>
<td>Intermediate Lab 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BARB 1400</td>
<td>Business Management in Barbering</td>
<td>2.00</td>
</tr>
<tr>
<td>BARB 1450</td>
<td>Advanced Technology</td>
<td>2.00</td>
</tr>
<tr>
<td>BARB 1460</td>
<td>Advanced Lab 1</td>
<td>4.00</td>
</tr>
<tr>
<td>BARB 1470</td>
<td>Advanced Lab 2</td>
<td>4.00</td>
</tr>
<tr>
<td>BARB 1500</td>
<td>Open Lab 1</td>
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<td>BARB 1510</td>
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<td>4.00</td>
</tr>
<tr>
<td>BARB 1520</td>
<td>Job Seeking</td>
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</table>

**TOTAL CREDITS: 34.00**

**General Education Courses (5 Credits)**

To complete the Barbering Diploma, students are required to successfully complete the General Education coursework listed in the course sequence above (HLTH 1101 and HLTH 1150).
Biology

What You Will Learn
The Biology A.S. degree is specifically designed to prepare you for transfer into the junior or third year of biology major at a four-year college or university.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - **Math Option 1:**
    - Placement into MATH 1110 or placement into MATH 1125
    - Completion of MATH 0080 with a grade of “A”
  - **Math Option 2:**
    - Placement into MATH 1180 or
    - Completion of MATH 1110 and MATH 1120 or MATH 1125

Awards or Credentials You Could Earn

- Biology A.S. Degree—60 credits

MCTC has an articulation agreement with St. Cloud State University, which provides for transfer of the A.S. in Biology to all of the B.S. degrees in the Department of Biology. MCTC is working on additional transfer agreements.

Students intending to transfer to St. Cloud State University are advised to select Option 1, and it is recommended that they take BIOL 2205 Genetics and not take BIOL 2230 Microbiology and BIOL 2231 Microbiology Lab.
Biology A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - **Math Option 1:**
    - Placement into MATH 1110 or placement into MATH 1125
    - Completion of MATH 0080 with a grade of “A”.
  - **Math Option 2:**
    - Placement into MATH 1180 or
    - Completion of MATH 1110 and MATH 1120 or MATH 1125

Students intending to transfer to St. Cloud State University are advised to select Option 1 and it is recommended that they take BIOL 2205 Genetics and not take BIOL 2230 Microbiology and BIOL 2231 Microbiology Lab.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Option 1**

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1100</td>
<td>Introduction to Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
<td>5.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
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</tr>
<tr>
<td>Biology Program Electives</td>
<td>Student must complete a minimum of 8 program electives (See following page)</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS: 15.00**

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2200</td>
<td>Principals of Biology</td>
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</tr>
<tr>
<td>CHEM 1152</td>
<td>Principles of Chemistry 2</td>
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<td>MATH 1110</td>
<td>College Algebra</td>
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</tr>
<tr>
<td>General Education</td>
<td>Choose from MnTC Goal Areas 2, 5, 6, 7, 8, 9, or 10</td>
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</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CHEM 2204</td>
<td>Organic Chemistry 1</td>
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<tr>
<td>CHEM 2224</td>
<td>Organic Chemistry 1 Lab</td>
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</tr>
<tr>
<td>MATH 1150</td>
<td>Statistical Analysis</td>
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</tr>
<tr>
<td>Biology Program Electives</td>
<td>Student must complete a minimum of 8 program electives (see below)</td>
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**TOTAL CREDITS:** 15.00

### Fourth Semester

<table>
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<tr>
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<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Electives</td>
<td>Choose from MnTC Goal Areas 2, 5, 6, 7, 8, 9 or 10</td>
<td>14.00</td>
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**TOTAL CREDITS:** 14.00

### Biology Program Electives

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>BIOL 1136</td>
<td>Environmental Science</td>
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<tr>
<td>BIOL 1137</td>
<td>Environmental Science Lab</td>
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</tr>
<tr>
<td>BIOL 2205</td>
<td>Genetics</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2224</td>
<td>Anatomy</td>
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<td>BIOL 2225</td>
<td>Physiology</td>
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<tr>
<td>BIOL 2230</td>
<td>Microbiology</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2231</td>
<td>Microbiology Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2250</td>
<td>Plant Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2260</td>
<td>Animal Biology</td>
<td>4.00</td>
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<tr>
<td>BIOL 2500</td>
<td>Molecular Biology</td>
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<tr>
<td>BIOT 1000</td>
<td>Introduction to Bioscience</td>
<td>1.00</td>
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<tr>
<td>BIOT 2701–2706</td>
<td>Biotechnology Internship</td>
<td>1.00–6.00</td>
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<td>BIOT/CHEM 2722</td>
<td>Undergraduate Research Methods</td>
<td>1.00</td>
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<tr>
<td>BIOT/CHEM 2723</td>
<td>Undergraduate Research Methods Lab</td>
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</tr>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry–Theory and Principles</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2620</td>
<td>Biochemistry lab</td>
<td>2.00</td>
</tr>
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### General Education Electives

To complete the A.S. degree in Biology, students are required to successfully complete coursework from six of the 10 goal areas of the MnTC. A minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10.

Students who choose Option 1 must select courses from a least two different MnTC goal areas than are represented among the required credits in order to meet the requirement for coursework completed in six of the 10 MnTC goal areas.
Biology A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Math Option 1:
    - Placement into MATH 1110 or placement into MATH 1125
    - Successful completion of MATH 0080 with a grade of "A".
  - Math Option 2:
    - Placement into MATH 1180
    - Successful completion of MATH 1110 and MATH 1120 or MATH 1125

**Option 2:**

Students who choose Option 2 must select courses from at least three different MnTC goal areas than are represented among the required credits in order to meet the requirement for coursework completed in six of the 10 MnTC goal areas. It is recommended that students choose BIOL 1136 and BIOL 1137 (lab) Environmental Science (MnTC 3 and 10) as one of their electives.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1100</td>
<td>Introduction to Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
<td>5.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1110 or MATH 1125</td>
<td>College Algebra Pre-calculus *Students who do not choose to take MATH 1125 will need to take MATH 1110 and MATH 1120 in order to take MATH 1180 in third semester</td>
<td>4.00 or 5.00</td>
</tr>
</tbody>
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**TOTAL CREDITS:** 16.00 or 17.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>BIOL 2200</td>
<td>Principals of Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 1152</td>
<td>Principles of Chemistry 2</td>
<td>5.00</td>
</tr>
<tr>
<td>MATH 1120</td>
<td>College Trigonometry</td>
<td>3.00</td>
</tr>
<tr>
<td>Only needed if MATH 1125 was not taken first semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Education</td>
<td>Choose from MnTC Goal Areas 2, 5, 6, 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00 or 12.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2204</td>
<td>Organic Chemistry 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2224</td>
<td>Organic Chemistry 1 Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>MATH 1180</td>
<td>Calculus 1</td>
<td>5.00</td>
</tr>
<tr>
<td>Biology Electives</td>
<td>Student must complete a minimum of 8 program electives (see below)</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1190</td>
<td>Calculus 2</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>Choose from MnTC Goal Areas 2, 5, 6, 7, 8, 9 or 10</td>
<td>7.00 or 9.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 12.00 or 14.00

### Biology Program Electives

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1136</td>
<td>Environmental Science</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1137</td>
<td>Environmental Science Lab</td>
<td>1.00</td>
</tr>
<tr>
<td>BIOL 2205</td>
<td>Genetics</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2224</td>
<td>Anatomy</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2225</td>
<td>Physiology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2230</td>
<td>Microbiology</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2231</td>
<td>Microbiology Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2250</td>
<td>Plant Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2260</td>
<td>Animal Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOL 2500</td>
<td>Molecular Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOT 1000</td>
<td>Introduction to Bioscience</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOT 2701–2706</td>
<td>Biotechnology Internship</td>
<td>1.00–6.00</td>
</tr>
<tr>
<td>BIOT/CHEM 2722</td>
<td>Undergraduate Research Methods</td>
<td>1.00</td>
</tr>
<tr>
<td>BIOT/CHEM 2723</td>
<td>Undergraduate Research Methods Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry—Theory and Principles</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2620</td>
<td>Biochemistry lab</td>
<td>2.00</td>
</tr>
</tbody>
</table>

### General Education Electives

To complete the A.S. degree in Biology, students are required to successfully complete coursework from six of the 10 goal areas of the MnTC. A minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10.
Biotechnology

What You Will Learn
MCTC’s Biotechnology A.S. degree program will prepare you for entry-level positions in the emerging and exciting biotechnology industry and is transferable to four-year baccalaureate majors within the biology and chemistry or related disciplines. Many courses in the program also transfer and apply to pre-med, pre-engineering, pre-vet and other academic tracks.

This program provides you with a strong scientific background and extensive laboratory experience in methods currently used in research, government, and industry laboratories. You will learn various skills that are important to gain employment at entry level in the growing bioscience industry, including laboratory techniques and instrumentation; basic computer skills associated with generating, analyzing and presenting experimental data; documenting laboratory procedures according to industry standards; and understanding the regulatory affairs that govern the bioscience industry. You will learn how to effectively work in cooperative teams in a laboratory setting to plan and complete experiments in a timely manner, and you will also complete oral and written presentations. You will learn to prepare job-search materials and practice interviewing skills.

MCTC has developed partnerships within the industry and community, and you will benefit in numerous ways from these alliances, including possible industry internships, seminars by guest speakers from the industry, and industry and research laboratory tours.

The Biotechnology program provides the academic coursework required to transfer to baccalaureate programs. MCTC has agreements with St. Cloud State University that facilitate transfer of the A.S. in Biotechnology degree coursework to all of the B.S. degrees in the Department of Biology, including the B.S. in Biotechnology. MCTC is working on additional transfer agreements.

Admission Requirements
Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1110
  - Successful completion of MATH 0080
- **CHEMISTRY**—one of the following:
  - One full year of high school chemistry
  - CHEM 1020

Awards or Credentials You Could Earn

- Biotechnology A.S. Degree—60 credits

Where You Could Work

- Bioscience industry, academic and government settings—in laboratory and instrumentation, quality control, quality assurance, production, manufacturing, documentation and several other divisions.
- You can also pursue a four-year degree in biology, chemistry or in related fields.

Register for BIOT 1000: Introduction to Bioscience to find out more about this program and the exciting field of bioscience.
Biotechnology A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1110
  - Successful completion of MATH 0080
- **CHEMISTRY**—one of the following
  - One full year of high school chemistry
  - CHEM 1020

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOT 1000</td>
<td>Introduction to Bioscience</td>
<td>1.00</td>
</tr>
<tr>
<td>BIOL 2200</td>
<td>Principles of Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
<td>5.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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**TOTAL CREDITS:** 13.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1152</td>
<td>Principals of Chemistry 2</td>
<td>5.00</td>
</tr>
<tr>
<td>BIOL 2230</td>
<td>Microbiology</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2231</td>
<td>Microbiology Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOT/CHEM 2320</td>
<td>Regulatory Affairs and Quality Control</td>
<td>4.00</td>
</tr>
<tr>
<td>MATH Course</td>
<td>Any MnTC Goal Area 4 MATH course</td>
<td>4.00</td>
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**TOTAL CREDITS:** 17.00

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2204</td>
<td>Organic Chemistry 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2410</td>
<td>Analytical Chemistry and Instrumentation Theory</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2420</td>
<td>Analytical Chemistry and Instrumentation Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Chose 6.00 credits from any MnTC Goal Areas</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00
Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry-Theory and Principles</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2620</td>
<td>Biochemistry Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2500</td>
<td>Molecular Biology</td>
<td>4.00</td>
</tr>
<tr>
<td>BIOT 2642</td>
<td>Cell Culture Technologies 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose 3.00 credits from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

**General Education Electives**

Choose from electives designed for transfer to four-year institutions or job opportunities in local industry, including industry internships, undergraduate research, and forensic science and tissue-culture courses. Students must work closely with an advisor or counselor when selecting math (students must choose among four specified math courses) and general education electives. A minimum of three credits must be completed from MnTC Goal Area 1 and three credits from MnTC Goal Areas 7, 8, 9 or 10, AND coursework must be selected from at least six of the MnTC goal areas to complete the A.S. in Biotechnology.

Please visit www.minneapolis.edu/biotechnology for complete details related to the recommended sequence for required courses and to view recommended elective general education courses.
Business Management

What You Will Learn
MCTC’s Business Management program will provide you with a broad background in the functional areas of business, such as accounting, management, marketing, leadership and small business development. You can either continue your studies or find entry-level employment in the field.

The accounting courses offered through the program will teach you to read and understand financial statements and prepare accounting statements for small to medium-sized organizations. In additional courses, you will learn oral and written business communication skills, the basic legal aspects of business, dispute resolution, marketing strategies, and how to evaluate an organization’s strengths and weaknesses.

The program will prepare you to serve as a manager of a business or government and/or nonprofit organizations, using the four basic management functions: planning, organizing, leading and controlling. You will put all of your knowledge to work in a final case analysis that program faculty will evaluate.

MCTC has an articulation agreement with Metropolitan State University and most MnSCU institutions. Metropolitan State offers its complete B.S. Degree in Business Administration on the MCTC campus.

Admission Requirements
Students are accepted into this program for fall, spring and summer terms.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Business Management A.S. Degree—60 credits
- Banking and Finance Concentration—60 credits
- Banking and Finance Certificate—21 credits
- Entrepreneurship Certificate—19 credits

Where You Could Work

- Private businesses
- Not-for-profit/nonprofit organizations
- Government
- Self-employment
## Business Management A.S. Degree

### 60 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

### Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1140</td>
<td>Introduction to Business</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1142</td>
<td>Principles of Marketing</td>
<td>4.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from any of the MnTC Goal Areas (other than MnTC Goal Area 1)</td>
<td>3.00</td>
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</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1154</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication <em>(Recommended or choose any course from any of the MnTC Goal Areas)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from the any of MnTC Goal Areas (other than MnTC Goal Area 1)</td>
<td>2.00</td>
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**TOTAL CREDITS: 15.00**

### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>BUSN 2252</td>
<td>Principles of Management</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2260</td>
<td>Legal Environment of Business</td>
<td>4.00</td>
</tr>
<tr>
<td>MATH Course</td>
<td><em>MATH is recommended or choose any MnTC Goal Area course</em></td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose at least one course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**
Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Electives</td>
<td>Choose 6 credits from the Program Elective list below</td>
<td>6.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from the MnTC Goal Areas (other than MnTC Goal Area 1) Recommended MATH 1140</td>
<td>9.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

**Program Elective Courses**

Choose six credits from among the following courses.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1143</td>
<td>Principles of Advertising</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1145</td>
<td>Small Business Management</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1155</td>
<td>Human Relations and Team Building</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1166</td>
<td>Women in Leadership and Management</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1180</td>
<td>Principles of Banking and Finance</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1182</td>
<td>Principles of Consumer Lending</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1200</td>
<td>Computer Applications in Home and Business</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2224</td>
<td>Managerial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2254</td>
<td>Entrepreneurship</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2256</td>
<td>Supervision and Leadership</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2270</td>
<td>Introduction to International Business</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**General Education Courses (30 credits)**

To complete the Business Management A.S. degree, students are required to successfully complete 30 credits of General Education coursework. This coursework must be selected from at least six of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are ENGL 1110 and ENGL 1111. The following courses are recommended, CMST 1010, MATH 1110 or MATH 1140.
Banking and Finance Concentration A.S. Degree

60 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1140</td>
<td>Introduction to Business</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1142</td>
<td>Principles of Marketing</td>
<td>4.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1180</td>
<td>Principles of Banking and Finance</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose at least 3 credits from MnTC Goal Area 3 and 3</td>
<td>6.00</td>
</tr>
<tr>
<td>General Education</td>
<td>credits from MnTC Goal Area 7, 8, 9 or 10</td>
<td></td>
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**TOTAL CREDITS: 16.00**

### Third Semester

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1182</td>
<td>Principles of Consumer Lending</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1190</td>
<td>Selling Financial Institution Products</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH Course</td>
<td>Recommended any MnTC Goal Area 4 course</td>
<td>4.00</td>
</tr>
<tr>
<td>ECON 2000 Or</td>
<td>Principles of Macroeconomics (recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 2200 Or</td>
<td>Principles of Microeconomics (recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 2000 Or</td>
<td>any course from MnTC Goal Area 5</td>
<td></td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>2.00</td>
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</tbody>
</table>

**TOTAL CREDITS: 15.00**
## Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSN 1183</td>
<td>Principles of Commercial Lending</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2252</td>
<td>Principles of Management</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2260</td>
<td>Legal Environment of Business</td>
<td>4.00</td>
</tr>
<tr>
<td>ECON 2200 Or</td>
<td>Principles of Microeconomics (recommended)</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1140</td>
<td>MATH 1140 Introduction to Statistics (recommended)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00
Banking and Finance Certificate

21 Credits

This certificate award is a result of a unique partnership between MCTC, US Bank, Goodwill Easter Seals and Project for Pride in Living. A team of individuals from these agencies provided their expertise in the creation of training and educational programs in banking and finance.

This program is designed to provide individuals who work in, or are interested in working in, a financial setting a comprehensive understanding of the professional skills needed for advanced positions in the banking industry. Interested students may progress from earning a certificate or an associate degree to a bachelor’s degree and then to an MBA from Metropolitan State University.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BUSN 1140</td>
<td>Introduction to Business</td>
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<tr>
<td>BUSN 1154</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
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**TOTAL CREDITS: 9.00**

**Second Semester**

<table>
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<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BUSN 1180</td>
<td>Principles of Banking and Finance</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1182</td>
<td>Principles of Consumer Lending</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1183</td>
<td>Principles of Commercial Lending</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1190</td>
<td>Selling Financial Institution Products</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS: 12.00**

**General Education Courses (3 Credits)**

To complete the Business Management-Banking and Finance Certificate, students are required to successfully complete CMST 1010 or CMST 2012.
Entrepreneurship Certificate

19 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>BUSN 1140</td>
<td>Introduction to Business</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 2254</td>
<td>Entrepreneurship</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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**TOTAL CREDITS:** 9.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>BUSN 1145</td>
<td>Small Business Management</td>
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<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
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<tr>
<td>BUSN 2256</td>
<td>Supervision and Leadership</td>
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**TOTAL CREDITS:** 10.00
Business Office Administration

What You Will Learn

MCTC’s Business Office Administration programs help you become proficient in the computer, business, and communication skills that are used to provide administrative and technology support in a wide variety of business office and customer service settings.

Coursework will cover the fundamentals of business computers, business culture, written business communication, business presentations and extensive work with current software applications. You will also learn human relations, problem-solving and team-building skills that are important in the workplace.

During the program, you will receive hands-on training in keyboarding skills and with current versions of the Microsoft Office applications: Word, Excel, PowerPoint and Access. In the A.A.S. degree program, you will learn the Windows operating system and the basics of microcomputer system maintenance, applications and support. Completion of an internship is also a popular experience for students. Additional emphasis is placed on résumé preparation and career portfolio construction, as well as job-search techniques that will cap your degree experience.

MCTC has an articulation agreement with Metropolitan State University for students who wish to transfer A.A.S. credits into the B.A.S. degree in Organization Administration and Technology at Metropolitan State University.

Admission Requirements

The Business Office Administration Program requires:

- Grades of “C” (2.0) or above in all required courses; and
- Passing a criminal background check prior to internship placement. The College cannot guarantee placement in a BTEC internships for students who do not have a clear criminal background check.

It is highly recommended that students can touch type 25 words per minute or have successfully completed a High School Keyboarding course.

Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070 or 0077
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Administrative Assistant/Software Support Specialist A.A.S. Degree—60 credits
- Administrative Assistant/Software Support Specialist Certificate—27 credits

Where You Could Work

- Businesses of all types and sizes
- Nonprofit organizations
- Government agencies

With an A.A.S. degree:

- Computer support service companies
- Computer training facilities and educational institutions
- All business organizations
Administrative Assistant/Software Support Specialist A.A.S. Degree

60 Credits

Pending MnSCU Approval

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070 or 0077
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of counselor or advisor during orientation. Students will meet with their assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, students can stop by the Counseling and Advising Office in T2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BTEC 1020</td>
<td>Introduction to Computer Applications</td>
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</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1835</td>
<td>Business English</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2730</td>
<td>The Professional Office</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
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**TOTAL CREDITS:** 16.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BTEC 1080</td>
<td>Microsoft Word</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2100</td>
<td>Microsoft Excel</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2030</td>
<td>PowerPoint Business Presentations</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2825</td>
<td>Career Management</td>
<td>2.00</td>
</tr>
<tr>
<td>BTEC 2780</td>
<td>Keyboarding 2</td>
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**TOTAL CREDITS:** 17.00
## Third Semester

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ACCT 1215</td>
<td>Accounting Cycle</td>
<td>1.00</td>
</tr>
<tr>
<td>BTEC 2110</td>
<td>Microsoft Access</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2445</td>
<td>Internship Assessment and Preparation</td>
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</tr>
<tr>
<td>BUSN 1155</td>
<td>Human Relations and Team Building</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose 2 courses from any of MnTC Goal Areas; at least 3 credits must be from MnTC Goal Area 7, 8, 9 or 10</td>
<td>6.00</td>
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**TOTAL CREDITS:** 16.00

## Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BTEC 2450</td>
<td>Administrative Assist./Software Support Internship</td>
<td>3.00</td>
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<tr>
<td>General Education</td>
<td>Choose courses from any MnTC Goal Areas</td>
<td>8.00</td>
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</table>

**TOTAL CREDITS:** 11.00

### General Education Courses (17 Credits)

Administrative Assistant/Software Support Specialist A.A.S. degree students are required to complete a minimum of 17 credits of General Education coursework. Within this total, CMST 1010 is required and satisfies the three-credit Goal Area 1 requirement. Of the remaining 14 General Education credits, at least three credits are required from Goal Areas 7, 8, 9 or 10.
Administrative Assistant/Software Support Specialist Certificate

27 Credits
Pending MnSCU Approval

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070 or 0077
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BTEC 1020</td>
<td>Introduction to Computer Applications</td>
<td>4.00</td>
</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1835</td>
<td>Business English</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
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**TOTAL CREDITS:** 13.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BTEC 1080</td>
<td>Microsoft Word</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2100</td>
<td>Microsoft Excel</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2730</td>
<td>The Professional Office</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2825</td>
<td>Career Management</td>
<td>3.00</td>
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</tbody>
</table>

**TOTAL CREDITS:** 17.00

**General Education Courses (3 Credits)**

Administrative Assistant/Software Support Specialist Certificate students are required to complete a minimum of three credits of General Education coursework. Within this total, CMST 1010 is required and satisfies the three-credit Goal Area 1 requirement.
Central Services Technician

What You Will Learn
This certificate prepares students for entry-level work in a healthcare setting sterilizing instruments and working with medical and surgical equipment and supplies. The program course builds upon knowledge learned in the Healthcare Core Curriculum. Foundational anatomy and physiology and basic principles of microbiology will be presented. Course competencies include decontamination, preparation and packaging for sterilization, sterilization process, and sterile storage. Basic surgical instrumentation and medical terminology that is necessary for this area of employment in the healthcare setting will also be presented. The lab will include campus-and hospital-based practice settings. Through this practicum experience, you will become familiar with the central services tasks at a hospital. The focus of this course is to provide you with comprehensive skills to perform competently and safely. You will have hands-on practice sessions to develop the skills and techniques required in performing various activities in the central services areas. Because this program requires internship in a hospital setting, you must pass a background check and provide proof of immunity status prior to placement in the healthcare setting.

Upon completion of CSIP 1000 and 1002, you are eligible to take the certification exam from the Certification Board for Sterile Processing and Distribution, Inc. (CBSPD).

The Central Services Program requires:
- Grades of “C” (2.0) or above in the CSIP theory course and in HCCC 1100;
- Pass (P) grades in the CSIP clinical internship course; and
- Passing of a criminal background check prior to internship placement.

The College cannot guarantee placement in internships for students who do not have a clear criminal background check.

For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services, at 651-296-3802.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:
- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

Awards or Credentials You Could Earn
- Central Services Technician Certificate—10 credits

Where You Could Work
- Hospitals
- Surgery centers
- Medical equipment supply companies
Central Services Technician Certificate

10 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

**Recommended Course Sequence**

The pathway is meant to guide your course selections. Courses will generally be selected with the assistance of a counselor or advisor during orientation. Students will meet with their assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, students can stop by the Counseling and Advising Office in T2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>HCCC 1010</td>
<td>Behaviors for Success in Health Careers</td>
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<tr>
<td>HCCC 1020</td>
<td>Communication in Healthcare</td>
<td>1.00</td>
</tr>
<tr>
<td>HCCC 1030</td>
<td>Awareness and Sensitivity to Clients Needs</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1040</td>
<td>Respecting Client and Staff Diversity</td>
<td>0.50</td>
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<tr>
<td>HCCC 1050</td>
<td>Healthcare Safety and Standard Precautions</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1060</td>
<td>Legal Issues in Healthcare</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1070</td>
<td>Healthcare Ethics</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1100</td>
<td>Medical Terminology</td>
<td>1.00</td>
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<tr>
<td>CSIP 1000</td>
<td>Role of the Central Services Technician</td>
<td>3.00</td>
</tr>
<tr>
<td>CSIP 1002</td>
<td>Central Services Technician Internship</td>
<td>2.00</td>
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</tbody>
</table>

**TOTAL CREDITS: 10.00**

Students who completed NAHA 1819/1850 in or after 2009, may petition to waive a total of three credits from the courses listed below:

HCCC 1010 (0.5cr), HCCC 1020 (1 cr), HCCC 1050 (0.5 cr), HCCC 1060 (0.5 cr) and HCCC 1070 (0.5 cr).
Chemistry

MCTC’s Chemistry major is specifically designed to prepare students for transfer into the junior or third year of a chemistry major at four-year colleges or universities. You will complete the coursework required in the first-two years of a four-year major in chemistry in several tracks offered by four-year institutions. Several of the courses and electives in the program are also required for biology, pharmacy, medical, veterinary, engineering, and other related programs at four-year institutions.

What You Will Learn

You will learn and apply central theories in general, organic, analytical, and forensic chemistry or biochemistry. The program includes physics, mathematics and electives required for transfer. You will learn the applications of chemistry to various disciplines, including health sciences, biological sciences and engineering. You will gain extensive laboratory experience utilizing various techniques and instruments. You will learn computer skills associated with data analysis and presentation, good laboratory practices and how to document laboratory procedures. You will learn to effectively work in cooperative teams in a laboratory setting to plan and complete experiments in a timely manner, as well as to give oral and written presentations.

MCTC has a transfer agreement with St. Cloud State University that facilitates transfer of the A.S. in Chemistry degree into the chemistry major in various tracks. MCTC is also working on transfer agreements with other four-year institutions.

Admission Requirements

Courses in this program require achievement of the following program admission requirements:

- **READING**—Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
- **WRITING**—Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0052.
- **MATH**—Placement into MATH 1110 or higher or completion of MATH 80.
- **CHEMISTRY**—Completion of one full year of high school Chemistry or CHEM 1020.

Awards or Credentials You Could Earn

- Chemistry A.S. Degree—60 credits

In addition to the courses required for this major, the Chemistry Department offers additional coursework students may want to consider taking, including:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1145</td>
<td>Forensic Science 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry—Theory &amp; Principles</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2620</td>
<td>Biochemistry Lab</td>
<td>2.00</td>
</tr>
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</table>
Chemistry A.S. Degree

60 Credits

Courses in this major require the following program admission requirements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 1110 or higher
  - Completion of MATH 80
- **CHEMISTRY**—one of the following:
  - Completion of one full year of high school chemistry
  - Completion of CHEM 1020

**Recommended Course Sequence**

These two pathways for Option 1 and 2 are meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. Students will meet with their assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, students can stop by the Counseling and Advising Office in T2500 or call 612-659-6700. Not all courses are offered each semester.

**Chemistry A.S. Option 1**

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
<td>5.00</td>
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<tr>
<td>MATH 1180</td>
<td>Calculus 1</td>
<td>5.00</td>
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<tr>
<td>General Education</td>
<td>Choose from MnTC Goal Areas 1, 9 or 10</td>
<td>3.00</td>
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</table>

**Recommended:** any course from MnTC 10 except for BIOL 1136

**TOTAL CREDITS: 13.00**

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>CHEM 1152</td>
<td>Principles of Chemistry 2</td>
<td>5.00</td>
</tr>
<tr>
<td>CHEM/BIOT 2320</td>
<td>Regulatory Affairs and Quality Control</td>
<td>4.00</td>
</tr>
<tr>
<td>MATH 1190</td>
<td>Calculus 2</td>
<td>5.00</td>
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**TOTAL CREDITS: 14.00**

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>CHEM 2204</td>
<td>Organic Chemistry 1</td>
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<td>CHEM 2224</td>
<td>Organic Chemistry 1 Lab</td>
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<td>PHYS 1211</td>
<td>Physics for Science and Engineering 1</td>
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<tr>
<td>General Education</td>
<td>Recommended: CHEM 1145 Forensic Science 1</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**
Fourth Semester

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CHEM 2205</td>
<td>Organic Chemistry 2</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2225</td>
<td>Organic Chemistry 2 Lab</td>
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</tr>
<tr>
<td>CHEM 2410</td>
<td>Analytical Chemistry and Instrumentation</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2420</td>
<td>Analytical Chemistry and Instrumentation Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>PHYS 1221</td>
<td>Physics for Science and Engineering 2</td>
<td>6.00</td>
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</tbody>
</table>

**TOTAL CREDITS: 17.00**

**General Education Electives**

**Option 1:** There are a total of 53 credits of required coursework for Option 1. The required courses fall within MnTC Goal Areas 3 (BIOT, CHEM, PHYS), 4 (MATH and PHYS), and 9 (if you take CHEM 1145 as an elective).

The remaining seven elective General Education credits must be selected to fulfill the requirement to complete coursework in three other Goal Areas.

Students seeking the A.S. degree in Chemistry must complete coursework in six of the 10 MnTC goal areas. Within the General Education coursework, students must complete a minimum of three credits in MnTC Goal Area 1, and a minimum or three credits from MnTC Goal Areas 7, 8, 9 or 10.

**Suggested additional Chemistry Coursework**

In addition to the courses required for this major, the Chemistry Department offers additional coursework students may want to consider taking, including:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1145</td>
<td>Forensic Science 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry–Theory and Principles</td>
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<tr>
<td>CHEM 2620</td>
<td>Biochemistry Lab</td>
<td>2.00</td>
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</table>

**Chemistry A.S. Option 2**

**First Semester**

<table>
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<tbody>
<tr>
<td>CHEM 1151</td>
<td>Principles of Chemistry 1</td>
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<tr>
<td>PHYS 1131</td>
<td>College Physics 1</td>
<td>5.00</td>
</tr>
<tr>
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<td>Choose any course from MnTC Goal Area 1</td>
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<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 6</td>
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**TOTAL CREDITS: 16.00**

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<td>PHYS 1132</td>
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</tr>
<tr>
<td>MATH 1170</td>
<td>Calculus for Business and Social Sciences</td>
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**TOTAL CREDITS: 14.00**
### Third Semester

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<td>CHEM 2204</td>
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<td>CHEM 2224</td>
<td>Organic Chemistry 1 Lab</td>
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</tr>
<tr>
<td>CHEM/BIOT 2320</td>
<td>Regulatory Affairs and Quality Control</td>
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<tr>
<td>General Education</td>
<td>Choose 3 credits from any course from any MnTC Goal Areas.</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose 3 credits from MnTC Goal Area 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>16.00</strong></td>
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### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>CHEM 2205</td>
<td>Organic Chemistry 2</td>
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<td>CHEM 2225</td>
<td>Organic Chemistry 2 Lab</td>
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<tr>
<td>CHEM 2410</td>
<td>Analytical Chemistry and Instrumentation</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2420</td>
<td>Analytical Chemistry and Instrumentation Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose 3 credits from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>14.00</strong></td>
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</table>

### General Education Electives

**Option 2:** There are a total of 45 credits of required coursework for Option 2. The required courses fall within MnTC Goal Areas 3 (BIOT, CHEM, PHYS), 4 (MATH and PHYS), and 9 (if you take CHEM 1145 as an elective). The remaining 15 elective General Education credits must be selected to fulfill the requirement to complete coursework in at least two other Goal Areas.

Students seeking the A.S. degree in Chemistry must complete coursework in six of the 10 MnTC Goal Areas. Within the General Education coursework, students must complete a minimum of three credits in MnTC Goal Area 1, and a minimum or three credits from MnTC Goal Areas 7, 8, 9 or 10.

### Suggested Additional Chemistry Coursework

In addition to the courses required for this major, the Chemistry Department offers additional coursework students may want to consider taking, including:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1145</td>
<td>Forensic Science 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CHEM 2610</td>
<td>Biochemistry–Theory &amp; Principles</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM 2620</td>
<td>Biochemistry Lab</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Cinema: Cinema Production

What You Will Learn
MCTC’s Cinema Production certificate integrates the language and aesthetics of cinema with film and digital video technology to support you in becoming a filmmaker. The intensive one-year core curriculum, required of all Cinema Division production students, is a hands-on introduction to the moviemaking process. Students develop professional skills in writing, camera operation, sound recording, and editing by working on numerous individual and group productions. After obtaining a Cinema Production certificate, students become eligible to pursue one of four specializations— Cinematography, Directing, Producing, Editing and Post-Production, or Screenwriting,—and earn an A.S. at the end of the second year. MCTC’s Cinema Division fuses cutting-edge technology and affordable professional training with an outstanding liberal arts education to help you become—above all—a compelling visual storyteller. MCTC has an articulation agreement with Augsburg College and Minnesota State University, Moorhead.

Note:
• Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
• Cinema Production courses are not available for auditing.

Admission Requirements
All students seeking admission to one of the following Cinema Division programs: Cinema Production, Cinematic Visual Effects, Cinematography, Digital Animation, Directing, Editing and Post-Production, Producing, Screenwriting and Sound for Cinema must meet the following admission requirements:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:
• READING—one of the following:
  • Placement into READ 1300
  • Completion of READ 0200 or ESOL 0052
• WRITING—one of the following:
  • Placement into ENGL 1110
  • Completion of ENGL 0900 or ESOL 0051
• MATH—one of the following:
  • Placement into MATH 0070
  • Successful completion of MATH 0060
• COMPUTER LITERACY—In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

How You Apply
Students are initially admitted to the Cinema Production certificate program, which begins each fall semester. To apply to this program, you must complete two applications:
1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

As they are completing the Cinema Production certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Awards or Credentials You Could Earn
• Cinema Production Certificate—30 credits
Cinema Production Certificate

30 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CIPR 1101</td>
<td>Cinema Production 1</td>
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</tr>
<tr>
<td>CIST 1101</td>
<td>Cinema History 1</td>
<td>3.00</td>
</tr>
<tr>
<td>SCRN 1101</td>
<td>Introduction to Cinematic Storytelling</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Choose any course from the Recommended General Education list or choose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS:** 15.00

**Second Semester**

<table>
<thead>
<tr>
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<tr>
<td>CIPR 1102</td>
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<tr>
<td>CIST 1102</td>
<td>Cinema History 2</td>
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</tr>
<tr>
<td>SCRN 1102</td>
<td>Writing the Short Fiction Screenplay</td>
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</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Choose any course from the Recommended General Education list or choose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS:** 15.00
# Recommended General Education Courses

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>JOUR 1000</td>
<td>Introduction to Mass Communication</td>
<td>3.00</td>
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<tr>
<td>ARTS 1110</td>
<td>Introduction to Arts</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 1110</td>
<td>Critical Thinking</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1104</td>
<td>World Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1137</td>
<td>Environment, Politics and Society</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
</tr>
<tr>
<td>DS 1152</td>
<td>Popular Culture in 20th-Century America</td>
<td>3.00</td>
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## General Education Courses (12 Credits)

To earn the Cinema Production certificate, students are required to successfully complete 12 credits of General Education, including MnTC Goal Area 1.

Note: ENGL 1110 and ENGL 1111 satisfy six credits of MnTC for Goal Area 1.
Cinema: Cinema Studies

What You Will Learn
The Cinema Studies program at MCTC covers narrative, documentary, and experimental cinema. The courses explore cinema from all over the world and across time periods. Through these genres, students will explore three areas of film study: film art and analysis of film images; film history and its social contexts; and an overview of the major theoretical and critical approaches to the study of film, including concepts of genre, auteur, psychoanalysis and technology.

MCTC has an articulation agreement with Augsburg College and Minnesota State University, Moorhead.

Note:
- Cinema Studies courses are not available for auditing.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

Awards or Credentials You Could Earn
- Cinema Studies Certificate—24 credits
Cinema Studies Certificate

24 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

- **COMPUTER LITERACY**—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

### Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

#### First Semester

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<th>COURSE #</th>
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<tr>
<td>CIST 1101</td>
<td>Cinema History 1</td>
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<td>CIST 1102</td>
<td>Cinema History 2</td>
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<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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<td>Choose any 3 credit course from the Recommended General Education list on the following page or choose any 3 credit course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 12.00**

#### Second Semester

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<td>CIST 1104</td>
<td>Documentary History</td>
<td>3.00</td>
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<tr>
<td>CIST 1105</td>
<td>Topics in Cinema History</td>
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</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
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**TOTAL CREDITS: 12.00**
Recommended General Education Courses

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<tr>
<th>COURSE #</th>
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</thead>
<tbody>
<tr>
<td>JOUR 1000</td>
<td>Introduction to Mass Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 1110</td>
<td>Introduction to Arts</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
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<td>PHIL 1110</td>
<td>Critical Thinking</td>
<td>3.00</td>
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<td>PSCI 1137</td>
<td>Environment, Politics and Society</td>
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<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>GLOS 1152</td>
<td>Popular Culture in 20th-Century America</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
</tr>
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</table>

General Education Courses (9 Credits)
To earn the Cinema Studies Certificate, students are required to successfully complete nine credits of General Education including MnTC Goal Area 1.

Note: ENGL 1110 and ENGL 1111 satisfy Goal Area 1.
Cinema: Visual Effects

What You Will Learn

The Visual Effects program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate. This program will give you the skills to integrate traditionally acquired film/video footage with visual effects processes like motion graphics, compositing, 2D animation and green/blue screen work. Visual Effects students will establish strong collaborations with Post-Production, Directing and Cinematography students in the Division. Program faculty are committed to following emerging technologies and will incorporate such technologies whenever possible.

MCTC’s Visual Effects degree offers the most affordable and unique visual education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and post-production equipment.

The Cinema Division’s faculty—all active professionals—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

The program is physically demanding since the process of transporting and setting up large equipment requires a substantial amount of heavy lifting. You will also spend considerable time outside the classroom working on productions.

MCTC has an articulation agreement with Moorhead State University.

Note:
• Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
• Visual Effects courses are not available for auditing.

Admission Requirements

All students seeking admission to the Cinematic Visual Effects must first be admitted to the Cinema Production Certificate Program.

As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply

Students are initially admitted to the Cinema Production certificate program which begins each fall semester.

To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

• Visual Effects A.S. Degree—60 credits

Where You Could Work

• Local and national film and video production houses
• Local and national independent producers
• Independent home video distribution companies
• In-house production departments within retail stores and corporations
• Local and national film studios
• Local and national television, cable stations and networks
• National and local advertising agencies
• Freelancing
Cinematic Visual Effects A.S. Degree

60 Credits

Pending MnSCU Approval

This program requires that you complete a first-year Core Curriculum Cinema Production Certificate before choosing the Cinematography major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college's computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIPR 1101</td>
<td>Cinema Production 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CIST 1101</td>
<td>Cinema History 1</td>
<td>3.00</td>
</tr>
<tr>
<td>SCRN 1101</td>
<td>Introduction to Cinematic Storytelling</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from the Recommended General Education list on the following page or choose a course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

**Second Semester**

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<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
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<td>Choose any course from the Recommended General Education list on the following page or chose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 15.00**
### Third Semester

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**TOTAL CREDITS: 14.00**

### Fourth Semester

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**TOTAL CREDITS: 16.00**

### Recommended General Education Courses

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<td>ARTS 1110</td>
<td>Introduction to Arts</td>
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<td>CMST 2011</td>
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<td>PHIL 1110</td>
<td>Critical Thinking</td>
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<td>PSCI 1104</td>
<td>World Politics</td>
<td>3.00</td>
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<td>PSCI 1137</td>
<td>Environment, Politics and Society</td>
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</tr>
<tr>
<td>INES 2600</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
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</table>

### General Education Courses (30 Credits)

To earn the Cinematography A.S. degree, students are required to successfully complete:

- 30 credits of general education;
- 18 credits of program-required General Education courses, including CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 and ENGL 1111; and
- 12 credits are recommended General Education selected from at least six of the MnTC Goal Areas.

As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Area 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Cinematography

What You Will Learn

The Cinematography program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate courses. This program will train you in the art and craft of Cinematography using a combination of aesthetic, technical and theoretical approaches, specializing in the photography of motion pictures. You will use both film and electronic media to record images while developing solid skills in camera operation, dramatic lighting, and pre-visualization. Cinematography students will establish strong collaborations with students in the Directing program, as well as with the other programs in the division. Program faculty are committed to following emerging technologies and will incorporate such technologies whenever possible.

MCTC’s Cinematography program offers the most affordable cinematography education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and post-production equipment.

The Cinema Division’s faculty—all active professionals with graduate degrees—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

The program is physically demanding since the process of transporting and setting up large equipment requires a substantial amount of heavy lifting. You will also spend considerable time outside the classroom working on productions. MCTC has an articulation agreement with Augsburg and Minnesota State University, Moorhead.

Note:

- Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
- Cinematography courses are not available for auditing.

Admission Requirements

All students seeking admission to Cinematography must first be admitted to the Cinema Production Certificate Program. As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply
Students are initially admitted to the Cinema Production certificate program which begins each fall semester.

To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

- Cinematography A.S. Degree—60 credits

Where You Could Work

- Local and national film and video production houses
- Local and national independent producers
- Independent home video distribution companies
- In-house production departments within retail stores and corporations
- Local and national film studios
- Local and national television, cable stations and networks
- National and local advertising agencies
- As a freelancer
Cinematography A.S. Degree

60 Credits

This program requires that you complete a first-year Core Curriculum Cinema Production certificate before choosing the Cinematography major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
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**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>Cinema History 1</td>
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**TOTAL CREDITS: 15.00**

**Second Semester**

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**TOTAL CREDITS: 15.00**
Continued from previous page

### Third Semester

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**TOTAL CREDITS: 14.00**

### Fourth Semester

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**TOTAL CREDITS: 16.00**

### Recommended General Education Courses

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<tr>
<td>ARTS 1110</td>
<td>Introduction to Arts</td>
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</tr>
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### General Education Courses (30 Credits)

To earn the Cinematography A.S. degree, students are required to successfully complete:

- 30 credits of General Education;
- 18 credits of program-required General Education courses, including CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 and ENGL 1111; and
- 12 credits of recommended General Education selected from at least six of the MnTC goal areas.

As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Areas 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Digital Animation

What You Will Learn

The Digital Animation diploma at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate. This program will train you in the art and craft of digital animation using a combination of aesthetic, technical and theoretical approaches, specializing in three-dimensional computer based animation, computer graphic imaging and special effects. Animation students will establish strong collaborations with students from Directing, Editing and Cinematography programs in the Division. Program faculty are committed to following emerging technologies and will incorporate such technologies whenever possible.

MCTC’s Digital Animation diploma offers the most affordable and unique animation education in Minnesota. Courses in this program require a high level of commitment. You will also spend considerable time outside the classroom working on productions. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and post-production equipment.

The Cinema Division’s faculty—all active professionals—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

MCTC has an articulation agreement with Augsburg.

Note:

• Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
• Digital Animation courses are not available for auditing.

Admission Requirements

All students seeking admission to Digital Animation must first be admitted to the Cinema Production Certificate Program.

As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

• **READING**—one of the following:
  • Placement into READ 1300
  • Completion of READ 0200 or ESOL 0052
• **WRITING**—one of the following:
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• **MATH**—one of the following:
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  • Successful completion of MATH 0060
• **COMPUTER LITERACY**—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply

Students are initially admitted to the Cinema Production certificate program which begins each fall semester.

To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

• Digital Animation Diploma—48 credits

Where You Could Work

• Local and national film and video production houses
• Local and national independent producers
• Independent home video distribution companies
• In house production departments within retail stores and corporations
• Local and national television, cable stations and networks
• National and local advertising agencies
• As a freelance
Digital Animation Diploma

48 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

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**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>CIST 1101</td>
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**TOTAL CREDITS:** 15.00

**Second Semester**

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**TOTAL CREDITS:** 15.00
### Third Semester

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**TOTAL CREDITS:** 6.00

### Fourth Semester

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<td>Animation–Advanced Project</td>
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**TOTAL CREDITS:** 12.00

### Recommended General Education Courses

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<td>ARTS 1110</td>
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<td>3.00</td>
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<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
<td>3.00</td>
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<tr>
<td>CMST 2012</td>
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<td>THTR 1104</td>
<td>Introduction to Acting</td>
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### General Education Courses (15 Credits)

To earn the Digital Animation diploma, students are required to successfully complete 15 credits of General Education, including MnTC Goal Area 1.

Note: ENGL 1110 and ENGL 1111 satisfy six credits of MnTC for Goal Area 1.
Cinema: Directing

What You Will Learn
The Directing Program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate courses. It has been designed to work in concert with other programs in the division: Screenwriting, Cinematography, Editing and Producing. This program combines a pragmatic immersion in the art, craft, business and discipline of directing with a knowledge of narrative structures and conventions to produce directors who are also compelling storytellers. You, as a directing student, will develop productive collaborations with members of your cast and crew in order to interpret scripts, elicit dramatic performances, determine camera coverage strategies, design the right “look” and emotional tone, and supervise the shape and arrangement of the final work in the cutting room.

MCTC’s Directing program offers the most affordable movie directing education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and postproduction equipment.

The Cinema Division’s faculty—all active professionals—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

The program is physically demanding since the process of transporting and setting up large equipment requires a substantial amount of heavy lifting. You will also spend considerable time outside the classroom working on productions. MCTC has an articulation agreement with Augsburg College and University State University, Moorhead.

Note:
- Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
- Directing courses are not available for auditing.

Admission Requirements
All students seeking admission to Directing must first be admitted to the Cinema Production certificate program.

As they are completing the Cinema Production certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply

Students are initially admitted to the Cinema Production certificate program which begins each fall semester.

To apply to this program, you must complete two applications:
1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

- Directing A.S. Degree—60 credits

Where You Could Work

- Local and national film and video production houses
- With local and national independent producers
- In-house production departments within retail stores and corporations
- Local and national film studios
- Local and national television, cable stations and networks
- Local and national advertising agencies
- As a freelancer
Directing A.S. Degree

60 Credits

This program requires students to complete a first-year core curriculum culminating in the Cinema Production Certificate, before choosing the Directing major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
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Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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**Second Semester**

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### Third Semester

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**TOTAL CREDITS:** 14.00

### Fourth Semester

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**TOTAL CREDITS:** 16.00

### Recommended General Education Courses

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<td>Popular Culture in 20th-Century America</td>
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<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
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**General Education Courses (30 Credits)**

To earn the Directing A.S. degree, students are required to successfully complete 30 credits of general education as follows:

- 18 credits of program-required General Education courses: CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 and ENGL 1111.
- 12 credits of recommended General Education selected from at least six of the MnTC Goal Areas.

As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Areas 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Editing and Post-Production

What You Will Learn

The Editing and Post-Production program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate courses and builds on the first year Cinema Production core curriculum. During that year, you will learn the beginning levels of all aspects of cinema production and the art of collaboration during the production of your projects. After being exposed to these fundamental skills you will have an understanding of where and what your strengths and interests are. This will enable you to choose a specialization.

In the Editing and Post-Production program, you will be introduced to a combination of aesthetic and technical approaches used in the finishing phases of your cinema projects.

Some of the technical skills you will acquire are: Acuity on professional picture and sound editing software, DVD authoring and special effects software; knowing the differences between editing on film and video; editing with Chroma Key, 2D and 3D effects/compositing; knowing how to prepare a press kit; and the steps to submitting your projects to screening venues (i.e. film festivals, public television).

You will also learn the aesthetic approaches to different types of projects (i.e. documentary, narrative, commercials), through studying a diverse group of master editors. Some of the considerations you will encounter are: editing to advance the story; rhythm and pacing; creating emotional impact with editing; understanding 2- and 3-dimensional space through editing and creating a film editor reel.

MCTC’s Editing and Post-Production program offers the most affordable post-production education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and post-production equipment.

The Cinema Division’s faculty—all working professionals with graduate degrees—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

MCTC has an articulation agreement with Augsburg College and Minnesota State University, Moorhead.

NOTE:

- Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
- Editing and Post-Production courses are not available for auditing.

Admission Requirements

All students seeking admission to Post-Production must first be admitted to the Cinema Production Certificate Program.

As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
• **WRITING**—one of the following:
  • Placement into ENGL 1110
  • Completion of ENGL 0900 or ESOL 0051
• **MATH**—one of the following:
  • Placement into MATH 0070
  • Successful completion of MATH 0060
• **COMPUTER LITERACY**—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

**How You Apply**

Students are initially admitted to the Cinema Production certificate program which begins each fall semester. To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

**Awards or Credentials You Could Earn**

• Editing and Post-Production A.S. Degree—60 credits

**Where You Could Work**

• Local and national film and video production houses
• With local and national independent producers
• In-house production departments within retail stores and corporations
• Local and national film studios
• Local and national television, cable stations and networks
• National and local advertising agencies
• As a freelancer
Editing and Post-Production A.S. Degree

60 Credits

This program requires that students complete a first-year core curriculum Cinema Production Certificate, before choosing the Editing and Post-Production major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
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Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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**TOTAL CREDITS:** 15.00

**Second Semester**

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<td>ENGL 1111</td>
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**TOTAL CREDITS:** 15.00
### Third Semester

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**TOTAL CREDITS: 14.00**

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**TOTAL CREDITS: 16.00**

### Recommended General Education Courses

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<td>THTR 1104</td>
<td>Introduction to Acting</td>
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### General Education Courses (30 Credits)

To earn the Editing and Post-Production A.S. degree, students are required to successfully complete 30 credits of general education as follows:

- 18 credits of program-required General Education courses: CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 and ENGL 1111; and
- 12 credits of recommended General Education selected from at least six of the MnTC Goal Areas.

As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Areas 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Producing

What You Will Learn

The Producing program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate courses. It has been designed to work in concert with the four other programs in the division: Directing, Screenwriting, Cinematography and Editing. This program combines a pragmatic immersion in the art, craft, business, and discipline of producing with knowledge of narrative structures and conventions to train producers who are able to take a movie production from the very early concepts directly through the theatrical or television distribution and exhibition of the movie. As a Producing student, you will develop creative collaborations with members of your cast and crew in order to finance, budget, organize, schedule, manage, market, distribute and exhibit the collaborative project at hand.

MCTC’s Producing program offers the most affordable producing education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations. The resources and facilities in this innovative program are outstanding and include film as well as electronic production and postproduction equipment.

The Cinema Division’s faculty—all active professionals—will guide you as you learn how to produce a story of any kind using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

The program is physically demanding since the producing process includes participation in transporting and setting up large equipment that requires a substantial amount of heavy lifting. You will also spend considerable time outside the classroom working on productions. MCTC has an articulation agreement with Augsburg College and Moorhead State University.

Note:

- Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
- Producing courses are not available for auditing.

Admission Requirements

All students seeking admission to Producing must first be admitted to the Cinema Production Certificate program. As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
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- **MATH**—one of the following:
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  - Successful completion of MATH 0060
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To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
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Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

• Producing A.S. Degree—60 credits

Where You Could Work

• Local and national film and video production houses
• Local and national independent producers
• In-house production departments within retail stores and corporations
• Local and national film studios
• Local and national television, cable stations and networks
• Local and national advertising agencies
• As a freelancer
Producing A.S. Degree

60 Credits

This program requires students to complete a first-year core curriculum culminating in the Cinema Production Certificate, before choosing the Producing major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
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- **WRITING**—one of the following:
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**Recommended Course Sequence**

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**TOTAL CREDITS:** 15.00

**Second Semester**

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<td>Writing the Short Fiction Screenplay</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
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<td>3.00</td>
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<tr>
<td>General Education</td>
<td>Choose any course from the Recommended General Education list on the following page or choose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS:** 15.00
### Third Semester

<table>
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<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>CIST</td>
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<tr>
<td>PROD</td>
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**TOTAL CREDITS:** 14.00

### Fourth Semester

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<td>PROD</td>
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<tr>
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**TOTAL CREDITS:** 16.00

### Recommended General Education Courses

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<tr>
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<tr>
<td>ARTS</td>
<td>Introduction to Arts</td>
<td>3.00</td>
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<tr>
<td>CMST</td>
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<td>CMST</td>
<td>Intercultural Communication</td>
<td>3.00</td>
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<tr>
<td>PHIL</td>
<td>Critical Thinking</td>
<td>3.00</td>
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<tr>
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<td>PSCI</td>
<td>Environment, Politics and Society</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>AMST</td>
<td>Popular Culture in 20th-Century America</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR</td>
<td>Introduction to Acting</td>
<td>3.00</td>
</tr>
</tbody>
</table>

### General Education Courses (30 Credits)

To earn the Producing A.S. degree, students are required to successfully complete 30 credits of General Education as follows:

- 18 credits of program-required General Education courses: CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 and ENGL 1111.
- 12 credits of recommended General Education selected from at least six of the MnTC Goal Areas. As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Areas 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Screenwriting

What You Will Learn

The Screenwriting program at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate.

You will learn how to develop, write, rewrite, analyze and “cover” screenplays of all kinds, including those for television, documentaries and advertising. You will master the intricate art of combining powerful images and inspiring dialogue, and grow as an innovative screenwriter while “telling” exciting stories in your unique voice. By the time you complete the Screenwriting degree, you will be ready to address all issues related to dramatic and nonfiction screenwriting, as well as all underlying business and legal aspects.

The program provides an interactive learning environment wherein you will share your ideas and your scripts and get feedback in a workshop setting. You will collaborate with Directing and Producing students in the Cinema Division to get your work produced. You will have the opportunity to meet and work with local writers, producers, and guest lecturers from around the country, as well as pitch your finished scripts to professionals from Los Angeles and New York.

MCTC’s Screenwriting program offers the most affordable screenwriting education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach, and they will hold you to professional standards and expectations.

The Cinema Division’s faculty—all active professionals with graduate degrees—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest. MCTC has an articulation agreement with Augsburg and Minnesota State University, Moorhead.

Note:

- Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
- Screenwriting courses are not available for auditing.

Admission Requirements

All students seeking admission to Screenwriting must first be admitted to the Cinema Production Certificate program.

As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply

Students are initially admitted to the Cinema Production certificate program which begins each fall semester. To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

- Screenwriting A.S. Degree—60 credits

Where You Could Work

- Local and national film and video production houses
- Local and national independent producers
- Independent home video distribution companies
- In-house production departments within retail stores and corporations
- Local and national film studios
- Local and national television, cable stations and networks
- National and local advertising agencies
- As a freelancer
Screenwriting A.S. Degree

60 Credits

This program requires that you complete a first-year core curriculum Cinema Production certificate, before choosing the Screenwriting major in the second year.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

- **COMPUTER LITERACY**—one of the following:
  - In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>CIST 1101</td>
<td>Cinema History 1</td>
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<td>SCRN 1101</td>
<td>Introduction to Cinematic Storytelling</td>
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<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
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<tr>
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<td><strong>TOTAL CREDITS:</strong></td>
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**Second Semester**

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<td>CIPR 1102</td>
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<td>CIST 1102</td>
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<td>SCRN 1102</td>
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<td>ENGL 1111</td>
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### Third Semester

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<td>SCRN 2103</td>
<td>Script Analysis and Structure</td>
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<td>Writing Nonfiction Scripts</td>
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**TOTAL CREDITS: 14.00**

### Fourth Semester

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<td>Writing the Fictional Feature-Length Script</td>
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**TOTAL CREDITS: 16.00**

### Recommended General Education Courses

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<td>JOUR 1000</td>
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<td>ARTS 1110</td>
<td>Introduction to Arts</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
<td>3.00</td>
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<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
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<tr>
<td>PHIL 1110</td>
<td>Critical Thinking</td>
<td>3.00</td>
</tr>
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<td>PSCI 1104</td>
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</tr>
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<td>PSCI 1137</td>
<td>Environment, Politics and Society</td>
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<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
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<tr>
<td>AMST 1152</td>
<td>Popular Culture in 20th-Century America</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
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</table>

### General Education Courses (30 Credits)

To earn the Screenwriting A.S. degree, students are required to successfully complete 30 credits of General Education as follows:

- 18 credits of program-required General Education courses, including CIST 1101 and CIST 1102; CIST 1103 and CIST 1104; ENGL 1110 & ENGL 1111; and
- 12 credits of recommended General Education selected from at least six of the MnTC Goal Areas.

As a general rule, a minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10. (See list of recommended courses above).

Note: ENGL 1110 satisfies MnTC Goal Area 1. CIST 1101 and 1102 satisfy MnTC Goal Area 6, CIST 1103 satisfies MnTC Goal Areas 6 and 7, and CIST 1104 satisfies MnTC Goal Areas 6 and 8.
Cinema: Sound for Cinema

What You Will Learn
The Sound for Cinema Diploma at MCTC is open to second-year Cinema Division students who have completed the Cinema Production Certificate. This program will train you in the art and craft of sound recording and mixing using a combination of aesthetic, technical and theoretical approaches, specializing in the recording and mixing of sound of motion pictures. Sound for Cinema students will establish strong collaborations with Directing students as well as with the other programs in the Division. Program faculty are committed to following emerging technologies and will incorporate such technologies whenever possible.

MCTC’s Sound for Cinema Diploma offers the most affordable and unique sound education in Minnesota. Courses in this program require a high level of commitment. Your instructors are passionate about what they teach and they will hold you to professional standards and expectations. The resources and facilities in this innovate program are outstanding and include film as well as electronic production and post-production equipment.

The Cinema Division’s faculty—all active professionals—will guide you as you learn to express yourself using moving images and sound. You can also take advantage of diverse internship opportunities in the Twin Cities area, one of the largest commercial and industrial markets in the Midwest.

The program is physically demanding, since the process of transporting and setting up large equipment requires a substantial amount of lifting. You will also spend considerable time outside the classroom working on productions. Articulation Agreement: Contact program Academic Dean, in Academic Affairs.

Note:
• Students seeking to re-enroll in CIPR 1101, CIPR 1102, SCRN 1101 and SCRN 1102 coursework they have previously completed successfully must have the permission of the instructor.
• The Sound for Cinema courses are not available for auditing.

Admission Requirements
All students seeking admission to Sound for Cinema must first be admitted to the Cinema Production Certificate Program.

As they are completing the Cinema Production Certificate during their first year, students should meet with their faculty and their advisor/counselor regarding appropriate sequencing of required coursework and to choose a major concentration for their second year.

Admission Requirements for the Cinema Production Certificate are as follows:

Completion and acceptance of the Cinema Division Supplemental Application form and achievement of the following minimum placements:

• READING—one of the following:
  • Placement into READ 1300
  • Completion of READ 0200 or ESOL 0052
• WRITING—one of the following:
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  • Successful completion of MATH 0060
• COMPUTER LITERACY—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.
How You Apply

Students are initially admitted to the Cinema Production certificate program which begins each fall semester.

To apply to this program, you must complete two applications:

1) Apply online at Minneapolis.edu/admissions
2) Complete and submit the Cinema Division Supplemental Application form (downloadable from the Cinema Division website)

Once admission requirements are met and Cinema Division Supplemental Application has been accepted, applicants will be admitted to the program on a “first come, first qualified” basis. Once the program is full, additional applicants meeting the admission requirements will be placed on a waiting list.

Awards or Credentials You Could Earn

- Sound for Cinema Diploma—48 credits

Where You Could Work

- Local and national film and video production houses
- Local and national independent producers
- Independent home video distribution companies
- In-house production departments within retail stores and corporations
- Local and national film studios
- Local and national television, cable stations and networks
- National and local advertising agencies
- As a freelancer
Sound for Cinema Diploma

48 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—one of the following:
  In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>CIST 1101</td>
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<tr>
<td>SCRN 1101</td>
<td>Introduction to Cinematic Storytelling</td>
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<td>ENGL 1110</td>
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<td>Choose any course from the Recommended General Education list on the following page or choose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 15.00**

**Second Semester**

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<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
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<tr>
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<td>Choose any course from the Recommended General Education list on the following page or chose a course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 15.00**
### Third Semester

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<td>SNDA 1310</td>
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<tr>
<td>General Education</td>
<td>Choose any course from the recommended General Education list (see below)</td>
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**TOTAL CREDITS:** 10.00

### Fourth Semester

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<td>Post-Production Sound for Motion Pictures</td>
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<td>SNDC 2103</td>
<td>Advanced Sound for Cinema Project</td>
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**TOTAL CREDITS:** 8.00

### Recommended General Education Courses

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<tr>
<td>JOUR 1000</td>
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<tr>
<td>ARTS 1110</td>
<td>Introduction to Arts</td>
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<td>CMST 2011</td>
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<td>CMST 2012</td>
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<td>PHIL 1110</td>
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<td>INFS 2600</td>
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<tr>
<td>THTR 1104</td>
<td>Introduction to Acting</td>
<td>3.00</td>
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### General Education Courses (15 Credits)

To earn the Sound for Cinema diploma, students are required to successfully complete 15 credits of General Education including MnTC Goal Area 1.

Note: ENGL 1110 and ENGL 1111 satisfy six credits of MnTC for Goal Area 1.
Communication Studies Certificate

9 Credits

Pending MnSCU Approval

Recommended Course Sequence

This award is designed to ease transfer and help you earn a four year degree. The pathway is meant to guide your course selections. Students will meet with their assigned advisor for planning their first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, students can stop by the Counseling and Advising Office in T2500 or call 612-659-6700.

First Semester

Choose three courses from the list below:

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<td>CMST 1005</td>
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<td>CMST 1013</td>
<td>Family Communication</td>
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<td>*CMST 2000</td>
<td>Speaking in the Community</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2005</td>
<td>Communication and Gender</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2010</td>
<td>Argumentation and Advocacy</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2011</td>
<td>Small Group Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 9.00

*Students who plan to take CMST 2000 must first have taken CMST 1000 or 1005.

To earn the Communication Studies Certificate, students are required to complete 9 credits from the course listing above.
Community Development

What You Will Learn
MCTC’s new Community Development A.S. degree program will prepare you for challenging careers in community development corporations, urban neighborhood revitalization, community organizations, environmental impact assessment, private developers, banks, nonprofits and government agencies.

This program intersects community development, community organizing and indigenous cultures. This combination promises to educate a future generation of community leaders. You will understand indigenous cultures and the broader community in a changing global environment; learn to demonstrate an awareness of approaches, methods, and techniques of community development and community indigenous cultural groups, focusing especially on Native Americans; and you will examine the roles and responsibilities of citizen leaders, citizen participants, community developers and organizers. This area of study enables you to better understand the links between local action and the process of policymaking within a larger system, while considering finances, assessment and development of the community.

This program provides you with courses designed to give you the practical skills necessary to research issues of interest within the area of Community Development. Indigenous cultures, economic problems, accounting and marketing, management, global studies, and reclaiming democracy are examples of the types of courses required for this degree. You will learn various skills that are important to gain for employment. You will learn how to effectively work cooperatively in a team setting and as an individual to be a leader in your community.

MCTC has an articulation agreement with St. Mary’s University.

Admissions Requirements
Students are accepted into this program for fall and spring terms.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Awards or Credentials You Could Earn
- Community Development A.S. Degree—60 credits

Where You Could Work
- Federal, state, county or local governments
- Banks and grant programs
- Private and nonprofit agencies
- Community organizations
- Neighborhood associations
- Neighborhood revitalization programs
- Community education
Community Development A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIS 1120</td>
<td>Community Development and Indigenous Cultures</td>
<td>3.00</td>
</tr>
<tr>
<td>BUSN 1145</td>
<td>Small Business Management</td>
<td>3.00</td>
</tr>
<tr>
<td>*BIOL 1127</td>
<td>Human Biology (Recommended or choose courses from the Recommended General Education list on page 153)</td>
<td>3.00</td>
</tr>
<tr>
<td>*BIOL 1128</td>
<td>Human Biology Lab (Recommended or choose courses from the Recommended General Education list on page 153)</td>
<td>1.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1102</td>
<td>State and Local Government</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 16.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>GLOS 1500</td>
<td>Introduction to Global Studies</td>
<td>3.00</td>
</tr>
<tr>
<td>*MATH 1140</td>
<td>Introduction to Statistics (Recommended or choose courses from the Recommended General Education list on page 153)</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1170</td>
<td>Community Organizing</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 1105</td>
<td>Introduction to Sociology</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMST 1132</td>
<td>Ethnic America</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1137</td>
<td>Environment, Politics and Society or choose courses from recommended MnTC Goal Area Electives list on page 153</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1180</td>
<td>Media and Community Organizing</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1200</td>
<td>Introduction to Public Policy</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 16.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 2500</td>
<td>Contemporary Economic Problems</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>HSER 1001</strong></td>
<td>Introduction to Human Services (Recommended or choose courses from the Recommended General Education list on page 153)</td>
<td>4.00</td>
</tr>
<tr>
<td>PSCI 1175</td>
<td>Political Science Field Experience (Recommended or choose courses from the Recommended Courses for MnTC Goal Area Electives see below)</td>
<td>3.00</td>
</tr>
<tr>
<td>*SOCI 2145</td>
<td>American Minority Relations (Recommended or choose courses from the Recommended General Education list on page 153)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00

### Recommended Courses for MnTC Goal Area Electives

The following courses are recommended for students who opt not to take PSCI 1137 or PSCI 1175.

<table>
<thead>
<tr>
<th>MnTC GOAL AREA 9</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFS 2510</td>
<td>Necessary Illusions: Intro to the Information Age</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 2520</td>
<td>Alternative Knowledge: How Radical Ideas are Communicated</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 1000</td>
<td>Consumer Economics</td>
<td>3.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MnTC GOAL AREA 10</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1136</td>
<td>Environmental Science</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1137</td>
<td>Environment, Politics and Society</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 1160</td>
<td>Technology, Culture and Society</td>
<td>3.00</td>
</tr>
<tr>
<td>WOST 2212</td>
<td>Ecofeminism</td>
<td>3.00</td>
</tr>
</tbody>
</table>
Recommended General Education Courses

Courses marked with an * are recommended and have been built into the semester-by-semester outline previously listed, but students can choose from any of these courses. Note: ** HSER 1001 and HSER 1002 do not carry an MnTC Goal Area but can be taken as an elective. You must still meet the 27 credits of required General Education coursework.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1127</td>
<td>Human Biology</td>
<td>3.00</td>
</tr>
<tr>
<td>*BIOL 1128</td>
<td>Human Biology lab</td>
<td>1.00</td>
</tr>
<tr>
<td>ECON 2000</td>
<td>Principles of Macroeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>**HSER 1001</td>
<td>Introduction to Human Services (Not a general education course)</td>
<td>2.00</td>
</tr>
<tr>
<td>**HSER 1002</td>
<td>Multicultural Aspects of Human Services (Not a general education course)</td>
<td>2.00</td>
</tr>
<tr>
<td>*MATH 1140</td>
<td>Introductory Statistics</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 2115</td>
<td>Environmental Ethics</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1101</td>
<td>American Government and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>*SOCI 2145</td>
<td>American Minority Relations</td>
<td>3.00</td>
</tr>
</tbody>
</table>

General Education Coursework (27 Credits)

To complete the Community Development A.S. degree, students must successfully complete an additional 27 credits of General Education coursework. The recommended coursework is outlined above. Six credits from MnTC Goal Areas 9 and 10 are required with recommended courses listed above.
Community Health Worker

What You Will Learn

MCTC’s Community Health Worker program will prepare you to obtain employment in a variety of organizations. As a Community Health Worker, you will deliver a broad range of health-related functions and play an important role in bridging the gap between cultures and healthcare systems. You will work with healthcare organizations to increase cultural competence, improve access to healthcare for racial and ethnic minorities, improve the quality of care for the chronically ill, promote healthy communities, and educate families about access to and use of healthcare coverage. You will learn the six basic core competencies appropriate to job placement.

The 17-credit certificate curriculum will provide a blend of classroom and field-based learning for new learners interested in becoming Community Health Workers (CMHW).

As a CMHW, you will understand and can act as a culture broker between your own community and systems of care. You will provide basic health advising and health promotion and link community members to health and social service systems.

The CMHW Program Requires

- Grades of “C” (2.0) or above in all CMHW courses.
- Passing of a criminal background check prior to being placed in a Community Health Worker internship. The College cannot guarantee placement in internships for students who do not have a clear criminal background check.
- For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.

Admission Requirements

Students are accepted into this program for fall, spring or summer. Students who start the program in the fall semester can complete the required coursework during the fall semester. Students who begin the program in spring or summer will complete the coursework over two semesters.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042

Awards or Credentials You Could Earn

- Community Health Worker Certificate—17 credits

Where You Could Work

- Federal, state, county or local health departments
- Human services agencies and organizations
- Private and/or nonprofit clinics
Community Health Worker Certificate

17 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Not all of the courses are offered every semester.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMHW 1001</td>
<td>The Community Health Worker Role: Advocacy and Outreach</td>
<td>2.00</td>
</tr>
<tr>
<td>CMHW 1016</td>
<td>Organizations and Resources: Community and Personal Strategies</td>
<td>1.00</td>
</tr>
<tr>
<td>CMHW 1025</td>
<td>The Community Health Worker's Role in Teaching and Capacity-Building</td>
<td>2.00</td>
</tr>
<tr>
<td>CMHW 1035</td>
<td>The Community Health Worker: Legal and Ethical Responsibilities</td>
<td>1.00</td>
</tr>
<tr>
<td>CMHW 1045</td>
<td>Community Health Worker: Coordination, Documentation and Reporting</td>
<td>1.00</td>
</tr>
<tr>
<td>CMHW 1055</td>
<td>Communication Skills and Cultural Competence</td>
<td>2.00</td>
</tr>
<tr>
<td>CMHW 1065</td>
<td>Health Promotion Competencies</td>
<td>3.00</td>
</tr>
<tr>
<td>CMHW 1100</td>
<td>Community Health Worker Internship</td>
<td>2.00</td>
</tr>
<tr>
<td>CMST 1005 Or ENGL 1110</td>
<td>Public Speaking College English 1</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 17.00**
Computer Forensics

What You Will Learn
MCTC’s Information Technology program has three A.A.S. awards: Computer Forensics, Computer Support and Network Administration, and Software Development, as well as a number of diplomas and certificates.

MCTC’s Computer Forensics A.A.S. is a unique degree program that combines knowledge and skills of a number of areas, including information technology, information security, computer forensics, criminal justice, law, investigation and ethics. Computer forensics professionals are primarily employed by governmental and legal agencies that specialize in cybercrime investigations. Instructors with business and industry experience lead classes and cover the various program areas.

In addition, you will have the chance to work in groups with other class members to learn valuable teamwork and communication skills that reflect real-world soft-skill requirements. You will also have the opportunity to participate in various student club activities, technology competitions and industry events.

As a student, you will also have the opportunity to participate in valuable learning activities such as internships, student-learning experiences and the Information Technology Club. Upon completion of the program, you will have gained strong technical problem-solving, interpersonal and communication skills that will be useful as you enter the workforce.

MCTC has articulation agreements with Metropolitan State University, Minnesota State University, Moorhead, St. Mary’s University and St. Scholastica for students who wish to pursue a four-year degree.

Admission Requirements
Students are accepted into this program for fall and spring semesters and summer term.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Awards or Credentials You Could Earn

- Computer Forensics A.A.S. Degree—60 credits

Where You Could Work

- Help desk centers
- Technical support
- Information technology departments in government and industry
- Network administration
- Internet service providers
- IT consulting firms
- Training centers
- Technology vendors
Computer Forensics A.A.S. Degree

60 Credits

Courses in this program require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Completion of READ 0200 or ESOL 0052
  - Be declared ready to enroll in READ 1300 on the basis of reading placement test scores

- **WRITING**—one of the following:
  - Completion of ENGL 0900 or ESOL 0051
  - Be declared ready to enroll in ENGL 1110 on the basis of writing placement test scores

- **MATH**—one of the following:
  - Completion of MATH 0070
  - Be declared ready to enroll in MATH 0080 on the basis of math placement test scores

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication Studies</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 1101</td>
<td>American Government</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 2000</td>
<td>Constitutional Law</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1310</td>
<td>Microcomputer System Maintenance</td>
<td>4.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 16.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 2710 Or</td>
<td>Microsoft Network Administration</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1475 Or</td>
<td>Linux System Administration</td>
<td></td>
</tr>
<tr>
<td>ITEC 2880</td>
<td>Cisco Network Administration</td>
<td></td>
</tr>
<tr>
<td>ITEC 2865</td>
<td>Internet/Intranet Security</td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose at least 3 credits from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 17.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 2855</td>
<td>Computer Forensics</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2950</td>
<td>Information Technology Career Preparation</td>
<td>2.00</td>
</tr>
<tr>
<td>SOCI 2155</td>
<td>Introduction to Criminal Justice</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any MnTC Goal Areas</td>
<td>4.00</td>
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</tbody>
</table>

**TOTAL CREDITS:** 13.00

**General Education (28 Credits):**

To complete the Computer Forensics A.A.S. degree, students are required to successfully complete 28 credits of General Education coursework. The required courses are ENGL 1110, ENGL 1111, CMST 1000, PSCI 1101, PSCI 2000, SOCI 2155 and a minimum of three credits from Goal Areas 7, 8, 9 or 10.

It is strongly recommended that students seeking transfer into Metropolitan State University’s B.A.S. in Computer Forensics complete MATH 1110 and MATH 1150.
Computer Science

What You Will Learn
Minneapolis Community and Technical College’s Computer Science curriculum serves students in three ways:

Elective Credits for the Associate in Arts Degree
If you are seeking an A.A. degree, classes are available to fulfill elective credits and provide additional skills for careers in both computer and business fields.

Transfer Courses
If you are planning to seek a four-year college degree in computer science, engineering, natural sciences or social sciences, the computer programming classes meet the needs of most transfer students who must have introductory programming courses for their majors.

Computer Literacy
Both CSCI 1100: Introduction to Computers and CSCI 1200: Computer Application in Home and Business fulfill the computer literacy requirement for the A.A. degree.

Awards or Credentials You Could Earn
• Transfer courses—28 credits

Computer Science-Transfer Courses
28 Credits

Recommended Course Sequence
The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1100</td>
<td>Introduction to Computers</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI 1200</td>
<td>Computer Applications in Home and Business</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI 1500</td>
<td>Introduction to Programming and Problem Solving</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI 1700</td>
<td>Introduction to Computer Programming in Java</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI 1730</td>
<td>Introduction to Object-Oriented Programming With C++</td>
<td>4.00</td>
</tr>
<tr>
<td>CSCI 1901</td>
<td>Structure of Computer Programming 1</td>
<td>4.00</td>
</tr>
<tr>
<td>CSCI 1902</td>
<td>Structure of Computer Programming 2</td>
<td>4.00</td>
</tr>
<tr>
<td>CSCI 2011</td>
<td>Discrete Mathematics</td>
<td>4.00</td>
</tr>
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</table>

TOTAL CREDITS: 28.00
Computer Software Development

Admission Requirements:
Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

Awards or Credentials You Could Earn

- Computer Software Development A.A.S. Degree—60 credits
- Software Developer Diploma—54 credits
- JAVA Developer Certificate—29 credits
- Visual BASIC .NET Developer Certificate—29 credits
- Visual C# Developer Certificate—29 credits
- Database Specialist Certificate—29 credits
- Open Source Developer Certificate—26 credits
- Mobile Application Developer Certificate—25 credits
Software Development A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
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<td></td>
<td><strong>TOTAL CREDITS:</strong> 14.00</td>
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**Second Semester**

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<tr>
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<tbody>
<tr>
<td>*CMST 1000</td>
<td>Introduction to Communication Studies</td>
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<tr>
<td>*ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1375 Or</td>
<td>Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1460 Or</td>
<td>SQL Server Database Design and Implementation</td>
<td></td>
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<tr>
<td>ITEC 1465</td>
<td>MySQL Database Design and Implementation</td>
<td></td>
</tr>
<tr>
<td>ITEC 2425 Or</td>
<td>Infotech Project Management</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
<td></td>
</tr>
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<td></td>
<td><strong>TOTAL CREDITS:</strong> 14.00</td>
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### Third Semester

Choose 2 sets of languages from one of the 5 listed sets below for a total of 16 credits.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1725 and ITEC 2410</td>
<td>Mobile Applications Development 1 Mobile Applications Development 2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1771 and ITEC 2541</td>
<td>Java /1 Java /2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1700 and ITEC 2400</td>
<td>Visual C# .NET/1 Visual C# .NET/2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1555 and ITEC 2555</td>
<td>Web Programming Web Client/Server Programming</td>
<td>8.00</td>
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**TOTAL CREDITS: 16.00**

### Fourth Semester

<table>
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<tr>
<th>COURSE #</th>
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</thead>
<tbody>
<tr>
<td>ITEC 2950</td>
<td>Information Technology Career Preparation</td>
<td>2.00</td>
</tr>
<tr>
<td>Program Electives</td>
<td>Choose 4 credits from the Program Elective Courses list on the following page</td>
<td>4.00</td>
</tr>
<tr>
<td>*ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose at least one course from MnTC Goal Area 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>Choose any courses from any of the MnTC Goal Areas</td>
<td>4.00</td>
</tr>
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</table>

**TOTAL CREDITS: 16.00**
### Program Elective Courses

Choose 4 credits from the list below:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1310</td>
<td>Microcomputer Systems Maintenance</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1465</td>
<td>MYSQL Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1475</td>
<td>Linux System Administration</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1585</td>
<td>E-Commerce Development and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1725</td>
<td>Mobile Application Development</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2075</td>
<td>Application Support and Resource Utilization</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2245</td>
<td>Computer Gaming Design and Development</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2410</td>
<td>Applications Development Using Tools</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2855</td>
<td>Computer Forensic</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2900</td>
<td>Information Technology Internship</td>
<td>2.00</td>
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### General Education Courses (16 Credits)

To complete the Computer Software Development A.A.S. degree, students are required to successfully complete 16 credits of General Education coursework. The coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are *ENGL 1110, *ENGL 1111 and *CMST 1000.
Software Developer Diploma

54 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
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</table>

**TOTAL CREDITS:** 14.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1375</td>
<td>Database Design and Implementation</td>
<td>4.00</td>
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<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
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<td>Infotech Project Management</td>
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<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2950</td>
<td>Information Technology Career Preparation</td>
<td>2.00</td>
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</tbody>
</table>

**TOTAL CREDITS:** 16.00
Third Semester

Choose 2 sets of languages from one of the 5 sets listed below for a total of 16 credits.

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1710 and ITEC 2410</td>
<td>Mobile Applications 1 Mobile Applications 2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1771 and ITEC 2541</td>
<td>Java /1 Java /2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1700 and ITEC 1555</td>
<td>Visual C#.NET/1 Visual C#.NET/2</td>
<td>8.00</td>
</tr>
<tr>
<td>ITEC 1555 and ITEC 2555</td>
<td>Web Programming Web Client/Server Programming</td>
<td>8.00</td>
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</table>

TOTAL CREDITS: 16.00

Fourth Semester

Program Elective Courses: Choose 8 credits from the following list of courses.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
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<td>ITEC 1310</td>
<td>Microcomputer Systems Maintenance</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
<td>4.00</td>
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<tr>
<td>ITEC 1465</td>
<td>MYSQL Database Design and Implementation</td>
<td>4.00</td>
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<td>ITEC 1475</td>
<td>Linux System Administration</td>
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<td>Application Support and Resource Utilization</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2245</td>
<td>Computer Gaming Design and Development</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2410</td>
<td>Applications Development Using Tools</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2855</td>
<td>Computer Forensic</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2900</td>
<td>Information Technology Internship</td>
<td>2.00</td>
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</table>

TOTAL CREDITS: 8.00

General Education Courses (6 Credits)

To complete the Software Developer diploma, students are required to successfully complete six credits of General Education coursework. The specific courses that are required are ENGL 1110 and CMST 1000.
Java Developer Certificate
29 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

**Recommended Course Sequence**
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</thead>
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<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
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**TOTAL CREDITS: 13.00**

**Second Semester**

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<th>COURSE #</th>
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<tbody>
<tr>
<td>ITEC 1375</td>
<td>Database Design and Implementation</td>
<td>4.00</td>
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<tr>
<td>ITEC 1771</td>
<td>Java/1</td>
<td>4.00</td>
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<td>ITEC 2541</td>
<td>Java/2</td>
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</tr>
<tr>
<td>ITEC 2425</td>
<td>Or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Infotech Project Management</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>Systems Analysis and Design</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**

**General Education Courses (3 Credits)**
To complete the Java Developer certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Visual BASIC .NET Developer Certificate

29 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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</tr>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
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</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
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**Second Semester**

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<tr>
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<tbody>
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<td>Database Design and Implementation</td>
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<tr>
<td>ITEC 1750</td>
<td>Visual BASIC .Net/1</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2450</td>
<td>Visual BASIC .Net/2</td>
<td>4.00</td>
</tr>
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<td>ITEC 2425 Or</td>
<td>Infotech Project Management</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
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</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>16.00</strong></td>
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</table>

**General Education Courses (3 Credits)**

To complete the Visual BASIC .Net Developer certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Visual C# Developer Certificate

29 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
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**TOTAL CREDITS: 13.00**

**Second Semester**

<table>
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<tbody>
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<td>4.00</td>
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<tr>
<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**

**General Education Courses (3 Credits)**

To complete the Visual C# Developer certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Database Specialist Certificate

29 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
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**TOTAL CREDITS:** 13.00

**Second Semester**

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<tbody>
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<td>ITEC 1375</td>
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<tr>
<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
<td>4.00</td>
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</table>

Program Language: Take one of the following sets of courses listed below.

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>ITEC 1700 and ITEC 2400</td>
<td>Visual C#.Net 1 and Visual C#.Net 2</td>
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<tr>
<td>ITEC 1750 and ITEC 2450</td>
<td>Visual BASIC.NET 1 and Visual BASIC.NET 2</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1771 and ITEC 2451</td>
<td>Java 1 and Java 2</td>
<td>4.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 16.00

**General Education Courses (3 Credits)**

To complete the Database Specialist certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Open Source Developer Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Please note that the second semester course ITEC 1771 has ITEC 1150 as a prerequisite. Students must complete ITEC 1771 prior to taking ITEC 2541.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
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<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1475</td>
<td>Linux System Administration</td>
<td>4.00</td>
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<tr>
<td>General Education</td>
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</table>

**TOTAL CREDITS: 14.00**

<table>
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<tr>
<td>ITEC 1771</td>
<td>Java 1</td>
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<tr>
<td>ITEC 2541</td>
<td>Java 2</td>
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<tr>
<td>ITEC 1465</td>
<td>MySQL Database Design and Implementation</td>
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</table>

**SECOND SEMESTER**

**TOTAL CREDITS: 12.00**

**General Education Courses (3 Credits)**

To complete the Open Source Developer certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1. ENGL 1110 satisfies this requirement.
Mobile Application Developer Certificate

25 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<tr>
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<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
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<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
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**TOTAL CREDITS:** 13.00

**Second Semester**

<table>
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<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
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<td>ITEC 1725</td>
<td>Mobile Applications Development</td>
<td>4.00</td>
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<tr>
<td>ITEC 2425 Or</td>
<td>InfoTech Project Management</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2410</td>
<td>Applications Development Using Tools</td>
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</table>

**TOTAL CREDITS:** 12.00

**General Education Courses (3 Credits)**

To complete the Mobile Application Developer certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Computer Support & Network Administration

What You Will Learn

MCTC’s Information Technology program has two A.A.S. awards: Computer Support and Network Administration and Software Development, as well as a number of diplomas and certificates.

MCTC’s Computer Support and Network Administration degree provides a comprehensive, industry-focused training on network support and Internet technologies. You will learn how to install, configure, and maintain computer hardware, protocols, operating systems, software and Internet-working devices, with special emphasis on developing troubleshooting skills. Instructors with real-world experience lead classes and cover key topics such as network administration, client/server installation and support, Web server management, database implementation, and network security.

In addition, you will have the chance to work in groups with other class members to learn valuable teamwork and communication skills that reflect real-world soft-skill requirements. You’ll also have the opportunity to participate in various student club activities, technology competitions and industry events.

MCTC’s Software Development degree will empower you to systematically analyze problems and create software solutions for business, scientific fields and government. You will learn how to create and maintain computer programs using a variety of computer programming languages. You will also study client/server architecture, data communications, data process principles, computer business applications, graphical user interfaces, Web development and e-business/e-commerce concepts.

To prepare programs for implementation, you will learn to design and develop in multiple programming languages. You’ll also test and maintain programs to verify proper operation with data and reliability testing, including debugging to correct errors that are encountered. Many of the Information Technology courses are geared toward vendor-based and vendor-neutral industry standard certifications, such as those from Microsoft, Sun and CompTIA.

As a student, you will also have the opportunity to participate in valuable learning activities such as internships, student learning experiences and the Information Technology Club. Upon completion of the program, you will have gained strong problem-solving, interpersonal and communication skills that will be useful as you enter the workforce.

MCTC has an articulation agreement with Metropolitan State University; Minnesota State University, Moorhead; St. Mary’s University; and St. Scholastica for students who wish to pursue a four-year degree.

Admission Requirements

Students are accepted into this program for fall, spring and summer terms.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070
Awards or Credentials You Could Earn

- Computer Support and Network Administration A.A.S. Degree—60 credits
- Computer Support and Network Administration Diploma—54 credits
- Information Assurance Professional Diploma—47 credits
- Cisco Network Administrator Certificate—26 credits
- Computer Security Specialist Certificate—26 credits
- Linux Network Administrator Certificate—26 credits
- Microsoft Network Administrator Certificate—26 credits
- Wireless Network Administrator Certificate—26 credits
- Database Administrator Certificate—26 credits
- Macintosh Support and Network Administration Certificate—26 credits
- Information Technology Fundamentals Certificate—21 credits

Where You Could Work

- Help desk centers
- Technical support
- Information technology departments in government and industry
- Network administration
- Internet service providers
- IT consulting firms
- Training centers
- Technology vendors
- Software consulting firms
- Application software developers
- Web developers
Computer Support and Network Administration A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

### Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

#### First Semester

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<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
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<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
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</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
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</tr>
<tr>
<td>ITEC 1425</td>
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**TOTAL CREDITS:** 14.00

#### Second Semester

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<td>ENGL 1110</td>
<td>College English 1</td>
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<td>ITEC 1310</td>
<td>Microcomputer System Maintenance</td>
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<tr>
<td>ITEC 1475 Or</td>
<td>Linux System Administration</td>
<td>4.00</td>
</tr>
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<td>ITEC 2425</td>
<td>Information Technology Project Management</td>
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<tr>
<td>ITEC 2710</td>
<td>Microsoft Network Administration</td>
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**TOTAL CREDITS:** 15.00
### Third Semester

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<tr>
<td>CMST 1000</td>
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<td>ENGL 1111</td>
<td>College English 2</td>
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<td>Internet/Intranet Security: Implementation and Management</td>
<td>4.00</td>
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<td>ITEC 2880</td>
<td>Cisco Network Administration</td>
<td>4.00</td>
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<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Areas 7, 8, 9 or 10</td>
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**TOTAL CREDITS: 17.00**

### Fourth Semester

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<tr>
<td>ITEC 2910</td>
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<tr>
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<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 14.00**

### Program Elective Courses

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
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<tr>
<td>ITEC 1375</td>
<td>Database Design and Implementation</td>
<td>4.00</td>
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<tr>
<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1465</td>
<td>MySQL Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1555</td>
<td>Web Programming</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1585</td>
<td>E-Commerce Development and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1950</td>
<td>Computer Telephony Integration</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2075</td>
<td>Application Support and Resource Utilization</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2425</td>
<td>Information Technology Project Management</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2725</td>
<td>Macintosh Network Administration</td>
<td>4.00</td>
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<tr>
<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2795</td>
<td>Web Server and TCP/IP Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2820</td>
<td>Wireless LAN/WAN Administration</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 2855</td>
<td>Computer Forensic</td>
<td>4.00</td>
</tr>
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<td>ITEC 2890</td>
<td>Firewall Implementation and Management</td>
<td>4.00</td>
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<tr>
<td>ITEC 2895</td>
<td>Security Implementation and Risk Analysis</td>
<td>4.00</td>
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<td>ITEC 2900</td>
<td>Information Technology Internship</td>
<td>2.00–4.00</td>
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<tr>
<td>ITEC 2990</td>
<td>Ethical Hacking and Network Defense</td>
<td>4.00</td>
</tr>
</tbody>
</table>

### General Education Courses (16 Credits)

To complete the Computer Support and Network Administration A.A.S. degree, students are required to successfully complete 16 credits of General Education coursework. This coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1; and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are ENGL 1110, ENGL 1111 and CMST 1000.
Computer Support and Network Administration Diploma

54 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ITEC 1100</td>
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<td>ITEC 1110</td>
<td>Information Technology Skills</td>
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<td>ITEC 1150</td>
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<td>3.00</td>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
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<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
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<tr>
<td>General Education</td>
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**TOTAL CREDITS: 17.00**

### Second Semester

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<th>COURSE #</th>
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<th>CREDITS</th>
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<td>ITEC 1310</td>
<td>Microcomputer System Maintenance</td>
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<td>ITEC 1475</td>
<td>Linux System Administration</td>
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<tr>
<td>ITEC 2710</td>
<td>Microsoft Network Administration</td>
<td>4.00</td>
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<tr>
<td>ITEC 2865</td>
<td>Internet/Intranet Security: Implementation and Management</td>
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**TOTAL CREDITS: 16.00**

### Third Semester

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<td>ITEC 2910</td>
<td>LAN Implementation and Management</td>
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<tr>
<td>ITEC 2950</td>
<td>Information Technology Career Prep</td>
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<tr>
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**TOTAL CREDITS: 16.00**
## Fourth Semester

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<td>Program Elective</td>
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**TOTAL CREDITS: 8.00**

### Program Elective Courses

Choose 8 credits from the list below:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
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<tr>
<td>ITEC 1375</td>
<td>Database Design and Implementation</td>
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</tr>
<tr>
<td>ITEC 1460</td>
<td>SQL Server Database Design and Implementation</td>
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</tr>
<tr>
<td>ITEC 1465</td>
<td>MySQL Database Design and Implementation</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1555</td>
<td>Web Programming</td>
<td>4.00</td>
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<td>ITEC 1585</td>
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<td>ITEC 1950</td>
<td>Computer Telephony Integration</td>
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</tr>
<tr>
<td>ITEC 2075</td>
<td>Application Support and Resource Utilization</td>
<td>4.00</td>
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<tr>
<td>ITEC 2425</td>
<td>Information Technology Project Management</td>
<td>4.00</td>
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<tr>
<td>ITEC 2725</td>
<td>Macintosh Network Administration</td>
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</tr>
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<td>ITEC 2775</td>
<td>Systems Analysis and Design</td>
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<td>ITEC 2795</td>
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<td>Wireless LAN/WAN Administration</td>
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<tr>
<td>ITEC 2855</td>
<td>Computer Forensic</td>
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<td>ITEC 2890</td>
<td>Firewall Implementation and Management</td>
<td>4.00</td>
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<td>ITEC 2895</td>
<td>Security Implementation and Risk Analysis</td>
<td>4.00</td>
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<tr>
<td>ITEC 2900</td>
<td>Information Technology Internship</td>
<td>2.00-4.00</td>
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<tr>
<td>ITEC 2990</td>
<td>Ethical Hacking and Network Defense</td>
<td>4.00</td>
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</table>

### General Education Courses (6 Credits)

To complete the Computer Support and Network Administration Diploma, students are required to successfully complete six credits of General Education coursework. A minimum of three credits must be completed from Goal Area 1, and three credits from Goal Areas 7, 8, 9 or 10.
Information Assurance Professional Diploma

47 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>Information Technology Concepts</td>
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<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>ITEC 1150</td>
<td>Programming Logic and Design</td>
<td>3.00</td>
</tr>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
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<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
</tr>
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**TOTAL CREDITS: 17.00**

**Second Semester**

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<td>ITEC 1475 Or</td>
<td>Linux Network Administration</td>
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<td>ITEC 2710</td>
<td>MS Network Administration</td>
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<tr>
<td>ITEC 1375 Or</td>
<td>Programming Logic and Design</td>
<td>4.00</td>
</tr>
<tr>
<td>ITEC 1460 Or</td>
<td>SQL Server Database Design and Implementation</td>
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</tr>
<tr>
<td>ITEC 2795 Or</td>
<td>Web Server and TCP/IP Implementation</td>
<td></td>
</tr>
<tr>
<td>ITEC 2880</td>
<td>Cisco Network Administration</td>
<td></td>
</tr>
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</table>
*General Education | Choose courses from any of the MnTC Goal Areas  | 3.00    |

**TOTAL CREDITS: 15.00**
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>ITEC 2865</td>
<td>Internet/Intranet Security</td>
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<tr>
<td>ITEC 2895</td>
<td>Security Implementation and Risk Analysis</td>
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<td>ITEC 2910</td>
<td>LAN Implementation and Management</td>
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<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
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</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

*The following courses are recommended for students interested in transferring into Metropolitan State’s B.A.S. in Information Assurance:

- MATH 1110—College Algebra
- MATH 1150—Statistics

**General Education Courses (9 Credits)**

To complete the Information Assurance Professional diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from a minimum of three credits from Goal Area 1, and six credits from any MnTC Goal Area.
Cisco Network Administrator Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

### Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

#### First Semester

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<tr>
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<tr>
<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
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<tr>
<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
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<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
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<td>ITEC 2890</td>
<td>Firewall Implementation and Management</td>
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### General Education Courses (3 Credits)

To complete the Cisco Network Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Computer Security Specialist Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>Information Technology Concepts</td>
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<td>ITEC 1110</td>
<td>Information Technology Skills</td>
<td>2.00</td>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
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<td>ITEC 1425</td>
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**TOTAL CREDITS:** 11.00

**Second Semester**

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<tr>
<td>ITEC 2710 Or ITEC 1475</td>
<td>MS Network Administration Linux Network Administration</td>
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<tr>
<td>ITEC 2865</td>
<td>Internet/Intranet Security: Implementation and Management</td>
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<td>ITEC 2895</td>
<td>Security Implementation and Risk Analysis</td>
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<tr>
<td>General Education</td>
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**TOTAL CREDITS:** 15.00

**General Education Courses (3 Credits)**

To complete the Computer Security Specialist certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Linux Network Administrator Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>ITEC 2425</td>
<td>Infotech Project Management</td>
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<td>ITEC 2910</td>
<td>LAN Implementation and Management</td>
<td>4.00</td>
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<tr>
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<td>Choose one course from MnTC Goal Area 1</td>
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**TOTAL CREDITS:** 15.00

**General Education Courses (3 Credits)**

To complete the Linux Network Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Microsoft Network Administrator Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>Information Technology Skills</td>
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<td>Microsoft Windows Operating Systems</td>
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**TOTAL CREDITS:** 11.00

**Second Semester**

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<td>ITEC 2910</td>
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**TOTAL CREDITS:** 15.00

**General Education Courses (3 Credits)**

To complete the Microsoft Network Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Database Administrator Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Introductory Courses**

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<tbody>
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<td>ITEC 1100</td>
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<td>ITEC 1110</td>
<td>Information Technology Skills</td>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
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**Advanced Courses**

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<tr>
<td>ITEC 1375</td>
<td>Database Design and Implementation</td>
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<td>SQL Server Database Design and Implementation</td>
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<td>Infotech Project Management</td>
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<tr>
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**Total Credits: 11.00**

**General Education Courses (3 Credits)**

To complete the Database Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Wireless Network Administrator Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
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<td>ITEC 1110</td>
<td>Information Technology Skills</td>
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<td>ITEC 1250</td>
<td>Microsoft Windows Operating Systems</td>
<td>3.00</td>
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<tr>
<td>ITEC 1425</td>
<td>Data Communications</td>
<td>4.00</td>
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<td><strong>TOTAL CREDITS:</strong></td>
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### Advanced Courses

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<tr>
<td>ITEC 2710 Or</td>
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<td>Linux Network Administration</td>
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<td>Wireless LAN/WAN Administration</td>
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### General Education Courses (3 Credits)

To complete the Wireless Network Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Macintosh Support and Network Administration Certificate

26 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>Information Technology Skills</td>
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<td>ITEC 1255</td>
<td>Macintosh Operating Systems</td>
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<td>ITEC 1425</td>
<td>Data Communications</td>
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<tr>
<td>ENGL 1110 Or CMST 1000</td>
<td>College English 1 Or Introduction to Communication Studies</td>
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**TOTAL CREDITS:** 11.00

**Second Semester**

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<td>InfoTech Project Management Or Systems Analysis and Design</td>
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<td>LAN Implementation and Management</td>
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**TOTAL CREDITS:** 12.00

**General Education Courses (3 Credits)**

To complete the Linux Network Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Information Technology Fundamentals Certificate

21 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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<td>Information Technology Skills</td>
<td>2.00</td>
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<td>ITEC 1150</td>
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<td>3.00</td>
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<td>ITEC 1250 Or</td>
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**Second Semester**

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<tr>
<td>CMST 1000</td>
<td>Introduction to Communication Studies</td>
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**General Education Courses (3 Credits)**

To complete the Database Administrator certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Criminal Justice

What You Will Learn
MCTC’s Criminal Justice Studies program will equip you to understand the causes of and means to prevent crime and to work effectively in the criminal justice field as a law enforcement officer, correctional officer, or in the courts or probation fields.

Your coursework will give you a broad professional education in the criminal justice system, including the workings of the police, courts, and corrections departments and an understanding of how they work together. As a foundation for your studies, you will take liberal arts classes in related subjects such as psychology and sociology. Program courses will cover drugs in the community, juvenile justice, family violence, and intercultural communications, the relationship between police officers and their communities, and more.

By completing the A.S. degree in Criminal Justice Studies, you can easily transition to MCTC’s Law Enforcement Certificate program to prepare yourself to take the State Peace Officer License examination. You must be a U.S. citizen to be licensed as a police officer in the state of Minnesota. There is a separate application process to enroll in the Law Enforcement Certificate Program. Call 651-999-7600 for details. To become a corrections officer or a police officer, you will be required to successfully pass extensive criminal background checks.

A four-year degree is needed for some criminal justice positions. MCTC has an articulation agreement with Metropolitan State University.

Admission Requirements
Students are accepted into this program for fall, spring and summer semester.

Courses in this program require achievement of the following program admission requirements:

- **Reading**—To enroll in these program courses, students must have successfully completed READ 0200 or ESOL 0052 or be declared ready to enroll in READ 1300 on the basis of their reading placement test scores.

- **Writing**—To enroll in these program courses, students must have successfully completed ENGL 0900 or ESOL 0051 or be declared ready to enroll in ENGL 1110 on the basis of their writing assessment test scores.

Awards or Credentials You Could Earn

- Criminal Justice A.S. Degree—60 credits

Where You Could Work

- Correctional institutions
- Criminal courts
- Community corrections departments
- Nonprofit court diversion programs
Criminal Justice A.S. Degree

60 Credits

Courses in this program require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Completion of READ 0200 or ESOL 0052
  - Be declared ready to enroll in READ 1300 on the basis of reading placement test scores

- **WRITING**—one of the following:
  - Completion of ENGL 0900 or ESOL 0051
  - Be declared ready to enroll in ENGL 1110 on the basis of writing assessment test scores

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

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</thead>
<tbody>
<tr>
<td>COUN 1500</td>
<td>Drugs in the Community</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 1171</td>
<td>Ethics</td>
<td>3.00</td>
</tr>
<tr>
<td>LAWE 1215</td>
<td>Police and Community</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
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</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
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<tr>
<td>LAWE 1220</td>
<td>Juvenile Justice</td>
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<tr>
<td>LAWE 1250</td>
<td>Introduction to Corrections</td>
<td>3.00</td>
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<tr>
<td>PSYC 1100</td>
<td>Applying Psychology</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
<td>4.00</td>
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**TOTAL CREDITS:** 15.00–16.00

### Third Semester

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<tr>
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<tbody>
<tr>
<td>SOCI 1105</td>
<td>Introduction to Sociology</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 2145</td>
<td>American Minority Relations</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 2155</td>
<td>Introduction to Criminal Justice</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI 2000</td>
<td>Constitutional Law</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00
Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI</td>
<td>Family Violence</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>Choose 3 courses from the General Elective courses listed below</td>
<td>9.00</td>
</tr>
</tbody>
</table>

**Total Credits:** 15.00

**General Education Elective Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH</td>
<td>Introduction to Cultural Anthropology</td>
<td>3.00</td>
</tr>
<tr>
<td>CHEM</td>
<td>Forensic Science 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI</td>
<td>Introduction to Computers</td>
<td>3.00</td>
</tr>
<tr>
<td>GLOS</td>
<td>Ethnic America</td>
<td>3.00</td>
</tr>
<tr>
<td>HLSC</td>
<td>Introduction to Homeland Security</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH</td>
<td>First Responder</td>
<td>3.00</td>
</tr>
<tr>
<td>WOST</td>
<td>Women’s Response to Violence</td>
<td>3.00</td>
</tr>
<tr>
<td>PHED</td>
<td>Fitness Intensity</td>
<td>1.00</td>
</tr>
<tr>
<td>SOCI</td>
<td>Sociology of Deviance</td>
<td>3.00</td>
</tr>
<tr>
<td>PSCI</td>
<td>State and Local Government</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC</td>
<td>Abnormal Psychology</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC</td>
<td>Social Psychology</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Total Credits:** 9.00

**Elective Courses (9 Credits)**

To complete the Criminal Justice Studies A.S. degree, students are required to successfully complete nine credits of elective coursework. These nine credits can be selected from any of the courses listed above.

**General Education Courses (6 credits)**

To complete the Criminal Justice Studies A.S. degree, students are required to successfully complete six additional General Education credits outside the program requirements listed above.

Students seeking the A.S. degree in Criminal Justice must complete coursework in six of the 10 MnTC goal areas. Within the General Education coursework, students must complete a minimum of three credits in MnTC Goal Area 1, and a minimum or three credits from MnTC Goal Areas 7, 8, 9 or 10.
Culinary Arts

What You Will Learn
MCTC’s Culinary Arts Program prepares you in all facets of food preparation and presentation and helps you to develop your own creative culinary style.

You will receive instruction on basic to advanced cooking skills including meat, fish and poultry fabrication; garde manger (cold food preparation); charcuterie (sausage, paté and terrine preparation); baking; pastry art; and more. Coursework also covers tableside cooking, menu design, restaurant operations, management principles, nutrition, safety and sanitation.

You will receive extensive hands-on training in MCTC’s cooking labs and in the student-operated dining room which is open to the public. You also have the opportunity to participate in numerous community service events wherein you can apply your banquet, buffet, and catering culinary knowledge and techniques.

To successfully participate in the program, you must be able to lift 25 pounds, have the endurance to stand for several hours at a time and have good hand-eye coordination. All students must purchase uniforms, knife and baking kits, and textbooks, as well as cover field trip costs.

MCTC has an articulation agreement with Metropolitan State University that permits transfer of the A.A.S. in Culinary Arts to their B.A.S. in Hospitality Management program.

Admission Requirements
Students are accepted into this program in both fall and spring semesters.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0060

Awards or Credentials You Could Earn

- Culinary Arts A.A.S. Degree—60 credits
- Culinary Arts Diploma: fall start—54 credits
- Culinary Arts Diploma: spring start—54 credits
- Culinary Arts Certificate—13 credits
- Baking Certificate—16 credits
- Restaurant Management A.A.S. Degree—60 credits (See Restaurant Management)
- Restaurant Management Diploma—27 credits (See Restaurant Management)

Where You Could Work

- Restaurants
- Hotels
- Resorts
- Cruise ships
- Hospital and healthcare centers
- Institutions and companies with food service
Culinary Arts A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0060

Recommended Course Sequence

You can begin the Culinary Arts program in either a fall or spring semesters. You should follow the course sequence for the semester they begin the program. The pathways below are meant to guide your course selections for the term you begin. First semester courses will generally be selected with the assistance of counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T2500 or call 612-659-6700.

**The Culinary Arts A.A.S. Course Sequence Fall Start:** Students starting coursework beginning fall semester will follow this course sequence for this award.

### First Semester (Fall)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1005</td>
<td>Culinary Fundamentals</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1106</td>
<td>Introduction to Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1110</td>
<td>Food Service Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1150</td>
<td>Menu Planning</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Second Semester (Spring)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1120</td>
<td>Casual Restaurant Operations</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1125</td>
<td>International Cuisine</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2500</td>
<td>Beverage Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2510</td>
<td>Full-Service Restaurant Operations</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1120</td>
<td>Casual Restaurant Operations</td>
<td>5.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**

### Third Semester (Summer Session)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1105</td>
<td>FS Purchasing &amp; Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 2100</td>
<td>Event Planning</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2103</td>
<td>Advanced Pastry and Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2502</td>
<td>Garde Manger</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 11.00**
Fourth Semester (Fall)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1115</td>
<td>Hospitality Supervisory Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 2000</td>
<td>Principles of Macroeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>9.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 9.00

General Education Coursework (15 credits)

To complete the Culinary Arts A.A.S. degree, students are required to successfully complete 15 credits of general education coursework. The coursework must be selected from at least three of the MnTC goal areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are CMST 2012 and ECON 2000. The additional 9 credits can be taken from any of the MnTC Goal Areas.

The Culinary Arts A.A.S. Course Sequence Spring Start: Students starting coursework beginning spring semester will follow this course sequence for this award:

First Semester (Spring)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1005</td>
<td>Culinary Fundamentals</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1106</td>
<td>Introduction to Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1110</td>
<td>Food Service Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1150</td>
<td>Menu Planning</td>
<td>2.00</td>
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</table>

**TOTAL CREDITS:** 15.00

Second Semester (Summer Session)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1105</td>
<td>FS Purchasing &amp; Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 2100</td>
<td>Event Planning</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2103</td>
<td>Advanced Pastry and Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2502</td>
<td>Garde Manger</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 11.00

Third Semester (Fall)

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1115</td>
<td>Hospitality Supervisory Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1120</td>
<td>Casual Restaurant Operations</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1125</td>
<td>International Cuisine</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2510</td>
<td>Full-Service Restaurant Operations</td>
<td>5.00</td>
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</table>

**TOTAL CREDITS:** 16.00
### General Education Coursework (15 Credits)

To complete the Culinary Arts A.A.S. degree, students are required to successfully complete 15 credits of General Education coursework. The coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. Specific courses that are required are CMST 2012 and ECON 2000. The additional 9 credits can be taken from any of the MnTC Goal Areas.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CULA 2500</td>
<td>Beverage Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON 2000</td>
<td>Principles of Macroeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>9.00</td>
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</tbody>
</table>

**TOTAL CREDITS: 18.00**
Culinary Arts Diploma

54 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1005</td>
<td>Culinary Fundamentals</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1105</td>
<td>Food Service Purchasing and Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1106</td>
<td>Introduction to Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1110</td>
<td>Food Service Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
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**TOTAL CREDITS: 18.00**

### Second Semester

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CULA 1115</td>
<td>Hospitality Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1120</td>
<td>Casual Restaurant Operations</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1125</td>
<td>International Cuisine</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2100</td>
<td>Event Planning</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2103</td>
<td>Advanced Pastry and Baking</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 17.00**
Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 2500</td>
<td>Beverage Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2502</td>
<td>Garde Manger</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1150</td>
<td>Menu Planning</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 2510</td>
<td>Full Service Restaurant Operations</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 19.00**

**General Education Coursework (6 Credits)**

To complete the Culinary Arts Diploma, students are required to successfully complete six credits of General Education coursework.
Culinary Arts Certificate

13 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1005</td>
<td>Culinary Fundamentals</td>
<td>5.00</td>
</tr>
<tr>
<td>CULA 1106</td>
<td>Introduction to Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1110</td>
<td>Food Service Nutrition</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 13.00
Baking Certificate

16 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULA 1105</td>
<td>Food Service Purchasing and Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1106</td>
<td>Introduction to Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1110</td>
<td>Food Service Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2000</td>
<td>Artisan Baking</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 2103</td>
<td>Advanced Pastry and Baking</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**
Dental Assistant

What You Will Learn
MCTC’s Dental Assistant diploma program is a one-year evening program for individuals employed in a dental office who wish to become certified and licensed dental assistants.

As part of a dental team, the dental assistant is an important communication link between the dentist and patient. You will need to interact with a wide variety of patients under sometimes stressful situations. The program will increase your knowledge to work chairside with the dentist and his or her patients, perform a variety of patient care functions, provide assistance within the business office, and/or complete laboratory duties.

To enter the evening program, you must have a minimum of one year of dental office experience and be presently employed in a dental office or have completed the Dental Office Support certificate program. Your coursework will include basic and dental sciences, dental materials, chairside assisting, radiology, Minnesota expanded functions, and clinical experience. The goal is to ensure you will be an indispensable member of the dental health team.

The program’s classroom, preclinical and clinical experiences will prepare you to take the Certification Examination offered by the Dental Assisting National Board (DANB), the Licensure and the Jurisprudence Examinations offered by the Minnesota Board of Dentistry.

The Dental Assistant program is accredited by the Commission on Dental Accreditation of the American Dental Association, (211 E. Chicago Ave.; Chicago, IL 60611; 1-312-440-4653), and approved by the Minnesota State Board of Dentistry (University Park Plaza; 2829 University Ave. SE, Suite 450; Minneapolis, MN 55414; 1-612-617-2250).

How You Apply
To enroll in this program, students must have a high school diploma or General Educational Development (GED) diploma, apply for admission and meet minimum program entry requirements. To apply to the Dental Assistant diploma evening program or the Expanded Functions certificate program, students must submit MCTC General Application and Dental Assistant program documents. Students must contact the dental assistant program director at 612-659-6071 to obtain the required Dental Assistant program documents to verify employment.

Students are accepted into the Dental Support Personnel certificate program each semester. (Please note: not all courses are offered each semester.) Students are accepted into the Dental Assistant diploma evening program fall semester only. Students are accepted into the Expanded Functions Dental Assistant certificate program spring semester only.

Admission Requirements
Students are accepted into the Dental Support Personnel certificate program each semester. (Please note: not all courses are offered each semester.) Students are accepted into the Dental Assistant diploma evening program fall semester only. Students are accepted into the Expanded Functions Dental Assistant certificate program spring semester only.

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

The Dental Programs Require That

- **Reading**: To enroll in program courses, students must have successfully completed READ 0100 or be declared ready to enroll in READ 0200 or ESOL 0052 on the basis of their reading placement test scores.
- Students achieve grades of “C” (2.0) or above in all DNTA theory courses and combined theory/lab courses, and
- Students achieve Pass (P) grades in lab and clinical/externship courses.
Important Information When Considering Application to the Dental Assistant Program

The curriculum in the Dental Assistant program may expose students to hazardous materials, radiation and/or infectious diseases. Students will be provided with information through education and program policies to protect themselves and their patients from harm. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory and clinic. Due to the hazards associated with the administration of the Nitrous Oxide, students in their first and second trimester of pregnancy will not be allowed to complete this aspect of the curriculum. For program policies, contact the program director at 612-659-6071.

The students considering entering this field should be aware that individuals with oral and/or facial piercing cannot wear oral or facial jewelry or studs when participating in on-campus lab activities and externships. When performing procedures on peers in the dental clinic, oral and facial jewelry or studs increases the potential for injury and many of the affiliating dental clinics do not permit wearing of oral and facial jewelry or studs while working in the facility as an extern. MCTC is not able to guarantee placement in clinics that will permit wearing of oral and/or facial jewelry or studs, and you should be aware that two satisfactorily completed clinical externships are required to graduate with a Dental Assistant Diploma.

Also, some affiliating clinics require that students pass a criminal background check prior to being assigned in their clinic as an extern. Again, MCTC is not able to guarantee placement of students who do not pass the criminal background check, and you should be aware that two satisfactorily completed clinical externships are required to graduate with a Dental Assistant Diploma.

For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services, at 651-296-3802.

Awards or Credentials You Could Earn

- Dental Assistant Diploma—39 credits
- Dental Office Support Personnel Certificate—17 credits
- Expanded Functions Certificate—16 credits

Where You Could Work

- Public and/or private dental offices
- Single or multiple-provider dental clinics
- General or specialty dental offices
- Dental laboratory
- Dental insurance companies
- Dental supply companies
Dental Assistant Diploma

39 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

For the evening diploma program (students employed in a dental clinic) the following course sequence is required by the employed evening students to complete the program. First semester courses are only offered during the fall semester, second semester courses are only offered during the spring semester and third semester courses are only offered during the summer semester.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Students must achieve grades of “C” (2.0) or above in all DNTA theory courses and combined theory/lab courses, and students must achieve Pass (P) grades in lab and clinical/externship courses.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNTA 1101</td>
<td>Introduction to Dental Assisting</td>
<td>3.00</td>
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<tr>
<td>DNTA 1110</td>
<td>Dental Science</td>
<td>3.00</td>
</tr>
<tr>
<td>DNTA 1120</td>
<td>Preclinical Dental Assisting</td>
<td>1.00</td>
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<tr>
<td>DNTA 1130</td>
<td>Chairside Dental Assisting 1</td>
<td>3.00</td>
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<tr>
<td>DNTA 1140</td>
<td>Chairside Dental Assisting 2</td>
<td>2.00</td>
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<tr>
<td>DNTA 1170</td>
<td>Clinical Externship 1</td>
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**Second Semester**

<table>
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<tr>
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<tr>
<td>DNTA 1210</td>
<td>Dental Materials</td>
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<td>DNTA 1250</td>
<td>Radiology 1</td>
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</tr>
<tr>
<td>DNTA 1260</td>
<td>Dental Assistant Expanded Functions 1</td>
<td>4.00</td>
</tr>
<tr>
<td>DNTA 1274</td>
<td>Clinical Externship 2</td>
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<tr>
<td>CMST 1010 or CMST 2012</td>
<td>Interpersonal Communication or Intercultural Communication (Recommended or choose one course from MnTC Goal Area 1)</td>
<td>3.00</td>
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<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>17.00</strong></td>
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### Third Semester

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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>DNTA 1350</td>
<td>Radiology 2</td>
<td>3.00</td>
</tr>
<tr>
<td>*DNTA 1360</td>
<td>Dental Assistant Expanded Functions 2</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>*Students in their first or second trimester of pregnancy should contact the program director at 612-659-6071 prior to registering for this course.</td>
<td></td>
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</table>

**TOTAL CREDITS: 7.00**

### General Education Courses (3 Credits)

To complete the Dental Assistant Diploma, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1. CMST 1010 or CMST 2012 is recommended.
Dental Office Support Personnel Certificate

17 Credits

The Dental Office Support Personnel certificate is a one-semester program that will prepare you to work in dental offices and clinics providing support to other credentialed dental personnel and/or office staff. This program provides an entry level education that prepares you to safely work within a dental setting. You will support the general office routines with skills in computerized scheduling and basic customer service. You will also be introduced to common dental terms, equipment and health/safety issues, as well as learn skills to support dental office personnel. Upon completion of the certificate, you will be prepared to work in a dental office in a supportive role and/or ladder into the MCTC Dental Assisting diploma courses.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Fall Start**

Students who start this program in a fall semester can complete all of the courses in a fall term.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCCC 1010</td>
<td>Behaviors for Success in Health Careers</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1020</td>
<td>Communication in Healthcare</td>
<td>1.00</td>
</tr>
<tr>
<td>HCCC 1030</td>
<td>Awareness and Sensitivity to Client Needs</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1040</td>
<td>Respecting Client and Staff Diversity</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1050</td>
<td>Healthcare Safety and Standard Precautions</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1060</td>
<td>Legal Issues in Healthcare</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1070</td>
<td>Healthcare Ethics</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1100</td>
<td>Medical Terminology</td>
<td>1.00</td>
</tr>
<tr>
<td>DNTA 1000</td>
<td>Introduction to the Dental Field</td>
<td>2.00</td>
</tr>
<tr>
<td>DNTA 1015</td>
<td>Customer Service Skills for the Dental Office</td>
<td>3.00</td>
</tr>
<tr>
<td>DNTA 1025</td>
<td>Clinic Support for the Dental Office</td>
<td>2.00</td>
</tr>
<tr>
<td>DNTA 1035</td>
<td>Dental Office Support Skills Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDIT: 17.00**
**Spring or Summer Start**

Students looking to enter during a spring semester or a summer term can take the HCCC courses and the CMST course, prior to the fall semester. Students must register for all four DNTA fall semester.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>HCCC 1010</td>
<td>Behaviors for Success in Health Careers</td>
<td>0.50</td>
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<tr>
<td>HCCC 1020</td>
<td>Communication in Healthcare</td>
<td>1.00</td>
</tr>
<tr>
<td>HCCC 1030</td>
<td>Awareness and Sensitivity to Client Needs</td>
<td>0.50</td>
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<tr>
<td>HCCC 1040</td>
<td>Respecting Client and Staff Diversity</td>
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</tr>
<tr>
<td>HCCC 1050</td>
<td>Healthcare Safety and Standard Precautions</td>
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</tr>
<tr>
<td>HCCC 1060</td>
<td>Legal Issues in Healthcare</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1070</td>
<td>Healthcare Ethics</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1100</td>
<td>Medical Terminology</td>
<td>1.00</td>
</tr>
<tr>
<td>CMST 1010 Or CMST 2012</td>
<td>Interpersonal Communication</td>
<td>Intercultural Communication</td>
</tr>
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</table>

**TOTAL CREDIT: 8.00**

### Second Semester

Students must register for all four DNTA fall semester.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>DNTA 1000</td>
<td>Introduction to the Dental Field</td>
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<tr>
<td>DNTA 1015</td>
<td>Customer Service Skills for the Dental Office</td>
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</tr>
<tr>
<td>DNTA 1025</td>
<td>Clinic Support for the Dental Office</td>
<td>2.00</td>
</tr>
<tr>
<td>DNTA 1035</td>
<td>Dental Office Support Skills Lab</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT: 9.00**

**Note:**
The courses for students who are transitioning to the dental assistant diploma program are offered during the day. The sequence of courses will differ from the evening course offerings.

Students who completed NAHA 1819/1850 in or after 2009, may petition to waive a total of three credits from below: HCCC 1010 (0.5 credits), HCCC 1020 (1 credit), HCCC 1050 (0.5 credits), HCCC 1060 (0.5 credits) and HCCC 1070 (0.5 credits).
Dental Assistant Expanded Functions Certificate

16 Credits

The Expanded Functions Dental Assistant certificate program is an evening program designed for the employed dental assistant who is currently certified through DANB or has completed an ADA accredited program that did not offer the Minnesota expanded functions. After completing this certificate and passing the Minnesota Licensure Examination, you will be able to provide direct patient care in general or specialty dental offices.

The following course sequence is required for completion of this certificate. First semester is only offered during the spring semester and second semester is only offered during the summer semester. Students must contact the Dental Assistant program director at 612-659-6071 for advising.

Courses in these programs require achievement of the following minimum placements:

• **READING**—one of the following:
  • Placement into READ 0200 or ESOL 0052
  • Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>DNTA 1201</td>
<td>Introduction to Expanded Functions</td>
<td>2.00</td>
</tr>
<tr>
<td>DNTA 1250</td>
<td>Radiology 1</td>
<td>3.00</td>
</tr>
<tr>
<td>DNTA 1260</td>
<td>Dental Assistant Expanded Functions 1</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDIT:</strong></td>
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<td><strong>9.00</strong></td>
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### Second Semester

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<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>DNTA 1350</td>
<td>Radiology 2</td>
<td>3.00</td>
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<tr>
<td>DNTA 1360</td>
<td>Dental Assistant Expanded Functions 2</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDIT:</strong></td>
<td></td>
<td><strong>7.00</strong></td>
</tr>
</tbody>
</table>
Early Childhood Education

What You Will Learn
MCTC’s Child Development program will prepare you to organize and lead activities and provide nurturing care for children, particularly in urban childcare centers, nursery schools, elementary classrooms and school-age programs.

The program incorporates cultural diversity into all of its courses, emphasizing working with children and families of all kinds in an urban setting. Your coursework will cover child development, community, family and parent relationships, oral and written communication, safety, health and nutrition, and child guidance.

You also will study various teaching and learning methods and be trained to observe, document, and assess children, and to convey a sense of professionalism and ethical behavior in a classroom setting.

By the time you complete the program, you will know how to promote and communicate knowledge of child development; create healthy, respectful and challenging learning environments; create and maintain respectful and supportive relationships with families; and design and implement developmentally and culturally appropriate activities and curriculum.

You will put your new knowledge to work through field experiences. MCTC partners with many agencies and organizations that provide wonderful learning opportunities for program participants.

Employment in the field will require you to pass a background check, as employers will not hire anyone who has a felony record. You also will need CPR and first aid training.

MCTC has an articulation agreement with Metropolitan State University; University of Wisconsin, Stout; and Southwest State; and the MnSCU consortium.

Admission Requirements
Students are accepted into this program for fall and spring terms only. Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

The A.S. degree also requires the following minimum placement in Math:

- **MATH**—one of the following:
  - Placement into MATH 1110
  - Completion of MATH 0080 or MATH 0088

Awards or Credentials You Could Earn

- Early Childhood Education A.S. Degree—60 credits
- Early Childhood Education A.A.S. Degree—60 credits
- Early Childhood Education Diploma—31 credits
- Early Childhood Education Certificate—18 credits

Where You Could Work

- Childcare centers
- Family support agencies
- Head Start
- Public schools
- School-age care programs
- Nursery schools or preschools
- Childcare resource or referral agencies
- Social service agencies
- Family resource programs
- Child life programs in hospitals
- Licensed Family Child Care Provider
Early Childhood Education A.S. Degree

60 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1110
  - Completion of MATH 0080 or MATH 0088

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
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<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>ECED 1200</td>
<td>Introduction to Early Childhood Education</td>
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<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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<tr>
<td>AMSL 1000</td>
<td>American Sign Language 1</td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>2.00</td>
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**Second Semester**

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<tbody>
<tr>
<td>ECED 1220</td>
<td>Child Safety, Health and Nutrition</td>
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<td>ECED 1300</td>
<td>Guiding Children’s Behavior</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1545</td>
<td>Learning Environment and Curriculum</td>
<td>3.00</td>
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<tr>
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<td>Choose any course from MnTC Goal Area 3 with a lab science</td>
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</tr>
<tr>
<td>General Education</td>
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<td>2.00</td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>15.00</strong></td>
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### Third Semester

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<tbody>
<tr>
<td>ECED 1505</td>
<td>Working with Diverse Families and Children</td>
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<td>ECED 1575</td>
<td>Observation and Assessment</td>
<td>3.00</td>
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<td>ECED 1925</td>
<td>Children with Differing Abilities</td>
<td>3.00</td>
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<td>ECED 1600</td>
<td>Practicum 1</td>
<td>3.00</td>
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<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1 other than ENGL 1110</td>
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**TOTAL CREDITS:** 15.00

### Fourth Semester

<table>
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<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>ECED 2500</td>
<td>Educational Leadership and Management</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1165 Or MATH 1110</td>
<td>Math for Others College Algebra</td>
<td>3.00</td>
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<tr>
<td>PSYC 2350</td>
<td>Introduction to Educational Psychology</td>
<td>4.00</td>
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<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00–4.00</td>
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</table>

**TOTAL CREDITS:** 15.00

### General Education Courses (30 Credits)

To complete the Early Childhood Education A.S. degree, students must successfully complete 30 credits of General Education coursework; 14 credits of required General Education coursework are listed in the award outlined above. Additionally, 16 credits, including one course from MnTC Goal Area 3 with a lab science, and one additional course from MnTC Goal Area 1 are required.
Early Childhood Education A.A.S. Degree

60 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<th>CREDITS</th>
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<tbody>
<tr>
<td>ECED 1200</td>
<td>Introduction to Early Childhood Education</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>AMSL 1000</td>
<td>American Sign Language</td>
<td>4.00</td>
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<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS: 16.00**

**Second Semester**

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<tr>
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<tbody>
<tr>
<td>ECED 1220</td>
<td>Child Safety, Health and Nutrition</td>
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<td>Learning Environment and Curriculum</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from any of the MnTC Goal Areas</td>
<td>5.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 14.00**

Students who have successfully completed all of the ECED coursework and ENGL 1110 in semesters 1 and 2 should submit the Graduation Application form to the Registrar’s Office for the Early Childhood Education Certificate.

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECED 1505</td>
<td>Working with Diverse Families and Children</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1575</td>
<td>Observation and Assessment</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1600</td>
<td>Practicum 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1925</td>
<td>Children with Differing Abilities</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED Elective</td>
<td>Choose any ECED course that is not part of the required ECED courses</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**
### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECED 2500</td>
<td>Educational Leadership and Management</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 2545</td>
<td>Curriculum Planning</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 2600</td>
<td>Practicum 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED Elective</td>
<td>Choose any ECED course that is not part of the required ECED courses</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### General Education Courses (15 Credits)

To complete the Early Childhood Education A.A.S. degree, students must successfully complete ENGL 1110 and AMSL 1000. 8 additional credits are required from at least one other MnTC Goal Areas other than MnTC Goal Areas 1 and 8.
Early Childhood Education Diploma

31 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMSL 1000</td>
<td>American Sign Language 1</td>
<td>4.00</td>
</tr>
<tr>
<td>ECED 1200</td>
<td>Introduction to Early Childhood Education</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1545</td>
<td>Learning Environment and Curriculum</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 16.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>ECED 1220</td>
<td>Child Safety, Health and Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1300</td>
<td>Guiding Children’s Behavior</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1505</td>
<td>Working with Diverse Families and Children</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1575</td>
<td>Observation and Assessment</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1600</td>
<td>Practicum 1</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

**General Education Courses (7 Credits)**

To complete the Early Childhood Education diploma, students must successfully complete seven credits of General Education coursework. ENGL 1110 and AMSL 1000 are required and satisfy the seven credits of General Education.
Early Childhood Education Certificate

18 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECED 1200</td>
<td>Introduction to Early Childhood Education</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>9.00</strong></td>
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**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECED 1220</td>
<td>Child Safety and Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1300</td>
<td>Guiding Children’s Behavior</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1545</td>
<td>Learning Environment and Curriculum</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>9.00</strong></td>
</tr>
</tbody>
</table>

General Education Courses (3 Credits)

To complete the Early Childhood Education certificate, students must successfully complete three credits of General Education coursework. ENGL 1110 is required and satisfies the three credits of General Education.
Education

What You Will Learn
MCTC’s Education program will introduce students to the special opportunities and challenges of teaching in urban contexts and prepare students to transfer and obtain a four-year Bachelor of Arts degree that will lead to a teaching license (with the A.A. with an Emphasis in Education degree) or to prepare them to enter the field as an associate educator (with the A.S. in Education degree).

The program—the only two-year preprofessional urban teacher program in Minneapolis—offers a curriculum that examines educational theory and practice, engages in critical self-reflection and explores different instructional responses to enhance student learning.

Instructors with experience teaching in urban K–12 schools will teach you how to reflect on your own teacher identity as you investigate the impact of racism, classism, and gender on the classroom and school structure. You’ll not only learn about teaching, learning, and the institution of schools, but you will learn about how to transform teaching, schools and our society. As you complete your meaningful fieldwork experiences, you will conduct community-based research and use the research to design rich learning experiences for students of all ages.

MCTC works in partnership with Minneapolis Public Schools. As a result, these studies go beyond our classroom, allowing students to work with learners in urban elementary and secondary schools. Students will complete about 100 hours in the field by the end of the program. In addition, by the end of the program, students will have created an electronic portfolio highlighting their achievements in the program. MCTC’s Education program has articulation agreements with other four-year colleges and universities in the metro area that can result in many different teaching licensure areas.

Employment in this field will require you to pass a background check, as employers will not hire anyone with a felony record. Additionally, you will need to pass a background check to complete required fieldwork for the degree.

Admission Requirements
Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1110
  - Completion of MATH 0080 or MATH 0088

Awards or Credentials You Could Earn
- A.A. with an Emphasis in Education—60 credits-Pending MnSCU Approval
- Education A.S. Degree—60 credits
- ESOL Education Certificate—13 credits
- Special Education Certificate—24 credits

Where You Could Work
- Public school system
- Private/charter school systems
- Nonprofit afterschool programs
**Associate of Arts with an Emphasis in Education**

**60 Credits**

*Pending MnSCU Approval*

**Recommended Course Sequence**

This award is designed to ease transfer and help you earn a four year degree. The pathway is meant to guide your course selections. You will meet with your assigned advisor for planning your first semester courses, as well as creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Students need to complete the entire 40-credit Minnesota Transfer Curriculum (MnTC) as well as elective credits to reach 60 credits for the Associate of Arts in Education.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 1400</td>
<td>Technology for Educators</td>
<td>2.00</td>
</tr>
<tr>
<td>EDUC 1500</td>
<td>Introduction to Education and Reflective Practice</td>
<td>3.00</td>
</tr>
<tr>
<td>AMIS 1350</td>
<td>American Indian Education: Past and Present</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1005</td>
<td>Public Speaking</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>16.00</strong></td>
<td></td>
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</table>

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>BIOL 1100 Or</em>&lt;br&gt;BIOL 1120 Or&lt;br&gt;BIOL 1160</td>
<td><strong>Introduction to Biology</strong> <em>(4.00 credits/lab science)&lt;br&gt;Nutrition (3.00 credits)&lt;br&gt;Biology of Women (3 credits)&lt;br&gt;(recommended or emphasis or choose any course from MnTC Goal Area 3)</em></td>
<td>4.00 Or 3.00</td>
</tr>
<tr>
<td>ECED 1215 Or&lt;br&gt;PSYC 110</td>
<td><strong>Growth and Development for Educators</strong> <em>(recommended for emphasis)&lt;br&gt;General Psychology (4.00 credits)</em></td>
<td>3.00–4.00</td>
</tr>
<tr>
<td>EDUC Elective</td>
<td>Choose any courses from any of the EDUC courses other than EDUC 1400, EDUC 1500, EDUC 2350 or EDUC 2650</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td>Choose any course that meets MnTC Goal Areas 5 and 8 other than AMIS or PSYC.</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>15.00–16.00</strong></td>
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### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*CHEM 1140</td>
<td>Chemistry in Your Life or choose any course from MnTC Goal Area 3</td>
<td>4.00</td>
</tr>
<tr>
<td>EDUC 2350</td>
<td>Introduction to Pedagogical Practices</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1161</td>
<td>Children’s Literature</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 2255</td>
<td>Effects of Drugs on Children and Adolescent Health</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 2350</td>
<td>Introduction to Educational Psychology</td>
<td>4.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 17.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2650</td>
<td>Education Capstone and Field Work</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1165</td>
<td>Math for Teachers</td>
<td>5.00</td>
</tr>
<tr>
<td>PHED 1100</td>
<td>Foundations of Fitness and Health or choose any Physical Education</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**To complete the A.A. with an Emphasis in Education, you must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By taking the recommended for emphasis courses, you will fulfill both of these Goal Areas.**

**By completing the recommended for emphasis courses, you will complete the necessary requirements for the A.A. with an Emphasis in Education and the entire Minnesota Transfer Curriculum.**
Education A.S. Degree

60 Credits
Pending MnSCU Approval

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1110
  - Completion of MATH 0080 or MATH 0088

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMIS 1350</td>
<td>American Indian Education: Past and Present</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1005</td>
<td>Public Speaking</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 1400</td>
<td>Technology for Educators</td>
<td>2.00</td>
</tr>
<tr>
<td>EDUC 1500</td>
<td>Introduction to Education and Reflective Practice</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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**TOTAL CREDITS: 14.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>EDUC 1800</td>
<td>Multicultural Human Relations in Education</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC Elective</td>
<td>Choose any EDUC course other than EDUC 1400, EDUC 1500, EDUC 1800, EDUC 2350 or EDUC 2650</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 2255</td>
<td>Effects of Drugs on Children and Adolescent Health</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC Elective</td>
<td>Choose any EDUC course other than EDUC 1400, EDUC 1500, EDUC 1800, EDUC 2350 or EDUC 2650</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1161</td>
<td>Children’s Literature</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any MnTC Goal Area 3 with a lab Science</td>
<td>4.00</td>
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</table>

**TOTAL CREDITS: 16.00**
## Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2350</td>
<td>Introduction to Pedagogical Practices</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2250</td>
<td>Introduction to Special Education</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any of the World Languages that meet MnTC Goal Area 8.</td>
<td>5.00</td>
</tr>
<tr>
<td>PSYC 2350</td>
<td>Introduction to Educational Psychology</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

## Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2650</td>
<td>Education Capstone and Fieldwork</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC Elective</td>
<td>Choose two EDUC courses other than EDUC 1400, EDUC 1500, EDUC 1800, EDUC 2350 or EDUC 2650</td>
<td>6.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any MnTC Goal Area 4 course</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### General Education Coursework (30 Credits)

To complete the Education A.S. degree, students are required to successfully complete 30 credits of general education coursework. This coursework must be selected from at least six of the MnTC Goal Areas. Of these credits, students must earn a minimum of three credits in MnTC Goal Area 1 and three credits in MnTC Goal Areas 7, 8, 9 or 10. The General Education coursework and MnTC Goal Areas listed above will satisfy that requirement.
ESOL Education Certificate

13 Credits

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2200</td>
<td>Introduction to Language and Language Teaching for ESOL Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2300</td>
<td>Introduction to English for ESOL Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2400</td>
<td>Methods and Materials for ESOL Educators</td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
<td></td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>13.00</strong></td>
<td></td>
</tr>
</tbody>
</table>
Special Education Certificate

26 Credits

Pending MnSCU Approval

Courses in these programs require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement in to READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 1170</td>
<td>Tutoring Students in Urban Contexts</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 1235</td>
<td>Introduction to Culturally Competent Classroom</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 1500</td>
<td>Introduction to Education and Reflective Practice</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English</td>
<td>3.00</td>
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**TOTAL CREDITS: 15.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2250</td>
<td>Introduction to Special Education</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2260</td>
<td>Instruction for Exceptional Learners</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2270</td>
<td>Learning Disabilities and Behavior Disorders</td>
<td>3.00</td>
</tr>
<tr>
<td>EDUC 2280</td>
<td>Communication and Collaboration in Diverse Settings</td>
<td>2.00</td>
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</table>

**TOTAL CREDITS: 11.00**

General Education Courses (3 Credits)

To complete the Special Education certificate, students must successfully complete three credits of General Education coursework. ENGL 1110 is required and satisfies the three credits of General Education.
Electrical Construction and Technology

What You Will Learn
MCTC’s Electrical Construction and Technology program will prepare you for a career in the electrical construction. You will learn to install and repair electrical wiring and systems in commercial, industrial and residential settings.

You will learn electrical theory as you perform in a hands-on practical laboratory. You will make electrical connections; install different types of wiring systems used in the trade; and develop a strong basic knowledge of transformers, motors and control systems, and you will learn the basics of Solar Photovoltaic electricity generation.

MCTC’s experienced instructors will give you extensive training in advanced motor control, conduit installation and bending techniques, and wiring. They also will emphasize special features of commercial electrical systems and show you how to use diagnostic procedures to determine what causes electrical failures.

To participate in the program, you must have above-average manual dexterity, be able to lift 60 pounds, have excellent mathematics skills and be comfortable with moderate heights. All program participants must purchase approximately $250 in hand tools.

During the first year of the program, you will take the same courses as students in the Heating, Ventilation, Air Conditioning and Refrigeration program, which will give you valuable HVACR training. It also will give you the opportunity to complete both the HVACR and the electrical construction programs in just three years.

For more information on the program and its requirements, contact Dean Weikle at 612-659-6427 or Tom Hiltner at 612-659-6411.

Admission Requirements
Students are accepted into this program for fall semester only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 005
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077
- **ESOL Students only**
  - Placement into ESOL 0043
  - Successful completion of ESOL 0033

Awards or Credentials You Could Earn

- Electrical Construction and Technology Diploma—64 credits

Where You Could Work

- Electrical contracting companies
- Electrical supply companies
- Electrical power companies
- Property management companies
- Government inspection agencies
- Industrial control work
Electrical Construction and Technology Diploma

64 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077
- **ESOL Students only**
  - Placement into ESOL 0043
  - Successful completion of ESOL 0033

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEL 1000</td>
<td>Introductory Electric Circuits</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 1030</td>
<td>Introduction to Electric Motors</td>
<td>1.00</td>
</tr>
<tr>
<td>HVAC 1000</td>
<td>Refrigeration Fundamentals</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 1050</td>
<td>Trade Tools and Test Instruments</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 1250</td>
<td>Interpreting Schematic Drawings</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEL 1010</td>
<td>Semiconductor Circuits</td>
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</tr>
<tr>
<td>CNEL 1050</td>
<td>AC Circuit analysis</td>
<td>3.00</td>
</tr>
<tr>
<td>CNEL 1100</td>
<td>Single-Phase Transformer Principals</td>
<td>1.00</td>
</tr>
<tr>
<td>CNEL 1150</td>
<td>Introductory Motor Controls</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 1100</td>
<td>Metal Fabrication</td>
<td>3.00</td>
</tr>
<tr>
<td>HVAC 1300</td>
<td>HVAC and R Controls</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from any of the MnTC Goal Area</td>
<td>3.00</td>
</tr>
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**TOTAL CREDITS:** 16.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEL 2000</td>
<td>Residential Wiring</td>
<td>4.00</td>
</tr>
<tr>
<td>CNEL 2150</td>
<td>Three Phase Systems and Transformers</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2200</td>
<td>Electrical Raceway Installation</td>
<td>2.00</td>
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<tr>
<td>CNEL 2250</td>
<td>National Electrical Code 1</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2300</td>
<td>Electrical Rotating Machinery</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2450</td>
<td>Advanced Motor Controls</td>
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**TOTAL CREDITS: 15.00**

### Fourth Semester

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEL 2050</td>
<td>Blueprint Reading</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2110</td>
<td>Introduction to Solar Photovoltaic</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2400</td>
<td>Feeder and Service Installation</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2500</td>
<td>N.E.C. Calculations</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2550</td>
<td>National Electrical Code 2</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2600</td>
<td>Commercial Wiring</td>
<td>3.00</td>
</tr>
<tr>
<td>CNEL 2650</td>
<td>Programmable Controls</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 2700</td>
<td>Trade and Industry Relations</td>
<td>1.00</td>
</tr>
<tr>
<td>CNEL 2750</td>
<td>Digital Electronic Circuits</td>
<td>1.00</td>
</tr>
<tr>
<td>CNEL 2880</td>
<td>Electrical Circuit Design</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 18.00**

### General Education Courses (9 Credits)

To complete the Electrical Construction and Technology diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from at least two of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10.
Electroneurodiagnostic Technology

The Electroneurodiagnostic Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756. Phone: 727.210.2350.

What You Will Learn

MCTC’s new Electroneurodiagnostic (ENDT) Technology program provides you with the skills needed to work with a variety of equipment to perform diagnostic neurological studies and tests. After one year of coursework is completed, you will receive your diploma and can work in this field. After completion of the two-year degree, you will be qualified for more complex responsibilities in the work environment.

You will learn the skills needed to perform quality electroencephalograms, evoked-potentials, nerve conduction velocities, and intraoperative monitoring in hospitals and neurology clinics.

This occupation is evolving in the field of healthcare. END Technology graduates work in hospitals and neurology clinics around the country. Knowledge of seizure disorders, neurological disorders and operating room skills is the basis of the field study. END technologists work with a variety of equipment to perform diagnostic neurological studies.

Because this program requires internships in hospital settings, you must pass a background check and provide proof of immunity status prior to placement in the healthcare setting.

How You Apply

The Electroneurodiagnostic Technology (ENDT) is a selective admission program.

- Complete the ENDT program application by July 1 for the following Fall Semester.
- Further information and application materials are available on the ENDT program page located in the Educational Programs section of the college website.

Admission Requirements

Minimum Education Coursework Requirement:

For applicants who received their high school diploma and have not attended college:

- Completion of a high school diploma within the last five (5) years with a minimum class ranking at the 60th percentile and a cumulative GPA of 2.75.

For applicants who have taken college coursework:

Completion of a minimum of 10 semester credits of coursework from the Minnesota Transfer Curriculum (MnTC) or transfer equivalent with a minimum cumulative grade point average (GPA) of 2.75 or higher in all previous college coursework completed.

RECOMMENDED COURSES: It is highly recommended that applicants considering admission to the ENDT program, complete the following required General Education courses (or a transfer equivalent) with a grade of “C” or higher. These courses are required for completion of the ENDT program and, with the exception of COML 1100, meet the minimum 10 semester credits of MnTC coursework required for admission to the program:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1127</td>
<td>Human Biology</td>
</tr>
<tr>
<td>BIOL 1128</td>
<td>Human Biology Lab</td>
</tr>
<tr>
<td>COML 1100</td>
<td>Computer Literacy Basics with Keyboarding</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
</tr>
<tr>
<td>PSYC 1100</td>
<td>General Psychology</td>
</tr>
</tbody>
</table>

* To assist in successfully beginning the program it is strongly encouraged that ENGL 1110 and COML 1100 be completed before the fall start of the ENDT program.
Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052 with a score of 85% or higher in course exit exam \or completion of coursework at another college directly equivalent to READ 0200 or ESOL 0052 with a letter grade of B or higher.

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

**ESOL Students Only:** In addition to the placement tests listed above, any applicant that indicates on the ENDT application or at any time during the placement testing process that English is not their primary language or has completed ESL coursework at any time during their post-secondary education must complete the ESL Listening and Speaking placement test prior to applying for the program and before the application deadline. The applicant must receive a score of 87 or higher on the ESL Listening and Speaking placement test or have successfully completed ESOL 0043 (Listening and Speaking IV) at MCTC. Exemption of the ESL listening and speaking placement testing requirement based on previous college coursework may be granted if, based on review of the transcript, the course is a direct transfer equivalent to successful completion of ESOL 0043.

**The Electroneurodiagnostic Program Requires**

- Grades of “C” (2.0) or above in all ENDT courses and all program-required general education courses; and
- Pass (P) grades in lab and clinical internship courses; and
- Passing a criminal background check prior to being placed in an ENDT internship. The college cannot guarantee placement in internships for students who do not have a clear criminal background check.
- For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services, at 651-296-3802.

**Awards or Credentials You Could Earn**

- Electroneurodiagnostic Technology A.A.S. Degree—70 credits
- Electroneurodiagnostic Technology Diploma—56 credits

**Where You Could Work**

- Neurology departments in hospitals
- Neurology clinics
Electroneurodiagnostic A.A.S. Degree or Diploma

Credits: For A.A.S. Degree 70 Credits or Diploma 56 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052 with a score of 85% or higher in course exit exam or completion of coursework at another college directly equivalent to READ 0200 or ESOL 0052 with a letter grade of B or higher.

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENDT 1010</td>
<td>Foundations of ENDT</td>
<td>6.00</td>
</tr>
<tr>
<td>ENDT 1030</td>
<td>Introduction to ENDT</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1127</td>
<td>Human Biology</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1128</td>
<td>Human Biology Lab</td>
<td>1.00</td>
</tr>
<tr>
<td>COML 1100</td>
<td>Computer Literacy Basics with Keyboarding</td>
<td>2.00</td>
</tr>
<tr>
<td>HCCC 1100</td>
<td>Medical Terminology</td>
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</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>16.00</strong></td>
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**Second Semester**

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<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ENDT 1100</td>
<td>Clinical Neurology for the ENDT Role</td>
<td>4.00</td>
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<tr>
<td>ENDT 1510</td>
<td>Technical Concepts and Equipment</td>
<td>6.00</td>
</tr>
<tr>
<td>ENDT 1525</td>
<td>Clinical Correlates 1</td>
<td>2.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>15.00</strong></td>
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**Summer Session**

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<tr>
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<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENDT 1850</td>
<td>Clinical Internship 1</td>
<td>4.00</td>
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<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
<td>4.00</td>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>8.00</strong></td>
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### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENDT 2010</td>
<td>Evoked Potentials</td>
<td>3.00</td>
</tr>
<tr>
<td>ENDT 2030</td>
<td>Nerve Conduction Studies</td>
<td>3.00</td>
</tr>
<tr>
<td>ENDT 2050</td>
<td>Clinical Internship 2</td>
<td>8.00</td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 17.00**

At this point in the Electroneurodiagnostic program, a diploma can be earned. Be sure to submit an Intent to Graduate form to the Office of the Registrar by the published deadline on the Academic Calendar in your third semester. Students can continue on to the fourth semester to complete the A.A.S. degree.

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDT 2525</td>
<td>Clinical Correlates 2</td>
<td>2.00</td>
</tr>
<tr>
<td>ENDT 2550</td>
<td>Clinical Internship 3</td>
<td>8.00</td>
</tr>
<tr>
<td>PSYC 2240</td>
<td>Lifespan Development</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 14.00**

**Diploma General Education Coursework (14 Credits)**

To complete the Electroneurodiagnostic Technology diploma, students are required to successfully complete 14 credits of General Education coursework. The required coursework is included in the course outline.

**A.A.S. General Education Coursework (18 Credits)**

To complete the Electroneurodiagnostic Technology A.A.S. degree, students are required to successfully complete 18 credits of General Education coursework. The required coursework is included in the course outline.
Global Studies

What You Will Learn

The MCTC Global Studies certificate is designed to prepare you with the knowledge and skills necessary to participate effectively in the global workplace and as world citizens who can meet the challenges of an increasingly interdependent global community. You will learn, through a multi disciplinary approach, to see and better understand how people and nations of the world are interconnected with each other and with the natural environment of our planet Earth. By taking a variety of courses with a common focus, you will develop habits of thinking and questioning that will enable you to address complex global political, economic, cultural and environmental issues from diverse perspectives. You will also gain the knowledge and skills to communicate and work collaboratively across borders, with people from a variety of backgrounds and cultures, and develop the ability to contribute to the creation of a more equitable, sustainable and peaceful world.

The main objective of a Global Studies certificate is to offer educational opportunities for you to become productive global citizens and future leaders in the community, state, nation and world. This certificate complements many academic fields and any career that benefits from a global perspective. The program helps prepare you for transfer into four-year degree programs that focus on global studies; ethnic, area or environmental studies; international business; international affairs; and development work; or other career fields, such as healthcare and law enforcement, that will require you to deal with diverse people and groups.

Admission Requirements

Students admitted to Minneapolis Community and Technical College may need to complete additional courses based on their placement results and course prerequisite requirements. Certain courses may have additional prerequisites. See course descriptions for complete prerequisite listings.

Awards or Credentials You Could Earn

- Global Studies Certificate—18 credits

Where You Could Work

- Environment and health resources centers
- Social service centers
- Advocacy groups
- Cultural resources organization
Global Studies Certificate

18 Credits

Recommended Course Sequence
The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>GLOS 1500</td>
<td>Introduction to Global Studies</td>
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<tr>
<td>ANTH 2105</td>
<td>Globalization and Culture Change</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110 Or CMST 2012</td>
<td>College English 1 Intercultural Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1136 Or WOST 2212 Or PHIL 2171</td>
<td>Environmental Science Ecofeminism Environmental Ethics</td>
<td>3.00</td>
</tr>
<tr>
<td>Global Studies Electives</td>
<td>Choose 6 credits from the following list</td>
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</tr>
<tr>
<td>PSCI 1104</td>
<td>World Politics</td>
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<tr>
<td>GLOS 1190</td>
<td>World Religions</td>
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<tr>
<td>HIST 1010</td>
<td>World History 2</td>
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<tr>
<td>HIST 1020</td>
<td>Contemporary World History: Issues and Themes</td>
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</tr>
<tr>
<td>ENGL 2225</td>
<td>World Literature: Asia and Middle East</td>
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</tr>
<tr>
<td>ENGL 2226</td>
<td>World Literature: Europe, Africa and Latin America</td>
<td></td>
</tr>
<tr>
<td>BUSN 2270</td>
<td>Introduction to International Business</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 18.00
Graphic Design: Print Media

What You Will Learn

MCTC’s Graphic Design program will teach you how to visually communicate important messages and electronically prepare your work for the printed reproduction of catalogs, brochures, book jackets, advertisements, packaging, point-of-purchase displays and more.

The program’s core set of classes will allow you to specialize in graphic design or migrate to the Web and Interactive Media program. In addition, MCTC offers specialized courses to accommodate both degree-seeking students and industry professionals.

Your coursework will cover visual problem-solving, art and design principles, and print production standards, using computer and current design software to create visual solutions for your final projects.

Experienced faculty will teach you how visual elements such as type, graphics, illustration and photography work together to make a design more effective. To simulate a professional creative environment, you will work under tight deadlines to design, lay out and produce a variety of printed pieces. Students’ finished projects will create a well-rounded portfolio necessary for entry into the design profession.

Program faculty will help you prepare your portfolio and give you guidelines on job seeking. Students are required to exhibit their work in the program portfolio show. Faculty have developed numerous award-winning partnerships within the industry and community, and students benefit in numerous ways from these alliances.

To successfully complete the program and work in this profession, you will need to own, or have access to, a computer and current design software. You also will need to purchase a large-format portable storage device.

MCTC has an articulation agreement with Metropolitan State University.

Admission Requirements

Students are accepted into this program for fall, spring and summer terms.

Courses in this program require achievement of the following minimum placements:

- **READING** — one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH** — one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Graphic Design: Print Media A.A.S. Degree—66 credits
- Graphic Design: Print Media Certificate—30 credits
- Graphic Design Core Certificate—18 credits

Where You Could Work

- Advertising agencies
- Art studios
- Corporate art departments
- Government institutions
- Graphic design firms
- Marketing and public relations firms
- Government and education institutions
- Printing and publishing firms
- Retail and merchandising companies
**Graphic Design: Print Media A.A.S. Degree**

**66 Credits**

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>GRPH 1101</td>
<td>Typography 1</td>
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</tr>
<tr>
<td>GRPH 1120</td>
<td>Layout and Design 1</td>
<td>3.00</td>
</tr>
<tr>
<td>GRPH 1130</td>
<td>Introduction to Graphics Software</td>
<td>3.00</td>
</tr>
<tr>
<td>GRPH 1140</td>
<td>Color Theory</td>
<td>3.00</td>
</tr>
<tr>
<td>GRPH 1540</td>
<td>History of Graphic Design</td>
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</tr>
<tr>
<td>General Education</td>
<td>Choose any CMST course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
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**TOTAL CREDITS:** 18.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tr>
<td>ARTS 1121</td>
<td>Drawing 1</td>
<td>3.00</td>
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<tr>
<td>ARTS Course</td>
<td>Choose any ARTS course from MnTC Goal Area 6</td>
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<tr>
<td>WEBI 1410</td>
<td>Web Layout and Design</td>
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<tr>
<td>GRPH 1560</td>
<td>Print Production 1</td>
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<td>GRPH 1585</td>
<td>Adobe InDesign</td>
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<td>GRPH 2110</td>
<td>Adobe Photoshop</td>
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**TOTAL CREDITS:** 18.00
### Third Semester

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<tbody>
<tr>
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<tr>
<td>GRPH 1550</td>
<td>Adobe Illustrator</td>
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<td>GRPH 2101</td>
<td>Typography 2</td>
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<td>GRPH 2130</td>
<td>Graphic Design Problems 1</td>
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<td>Program Electives</td>
<td>Choose any course from GRPH, WEBI or PHDI that is not a required course for the degree with instructor approval (Recommend GRPH 2145)</td>
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**TOTAL CREDITS: 15.00**

### Fourth Semester

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<td>GRPH 2540</td>
<td>Career Planning/Professional Practices</td>
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<td>GRPH 2550</td>
<td>Portfolio Prep/Exhibit</td>
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<td>PSYC Course</td>
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**TOTAL CREDITS: 15.00**

### General Education Courses (18 Credits)

To complete the Print Media A.A.S. degree, students are required to successfully complete 18 credits of General Education coursework. This coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 Communication Studies courses, as well as three credits from Goal Area 1 English courses; three credits from any Goal Area 5 Psychology course; three credits from any Goal Area 6 Arts courses; and three additional credits from any Goal Area 6 Arts course that also holds MnTC 8, or CIST 1106. In addition, ARTS 1121 is also required.
Graphic Design: Print Media Certificate

30 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>GRPH 1101</td>
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<td>Layout and Design 1</td>
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<tr>
<td>GRPH 1130</td>
<td>Introduction to Graphics Software</td>
<td>3.00</td>
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<td>GRPH 1140</td>
<td>Color Theory</td>
<td>3.00</td>
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Second Semester

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<tr>
<td>GRPH 1585</td>
<td>Adobe InDesign</td>
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<td>Adobe Photoshop</td>
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<td>WEBI 1416</td>
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General Education Courses (3 Credits)

To complete the Graphic Design: Print Media certificate, students must successfully complete three credits of General Education coursework. Choose any CMST course from MnTC Goal Area 1.
Graphic Design Core Certificate

18 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

First Semester

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<tr>
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<tbody>
<tr>
<td>GRPH 1101</td>
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<td>Layout and Design 1</td>
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<td>GRPH 1130</td>
<td>Introduction to Graphics Software</td>
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<td>3.00</td>
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<td>GRPH 1540</td>
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**TOTAL CREDITS: 18.00**

General Education Courses (3 Credits)

To complete the Graphic Design: Core certificate, students must successfully complete three credits of General Education coursework. Choose any CMST course from MnTC Goal Area 1.
Graphic Design: Web and Interactive Media

What You Will Learn

MCTC’s Web and Interactive Media and Web Design program will prepare you to use a variety of specialized computer software to create, prepare and produce, printed or interactive Web design productions.

The program’s core set of classes will allow you to specialize in Web design or electronic publishing, or migrate to the Graphic Design program. The Web and Interactive Media certificate or diploma coursework will concentrate on current industry standard programs and prepress skills needed to successfully guide a job from concept to print.

The Web and Interactive Media certificate, diploma and A.A.S. degrees feature current Web design studies in the Internet technologies and design profession. In addition, the program offers specialized courses to accommodate both degree-seeking students and current industry professionals.

Overall, coursework will cover visual problem-solving, art and design principles, and Web or electronic production standards, using the computer and current software standards extensively to prepare creative visual solutions for student projects.

Experienced faculty will teach you how visual elements such as type, illustration, graphics, photography and animation work together to make a design more effective. To simulate a professional creative environment, you will work under tight deadlines to design, compose and produce work using current software. Your finished projects will create a well-rounded portfolio necessary for entry into the design profession.

Program faculty will help you prepare your portfolio and give you guidelines on job seeking. Students are required to exhibit their work in the program portfolio show. Faculty have developed numerous award-winning partnerships within the industry and community, and students benefit in numerous ways from these alliances.

To successfully complete the program and work in this profession, you will need to own, or have access to, a computer and current design software. You also will need to purchase a large-format portable storage device.

MCTC has an articulation agreement with Metropolitan State University.

Admission Requirements

Students are accepted into this program for fall, spring and summer terms. Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Web and Interactive Media A.A.S. Degree—66 credits
- Web and Interactive Media Certificate—30 credits
- Web and Interactive Media Core Certificate—18 credits

Where You Could Work

- Advertising agencies
- Animation companies and studios
- Corporate creative departments
- Electronic publishing departments
- Freelance businesses
- Government and education institutions
- Graphic design firms
- Marketing firms
- Public relations firms
- Web design studios
# Web and Interactive Media A.A.S. Degree

## 66 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

## Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
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<td>GRPH 1101</td>
<td>Typography 1</td>
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<td>GRPH 1130</td>
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<td>3.00</td>
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<td>GRPH 1140</td>
<td>Color Theory</td>
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<td>WEBI 1416</td>
<td>Web Layout and Design</td>
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<tr>
<td>WEBI 1611</td>
<td>HTML/XHTML Authoring 1</td>
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**TOTAL CREDITS: 18.00**

### Second Semester

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<tr>
<td>WEBI 1711</td>
<td>Web Tools: Dreamweaver</td>
<td>3.00</td>
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<tr>
<td>WEBI 1811</td>
<td>Web Animation: Flash/Image Ready</td>
<td>3.00</td>
</tr>
<tr>
<td>WEBI 1911</td>
<td>Scripting Overview</td>
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**TOTAL CREDITS: 18.00**
### Third Semester

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**TOTAL CREDITS: 15.00**

### Fourth Semester

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<tr>
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<td>WEBI</td>
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<tr>
<td>CIST</td>
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**TOTAL CREDITS: 15.00**

### General Education Courses (18 Credits)

To complete the Web and Interactive Media A.A.S. degree, students are required to successfully complete 18 credits of General Education coursework. The coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 Communication Studies courses as well as three credits from Goal Area 1 English courses; three credits from any Goal Area 5 Psychology course; three credits from any Goal Area 6 Arts courses; and three additional credits from any Goal Area 6 Arts course that also holds MnTC 8, or CIST 1106.
Web and Interactive Media Certificate

30 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
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<th>COURSE #</th>
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<tr>
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<td>Typography 1</td>
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<td>WEBI 1611</td>
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**TOTAL CREDITS: 18.00**

**Second Semester**

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<td>WEBI 1911</td>
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</tr>
<tr>
<td>WEBI 1811</td>
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**TOTAL CREDITS: 12.00**

**General Education Courses (3 Credits)**

To complete the Web and Interactive Media Certificate, students are required to successfully complete any CMST course from MnTC Goal Area 1.
Web and Interactive Media Core Certificate

18 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<tr>
<td>WEBI 1611</td>
<td>HTML Authoring 1</td>
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**TOTAL CREDITS: 18.00**

**General Education Courses (3 Credits)**

To complete the Web and Interactive Media Core Certificate, students are required to successfully complete any CMST course from MnTC Goal Area 1.
Healthcare Core Curriculum

What You Will Learn
Healthcare careers are many and varied. The Healthcare Core Curriculum is a standardized, Minnesota State Colleges and Universities (MnSCU)-approved curriculum that serves as a pathway in healthcare education that permits students to explore healthcare career options, provides basic knowledge and skills applicable in a wide range of healthcare and human service settings, and develops an awareness of workplace expectations.

Students may take the HCCC courses as prerequisite to a program major (see Where You Could Work for a list of majors that require HCCC coursework), or to explore the suitability of pursuing a healthcare career major. The Healthcare Core Curriculum is composed of eight modules which provide basic knowledge and skills in the following areas:

**Healthcare Career Opportunities (an overview)**
- Roles of healthcare workers
- Licensure or credentialing requirements
- Behaviors suitable for the workplace
- Employer expectations
- Effective communication skills
- Respect for the diversity of staff and clients
- Awareness of client needs
- Legal and ethical implications in healthcare settings
- Safety issues in the workplace
- Medical terminology
- Care of families
- Personal wellness/stress management

What Should You Know When Considering a Healthcare Major
Since it is vital to maintain high standards in all health-related facilities, you should know that most healthcare majors require students to be criminal background checked and students must have a clear criminal background check in order to participate in coursework that requires placement in a healthcare facility. Many healthcare majors also require students to meet specific health and immunity requirements in order to participate in clinical and internship placements.

**Admission Requirements**
Courses in this program require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
- **MATH**—one of the following:
  - Placement into MATH 0060

**Awards or Credentials You Could Earn**
- Healthcare Core Curriculum

**Where You Could Work**
The Healthcare Core Curriculum is intended to serve as a pathway to student decision-making regarding the suitability of a healthcare career or as prerequisite to healthcare majors that require completion of HCCC coursework prior to registration in program coursework. The following MCTC healthcare majors require completion of the five-credit Health Core Curriculum core courses (HCCC 1010 through HCCC 1100) before becoming eligible to register in the program coursework:

- Dental Office Support Personnel
- Central Services Technician
- Phlebotomy
Health Care Core Curriculum

6 Credits

Courses in this program require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Completion READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

- **MATH**—one of the following:
  - Placement into MATH 0060

Recommended Course Sequence

The Healthcare Core Curriculum is intended to serve as a pathway to student decision-making regarding the suitability of a healthcare career or as prerequisite to healthcare majors that require completion of HCCC coursework prior to registration in program coursework.

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

<table>
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<td>HCCC 1010</td>
<td>Behaviors for Success in Health Careers</td>
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<td>HCCC 1020</td>
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<td>HCCC 1030</td>
<td>Awareness and Sensitivity to Client Needs</td>
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<tr>
<td>HCCC 1040</td>
<td>Respecting Client and Staff Diversity</td>
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<tr>
<td>HCCC 1050</td>
<td>Health Care Safety and Standard Precautions</td>
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<td>Legal Issues in Health Care</td>
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<td>Dosage Calculations</td>
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For majors with HCCC requirements, if student has completed NAHA 1819/1850 in or after 2009, may petition to waive a total of three credits from the following: HCCC 1010 (0.5 cr), HCCC 1020 (1 cr), HCCC 1050 (0.5 cr), HCCC 1060 (0.5 cr) and HCCC 1070 (0.5 cr).
Heating, Ventilation, Air Conditioning and Refrigeration

What You Will Learn

MCTC’s Heating, Ventilation, Air Conditioning and Refrigeration program will train you to diagnose problems, perform repairs and conduct maintenance on residential and commercial heating, ventilation, air conditioning and refrigeration (HVACR) systems.

Through coursework and hands-on laboratory exercises, you will learn Minnesota Energy Code requirements and diagnostic procedures for HVACR equipment. You will be trained to fabricate sheet metal and copper, as well as plastic and steel piping. Experienced instructors will prepare you to work with advanced electrical controls, heat recovery ventilators, air-cleaning devices, sophisticated air-measurement equipment and carbon-monoxide-testing instruments and you will learn the basics of Solar Thermal Energy.

You will receive advanced training in indoor-air-quality technologies and commercial and residential heat pumps. Indoor-air-quality training is provided in a specially designed on-site facility.

To participate in the program, you should have a strong mechanical aptitude, strong math skills and enjoy problem-solving. You also must have above-average manual dexterity, be in good physical condition to perform lifting, and be comfortable with heights and climbing ladders. All program participants must purchase approximately $900 in tools.

During the first year of the program, you will take the same courses as students in the Electrical Construction program, which will give you more electrical training than programs at other technical colleges. This gives you the opportunity to complete both the HVACR and the Construction Electricity programs in just three years. To schedule a lab tour or discuss the program, call Greg Skudlarek at 612-659-6424.

MCTC has an articulation agreement with Minnesota State University, Moorhead and Ferris State University.

Admission Requirements

Students are accepted into this program for fall semester only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077
- **ESOL Students only**
  - Placement into ESOL 0043
  - Successful completion of ESOL 0033

Awards or Credentials You Could Earn

- Heating, Ventilation, Air Conditioning and Refrigeration A.A.S. Degree—72 credits
- Heating, Ventilation, Air Conditioning and Refrigeration Diploma—64 credits

Where You Could Work

- HVAC residential service companies
- HVACR commercial service companies
- Gas utilities
- Commercial buildings (HVAC maintenance)
- HVACR equipment sales companies
Heating, Ventilation, Air Conditioning and Refrigeration A.A.S. Degree

72 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077
- **ESOL Students only**
  - Placement into ESOL 0043
  - Successful completion of ESOL 0033

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>CNEL 1000</td>
<td>Introductory Electric Circuits</td>
<td>2.00</td>
</tr>
<tr>
<td>CNEL 1030</td>
<td>Introduction to Electric Motors</td>
<td>1.00</td>
</tr>
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<td>HVAC 1000</td>
<td>Refrigeration Fundamentals</td>
<td>2.00</td>
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<tr>
<td>HVAC 1050</td>
<td>Trade Tools and Test Instruments</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 1250</td>
<td>Interpreting Schematic Drawings</td>
<td>2.00</td>
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<tr>
<td>HVAC 2000</td>
<td>Service Procedures for HVACR Technicians</td>
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<td>HVAC 2650</td>
<td>HVAC Sheet Metal</td>
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<tr>
<td>General Education</td>
<td>Choose a course from any MnTC Goal Area</td>
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**TOTAL CREDITS: 18.00**

**Second Semester**

<table>
<thead>
<tr>
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<th>TITLE</th>
<th>CREDITS</th>
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<tr>
<td>CNEL 1050</td>
<td>A.C. Circuit Analysis</td>
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<td>Single Phase Transformer Principles</td>
<td>1.00</td>
</tr>
<tr>
<td>CNEL 1150</td>
<td>Introductory Motor Controls</td>
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</tr>
<tr>
<td>HVAC 1100</td>
<td>Metal Fabrication</td>
<td>3.00</td>
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<tr>
<td>HVAC 1150</td>
<td>Refrigeration Management</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 1300</td>
<td>HVAC and R Controls</td>
<td>2.00</td>
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<td>General Education</td>
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**TOTAL CREDITS: 18.00**
## Third Semester

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<tbody>
<tr>
<td>HVAC 2010</td>
<td>HVAC and R Internship 1</td>
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<tr>
<td>HVAC 2150</td>
<td>Central Air Conditioners</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 2250</td>
<td>Heat Pumps</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 2450</td>
<td>Indoor Air Quality</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 2500</td>
<td>Gas-Fired Furnaces</td>
<td>3.00</td>
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<tr>
<td>HVAC 2550</td>
<td>Oil-Fired Furnaces</td>
<td>1.00</td>
</tr>
<tr>
<td>HVAC 2600</td>
<td>Residential Boilers</td>
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</tr>
<tr>
<td>HVAC 2640</td>
<td>Introduction to Solar Thermal Systems</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
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**TOTAL CREDITS: 18.00**

## Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>HVAC 2050</td>
<td>HVAC Internship 2</td>
<td>1.00</td>
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<tr>
<td>HVAC 2100</td>
<td>HVAC Design</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 2200</td>
<td>Commercial Air Conditioners</td>
<td>3.00</td>
</tr>
<tr>
<td>HVAC 2300</td>
<td>Commercial Refrigeration</td>
<td>4.00</td>
</tr>
<tr>
<td>HVAC 2350</td>
<td>Commercial Ice Machines</td>
<td>2.00</td>
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<tr>
<td>HVAC 2400</td>
<td>HVAC Rooftop Systems</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>4.00</td>
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</table>

**TOTAL CREDITS: 18.00**

### General Education Courses (18 Credits)

To complete the Heating, Ventilating, Air Conditioning and Refrigeration A.A.S., students are required to successfully complete 18 credits of General Education coursework. This coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10.
Heating, Ventilation, Air Conditioning and Refrigeration Diploma

64 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077
- **ESOL Students only**
  - Placement into ESOL 0043
  - Successful completion of ESOL 0033

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

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<td>HVAC 2650</td>
<td>HVAC Sheet Metal</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 18.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<td>HVAC 1300</td>
<td>HVAC and R Controls</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
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**TOTAL CREDITS:** 16.00
### Third Semester

<table>
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<tr>
<th>COURSE #</th>
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<td>HVAC 2640</td>
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<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
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**TOTAL CREDITS:** 18.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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</tr>
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<td>HVAC 2050</td>
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<td>Commercial Ice Machines</td>
<td>2.00</td>
</tr>
<tr>
<td>HVAC 2400</td>
<td>HVAC Rooftop Systems</td>
<td>2.00</td>
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**TOTAL CREDITS:** 14.00

### General Education Courses (9 Credits)

To complete the Heating, Ventilating, Air Conditioning and Refrigeration diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from at least two of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10.
Herbal Studies
Pending MnSCU Approval

What You Will Learn
The Herbal Studies certificate program provides a unique opportunity for those interested in herbal medicine, wellness, holistic health, botany and horticulture to study herbal medicine in an academic setting. Upon completion of the Herbal Studies certificate, students will understand traditional and holistic approaches to herbal medicine in addition to current scientific research and herbal product market trends, preparing them for employment in the herbal products field.

• You will gain a background in holistic medicine systems currently used in the United States including Western Herbalism, Native American, Ayurvedic and Traditional Chinese Medicine;
• You will develop treatment and safety strategies for herbal medicine use;
• You will manufacture herbal products; and
• You will have an in-depth knowledge of the use of medicinal plants including the 50 top selling herbs in the United States.

Admission Requirement
Courses in this program require achievement of the following minimum placements:

• READING—one of the following:
  • Placement into READ 1300
  • Successful completion of READ 0200 or ESOL 0052

Awards or Credentials You Could Earn

• Herbal Studies Certificate—18 credits

Where You Could Work

• Herbal industry representative, consultant, or manager
• Work in the health/wellness/supplements/cosmetics industry
• Natural product retailers
Herbal Studies Certificate

18 Credits

Pending MnSCU Approval

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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<tbody>
<tr>
<td>HERB 1000</td>
<td>Foundations of Herbal Medicine</td>
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<tr>
<td>HERB 1100</td>
<td>Introduction to Herbal Medicine</td>
<td>3.00</td>
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<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
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**TOTAL CREDITS: 9.00**

Advanced Courses

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<tbody>
<tr>
<td>HERB 1200</td>
<td>Herbal Pharmacy</td>
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<tr>
<td>HERB 1220</td>
<td>Materia Medica</td>
<td>3.00</td>
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<tr>
<td>HERB 1240</td>
<td>Lifespan and Gender Specific Herbs</td>
<td>3.00</td>
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**TOTAL CREDITS: 9.00**

General Education Courses (3 Credits)

To complete the Herbal Studies certificate, students are required to successfully complete CMST 1010.
Human Services

What You Will Learn
MCTC’s Human Services program will prepare you to work in community settings to assist and advocate for people who face economic, social, emotional, or developmental challenges and barriers.

The program integrates theory and skills practice and emphasizes peer interaction and group learning projects. You will be able to take advantage of a variety of courses that focus on the history of the human services field, social policy, multicultural factors, system change and advocacy.

Throughout the program, you will get to know and work with faculty and other students who want to make a difference in people’s lives. Experienced instructors will teach you interviewing, basic case management, and group skills using lecture, role play, and media feedback. A supervised, semester-long community service internship will give you a chance to put your skills to work and gain valuable experience in the field.

Many graduates transfer to bachelor’s degree programs. MCTC has an articulation agreement with Metropolitan State University.

Admission Requirements
The Human Services Program requires:

- Grades of “C” (2.0) or above in all HSER program courses; and
  Passing a criminal background check prior to internship placement. The College cannot guarantee placement in internships for students who do not have a clear criminal background check.
- For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.

Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following program admission requirements:

- READING—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- WRITING—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

Summer internships in our program are reserved only for students who are completing the 36-credit diploma in Human Services and who have no intention of continuing on for the A.S. degree in Human Services at MCTC. Most students in our program are pursuing the A.S. degree. They must plan for internship during fall or spring semesters. Occasionally, we have a student who intends to complete only a diploma (e.g. already has an associate’s or bachelor’s degree, or is undergoing a career change). He or she could be eligible for a summer internship.

Awards or Credentials You Could Earn

- Human Services A.S. Degree—60 credits
- Human Services Diploma—36 credits

Where You Could Work

- Family outreach and advocacy programs
- Residential and community youth service organizations
- Nonprofit and government social service agencies
- School and educational settings
- Group homes
- Community centers
- Culturally focused service agencies
- Housing resource programs
Human Services A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Completion of READ 0200 or ESOL 0052
  - Be declared ready to enroll in READ 1300 on the basis of reading placement test scores
- **WRITING**—one of the following:
  - Completion of ENGL 0900 or ESOL 0051
  - Be declared ready to enroll in ENGL 1110 on the basis of writing placement test scores

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

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<td>ENGL 1110</td>
<td>College English 1</td>
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<tr>
<td>HSER 1001</td>
<td>Introduction to Human Services and Career Assessment</td>
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<tr>
<td>HSER 1002</td>
<td>Multicultural Aspects of Human Services</td>
<td>2.00</td>
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<td>Choose courses from any of the MnTC Goal Areas. Take at least 3 credits from MnTC Goal Areas 7, 8, 9 or 10</td>
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### Second Semester

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<td>HSER 1004</td>
<td>Individual Counseling Skills</td>
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<td>HSER 1105</td>
<td>Promoting System Change</td>
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<td>SOCI 2115</td>
<td>Family Violence</td>
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### Third Semester

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<td>HSER 2001</td>
<td>Introduction to Group Skills</td>
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<td>HSER 2002</td>
<td>Case Management Skills</td>
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<tr>
<td>HSER 2003</td>
<td>Internship Assessment and Preparation</td>
<td>1.00</td>
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<tr>
<td>Program Electives</td>
<td>Choose 3 credits from Program Electives</td>
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<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>4.00</td>
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<tr>
<td><strong>TOTAL CREDITS:</strong></td>
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<td><strong>15.00</strong></td>
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Fourth Semester

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<tbody>
<tr>
<td>HSER 2004 or *HSER 2006</td>
<td>Internship</td>
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<tr>
<td>HSER 2005</td>
<td>Internship Seminar</td>
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<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
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TOTAL CREDITS: 15.00

Program Elective Courses

Electives may be taken any semester. Choose three credits from the following list:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMHW 1025</td>
<td>Community Health Worker’s Role in Teaching and Capacity Building</td>
<td>2.00</td>
</tr>
<tr>
<td>CMHW 1035</td>
<td>The Community Health Worker: Legal and Ethical Responsibilities</td>
<td>1.00</td>
</tr>
<tr>
<td>CMHW 1045</td>
<td>Community Health Worker: Coordination, Documentation and Reporting</td>
<td>1.00</td>
</tr>
<tr>
<td>CMHW 1055</td>
<td>Communication Skills and Cultural Competence</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 1500</td>
<td>Drugs in the Community</td>
<td>3.00</td>
</tr>
<tr>
<td>HSER 1051</td>
<td>Current Issues in Human Services</td>
<td>1.00</td>
</tr>
<tr>
<td>HSER 1052</td>
<td>Current Issues in Human Services</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1110</td>
<td>Working with Youth</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1111</td>
<td>Using Personality Types in Human Services</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1115</td>
<td>Self-Care and Wellness for Helping Professionals</td>
<td>2.00</td>
</tr>
</tbody>
</table>

General Education Courses (30 Credits)

To complete the Human Services A.S., students are required to successfully complete 30 credits of General Education coursework. This coursework must be selected from at least six of the MnTC Goal Areas. A minimum of six credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10, specifically ENGL 1110, ENGL 1111 and SOCI 2115. Students who are not already computer literate should take a computer applications class or an independent study/online tutorial. Note: HSER 2004, HSER 2005 and HSER 2006 may be taken fall and spring terms only.

*Students who complete CMHW 1000 and 1015 should take HSER 2006 to meet the required six credits of internship.
Human Services Diploma

36 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSER 1001</td>
<td>Introduction to Human Services and Career Assessment</td>
<td>4.00</td>
</tr>
<tr>
<td>HSER 1002</td>
<td>Multicultural Aspects of Human Services</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1004</td>
<td>Individual Counseling Skills</td>
<td>4.00</td>
</tr>
<tr>
<td>HSER 1105</td>
<td>Promoting System Change</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 15.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSER 2001</td>
<td>Introduction to Group Skills</td>
<td>3.00</td>
</tr>
<tr>
<td>HSER 2002</td>
<td>Case Management Skills</td>
<td>4.00</td>
</tr>
<tr>
<td>HSER 2003</td>
<td>Internship Assessment and Preparation</td>
<td>1.00</td>
</tr>
<tr>
<td>SOCI 2115</td>
<td>Family Violence</td>
<td>3.00</td>
</tr>
<tr>
<td>Program Electives</td>
<td>Choose three credits from the Program Elective list</td>
<td>3.00</td>
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**TOTAL CREDITS:** 14.00

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSER 2004 or HSER 2006</td>
<td>Internship or Internship for Community Healthcare Worker</td>
<td>6.00 or 4.00</td>
</tr>
<tr>
<td>HSER 2005</td>
<td>Internship Seminar</td>
<td>1.00</td>
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</table>

**TOTAL CREDITS:** 7.00
Program Elective Courses

Electives may be taken any semester. Choose three credits from the following list:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMHW 1025</td>
<td>Community Health Worker’s Role in Teaching and</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Capacity Building</td>
<td></td>
</tr>
<tr>
<td>CMHW 1035</td>
<td>The Community Health Worker: Legal and Ethical</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Responsibilities</td>
<td></td>
</tr>
<tr>
<td>CMHW 1045</td>
<td>Community Health Worker: Coordination,</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Documentation and Reporting</td>
<td></td>
</tr>
<tr>
<td>CMHW 1055</td>
<td>Communication Skills and Cultural Competence</td>
<td>3.00</td>
</tr>
<tr>
<td>COUN 1500</td>
<td>Drugs in the Community</td>
<td>3.00</td>
</tr>
<tr>
<td>HSER 1051</td>
<td>Current Issues in Human Services</td>
<td>1.00</td>
</tr>
<tr>
<td>HSER 1052</td>
<td>Current Issues in Human Services</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1110</td>
<td>Working with Youth</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1111</td>
<td>Using Personality Types in Human Services</td>
<td>2.00</td>
</tr>
<tr>
<td>HSER 1115</td>
<td>Self-Care and Wellness for Helping Professionals</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 3.00**

General Education Courses (6 Credits)

To complete the Human Services Diploma, students are required to successfully complete SOCI 2115 and three additional credits from MnTC Goal Area 1. Note: HSER 2004, HSER 2005 and HSER 2006 may be taken fall and spring terms only.

*Students who complete CMHW 1000 and 1015 should take HSER 2006 to meet the required six credits of internship.*
Law Enforcement

The law enforcement skills portion of the degree program is offered through our sister institution, Hennepin Technical College (HTC) in Brooklyn Park, MN. Students begin the A.S. degree program here at MCTC and complete the final 21 credits of the program on-site at HTC, but they actually graduate from MCTC. Students may apply for admission to the HTC program after completing at least 28 credits of the degree program. Please call the HTC Law Enforcement and Criminal Justice Education Center at 763-657-3700 for specific admissions information.

What You Will Learn

MCTC’s Law Enforcement program will prepare you to become a professional law enforcement officer who thinks clearly, applies communication and human behavior principles to the job, and effectively uses hands-on skills as the situation requires.

The Law Enforcement training program is accredited by the Minnesota Board of Peace Officer Standards and Training (POST) and provides the academic components of the mandated Law Enforcement program, with continued training taken on-site at Hennepin Technical College’s Law Enforcement skills facility. The combined learning is varied, including things like the Minnesota statutes and the U.S. Constitution, criminal and traffic law, and training for the many skills used in daily law enforcement, such as:

- Handling and using firearms
- Decision shooting
- Armed and unarmed defensive tactics
- High-speed and pursuit driver techniques
- Low- and high-risk traffic stop tactics
- In-progress crimes and domestic violence tactics
- Criminal investigation and arrest procedures
- Traffic law enforcement and accident investigation

Faculty members include current and past law enforcement officers who will use their broad experience, as well as some of the latest technologies, to give you the best and most practical training possible. For example, decision-shooting exercises use DVD technology with interactive scenarios so you can learn to think and react quickly to life-threatening situations. You also may find yourself confronting typical law enforcement problems in a realistic simulation lab, wherein your actions and techniques are videotaped for later review and analysis.

To enter the program, you will need to possess a valid driver’s license, be able to pass a criminal background check, and not be prohibited by state or federal law from possessing a firearm. You also must purchase a uniform, utility belt, and gym wear, as well as have sufficient strength, flexibility, and cardiovascular endurance to satisfactorily complete the firearms, defensive tactics, and patrol tactics included in the skills portion of the program.

Once you complete the program, you will be eligible to take the state’s Peace Officer Licensing Examination required to be eligible for entry-level law enforcement positions with state, county or local government agencies. You must be a U.S. citizen, however, to enter the law enforcement profession.

MCTC has an articulation agreement with Metropolitan State University, should you decide to pursue a four-year degree.

Admission Requirements

Students are accepted into this program for fall and spring semesters.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
Awards or Credentials You Could Earn

• Law Enforcement A.S. Degree—68 credits

Where You Could Work

• Police departments
• Sheriff’s departments
• Department of Natural Resources
• Minnesota State Patrol
• Private security organizations
• Some federal law enforcement agencies
Law Enforcement A.S. Degree

68 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>HLTH 2249</td>
<td>First Responder</td>
<td>3.00</td>
</tr>
<tr>
<td>LAWE 1215</td>
<td>Police and Community</td>
<td>3.00</td>
</tr>
<tr>
<td>PHIL 1171</td>
<td>Ethics</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>LAWE 1220</td>
<td>Juvenile Justice</td>
<td>3.00</td>
</tr>
<tr>
<td>PHED 1180</td>
<td>Fitness Intensity Training</td>
<td>1.00</td>
</tr>
<tr>
<td>PSYC 1100 Or</td>
<td>Applying Psychology</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 2260 Or</td>
<td>Social Psychology</td>
<td>3.00</td>
</tr>
<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
<td>4.00</td>
</tr>
<tr>
<td>SOCI 1105</td>
<td>Introduction to Sociology</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas that are not part of the degree</td>
<td>3.00</td>
</tr>
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**TOTAL CREDITS:** 15.00 or 16.00 or 17.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAWE 2251</td>
<td>Criminal Justice Service Learning Internship</td>
<td>1.00</td>
</tr>
<tr>
<td>SOCI 2115</td>
<td>Family Violence</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 2145</td>
<td>American Minority Relations</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 2155</td>
<td>Introduction to Criminal Justice</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any two courses from any of the MnTC Goal Areas that are not part of the degree</td>
<td>6.00</td>
</tr>
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</table>

**TOTAL CREDITS: 16.00**

### Fourth Semester

*To enroll in the fourth semester (Professional Licensing program), students must have completed with a minimum “C” (2.0) grade in each course and an overall 2.50 GPA in the following introductory courses: ENGL 1110, ENGL 1111, LAWE 1215, LAWE 1220, PSYC 1100, PSYC 1110 or PSYC 2260, SOCI 1105, SOCI 2115, SOCI 2145 and SOCI 2155. To enroll in the advanced courses, students must also be admitted to the Professional Licensing program at Hennepin Technical College’s Law Enforcement and Criminal Justice Education Center. See the MCTC Law Enforcement website and/or call the center at 763-657-3700 for additional information.

#### General Education Credits (34 Credits)

To complete the Law Enforcement A.S. degree, students are required to complete 34 credits of General Education coursework. Twenty-five of those credits are specified in the program requirements. The remaining nine credits may be selected from any of the MnTC Goal Areas.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>*LAWE 2225</td>
<td>Criminal Investigation</td>
<td>3.00</td>
</tr>
<tr>
<td>*LAWE 2230</td>
<td>Legal Issues and Law Enforcement</td>
<td>3.00</td>
</tr>
<tr>
<td>*LAWE 2231</td>
<td>MN Criminal and Traffic Codes</td>
<td>3.00</td>
</tr>
<tr>
<td>*LAWE 2240</td>
<td>Patrol Operations</td>
<td>3.00</td>
</tr>
<tr>
<td>*LAWE 2299</td>
<td>Law Enforcement Integrated Practicum</td>
<td>9.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 21.00**
Legal Administrative Assistant

What You Will Learn

This program will provide you with the skills and proficiencies required to work in modern law offices, legal departments of corporations, government offices, legal aid offices and courts. The coursework will develop your skills for processing legal documents, understanding legal terminology and documentation, working with legal software applications, executing law office procedures, keeping records, billing, becoming aware of applicable policies and regulations for the Minnesota legal system, and comprehending professional standards and ethics.

Note: This program is the result of a unique partnership with the 12 largest downtown Minneapolis law firms. Representatives from these law offices assisted with the creation of the curriculum for this award and are seeking to hire qualified graduates of this program.

Students are accepted into this program for fall and spring semesters only. An opportunity to receive credit for prior learning or experience in the form of MCTC’s Credit by Exam process is available.

Admission Requirements

The Legal Administrative Assistant program requires:

- Grades of “C” (2.0) or above in all required courses

It is highly recommended that students can touch type 25 words per minute or have successfully completed a high school keyboarding course.

Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Legal Administrative Assistant Certificate—30 credits

Where You Could Work

- Court systems
- Private legal offices and firms
- Federal, state and local government offices
- Administrative agencies
- Corporate legal departments
- Real estate offices
- Legal transcription services
- General offices
Legal Administrative Assistant Certificate

30 Credits

Pending MnSCU Approval

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTEC 1020</td>
<td>Introduction to Computer Applications</td>
<td>4.00</td>
</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1145</td>
<td>Technology in the Law Office</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1160</td>
<td>Legal Office Procedures</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1835</td>
<td>Business English</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS: 16.00**

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTEC 1080</td>
<td>Microsoft Word</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1165</td>
<td>Legal Transcription</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2780</td>
<td>Keyboarding 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2825</td>
<td>Career Management</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1 (CMST 1000 is recommended)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 14.00**

**General Education Courses (3 Credits)**

To complete the Legal Administrative Assistant Certificate, students are required to successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Library Information Technology

What You Will Learn

MCTC’s Library Information Technology program will equip you with the practical and conceptual skills needed to work in highly automated libraries and information agencies.

The program will introduce you to integrated library systems, including library circulation, acquisitions, serials and information management systems, and other computer applications unique to the industry. You will learn to efficiently search online databases and the Internet and provide effective user services, as well as build exposure to the various services and outreach that libraries of all types provide to their communities. You will also learn about ethical and legal issues related to information use and production, and develop skills for critical thinking and moral reasoning.

As part of the A.A.S. degree, you will have the opportunity to take special courses dealing with alternative media and other coursework, allowing you the flexibility to customize your degree to build expertise. As a capstone, you will participate in a semester-long internship.

The A.A.S. degree is designed for those seeking a new career as a paraprofessional and for anyone wishing to transfer elsewhere for a bachelor’s degree. The certificate awards are designed for individuals already working in libraries and information agencies who seek additional education and training.

Both the Public and Technical Information Services certificates are offered as entirely online programs. All courses are offered in a Web-based format using the College’s Desire2Learn course management software. The required library program courses for the A.A.S. degree are offered in an online format (INFS 1000, LIBT 1100, LIBT 1200, LIBT 1300, LIBT 2200, LIBT 2210, LIBT 2300, LIBT 2310, LIBT 2500, and LIBT 2900). As part of the online A.A. degree, liberal arts courses for the A.A.S. degree can also be taken online.

Admission Requirements

Students are accepted into this program for fall, spring, and summer terms. Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

If students place into lower-level courses, they must complete the appropriate developmental coursework before they are admitted into the program. Non-degree-seeking students may be waived from program course prerequisites. To receive a course prerequisite waiver, students must contact either the course instructor or the Information Studies department coordinator.

Awards or Credentials You Could Earn

- Library Information Technology A.A.S. Degree—60 credits
- Technical Information Services Certificate—20 credits
- Public Information Services Certificate—20 credits

Where You Could Work

- Libraries of all types: corporate and other special libraries
- Public libraries
- School media centers
- Academic libraries
- Private companies

- Bookstores
- Nonprofit organizations
- Database and indexing companies
- Freelance work
Library Information Technology A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>LIBT 1100</td>
<td>Introduction to Information Agencies</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 1410</td>
<td>Topics in Library Information Technology or other Program Elective</td>
<td>1.00</td>
</tr>
<tr>
<td>CMST 1000 Or CMST 1010 Or CMST 2011 Or CMST 2012</td>
<td>Introduction to Communication Studies or Interpersonal Communication or Small Group Communication or Intercultural Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Areas 3-10</td>
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**TOTAL CREDITS:** 15.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
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</tr>
<tr>
<td>LIBT 1200</td>
<td>Introduction to Technical Information Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 1300</td>
<td>Introduction to Public Information Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 1400</td>
<td>Preserving History and Memory: Archives in Current Society or other Program Elective</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas (SOCI 1160 recommended)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBT 2210</td>
<td>Introduction to Indexing and Abstracting</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2300</td>
<td>Online Searching and Reference Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2310</td>
<td>Library Community and Outreach Services</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 2600</td>
<td>Ideas, Censorship and Politics</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas (Recommended INFS 2510)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBT 2200</td>
<td>Introduction to Cataloging</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2500</td>
<td>Information Ethics and Legal Issues</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2900</td>
<td>Information Agency Internship</td>
<td>3.00 or 4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any MnTC Goal Areas (Recommend INFS 2520 or INFS 2610)</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00 or 16.00**

### Program Electives

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1200 Or ITEC 1110</td>
<td>Computer Applications in Home and Business Information Technology Skills</td>
<td>3.00 2.00</td>
</tr>
<tr>
<td>BUSN 1155</td>
<td>Human Relations and Team Building</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1640</td>
<td>Language Development and Literature/Literacy Experiences</td>
<td>3.00</td>
</tr>
<tr>
<td>ECED 1215</td>
<td>Growth and Development for Educators</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1161</td>
<td>Children’s Literature</td>
<td>3.00</td>
</tr>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>LIBT 1420</td>
<td>Libraries and Social Justice</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**General Education Courses (15 Credits)**

To complete the Library Information Technology A.A.S., degree, students are required to successfully complete an additional 15 credits of General Education coursework. This coursework must be selected from at least four of the MnTC Goal Areas. Specific courses that are recommended are INFS 2510, INFS 2610, INFS 2520 and SOCI 1160.
Technical Information Services Certificate

20 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Not all of the LIBT courses are offered every semester.

**Required Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>LIBT 1100</td>
<td>Introduction to Information Agencies</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 1200</td>
<td>Introduction to Technical Information Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2200</td>
<td>Introduction to Cataloging</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2210</td>
<td>Introduction to Indexing and Abstracting</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2500</td>
<td>Information Ethics and Legal Issues</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110 Or</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1000 Or</td>
<td>Introduction to Communication Studies</td>
<td></td>
</tr>
<tr>
<td>CMST 1010 Or</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2011 Or</td>
<td>Small Group Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 20.00
Public Information Services Certificate

20 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

Not all of the LIBT courses are offered every semester.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills</td>
<td>2.00</td>
</tr>
<tr>
<td>LIBT 1100</td>
<td>Introduction to Information Agencies</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 1300</td>
<td>Introduction to Public Information Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2300</td>
<td>Online Searching and Reference Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2310</td>
<td>Library Community and Outreach Services</td>
<td>3.00</td>
</tr>
<tr>
<td>LIBT 2500</td>
<td>Information Ethics and Legal Issues</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110 Or</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1000 Or</td>
<td>Introduction to Communication Studies</td>
<td></td>
</tr>
<tr>
<td>CMST 1010 Or</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2011 Or</td>
<td>Small Group Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 20.00**
Machine Tool Technology

What You Will Learn
MCTC’s Machine Tool Technology program will give you the technical and problem-solving skills needed to work in the metals manufacturing and processing industries.

You will receive a solid foundation in basic skills, plus extensive instruction in advanced manufacturing processes. During the program, you will practice the art of traditional machining while you learn the applications of computers, including: computer-integrated machining, computer-aided design and manufacturing, and computer programming. You will also be trained in important safety and measurement techniques, learn how to interpret detailed blueprints, and perform key mathematical calculations.

You will receive hands-on experience as you perform the turning, milling, drilling and grinding concepts learned in the classroom. In addition, you will have the opportunity to work with other class members on team projects to develop valuable teamwork and communications skills that reflect those needed in the industrial setting.

To enroll in the Machine Tool Technology program, you should be in good physical condition, as some heavy lifting is required. You should also have good hand-eye coordination to perform tasks necessary in the profession. Measuring devices and hand tools are provided. However, over the course of the program, you will be encouraged to purchase your own tools.

Schedule a laboratory tour and discuss the program by calling Kim Munson at 612-659-6093.

MCTC’s Machine Tool Technology program is a member college of 360°, a Minnesota State Colleges and Universities Center of Excellence in Manufacturing and Applied Technology. Visit their website at www.360mn.org for more information on career ladder programs offered by 360° colleges and Bemidji State University.

Admission Requirements
Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

Awards or Credentials You Could Earn

- Machine Tool Technology Diploma—64 credits

Where You Could Work

- Medical and aerospace manufacturers
- Prototype and tool-making manufacturers
- Semiconductor and service parts manufacturers
- Parts production companies
- Parts repair facilities
Machine Tool Technology Diploma

64 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Introductory Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTTC 1000</td>
<td>Safety/Measurement/Metrology</td>
<td>4.00</td>
</tr>
<tr>
<td>MTTC 1010</td>
<td>Blueprint Reading 1</td>
<td>3.00</td>
</tr>
<tr>
<td>MTTC 1015</td>
<td>Applied Machine Shop Math 1</td>
<td>2.00</td>
</tr>
<tr>
<td>MTTC 1025</td>
<td>Drills and Drilling Machines</td>
<td>2.00</td>
</tr>
<tr>
<td>MTTC 1525</td>
<td>Benchwork/Power Saws</td>
<td>4.00</td>
</tr>
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</table>

**Advanced Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEC 1100</td>
<td>Information Technology Concepts</td>
<td>2.00</td>
</tr>
<tr>
<td>MTTC 1020</td>
<td>Engine Lathe</td>
<td>5.00</td>
</tr>
<tr>
<td>MTTC 1510</td>
<td>Vertical Milling</td>
<td>4.00</td>
</tr>
<tr>
<td>MTTC 1515</td>
<td>Applied Machine Shop Math 2</td>
<td>2.00</td>
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<tr>
<td>MTTC 1520</td>
<td>Blueprint Reading 2</td>
<td>3.00</td>
</tr>
<tr>
<td>MTTC 1530</td>
<td>Advanced Lathes Lab</td>
<td>4.00</td>
</tr>
<tr>
<td>MTTC 2005</td>
<td>Grinding</td>
<td>5.00</td>
</tr>
<tr>
<td>MTTC 2010</td>
<td>Advanced Milling Lab</td>
<td>4.00</td>
</tr>
<tr>
<td>MTTC 2020</td>
<td>Geometric Tolerancing</td>
<td>2.00</td>
</tr>
<tr>
<td>MTTC 2520</td>
<td>Welding for Machinists</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
<tr>
<td>Program Electives</td>
<td>Choose courses from the Program Elective list below</td>
<td>7.00</td>
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**TOTAL CREDITS:** 64.00
Program Elective Courses

<table>
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<tbody>
<tr>
<td>MTTC 1030</td>
<td>Machine Trades for Related Careers</td>
<td>2.00</td>
</tr>
<tr>
<td>MTTC 2035</td>
<td>CNC Programming and Operation</td>
<td>4.00</td>
</tr>
<tr>
<td>MTTC 2040</td>
<td>CNC Milling Center</td>
<td>3.00</td>
</tr>
<tr>
<td>MTTC 2045</td>
<td>CNC Turning Center</td>
<td>3.00</td>
</tr>
<tr>
<td>MTTC 2055</td>
<td>Advanced Machining Skills</td>
<td>5.00</td>
</tr>
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</table>

General Education Courses (9 Credits)

To complete the Machine Tool Technology Diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from at least two of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10.
Mathematics

What You Will Learn
The Mathematics A.S. degree is specifically designed to prepare students for transfer into the junior or third year of mathematics major in a four-year college or university.

MCTC has an articulation agreement with the University of Minnesota, which provides for transfer of the A.S. in Mathematics to their B.A. (College of Liberal Arts) and B.S. (College of Science and Engineering) degrees in Mathematics.

Admission Requirements
Students are accepted into this program for fall and spring semesters.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 1180
  - Successful completion of MATH 1110 and MATH 1120

Awards or Credentials You Could Earn

- Mathematics A.S. Degree—60 credits
Mathematics A.S. Degree
60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051

- **MATH**—one of the following:
  - Placement into MATH 1180
  - Successful completion of MATH 1110 and MATH 1120

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1180</td>
<td>Calculus 1</td>
<td>5.00</td>
</tr>
<tr>
<td>PHYS 1211</td>
<td>Physics for Science and Engineering 1</td>
<td>6.00</td>
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</table>

**TOTAL CREDITS:** 14.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1190</td>
<td>Calculus 2</td>
<td>5.00</td>
</tr>
<tr>
<td>PHYS 1221</td>
<td>Physics for Science and Engineering 2</td>
<td>6.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from the General Education Elective list</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS:** 17.00

### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1700 Or Or CSCI 1730</td>
<td>Introduction to Computer Programming in Java</td>
<td>3.00</td>
</tr>
<tr>
<td>CSCI 1901</td>
<td>Introduction to Object-Oriented Programming With C++</td>
<td>4.00</td>
</tr>
<tr>
<td>MATH 2220</td>
<td>Multivariable Calculus</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from the General Education Elective list</td>
<td>6.00</td>
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**TOTAL CREDITS:** 14.00–15.00
Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH/CSCI 2011 Or</td>
<td>Discrete Mathematics</td>
<td>4.00</td>
</tr>
<tr>
<td>MATH 2283</td>
<td>Sequences Series and Foundations</td>
<td></td>
</tr>
<tr>
<td>MATH 2210</td>
<td>Linear Algebra and Differential Equations</td>
<td>5.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from the General Education Elective list (See below)</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

**General Education Courses (18 Credits)**

General Education courses must be selected from the Minnesota General Education Transfer Curriculum (MnTC). These credits must be distributed across a minimum of six of the 10 MnTC Goal Areas. Students are required to successfully complete three credits in Goal Area 1, and three credits in Goal Areas 7, 8, 9 or 10. The required courses for this degree fall into the following MnTC Goal Areas:

- **MnTC Goal Area 1:** ENGL 1110
- **MnTC Goal Area 3:** PHYS 1211, PHYS 1221
- **MnTC Goal Area 4:** MATH 1180, MATH 1190, MATH/CSCI 2011, MATH 2210, MATH 2220, MATH 283, PHYS 1211 and PHYS 1221

Although it is not one of the required program courses, it is recommended that students also take MATH 1150, Statistical Analysis, as one of the general education electives.

Students seeking the Mathematics A.S. degree should work closely with a counselor or advisor when choosing General Education coursework to ensure their selections meet the requirements of the college or university to which they intend to transfer.

The following are recommended course options for the remaining 18 elective general education credits:

**BIOLOGICAL SCIENCES WITH LAB**

Take at least one of the following courses or course combinations:

- BIOL 1100, BIOL 1127 and BIOL 1128, BIOL 1136 and BIOL 1137, BIOL 2200

**SOCIAL SCIENCES**

Take at least two of the following courses:

- ANTH 1105
- ECON 2000, ECON 2200 or ECON 2500
- GEOG 1101, GEOG 1103, GEOG 1104 or GEOG 2204
- PSCI 1101, PSCI 1103, PSCI 1104, PSCI 1110 or PSCI 1140
- PSYC 1100 or PSYC 1110
- SOCI 1105, SOCI 1110, SOCI 1160 or SOCI 1170

**HISTORY**

Take at least one of the following courses:

- AMIS 1000
- HIST 1000, HIST 1010, HIST 1020, HIST 1100, HIST 1110, HIST 1200, HIST 1210, HIST 1300, HIST 1310, HIST 1320, HIST 1500, HIST 1520, HIST 1600, HIST 2241 or HIST 2242
ARTS AND HUMANITIES

Take at least one of the following courses:

- ENGL 1151, ENGL 1152, ENGL 1153, ENGL 1154, ENGL 1156, ENGL 1157 or ENGL 1160
- GLOS 1000, GLOS 1121, GLOS 1122, GLOS 1132 or GLOS 1190
- ARTS 1110, ARTS 1111, ARTS 1112, ARTS 1113, ARTS 1121, ARTS 1125, ARTS 1132, ARTS 1133, ARTS 1141 or ARTS 1142
- CIST 1101 or CIST 1102
- MUSC 1000, MUSC 1010, MUSC 1020 or MUSC 1150
- PHIL 1171
- THTR 1104, THTR 1131 or THTR 2150
- WOST 1140
Medical Office

What You Will Learn
In MCTC’s Medical Office program, you will learn the clerical, computer and administrative support skills you need to become a key staff member for health-related organizations.

The program will familiarize you with medical terminology, biology, hospital and laboratory office procedures, plus give you background in insurance coding and forms processing. Extensive hands-on experience with the latest computer hardware and software applications is central to the program. You will also be shown specifically how to apply those skills in a medical environment. Classes also will focus on human relations, oral communication and professional development skills.

While earning your Medical Office Assistant A.A.S. degree, you will receive further training to prepare correspondence, schedule appointments, record and chart information, and handle billings, as well as assist doctors and scientists with preparing speeches, articles, and conference proceedings.

Your job placement opportunities are likely to be excellent, as there is a high demand for trained medical office assistants. There may even be the opportunity to work from home.

Admission Requirements
The Medical Office program requires:

• Grades of “C” (2.0) or above in all required courses; and
  Passing a criminal background check prior to internship placement. The College cannot guarantee placement in a BTEC internships for students who do not have a clear criminal background check.

• It is highly recommended that students can touch type 25 words per minute or have successfully completed a high school keyboarding course.

Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

• READING—one of the following:
  • Placement into READ 1300
  • Successful completion of READ 0200 or ESOL 0052

• WRITING—one of the following:
  • Placement into ENGL 1110
  • Successful completion of ENGL 0900 or ESOL 0051

• MATH—one of the following:
  • Placement into MATH 0070
  • Successful completion of MATH 0060

Awards or Credentials You Could Earn

• Medical Office Assistant A.A.S. Degree—60 credits—Pending MnSCU Approval
• Medical Receptionist Certificate—30 credits—Pending MnSCU Approval

Where You Could Work

• Medical offices and clinics
• Hospitals
• Nursing homes
• Dental offices
• Insurance companies
Medical Office Assistant A.A.S.

60 Credits

Pending MnSCU Approval

Students must have grades of “C” (2.0) or higher in all required coursework.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1127</td>
<td>Human Biology</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1020</td>
<td>Introduction to Computer Applications</td>
<td>4.00</td>
</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1125</td>
<td>Medical Terminology and Disease Condition 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong> 16.00</td>
<td></td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTEC 1080</td>
<td>Microsoft Word</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1275</td>
<td>Medical Office Procedures</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2125</td>
<td>Medical Terminology and Disease Conditions 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2825</td>
<td>Career Management</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong> 14.00</td>
<td></td>
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</table>
### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>BTEC 1135</td>
<td>Medical Machine Transcription</td>
<td>2.00</td>
</tr>
<tr>
<td>BTEC 1700</td>
<td>Medical Insurance Coding</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1770</td>
<td>Claims and Reimbursement</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2100</td>
<td>Microsoft Excel</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2445</td>
<td>Internship Assessment and Preparation</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose one course from one of the MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTEC 2225</td>
<td>Speech Recognition Editing</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2555</td>
<td>Medical Office Assistant Internship</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from any of the MnTC Goal Areas</td>
<td>6.00–7.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 15.00–16.00

#### General Education Courses (16 Credits)

To complete the Medical Office Assistant A.A.S. degree, students are required to successfully complete 16 credits of General Education coursework. The coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas 7, 8, 9 or 10. MnTC Goal Area 1 is satisfied by successful completion of ENGL 1110. *BIOL 1127 will only satisfy MnTC Goal Area 3 if BIOL 1128 Human Biology Lab is also taken.*
Medical Receptionist Certificate

30 Credits

Pending MnSCU Approval

Students must have grades of “C” (2.0) or higher in all required coursework.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Introductory Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1127</td>
<td>Human Biology</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1020</td>
<td>Introduction to Computer Applications</td>
<td>4.00</td>
</tr>
<tr>
<td>BTEC 1060</td>
<td>Keyboarding 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1125</td>
<td>Medical Terminology and Disease Condition 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Advanced Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTEC 1080</td>
<td>Microsoft Word</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 1275</td>
<td>Medical Office Procedures</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2125</td>
<td>Medical Terminology and Disease Condition 2</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2375</td>
<td>Business Communications</td>
<td>3.00</td>
</tr>
<tr>
<td>BTEC 2825</td>
<td>Career Management</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 16.00**

**General Education Courses (3 Credits)**

To complete the Medical Receptionist certificate, students are required to successfully complete BIOL 1127 and ENGL 1110.
Nursing

MCTC’s Nursing programs are accredited by the National League for Nursing Accrediting Commission (3343 Peachtree Rd. NE, Suite 850, Atlanta, GA 30326) and approved by the Minnesota Board of Nursing.

What you Will Learn

The Nursing Department offers three academic tracks.

Students admitted to the practical nursing program will earn a Diploma in Practical Nursing (PN) upon successful completion of the two-semester program. Classes are offered during day hours only. Students in this program will learn to collect data regarding physical and mental functioning, administer prescribed medications and treatments, monitor status and perform delegated nursing care of patients, all under the supervision of a registered nurse. You also will learn to develop rapport with patients and to maintain medical confidentiality. Graduates of the program will then be eligible to apply to sit for the National Council Licensure Exam (NCLEX-PN). Following licensure, graduates will be able to apply to mobility nursing programs if they wish to pursue a Professional Nursing (RN) credential.

The Professional Nursing program curriculum at MCTC is concept-based. Students entering this program are dually admitted to MCTC and to Augsburg College. Dual admission ensures seamless continuation through to baccalaureate work and beyond at Augsburg College. The concept-based approach allows students to learn connections between nursing concepts that support the arrival at correct conclusions through critical thought rather than memorization. Students who successfully complete the A.S. degree and graduate can continue on to complete the baccalaureate coursework at Augsburg College or choose to apply for admittance to other colleges and universities to earn a Baccalaureate Nursing Award (B.S., B.A., B.S.N., B.A.N.). MCTC has articulation agreements with Metropolitan State University, the Minnesota State Colleges and Universities Consortium, and other private institutions. Graduates of the Professional Nursing degree program will be eligible to sit for the National Council Licensure Exam (NCLEX-RN).

Pre-Curricular Revision Students

Students admitted during the 2012–2013 (Spring 2013 and prior) academic year will complete the degree requirements per the 2012–2013 catalog. If you are already a Licensed Practical Nurse, the Nursing Mobility Program enables you to earn an A.S. Degree in Nursing upon completion of two transition courses and semesters three and four of the Nursing (RN) Pathway Mobility Program. This option will be replaced with a new mobility option in the summer of 2014. Graduates of the program will be eligible to sit for the National Council Licensure Exam (NCLEX-RN).

Students are admitted once per year to all programs with Practical starting fall and spring semesters and Professional nursing students starting in the fall semester only.

How You Apply

To apply to these programs, students must submit an MCTC Nursing Program Application. Students may apply to both programs if the admission criteria for both are met. There is a separate application process for the Nursing Mobility track.

Courses are taught at MCTC’s downtown Minneapolis campus, and the program course work is offered year-round. Clinical and experiential learning for all three academic tracks also takes place at various facilities around the Twin Cities. Students are admitted once per year to all programs with Practical and Mobility Nursing students starting fall and spring semesters and Professional Nursing students starting fall semester only. Courses in the Professional Nursing program are offered in one of two tracks either day time (Monday–Friday) or evening/weekend.
Admissions Requirements

Practical Nursing: To be considered for admission to the Practical Nursing program and see specific admission criteria, go to www.minneapolis.edu, then click on Educational Programs, Health, Nursing and click on Practical Nursing Diploma.

Professional Nursing: To be considered for admission to the Professional Nursing Program and see specific admission criteria, go to www.minneapolis.edu, then click on Educational Programs, Health, Nursing and click on Professional Nursing Program.

Awards or Credentials You Could Earn

- Practical Nursing Diploma—36 Credits
- Professional Nursing (R.N.) A.S. Degree—64 Credits

Where You Could Work

- Hospitals
- Clinics
- Extended-care facilities
- Home healthcare agencies
- Ambulatory surgery centers
- Urgent care centers
Professional Nursing A.S. Degree

64 Credits

Recommended Course Sequence
The following course sequence is required, with grades of “C” (2.0) or above for completion of this program. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPRO 1000</td>
<td>Introduction to Health Concepts</td>
<td>8.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 2224</td>
<td>Anatomy</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>15.00</strong></td>
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</table>

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>NPRO 1100</td>
<td>Wellness-Illness Concepts Across the Lifespan</td>
<td>7.00</td>
</tr>
<tr>
<td>BIOL 2225</td>
<td>Physiology</td>
<td>4.00</td>
</tr>
<tr>
<td>PSYC 2240</td>
<td>Life Span Development</td>
<td>4.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from any of the MnTC Goal Areas other than MnTC Goal Areas 1, 3, 5 or 9.</td>
<td>3.00</td>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>18.00</strong></td>
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**Second Semester**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>NPRO 1150</td>
<td>Concepts of Health Assessment</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 2226</td>
<td>Pathophysiology</td>
<td>2.00</td>
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<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>5.00</strong></td>
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**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>NPRO 2000</td>
<td>Complex Health Concepts</td>
<td>8.00</td>
</tr>
<tr>
<td>BIOL 2230</td>
<td>Microbiology</td>
<td>2.00</td>
</tr>
<tr>
<td>BIOL 2231</td>
<td>Microbiology Lab</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose courses from either MnTC Goal Areas 7 or 8.</td>
<td>3.00</td>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>15.00</strong></td>
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**Fourth Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>NPRO 2100</td>
<td>Synthesis of Health Concepts in Nursing</td>
<td>8.00</td>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>11.00</strong></td>
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**Fifth Semester**

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<tr>
<th>COURSE #</th>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>11.00</strong></td>
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</table>
General Education Courses (30 Credits)

To complete the A.S. degree in Professional Nursing, students are required to successfully complete 30 credits of General Education coursework selected from at least six of the 10 MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1, and a minimum of three credits from Goal Areas 7, 8, 9 or 10.

The specific courses that are required for the A.S. degree are ENGL 1110, BIOL 2214, BIOL 2225, BIOL 2226, BIOL 2230, BIOL 2231, and PSYC 2240. This will satisfy 21 of the 30 required credits. The nursing program curriculum as written includes Goal Areas 1, 3, 5 and 9.

Nursing students will need to select a minimum of nine additional MnTC credits. Of these credits, a minimum of three credits must be completed from MnTC Goal Area 6, and a minimum of three credits from MnTC Goal Areas 7 or 8. Students continuing to Augsburg College to complete the Baccalaureate Nursing Award should work closely with their advisors to select the remaining elective General Education coursework.
Practical Nursing Program Diploma

36 Credits

Total Credits: 36
- 25 Nursing Credits
- 11 General Education Credits

Recommended Course Sequence

The following course sequence is required, with grades of “C” (2.0) or above for completion of this program. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

One of the following: NURS 1550, NURS 1850, NURS 1885 or GHHA 1300, must be completed prior to achieving the Practical Nursing diploma. These classes can be taken either in the First Semester or the Second Semester of the program.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>BIOL 2224</td>
<td>Anatomy</td>
<td>4.00</td>
</tr>
<tr>
<td>NURS 1000</td>
<td>Foundations of Nursing</td>
<td>3.00</td>
</tr>
<tr>
<td>NURS 1050</td>
<td>Clinical Foundation</td>
<td>3.00</td>
</tr>
<tr>
<td>NURS 1075</td>
<td>Nursing Interventions</td>
<td>2.00</td>
</tr>
<tr>
<td>NURS 1205</td>
<td>Medication Administration 1</td>
<td>1.00</td>
</tr>
<tr>
<td>NURS 1250</td>
<td>Medication Administration 2</td>
<td>1.00</td>
</tr>
<tr>
<td>PSYC 2240</td>
<td>Lifespan Development</td>
<td>4.00</td>
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**TOTAL CREDITS: 18.00**

Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>NURS 1300</td>
<td>Application of Nursing</td>
<td>4.00</td>
</tr>
<tr>
<td>NURS 1350</td>
<td>Clinical Application</td>
<td>4.00</td>
</tr>
<tr>
<td>NURS 1425</td>
<td>Family Nursing</td>
<td>4.00</td>
</tr>
<tr>
<td>NURS 1600 Or</td>
<td>Psychosocial Nursing</td>
<td>2.00</td>
</tr>
<tr>
<td>GHHA 1300</td>
<td>Healing Traditions in our Diverse Community</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Student must take one of the following courses and the course must be completed prior to the completion of the Practical Nursing Diploma.**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 1550 Or</td>
<td>Complementary Therapies: A Service Learning Approach</td>
<td>1.00</td>
</tr>
<tr>
<td>NURS 1850 Or</td>
<td>Transcultural Nursing: A Service Learning Approach</td>
<td>1.00</td>
</tr>
<tr>
<td>NURS 1885 Or</td>
<td>Introduction to Chinese Health Care with a Cultural Emphasis</td>
<td>3.00</td>
</tr>
<tr>
<td>GHHA 1300</td>
<td>Healing Traditions in our Diverse Community</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 18.00 or 20.00**

General Education Credits (11 credits)

To complete the Practical Nursing diploma, students are required to successfully complete 11 credits of General Education coursework. The specific General Education courses required are ENGL 1110, BIOL 2224, and PSYC 2240 or transfer equivalent.
Nursing Assistant/Home Health Aide

What You Will Learn
MCTC offers nursing coursework that provides a pathway that prepares you to take the licensing exam to become a practical and/or a registered nurse. This pathway begins with a Nursing Assistant requirement, which can be met through successful completion of NAHA 1819: Nursing Assistant/Home Health Aide or NAHA 1850: Nursing Assistant/Home Health Aide Extended Hour.

Successful completion of NAHA 1819 or NAHA 1850 prepares you to take the Nursing Assistant Test Out, which, if passed, places you on the Minnesota Department of Health Nursing Assistant Registry and qualifies you for employment in MN Department of Health-approved long-term care facilities as a Nursing Assistant.

For full information about the MCTC Nursing program admission requirements and application, see www.minneapolis.edu, Career Programs, Nursing (Practical and A.S. Degree in Nursing).

How You Apply
To register in any of these courses, you must submit a College Application and pass a reading assessment test. Registration may be done online or in person at the College.

Students are accepted into this course fall, spring and summer terms.

Important Information when Considering Registering for a NAHA Course
All students registered in an NAHA course must pass a criminal background check prior to assignment in a clinical facility. MCTC is not able to guarantee placement of students in a clinical facility if the criminal background check is not passed. You should know that all NAHA courses include a clinical component which must be satisfactorily completed in order to pass the course.

For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.

The NAHA 1819: Nursing Assistant/Home Health Aide course has a very strict attendance policy put in place in order to meet the Minnesota Department of Health requirements for approved nursing assistant programs. For this reason, attendance at ALL class and clinical hours is mandatory in order to satisfactorily complete NAHA 1819.

Admission Requirements
Courses in this program require achievement of the following minimum placements:

NAHA 1819:
- **READING**—one of the following:
  - Placement into READ 0200 or placement into ESOL 0052
  - Successful completion of READ 0100 or ESOL 0051 with faculty recommendation into ESOL 0052

NAHA 1850:
- **READING**—one of the following:
  - Placement into READ 0100
  - Successful completion of ESOL 0042

Requirements for all NAHA Courses Must:
- Pass a criminal background check.
- Provide evidence of a negative mantoux or chest x-ray prior to first clinical date and within 90 days of the last clinical date.
- Own or purchase and wear a white nurse’s uniform and white shoes that meet program criteria.
- Pay a liability insurance fee.
- Provide proof of immunity to specified diseases
Awards or Credentials You Could Earn

- Nursing Assistant/Home Health Aide Certificate—5 credits
- Nursing Assistant/Home Health Aide Extended Hour Certificate—6 credits

Where You Could Work

- Nursing homes
- Home healthcare agencies
- Assisted living facilities
Nursing Assistant/Home Health Aide

Important Information when Considering Registering for a NAHA Course

- All students registered in a NAHA course must pass a criminal background check prior to assignment in a clinical facility. MCTC is not able to guarantee placement of students in a clinical facility if the criminal background check is not passed. You should know that all NAHA courses include a clinical component which must be satisfactorily completed in order to pass the course. For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.
- The NAHA 1819: Nursing Assistant/Home Health Aide course has a very strict attendance policy put in place in order to meet the Minnesota Department of Health requirements for approved nursing assistant programs. For this reason, attendance at ALL class and clinical hours is mandatory.

Requirements for all NAHA Courses Students Must:

- Pass a criminal background check.
- Provide evidence of a negative mantoux or chest x-ray prior to first clinical date and within 90 days of the last clinical date.
- Own or purchase and wear a white nurse’s uniform and white shoes that meet program criteria.
- Pay a liability insurance fee.
- Provide proof of immunity to specified diseases.

Courses in this program require achievement of the following minimum placements:

**NAHA 1819:**
- READING—one of the following:
  - Placement into READ 0200 or placement into ESOL 0052
  - Successful completion of READ 0100 or ESOL 0051 with faculty recommendation into ESOL 0052

**NAHA 1850:**
- READING—one of the following:
  - Placement into READ 0100
  - Successful completion of ESOL 0042

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Nursing Assistant/Home Health Aide Certificate**
5 Credits

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAHA 1819</td>
<td>Nursing Assistant/Home Health Aide</td>
<td>5.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 5.00**

**Nursing Assistant/Home Health Aide Extended-Hour Certificate**
6 Credits

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAHA 1850</td>
<td>Nursing Assistant/Home Health Aide Extended Hour</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 6.00**
Acute Care Option

Students who would like to be considered for employment in acute care facilities may wish to also take NAHA 1900 Acute Care Skills for Nursing Assistants.

To take the NAHA 1900 course requires successful completion of NAHA 1819 or NAHA 1850 and current Nursing Assistant Registration.

**Acute Care Option**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAHA 1900</td>
<td>Acute Care Skills for Nursing Assistants</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 3.00
Personal Trainer and Group Exercise Instruction

8 Credits

Pending MnSCU Approval

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLTH 1150</td>
<td>First Aid and CPR</td>
<td>2.00</td>
</tr>
<tr>
<td>PHED 1800</td>
<td>Fitness Intensity Training</td>
<td>1.00</td>
</tr>
<tr>
<td>PHED 2210</td>
<td>Wellness Leadership</td>
<td>2.00</td>
</tr>
<tr>
<td>PHED 2211</td>
<td>Personal and Group Exercise Training</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 8.00
Phlebotomy

The Phlebotomy program is approved by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119, and Phone: 1-773-714-8880.

What You Will Learn

The Phlebotomy Certificate program at MCTC is a 16-credit certificate that combines the Healthcare Core Curriculum, medical terminology and human biology with hands-on phlebotomy skills and theory to prepare students for employment as a phlebotomist. Phlebotomists are hired in a variety of healthcare settings and work as members of the healthcare team, obtaining patients’ blood for medical testing and specimen processing.

The Phlebotomy Program Requires:

- Grades of “C” (2.0) or above in the PHLE theory course and other program-required courses that are graded A/F (HCCC 1100 and BIOL 1127/1128);
- Pass (P) grades in the HCCC courses graded P/F and the PHLE clinical internship course; and
- Passing of a criminal background check prior to being placed in a PHLE internship. The College cannot guarantee placement in internships for students who do not have a clear background check.
- For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.
- Provision of evidence of immunity to specified diseases.

Important Information when Considering Application to the Phlebotomy Program:

The curriculum in the Phlebotomy program involves working in an environment in which there is a risk of exposure to blood or infectious materials. Students will be provided with information through education and program policies to protect themselves and their patients from harm. Students will be expected to utilize appropriate safety precautions in the classroom, laboratory, and clinical settings.

Admission Requirements

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Phlebotomy Certificate—16 credits

Where You Could Work

- Doctors’ offices
- Medical clinics
- Hospitals
- Blood donation centers
Phlebotomy Certificate

16 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

The Phlebotomy Program Requires:

- Grades of “C” (2.0) or above in the PHLE theory course, other program-required courses that are graded A/F (HCCC 1100 and BIOL 1127/1128);
- Pass (P) grades in the HCCC courses graded P/F and the PHLE clinical internship course; and
- Passing of a criminal background check prior to being placed in a PHLE internship. The College cannot guarantee placement in internships for students who do not have a clear background check.

Not all courses are offered every semester.

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHLE 1000</td>
<td>Phlebotomy (Offered fall semester only)</td>
<td>4.00</td>
</tr>
<tr>
<td>HCCC 1010</td>
<td>Behaviors for Success in Health Careers</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1020</td>
<td>Communication in Healthcare</td>
<td>1.00</td>
</tr>
<tr>
<td>HCCC 1030</td>
<td>Awareness and Sensitivity to Client Needs</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1040</td>
<td>Respecting Client and Staff Diversity</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1050</td>
<td>Healthcare Safety and Standard Precautions</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1060</td>
<td>Legal Issues in Healthcare</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1070</td>
<td>Healthcare Ethics</td>
<td>0.50</td>
</tr>
<tr>
<td>HCCC 1100</td>
<td>Medical Terminology</td>
<td>1.00</td>
</tr>
<tr>
<td>BIOL 1127</td>
<td>Human Biology</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 1128</td>
<td>Human Biology lab</td>
<td>1.00</td>
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**TOTAL CREDITS:** 13.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHLE 1002</td>
<td>Phlebotomy Internship (Offered spring semester only)</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 3.00
Photography and Digital Imaging

What You Will Learn

The Photography and Digital Imaging program at MCTC integrates the latest developments in digital photo technology while maintaining an emphasis on traditional photographic skills such as composition, exposure, camerawork and lighting.

Coursework covers metering and lighting techniques, portraiture, product, studio and location photography. You will use digital SLR cameras, high-end digital capture backs and the latest in digital capture technology. The complete digital workflow process is covered, from input to file management to color management through image output.

While being occupational and technical in nature, the Photography and Digital Imaging curriculum will encourage your creativity and individualized expression through hands-on assignments and personalized instruction. You will graduate from the program with a professional portfolio and a working knowledge of the professional photographic industry.

You will be required to provide your own digital SLR camera and lenses, professional light meter, supplies, visual curiosity and a desire to learn.

This program has an articulation agreement with Metropolitan State University and Bemidji State University.

Admission Requirements

Students are accepted into this program for fall and spring semesters only.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Photography and Digital Imaging A.A.S. Degree—60 credits
- Photography and Digital Imaging Diploma—54 credits
- Photography and Digital Imaging Certificate—27 credits
- Dynamic Media Certificate—27 credits—Pending MnSCU Approval

Where You Could Work

- Photo studios
- Production houses
- Service bureaus
- Ad agencies
Photography and Digital Imaging A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1010</td>
<td>Photo Composition and Design</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1020</td>
<td>Introduction to Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1110</td>
<td>Digital Photography 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1120</td>
<td>Lighting 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>CIST 1106</td>
<td>History of Photography</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 17.00**

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1240</td>
<td>Photo Assistant Training</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1230</td>
<td>Lighting 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1250</td>
<td>Digital Photo 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2110</td>
<td>Advanced Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose 3 credits from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS: 14.00**

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 2120</td>
<td>Product Photography</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2130</td>
<td>Portrait Photography</td>
<td></td>
</tr>
<tr>
<td>PHDI 2180</td>
<td>Dynamic Media for Photographers</td>
<td>4.00</td>
</tr>
<tr>
<td>Program Electives</td>
<td>Choose any PHDI, GRPH, WEBI or Cinema Division production courses that are not already required for degree completion</td>
<td>6.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
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**TOTAL CREDITS: 16.00**
## Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 2210</td>
<td>Portfolio Development and Presentation</td>
<td>4.00</td>
</tr>
<tr>
<td>PHDI 2430</td>
<td>Media Business</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2470</td>
<td>Internship</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 13.00**

**Program Elective Courses (6 Credits)**

Choose any PHDI, GRPH, WEBI or Cinema Division production courses that are not already required for degree completion.

**General Education Courses (15 Credits)**

To complete the Photography and Digital Imaging A.A.S. degree, students are required to successfully complete 15 credits of General Education coursework. This coursework must include a minimum of three credits from MnTC Goal Area 1 and three credits from MnTC Goal Areas, 7, 8, 9 or 10. PHOT 1100 is recommended and is a MnTC Goal Area 6 course.
Photography and Digital Imaging Diploma

54 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>CIST 1106</td>
<td>History of Photography</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>CMST 1010</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>PHDI 1010</td>
<td>Photo Composition and Design</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1110</td>
<td>Digital Photography 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1020</td>
<td>Introduction to Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1120</td>
<td>Lighting 1</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 17.00

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1230</td>
<td>Lighting 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1240</td>
<td>Photo Assistant Training</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1250</td>
<td>Digital Photo 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2110</td>
<td>Advanced Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 14.00

### Third Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 2120</td>
<td>Product Photography</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2130</td>
<td>Portrait Photography</td>
<td></td>
</tr>
<tr>
<td>PHDI 2180</td>
<td>Dynamic Media for Photographers</td>
<td>4.00</td>
</tr>
<tr>
<td>Program Electives</td>
<td>Choose any PHDI, GRPH WEBI or Cinema Production course that is not already required for the diploma</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 13.00
### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 2210</td>
<td>Portfolio Development and Presentation</td>
<td>4.00</td>
</tr>
<tr>
<td>PHDI 2430</td>
<td>Media Business</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2470</td>
<td>Internship</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 10.00**

**Program Elective Courses (3 Credits)**
Choose any PHDI, GRPH, WEBI or Cinema Division production course that is not already required for the diploma.

**General Education Courses (9 Credits)**
To complete the Photography and Digital Imaging diploma, students are required to successfully complete nine credits of General Education coursework. This coursework must be selected from at least two of the MnTC Goal Areas. A minimum of three credits must be completed from Goal Area 1 and three credits from Goal Areas, 7, 8, 9 or 10.

*Note:* ENGL 1110 or CMST 1010 satisfies MnTC Goal Area 1. The remaining three credits may be taken from any of MnTC Goal Areas. CIST 1106 may not be used toward the General Education requirement.
Photography and Digital Imaging Certificate

27 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1010</td>
<td>Photo Composition and Design</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1110</td>
<td>Digital Photography 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1020</td>
<td>Introduction to Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1120</td>
<td>Lighting 1</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110 or CMST 1010</td>
<td>College English 1 or Interpersonal Communication</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS:** 14.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1240</td>
<td>Photo Assistant Training</td>
<td>2.00</td>
</tr>
<tr>
<td>PHDI 1230</td>
<td>Lighting 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1250</td>
<td>Digital Photo 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2110</td>
<td>Advanced Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1290</td>
<td>Flash Photography</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 13.00

**General Education (3 credits)**

To complete the Photography and Digital Imaging certificate, students are required to complete three credits of General Education coursework from MnTC Goal Area 1.
Digital Media Certificate

27 Credits

Pending MnSCU Approval

Courses in this program require achievement of the following program admission requirements:

- **READING**—one of the following:
  - Completion of READ 0100
  - Be declared ready to enroll in READ 0200 or ESOL 0052 on the basis of reading placement test scores

- **MATH**—one of the following:
  - Completion of MATH 0060
  - Be declared ready to enroll in MATH 0070 on the basis of math placement test scores

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1010 Or ENGL 1110</td>
<td>Interpersonal Communication College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>GRPH 1130 Or PHDI 1020</td>
<td>Introduction to Graphic Software Introduction to Photographic Software</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1110</td>
<td>Digital Photography 1</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 1120</td>
<td>Lighting 1</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose an additional 3 credits from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>15.00</strong></td>
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</table>

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHDI 1040</td>
<td>Audio for Media Professionals</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2180</td>
<td>Dynamic Media for Photographers</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2195</td>
<td>Visual Journalism</td>
<td>3.00</td>
</tr>
<tr>
<td>PHDI 2400</td>
<td>Post-Production for Media Professionals</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
<td><strong>12.00</strong></td>
</tr>
</tbody>
</table>

**General Education (3 Credits)**

To earn the Dynamic Media certificate, students are required to successfully complete an additional three credits of General Education for a total of three credits from MnTC Goal Area 1.
Polysomnographic (Sleep) Technology

The Polysomnographic Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). 1361 Park St., Clearwater, FL 33756. Phone: 727-210-2350

What You Will Learn
In the Polysomnographic (Sleep) Technology program, you will gain the knowledge and skills necessary to perform professional clinical sleep studies. Program graduates will be qualified to take the Board of Registered Polysomnographic Technologists exam and work in independent and hospital-based sleep laboratories around the country. An understanding of sleep disorders and the therapies used to help patients sleep is the basis of the field study. Polysomnographic technologists perform diagnostic sleep studies and interventions with patients. This program requires clinical experiences in accredited sleep centers. You must pass a background check and provide evidence of immunity status prior to placement in a healthcare setting.

The Polysomnographic Technology Program Requires:
- Grades of “C” (2.0) or above in all PSOM theory and combination theory/lab courses and all program-required general education courses;
- Pass (P) grades in clinical internship and seminar courses; and
- Passing of a criminal background check prior to being placed in a PSOM internship. The College cannot guarantee placement in internships for students who do not have a clear criminal background check.
- For more information about the background study process and disqualifying crimes, contact the Minnesota Department of Human Services at 651-296-3802.

How You Apply
Polysomnographic Technology is a Managed Admission Health Program. Students must successfully complete all first semester courses before the acceptance in the program.

Waiting List:
- Students must first meet the placement testing requirements or successfully complete the developmental coursework prior to placement on the waiting list.

Admission:
- Students are selected from the waiting list and admitted on a “first come, first qualified” basis to fill the available seats in the program.
- General Education courses may be completed prior to admission.
- Contact the Allied Health program admissions advisor at 612-659-6200.

Admission Requirements
Courses in this program require achievement of the following minimum placements:
- READING—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- WRITING—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- MATH—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

Awards or Credentials You Could Earn
- Polysomnographic Technology A.A.S. Degree—60 credits
Polysomnographic (Sleep) Technology A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0080
  - Successful completion of MATH 0070 or MATH 0077

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>BIOL 2224 <strong>Or</strong></td>
<td>Anatomy</td>
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<tr>
<td>BIOL 1127 <strong>And</strong></td>
<td>Human Biology</td>
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<tr>
<td>BIOL 1128</td>
<td>Human Biology Lab</td>
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<tr>
<td>BIOL 1190</td>
<td>BioMedical Terminology</td>
<td>2.00</td>
</tr>
<tr>
<td>COML 1100 <strong>Or</strong></td>
<td>Computer Literacy</td>
<td>2.00</td>
</tr>
<tr>
<td>*COML 1000 <strong>Or</strong></td>
<td>COML 1000 is a 1 credit course; see Computer Literacy Requirement information below.</td>
<td></td>
</tr>
<tr>
<td><strong>COML Test Out</strong></td>
<td>The COML Test Out is a non-credit test out, see Computer Literacy Requirement information below.</td>
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<tr>
<td>ENGL 1110 <strong>Or</strong></td>
<td>College English</td>
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<td>ENGL 1108</td>
<td>Technical Writing</td>
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<tr>
<td>PSOM 1000 <strong>Or</strong></td>
<td>Introduction to Sleep and Rest</td>
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<tr>
<td>HLTH 1000</td>
<td>Introduction to Sleep and Rest</td>
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<tr>
<td>PSYC 1110</td>
<td>General Psychology</td>
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**TOTAL CREDITS: 18.00**

**Second Semester**

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<tbody>
<tr>
<td>CMST 1010 <strong>Or</strong></td>
<td>Interpersonal Communication</td>
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<td>CMST 2012</td>
<td>Intercultural Communication</td>
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<td>PSOM 1100</td>
<td>Fundamentals of Polysomnography</td>
<td>3.00</td>
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<tr>
<td>PSOM 1200</td>
<td>Anatomy and Physiology of Sleep and Breathing</td>
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<tr>
<td>PSOM 1300</td>
<td>Pathophysiology and Classification of Sleep Disorders</td>
<td>2.00</td>
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<tr>
<td>PSYC 2240</td>
<td>Lifespan Psychology</td>
<td>4.00</td>
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**TOTAL CREDITS: 14.00**
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<tr>
<th>COURSE #</th>
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<tr>
<td>PSOM 1400</td>
<td>Instrumentation in Polysomnography</td>
<td>5.00</td>
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<tr>
<td>PSOM 1500</td>
<td>Monitoring and Introduction to Therapeutic Interventions</td>
<td>4.00</td>
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<tr>
<td>PSOM 1650</td>
<td>Internship 1</td>
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<tr>
<td>PSOM 1660</td>
<td>Internship Seminar 1</td>
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**TOTAL CREDITS: 12.00**

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<th>COURSE #</th>
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</tr>
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<tbody>
<tr>
<td>PSOM 2000</td>
<td>Polysomnographic Theory Integration</td>
<td>4.00</td>
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<tr>
<td>PSOM 2150</td>
<td>Internship 2</td>
<td>3.00</td>
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<tr>
<td>PSOM 2160</td>
<td>Internship 2 Seminar</td>
<td>1.00</td>
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<tr>
<td>PSOM 2250</td>
<td>Internship 3</td>
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<td>PSOM 2260</td>
<td>Internship 3 Seminar</td>
<td>1.00</td>
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<tr>
<td>PSOM 2350</td>
<td>Internship 4</td>
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<tr>
<td>PSOM 2360</td>
<td>Internship 4 Seminar</td>
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**TOTAL CREDITS: 16.00**

**General Education Courses (18 Credits)**

To complete the Polysomnographic Technology A.A.S. degree students are required to complete the 18 credits of General Education coursework outlined above.

**Computer Literacy Requirement:**

Students who take COML 1100 will satisfy the Computer Literacy requirement.

*COML 1000: Students who choose to take COML 1000 (one credit) will need to take one additional credit of elective coursework. This elective coursework can be taken from any discipline except for developmental coursework (courses with numbers under 1000). Developmental courses cannot be used toward completion of program requirements.

**COML Test Out:** Students who choose to take the Computer Literacy Test Out (noncredit test out) will need to take an additional two credits of elective coursework. This elective coursework can be taken from any discipline except for developmental coursework (courses with numbers under 1000). Developmental courses cannot be used toward completion of program requirements.
Restaurant Management

What You Will Learn
MCTC’s Restaurant Management program prepares you in all facets of running a restaurant operation and helps you to develop a full understanding of the elements necessary to be a successful leader in the restaurant industry through exploring both front-of-the-house and back-of-the-house functions.

You will receive instruction on culinary fundamentals; purchasing and receiving products; and analyzing food, beverage and cost controls. Coursework will also include a focus on supervision, accounting, marketing and management. Upon completion of the program, you will be ServSafe Sanitation and ServSafe Alcohol certified. The Restaurant Management program also includes a 160-hour required internship and a capstone course that develops your e-folio to display your experience for future employers or to assist in your transfer to a four-year university.

You will receive extensive hands-on training in MCTC’s cooking labs and in the student-operated dining room which is open to the public. You will also have the opportunity to participate in numerous community service events wherein you can apply your culinary and supervisory expertise.

To successfully participate in the program, you must be able to lift 25 pounds, have the endurance to stand for several hours at a time and have good hand-eye coordination. All students must purchase uniforms, knife and baking kits, and textbooks, as well as cover field trip costs.

Admission Requirements
Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Awards or Credentials You Could Earn

- Restaurant Management A.A.S. Degree—60 credits
- Restaurant Management Certificate—27 credits

Where You Could Work

- Restaurants
- Hotels
- Resorts
- Cruise ships
- Hospital and healthcare centers
- Institutions and companies with food service
Restaurant Management A.A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>CULA</td>
<td>1005 Culinary Fundamentals</td>
<td>5.00</td>
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<tr>
<td>REST</td>
<td>1000 Restaurant Business Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA</td>
<td>1109 ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>REST</td>
<td>1100 Food, Beverage and Cost Controls</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS:** 16.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>CULA</td>
<td>1120 Casual Restaurant Operations</td>
<td>5.00</td>
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<tr>
<td>CULA</td>
<td>1115 Hospitality Supervisory Management</td>
<td>3.00</td>
</tr>
<tr>
<td>ECON</td>
<td>2000 Principles of Macroeconomics</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL</td>
<td>1110 College English 1</td>
<td>3.00</td>
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**TOTAL CREDITS:** 14.00

**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
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<tbody>
<tr>
<td>CMST</td>
<td>2012 Intercultural Communication</td>
<td>3.00</td>
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<tr>
<td>CULA</td>
<td>1105 Food Service Purchasing and Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA</td>
<td>2500 Beverage Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA</td>
<td>1150 Menu Planning</td>
<td>2.00</td>
</tr>
<tr>
<td>REST</td>
<td>2000 Hospitality Marketing Management</td>
<td>3.00</td>
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<tr>
<td>General Education</td>
<td>Choose 3 credits from any of the MnTC Goal Areas</td>
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**TOTAL CREDITS:** 16.00
Fourth Semester

<table>
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<tr>
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<th>TITLE</th>
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<tbody>
<tr>
<td>BUSN 2202</td>
<td>Financial Accounting</td>
<td>4.00</td>
</tr>
<tr>
<td>BUSN 2252</td>
<td>Principles of Management</td>
<td>4.00</td>
</tr>
<tr>
<td>REST 2200</td>
<td>Restaurant Management Internship</td>
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<tr>
<td>REST 2100</td>
<td>Restaurant Management Capstone</td>
<td>2.00</td>
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</table>

**TOTAL CREDITS: 14.00**

**General Education Courses (15 credits)**

To complete the Restaurant Management A.A.S. Degree, students are required to successfully complete 15 credits of General Education coursework. ENGL 1110, CMST 2012 and ECON 2000 are required. The additional nine credits of General Education coursework can be selected from any of the MnTC Goal Areas.

Note: ENGL 1110 satisfies MnTC Goal Area 1 and CMST 2012 satisfies MnTC Goal Areas 1 and 8 and ECON 2000 satisfies MnTC Goal Areas 5 and 6.
Restaurant Management Certificate

27 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Required Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
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<tbody>
<tr>
<td>BUSN 2202</td>
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</tr>
<tr>
<td>CMST 2012</td>
<td>Intercultural Communication</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1109</td>
<td>ServSafe Sanitation</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 1115</td>
<td>Hospitality Supervisory Management</td>
<td>3.00</td>
</tr>
<tr>
<td>CULA 1105</td>
<td>Food Service Purchasing and Receiving</td>
<td>2.00</td>
</tr>
<tr>
<td>CULA 2500</td>
<td>Beverage Management</td>
<td>3.00</td>
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<tr>
<td>REST 1000</td>
<td>Restaurant Business Management</td>
<td>3.00</td>
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<tr>
<td>REST 1100</td>
<td>Food, Beverage and Cost Controls</td>
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</tr>
<tr>
<td>REST 2000</td>
<td>Restaurant Management Internship</td>
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**TOTAL CREDITS:** 27.00

**General Education Courses (3 Credits)**

To complete the Restaurant Management certificate, students are required to successfully complete three credits of General Education coursework. A minimum of three credits must be completed from MnTC Goal Area 1 and CMST 2012, which is required, satisfies MnTC Goal Area 1.
Sound Arts

What You Will Learn

MCTC’s Sound Arts program will teach you to artistically produce and create quality sound, using the most current high-tech equipment and computer software available.

The core of the program—the first of its kind in the Midwest—is a series of five comprehensive sound arts courses encompassing the physics of sound, analog and digital theory, and artistic form. MCTC’s experienced faculty also will provide extensive hands-on training, teaching you to operate electronic and digital equipment and encouraging you to develop your own creative vision. You will broaden your knowledge by studying sound arts history and literature, music theory and design, and the business of sound arts.

The program will help you master the specific procedures for recording, manipulating and mixing sound in a studio. You will even learn how to design your own studio for professional work in music or sound design. In addition, you will learn to adapt to change and train yourself on new equipment and technologies as they appear.

You will have the opportunity to work individually and in groups to complete projects involving music, dialogue, and sound effects and learn to tie sound projects to video and film. In addition, you will put your new skills to work in an internship in the sound industry. For a final project, you will produce a portfolio of small and large works mastered to a compact disk.

All students in the program will need to purchase media materials, such as recording tape and jump drives, during the course of the program. MCTC has an articulation agreement with Metropolitan State University.

How You Apply

• Students are accepted into this program for fall and spring semesters only.
• Production SNDA courses are not available for auditing.

Admission Requirements

Courses in this program require achievement of the following minimum placements:

• READING—one of the following:
  • Placement into READ 1300
  • Successful completion of READ 0200 or ESOL 0052
• WRITING—one of the following:
  • Placement into ENGL 1110
  • Successful completion of ENGL 0900 or ESOL 0051
• MATH—one of the following:
  • Placement into MATH 0070
  • Successful completion of MATH 0060
• COMPUTER LITERACY—In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

Awards or Credentials You Could Earn

• Sound Arts A.S. Degree—60 credits

Where You Could Work

• Recording and post-production studios
• Location recording companies
• Video and film location and studios
• Radio stations
• Commercial music houses
• Nightclubs and touring productions
• Web design firms
• Self-employment (self-run studios and production companies)
Sound Arts A.S. Degree

60 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 1300
  - Successful completion of READ 0200 or ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 1110
  - Successful completion of ENGL 0900 or ESOL 0051
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060
- **COMPUTER LITERACY**—In addition, students must demonstrate computer literacy skills by passing the college’s computer literacy exam or successfully completing one of the following courses: COML 1000, COML 1100, BTEC 1020, ITEC 1100 or CSCI 1100.

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
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<tr>
<td>MUSC 1150</td>
<td>Fundamentals of Music</td>
<td>3.00</td>
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<tr>
<td>SNDA 1310</td>
<td>Sound Arts 1: The Nature and Control of Sound</td>
<td>3.00</td>
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<tr>
<td>General Education</td>
<td>Choose 3 credits from MnTC Goal Areas 7, 8, 9 or 10</td>
<td>3.00</td>
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**TOTAL CREDITS:** 12.00

**Second Semester**

<table>
<thead>
<tr>
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<tbody>
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<td>ENGL 1111</td>
<td>College English 2</td>
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<tr>
<td>SNDA 1320</td>
<td>Sound Arts 2: Advanced Recording and Sync</td>
<td>3.00</td>
</tr>
<tr>
<td>SNDA 1360</td>
<td>Sound Arts History and Literature</td>
<td>3.00</td>
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<tr>
<td>*General Education</td>
<td>Choose 3 credits from MnTC Goal Areas 7, 8, 9 or 10 not taken in previous semester</td>
<td>3.00</td>
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<tr>
<td>Program Electives</td>
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**TOTAL CREDITS:** 15.00
### Third Semester

<table>
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<th>TITLE</th>
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<tbody>
<tr>
<td>SNDA 2330</td>
<td>Sound Arts 3: Advanced Digital Sound and Music</td>
<td>4.00</td>
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<tr>
<td>SNDA 2340</td>
<td>Sound Arts 4: Form and Design</td>
<td>3.00</td>
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<tr>
<td>SNDA 2370</td>
<td>Project Studio Design</td>
<td>3.00</td>
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<tr>
<td>*General Education</td>
<td>Choose 6 credits from MnTC Goal Areas 7, 8, 9 or 10 not taken in previous semester</td>
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**TOTAL CREDITS: 16.00**

### Fourth Semester

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<tbody>
<tr>
<td>SNDA 2350</td>
<td>Sound Arts 5: Final Project</td>
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<tr>
<td>SNDA 2380</td>
<td>Internship</td>
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</tr>
<tr>
<td>SNDA 2390</td>
<td>Sound Arts as Business</td>
<td>3.00</td>
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<tr>
<td>*General Education</td>
<td>Choose 6 credits from MnTC Goal Areas 7, 8, 9 or 10 not taken in previous semester</td>
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**TOTAL CREDITS: 14.00**

### Program Elective Courses

Choose 3 credits from this list:

<table>
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<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIST 1102</td>
<td>Cinema History II</td>
<td>3.00</td>
</tr>
<tr>
<td>MUSC 1000</td>
<td>Introduction to Music</td>
<td>3.00</td>
</tr>
<tr>
<td>MUSC 1010</td>
<td>American Popular Music 1</td>
<td>3.00</td>
</tr>
<tr>
<td>MUSC 1020</td>
<td>American Popular Music 2: The History and Develop-ment of Rock ‘n’ Roll</td>
<td>3.00</td>
</tr>
<tr>
<td>MUSC 1160</td>
<td>Music Theory and Design</td>
<td>3.00</td>
</tr>
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### General Education Courses (30 Credits)

To earn the Sound Arts A.S. degree, students are required to successfully complete 30 credits of General Education coursework as follows:

Six credits of program-required General Education courses: ENGL 1110 and ENGL 1111.

In addition, 24 credits of General Education coursework must be selected from at least six of the 10 MnTC Goal Areas, including three credits from MnTC Goal Area 1, *three credits each from MnTC Goal Area 7, 8, 9 and 10; and three credits from the Program Elective Courses list above, which will satisfy Goal Area 6.

**Note:** ENGL 1110 and ENGL 1111 satisfy MnTC Goal Area 1, and MUSC 1150 satisfies MnTC Goal Area 6.
Theater Arts

What You Will Learn

MCTC’s A.F.A. in Theater Arts will give you training in the basic skills necessary for creative expression in the performance and technical aspects of the theater arts, and, if you choose, provide you with the ability to transfer to a B.A. or B.F.A. degree in Theater. It will also qualify you for the first half of a cooperative B.A. degree in Theater Arts with Metropolitan State University, the only state college or university outside of the University of Minnesota to offer a B.A. degree in Theater Arts in the Twin Cities.

The program integrates the artistic, technical and academic disciplines of theater practice. You may choose an emphasis in acting, directing or technical theater skills. You will also learn to interpret and understand global theater history, as well as contemporary and classical dramatic literature.

Your instructors will be theater artists with professional experience and graduate degrees in theater. Their classes focus on developing the fundamentals of acting, stage movement, vocal production, play directing and producing, scene design and lighting, playwriting, and written and oral response to theater.

The Theater Department’s stage productions will serve as your learning laboratory, an opportunity to enter into creative collaborations with faculty, community members and artists-in-residence. You may find yourself acting, directing, designing or viewing productions at any given time to learn all aspects of the theater experience, from lab theater to the mainstage. The productions and your coursework combine to give you a solid base in classical, modern, contemporary and multicultural theater.

The program has cross-disciplinary connections with Cinema, Art, Music, English and various Humanities disciplines.

Awards or Credentials You Could Earn

• A.F.A Degree in Theater Arts—60 credits

Where You Could Work

• Local, regional and national theater companies
• Music, dance and opera companies
• Local and regional TV production
• Local and regional film production
• Local and regional commercial production houses
• Live events production agencies
Theater Arts A.F.A. Degree

60 Credits

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

By completing the recommended courses, you will complete the necessary requirements for the A.F.A of Theater Arts degree, along with the entire Minnesota Transfer Curriculum.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1005</td>
<td>Public Speaking (Recommended or choose any other CMST course)</td>
<td>3.00</td>
</tr>
<tr>
<td>ENGL 1110</td>
<td>College English 1</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1104</td>
<td>Introduction to Acting 1</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1131</td>
<td>Introduction to Theater</td>
<td>3.00</td>
</tr>
<tr>
<td>MATH 1160</td>
<td>Mathematical Ideas (Recommended or choose any MnTC Goal Area 4 course)</td>
<td>3.00</td>
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</table>

**TOTAL CREDITS:** 15.00

**Second Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 1136</td>
<td>Environmental Science (Recommended or choose any MnTC course from MnTC Goal Area 3)</td>
<td>3.00</td>
</tr>
<tr>
<td>*BIOL 1137</td>
<td>Environmental Science Lab</td>
<td>1.00</td>
</tr>
<tr>
<td>ENGL 1111</td>
<td>College English 2</td>
<td>3.00</td>
</tr>
<tr>
<td>INFS 1000</td>
<td>Information Literacy and Research Skills (Recommended or choose any course from MnTC Goal Area 2)</td>
<td>2.00</td>
</tr>
<tr>
<td>**PSYC 1110</td>
<td>General Psychology (Recommended or choose any MnTC Goal Area 5 course)</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 2145</td>
<td>Introduction to Directing</td>
<td>3.00</td>
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**TOTAL CREDITS:** 15.00
**Third Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td><strong>AMST 1152</strong></td>
<td>Popular Culture in the 20th Century (Recommended or choose any course from MnTC Goal Area 6 that also meets MnTC Goal Area 7)</td>
<td>3.00</td>
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<tr>
<td><strong>ECON 1000</strong></td>
<td>Consumer Economics (Recommended or choose any MnTC Goal Area course that meets both MnTC Goal Areas 5 and 9)</td>
<td>1.00</td>
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<tr>
<td><em>GEOL 1120</em></td>
<td>Physical Geology</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 1145</td>
<td>Stagecraft: Scene Design and Lighting</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 2150</td>
<td>Theater History 1</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Total Credits:</strong></td>
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**Fourth Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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<tbody>
<tr>
<td><strong>ENGL 2226</strong></td>
<td>World Literature: Europe, Africa, Latin America (Recommended or choose any course from MnTC Goal Area 6)</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>PSCI 1104</strong></td>
<td>World Politics (Recommended or choose any course from MnTC Goal Area 5)</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 2105</td>
<td>Introduction to Acting 2</td>
<td>3.00</td>
</tr>
<tr>
<td>THTR 2160</td>
<td>Theater Capstone</td>
<td>2.00</td>
</tr>
<tr>
<td>THTR Electives</td>
<td>Choose any THTR course that is not already required for this degree</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Total Credits:</strong></td>
<td></td>
<td><strong>14.00</strong></td>
</tr>
</tbody>
</table>

**General Education**

* MnTC Goal Area 3: You must complete at least two courses from two different disciplines, and at least one course must include a lab from MnTC Goal Area 3. By taking the recommended courses for the A.F.A. in Theater Arts, these two goal areas will be fulfilled.

**To complete the A.F.A in Theater Arts, you must complete at least three courses from three different disciplines in MnTC Goal Areas 5 and 6. By taking the recommended courses, you will fulfill both of these goal areas.

**Note:** If you plan to not take the recommended courses you will need to take 40 credits of MnTC-eligible coursework. The courses you select must meet the requirements within each of the MnTC Goal Areas. You can refer to the MnTC requirements found on the MCTC Awards pages to learn about the MnTC requirements.
Visual Arts

What You Will Learn
MCTC’s Associate of Fine Arts (A.F.A.) degree in Visual Arts is a combination of Liberal Arts general education courses and foundation courses in Art and Art History. The A.F.A. offers you an opportunity to think seriously about a career in visual art making. You will complete the degree with a portfolio to prepare you for transfer to a four-year baccalaureate program in Fine Arts (B.A. or B.F.A.). Students desiring a two-year A.F.A. degree for job placement or enhancement, as well as those returning to school for enrichment purposes, will also benefit from this degree.

Experienced faculty, practicing artists in their own right, will teach you how to identify formal qualities, demonstrate technical processes, and cultivate investigation of the impact of expression in visual art, as well as create art in a wide variety of mediums. Your coursework will cover art and art history from all over the world and across time periods. Additionally, core courses in design, drawing, painting, ceramics, photography, sculpture, as well as watercolor, printmaking and direct metal sculpture, lead students to more advanced study and creation in those areas. You will complete your degree with a portfolio presentation, for which you will select a body of work that has visual or thematic continuity and represents the culmination of your A.F.A. studies. You will install an exhibition of the results of that study. The exhibition will be accompanied by a written artist’s statement, all in preparation for an advanced degree.

Awards or Credentials You Could Earn

- A.F.A. Degree in Visual Arts—60 credits
Visual Arts A.F.A. Degree

60 Credits

Recommended Course Sequence
The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>COURSE #</td>
</tr>
<tr>
<td>ARTS 1141</td>
</tr>
<tr>
<td>ARTS 1121</td>
</tr>
<tr>
<td>CHEM 1140</td>
</tr>
<tr>
<td>CMST 2012</td>
</tr>
<tr>
<td>ENGL 1110</td>
</tr>
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<td>TOTAL CREDITS:</td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE #</td>
</tr>
<tr>
<td>ARTS 1125</td>
</tr>
<tr>
<td>ARTS 1142</td>
</tr>
<tr>
<td>ENGL 1111</td>
</tr>
<tr>
<td>INFS 1000</td>
</tr>
<tr>
<td>PHOT 1100</td>
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<table>
<thead>
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<th>Third Semester</th>
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<tbody>
<tr>
<td>COURSE #</td>
</tr>
<tr>
<td>ARTS 1111 Or</td>
</tr>
<tr>
<td>ARTS 1112 Or</td>
</tr>
<tr>
<td>ARTS 1113 Or</td>
</tr>
<tr>
<td>ARTS 2211</td>
</tr>
<tr>
<td>ARTS 1133</td>
</tr>
<tr>
<td>ARTS Electives</td>
</tr>
<tr>
<td>MUSC 1000</td>
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<tr>
<td>PSCI 1101</td>
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<td>TOTAL CREDITS:</td>
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### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ARTS 2214</td>
<td>A.F.A. Portfolio</td>
<td>2.00</td>
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<tr>
<td>ARTS Electives</td>
<td>Choose 3 credits from the Arts Elective course list below</td>
<td>6.00</td>
</tr>
<tr>
<td>THTR 1131</td>
<td>Introduction to Theater (recommended or choose any course from MnTC Goal Area 6 other than ARTS or PHOT)</td>
<td>3.00</td>
</tr>
<tr>
<td>*General Education</td>
<td>Choose any 3 credit course from MnTC Goal Area 7, 8, 9 or 10 that is NOT also in MnTC Goal Area 6</td>
<td>5.00</td>
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</table>

**TOTAL CREDITS: 16.00**

### Visual Arts Electives

Choose 6 credits from the courses listed below:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>ARTS 1132</td>
<td>Printmaking</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2212</td>
<td>Painting 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2213</td>
<td>Watercolor</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2221</td>
<td>Drawing 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2225</td>
<td>Ceramics 2</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2233</td>
<td>Sculpture: Direct Metals</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2234</td>
<td>Sculpture 2</td>
<td>3.00</td>
</tr>
<tr>
<td>PHOT 1200</td>
<td>Photography 2</td>
<td>3.00</td>
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</table>

### General Education Courses (28 Credits)

Required courses:

- ENGL 1110: College Writing 1
- ENGL 1111: College Writing 2
- CMST: any MnTC Goal Area 1 Communication Studies course
- Choose any course from MnTC Goal Area 2 or MnTC Goal Area 4

### General Education Electives

Recommended courses are outlined in the pathway above or you can choose the remaining courses as follows:

- **MnTC Goal Area 3: Natural Sciences:**
  - Any course from MnTC Goal Area 3

- **MnTC Goal Area 5: History and the Social Behavioral Sciences:**
  - Any course from MnTC Goal Area 5

- **MnTC Goal Area 6: Humanities and Fine Arts:**
  - Any two courses from MnTC Goal Area 6 that are NOT in Arts or Photography

- **MnTC Goal Area 2 Critical Thinking or MnTC Goal Area 4 Mathematics/Logical Reasoning**
  - Any one course from either MnTC Goal Area 2 or MnTC Goal Area 4

- **MnTC Goal Areas 7 Human Diversity, 8 Global Perspective, 9 Ethic and Civic Responsibility, or 10 People and the Environment:**
  - Any one course from either MnTC Goal Areas 7, 8, 9 or 10 that is NOT also in MnTC Goal Area 6.
Welding and Metal Fabrication

What You Will Learn

MCTC’s Welding and Metal Fabrication program will provide you with the technical knowledge and hands-on skills you need to gain entry-level employment with manufacturing plants and various other industries.

This program will introduce you to current welding and metal fabrication processes widely used in a great variety of work environments. Throughout the program, you will receive practical information on how metal fabrication processes work. Then, you will apply that knowledge in a hands-on environment by utilizing welding and metal fabrication equipment. By examining your projects with the instructor, you will begin to develop a skill and knowledge base that will be useful in shops and at work sites.

In addition, you will learn about shop safety and safe work practices, blueprint reading, applied math, and general fabrication methods.

To participate in the program, you should be in good physical health and possess stamina, be able to lift 50 pounds, and have good hand-eye coordination and manual dexterity.

With additional education and training, you may advance to more skilled jobs in the manufacturing and construction fields or open your own shop. Welding courses are also valuable for persons who have careers or interests that require some welding knowledge.

MCTC has an articulation agreement with the Welding Program at Saint Paul College.

For more information, contact the program faculty coordinator, Todd Bridigum, at 612-659-6054.

MCTC’s Welding and Metal Fabrication program is a member college of 360°, a Minnesota State Colleges and Universities Center of Excellence in Manufacturing and Applied Technology. Visit their website at www.360mn.org for more information on career ladder programs offered by 360° colleges and Bemidji State University.

Admission Requirements

Students are accepted into this program in fall and spring semesters.

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
  - Successful completion of ESOL 0041

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Requirements for Fall Semester Start:

- Students must meet admission requirements, or they may be accepted into the program if enrolled in MATH 0060, concurrently with enrollment in: WELD 1000, WELD 1050, WELD 1100, and WELD 1150. Instructor will work with students enrolled in MATH 0060 in accommodating class schedules that pose a time conflict.

Requirements for Spring Semester Start:

- Students must meet admission requirements and register for the following courses: WELD 2050, WELD 2100, WELD 2150 and WELD 2200.
Awards or Credentials You Could Earn

- Welding and Metal Fabrication A.A.S.—60 credits—Pending MnSCU Approval
- Welding and Metal Fabrication Certificate—30 credits

Where You Could Work

- Industrial fabrication and repair shops
- Custom job shops
- Medical/Pharmaceutical industry
- Food machinery and equipment manufacturers
- Aircraft, automobile, trucking and shipbuilding industries
- Construction sites
Welding and Metal Fabrication A.A.S.

60 Credits

Pending MnSCU Approval

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052

- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
  - Successful completion of ESOL 0041

- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

Recommended Course Sequence

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 1000</td>
<td>Applied Shop Mathematics and Measuring Devices</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 1050</td>
<td>Oxy/Acetylene Welding, Brazing and Cutting</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 1100</td>
<td>Shielded Metal Arc Welding</td>
<td>4.00</td>
</tr>
<tr>
<td>WELD 1150</td>
<td>Blueprint Reading and Welding Symbols</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td></td>
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### Third Semester

<table>
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<tr>
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<tbody>
<tr>
<td>WELD 2600</td>
<td>Pipe Welding</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 2650</td>
<td>Advanced GTAW</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 2700</td>
<td>Advanced Blueprint and Welding Symbols</td>
<td>3.00</td>
</tr>
<tr>
<td>ARTS 2233</td>
<td>Sculpture: Direct Metals</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose a course from one of the following MnTC Goal Areas: 7, 8, 9 or 10</td>
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**TOTAL CREDITS: 15.00**

### Fourth Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td>WELD 2800</td>
<td>Advanced GMAW</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 2850</td>
<td>Welder Qualification</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 2900</td>
<td>Advanced Shop Fabrication/Equipment</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 2950</td>
<td>Inspection and Testing</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any 2 courses from any of the MnTC Goal Areas</td>
<td>6.00</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 15.00**

**General Education Courses (15 Credits)**

To complete the Welding and Manufacturing A.A.S. degree, students are required to successfully complete 15 credits of General Education coursework. This coursework must be selected from at least three of the MnTC Goal Areas. A minimum of three credits must be completed from MnTC Goal Area 1 and three credits from MnTC Goal Areas 7, 8, 9 or 10. ARTS 2233: Sculpture: Direct Metals is a required course and meets MnTC Goal Area 6.
Welding and Metal Fabrication Certificate

30 Credits

Courses in this program require achievement of the following minimum placements:

- **READING**—one of the following:
  - Placement into READ 0200 or ESOL 0052
  - Successful completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052
- **WRITING**—one of the following:
  - Placement into ENGL 0900 or ESOL 0051
  - Successful completion of ESOL 0041
- **MATH**—one of the following:
  - Placement into MATH 0070
  - Successful completion of MATH 0060

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

### First Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 1000</td>
<td>Applied Shop Mathematics and Measuring Devices</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 1050</td>
<td>Oxy/Acetylene Welding, Brazing and Cutting</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 1100</td>
<td>Shielded Metal Arc Welding</td>
<td>4.00</td>
</tr>
<tr>
<td>WELD 1150</td>
<td>Blueprint Reading and Welding Symbols</td>
<td>3.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
<td>3.00</td>
</tr>
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</table>

**TOTAL CREDITS: 15.00**

### Second Semester

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 2000</td>
<td>Layout (Volumes) and Fixture</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 2050</td>
<td>Gas Metal Arc Welding</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 2100</td>
<td>Flux Core Arc Welding</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 2150</td>
<td>Gas Tungsten Arc Welding—DC Applications</td>
<td>3.00</td>
</tr>
<tr>
<td>WELD 2200</td>
<td>Gas Tungsten Arc Welding—AC Applications</td>
<td>2.00</td>
</tr>
<tr>
<td>WELD 2500</td>
<td>Fabrication Shop/ Equipment</td>
<td>3.00</td>
</tr>
</tbody>
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**TOTAL CREDITS: 15.00**

**General Education Courses (3 Credits)**

To complete the Welding and Metal Fabrication certificate, you are required to successfully complete three credits of General Education coursework from the MnTC Goal Area 1.
Women’s Studies

What You Will Learn

MCTC’s Women’s Studies program will help you examine the world from the perspectives of ethnically diverse women and become an agent of positive change for women and their communities. MCTC’s Women’s Studies program explores women’s realities in a wide variety of academic disciplines, including social sciences, biology, psychology, history, literature and the arts. Grounded in feminist thought and activism, Women’s Studies will help you understand how race, social class, age, ability, appearance, and sexual identity intersect to affect women’s lives and societies as a whole. Women’s Studies courses affirm cultural diversity; widen understanding of the impact of social institutions; and empower students to become thinkers, leaders, and activists.

The Women’s Studies Certificate will be noted on your MCTC transcript and can be valuable in demonstrating your commitment to a particular focus of study. You will develop a perspective that enhances related fields of study and contributes to your ability to apply a woman-centered perspective to future study and employment.

Women’s Studies courses fulfill elective requirements in several degree programs, as well as some of the requirements in the Minnesota Transfer Curriculum. Please note that you can complete the certificate as you are completing the MN Transfer Curriculum. The certificate does not require that you take extra courses as long as you plan your MN Transfer course load with the certificate in mind.

MCTC has an articulation agreement with Metropolitan State University. In addition, the Women’s Studies counselor will help nontraditional students apply for transfer scholarships at specified private and public colleges.

Awards or Credentials You Could Earn

- Women’s Studies Certificate—18 credits

Where You Could Work

- Women’s Studies graduates often pursue further education and use their certificate in support of occupations such as teaching, social work, counseling, criminal justice, health care, politics, and law.

Some local possibilities for working with the Women’s Studies certificate include:

- Environment and health resource centers
- Social service centers such as Harriet Tubman Women’s Shelter and the Sexual Violence Center
- Advocacy groups such as Advocates for Human Rights
- Cultural resource organizations such as Black, Indian, Hispanic and Asian Women in Action; the Indian Women’s Resource Center
**Women’s Studies Certificate**

**18 Credits**

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**Required Course**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOST 1101</td>
<td>Introduction to Women's Studies</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Additional Courses:**
The 15 remaining credits must be chosen from at least three of the following four MnTC Goal Areas and/or electives areas:

**MnTC Goal Area 3: Natural Sciences**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>TITLE</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1160</td>
<td>Biology of Women</td>
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**MnTC Goal Area 5: History and the Social and Behavioral Sciences**

<table>
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<tr>
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<tbody>
<tr>
<td>ANTH 1150</td>
<td>Women Across Cultures</td>
<td>3.00</td>
</tr>
<tr>
<td>HIST 2241</td>
<td>Women in Early America, 1500–1865</td>
<td>3.00</td>
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<tr>
<td>HIST 2242</td>
<td>Women in Modern America, 1865 to the Present</td>
<td>3.00</td>
</tr>
<tr>
<td>SOCI 1170</td>
<td>Women in a Global Perspective</td>
<td>3.00</td>
</tr>
<tr>
<td>WOST 1120</td>
<td>Introduction to Lesbian Cultures</td>
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**MnTC Goal Area 6: Humanities and Fine Arts**

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<tr>
<th>COURSE #</th>
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<tr>
<td>ARTS 2211</td>
<td>Women in Art</td>
<td>3.00</td>
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<tr>
<td>ENGL 1158</td>
<td>Women’s Literature</td>
<td>3.00</td>
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<tr>
<td>WOST 1140</td>
<td>Women’s Culture</td>
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<tr>
<td>WOST 1150</td>
<td>Images of Women in Contemporary Literature</td>
<td>3.00</td>
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<tr>
<td>WOST 2200</td>
<td>Female Divine</td>
<td>3.00</td>
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<tr>
<td>WOST 2211</td>
<td>Women’s Response to Violence</td>
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<tr>
<td>WOST 2212</td>
<td>Ecofeminism</td>
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<td>WOST 2213</td>
<td>Women and Empowerment</td>
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<tr>
<td>PHIL 2215</td>
<td>Feminist Philosophy</td>
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<tr>
<td>WOST 2235</td>
<td>Women Poets of the World</td>
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**Women’s Studies Electives**

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<tr>
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<tbody>
<tr>
<td>BUSN 1166</td>
<td>Women in Leadership and Management</td>
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<tr>
<td>PHED 1191</td>
<td>Self-Defense for Women</td>
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Yoga and Teacher Training Certificate

18-19 Credits

Pending MnSCU Approval

**Recommended Course Sequence**

The pathway is meant to guide your course selections. First semester courses will generally be selected with the assistance of a counselor or advisor during orientation. You will meet with your assigned advisor for creating an academic pathway for subsequent semesters. To schedule an appointment, you can stop by the Counseling and Advising Office in T.2500 or call 612-659-6700.

**First Semester**

<table>
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<tr>
<th>COURSE #</th>
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<tr>
<td>BIOL 1127 Or HLTH 1135</td>
<td>Human Biology Fitness Nutrition</td>
<td>2.00–3.00</td>
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<tr>
<td>GHAA 1100</td>
<td>Energy Medicine</td>
<td>3.00</td>
</tr>
<tr>
<td>GHAA 1500</td>
<td>Introduction to Meditation and Mindfulness</td>
<td>2.00</td>
</tr>
<tr>
<td>PHED 1108</td>
<td>Beginning Hatha Yoga</td>
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</tr>
<tr>
<td>PHED 1132</td>
<td>Relaxation Techniques</td>
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TOTAL CREDITS: 9.00–10.00

**Second Semester**

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<tbody>
<tr>
<td>HLTH 1150</td>
<td>First Aid and CPR</td>
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<tr>
<td>PHED 2208</td>
<td>Advanced Hatha Yoga</td>
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<tr>
<td>PHED 2210</td>
<td>Wellness Leadership</td>
<td>2.00</td>
</tr>
<tr>
<td>General Education</td>
<td>Choose any course from MnTC Goal Area 1</td>
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TOTAL CREDITS: 9.00

**General Education (3 Credits)**

To complete the Yoga and Teacher Training certificate, you must successfully complete three credits of General Education coursework from MnTC Goal Area 1.
Course Descriptions

Accounting

**ACCT 1215:** Accounting Cycle
1.00 credits (1.00 lab)
This course provides an understanding of the basic accounting cycle. You will learn to apply debits and credits, do transaction analysis, record transactions in the general journal, post to the general ledger, and record adjusting and closing entries. You will also learn to work with subsidiary ledgers and special journals.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**ACCT 1222:** Business Math
3.00 credits (2.00 lec/1.00 lab)
This course provides you with an introduction to the study of business mathematics. You will apply mathematics concepts to commonly occurring business-related situations, including calculation of commissions, payroll taxes and compound interest. You will also gain proficiency in the use of a 10-key pad.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**ACCT 1230:** Payroll Accounting
3.00 credits (3.00 lec)
This course covers the various state and federal laws pertaining to the computation and payment of salaries and wages. Topics include preparation of employment records, payroll time cards, payroll register, employee earnings records, and state and federal reports.
Prerequisites: BUSN 2202; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**ACCT 1261:** Spreadsheets for Accounting
4.00 credits (3.00 lec/1.00 lab)
This course provides an in-depth exposure to the current version of Microsoft Excel. You will learn the basic tools of Microsoft Excel. You will then apply those tools to typical business situations. Must be taken A–F.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**ACCT 1270:** Computerized Accounting—QuickBooks
2.00 credits (2.00 lab)
This course combines basic accounting concepts with key software skills supported in Quickbooks Accounting. Must be taken A–F.
Prerequisite: BUSN 2202.

**ACCT 1272:** Computerized Accounting—Peachtree
2.00 credits (2.00 lab)
This course combines basic accounting concepts with key software skills supported in Peachtree Accounting.
Prerequisite: BUSN 2202.

**ACCT 1280:** Income Tax
3.00 credits (2.00 lec/1.00 lab)
This course provides an explanation and interpretation of the Internal Revenue Code as it applies to individual income tax returns. You will have opportunities to prepare income tax returns.
Prerequisite: BUSN 2202.

**ACCT 2230:** Intermediate Accounting 1
4.00 credits (4.00 lec)
This course is an advanced study of accounting theory and concepts, including analysis and practical application of the influences on financial accounting by various policy-making boards and governmental agencies. Topics include the income statement, balance sheet, statement of cash flows, assets and liabilities.
Prerequisites: BUSN 2202; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**ACCT 2240:** Intermediate Accounting 2
4.00 credits (4.00 lec)
This course is a continuation of the comprehensive study of accounting theory and concepts. Topics include owners’ equity, revenue recognition concepts, changes in price levels and financial statement analysis.
Prerequisites: ACCT 2230; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.
ACCT 2252: Accounting Internship
2.00 credits (2.00 int)
This course provides you with actual work experience in an accounting position. A competency-based training plan will be developed for each student.
Prerequisites: BUSN 2202 and instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

ACCT 2295: Accounting Technical Review
2.00 credits (2.00 lab)
This is a capstone course. You will complete a comprehensive practice to demonstrate the accounting knowledge and computer skills that you have learned in the Accounting Technician program. Must be taken A–F.
Prerequisite: ACCT 1261.
Prerequisite/Co-requisite: ACCT 2230.

ACCT 2998: Directed Study
Prerequisites: One course in ACCT; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

Addiction Counseling

COUN 2510: Introduction to Addictionology
3.00 credits (3.00 lec)
This course acquaints you with what addiction counselors experience both personally and professionally. Ethics, licensure and the 12 core functions of a counselor are discussed. The course focuses on gaining a working knowledge of predominant professional approaches to addiction.
Historic approaches, Jellinek theory and the disease concept are critically reviewed. It also examines similarities of many types of harmful dependencies and stresses differences and parallels among various approaches to their treatment. Discussion and writing assignments allow you to further develop critical thinking skills. If taking only one COUN course, you must begin with COUN 2510. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

COUN 2520: Psychopharmacology
3.00 credits (3.00 lec)
This course will acquaint you with psychoactive drug classifications and with the physiological, biochemical, and psychological effects of mind-altering drugs. This course describes the characteristics of several types of mental illness, how they co-vary with chemical dependency, and how education and counseling techniques are used in treatment. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

COUN 2540: Multicultural Counseling Skills
4.00 credits (4.00 lec)
In this course, you will develop the knowledge, skills and attitudes that alcohol- and drug-abuse counselors need in order to work effectively with culturally diverse client populations. You will focus on psychodynamic, humanistic, and cognitive-behavioral theories and techniques, as well as on motivational interviewing and family counseling within a multicultural context. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

COUN 1500: Drugs in the Community
3.00 credits (3.00 lec)
This course is designed to acquaint you with the physiological, psychological and sociological aspects of commonly abused drugs in the community. Topics include: drugs of abuse (marijuana, alcohol, cocaine, etc.); substance abuse among people in the community (youth, ethnic and cultural groups); and substance abuse services (prevention, treatment, drugs and law enforcement). This is a nonprogram course that is offered for the general student body.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
**COUN 2620: Assessment and Interviewing**
3.00 credits (3.00 lec)
This course teaches the skills of chemical health assessment and referral. You will learn appropriate interviewing techniques, data collection, and diagnostic and referral procedures. Several assessment tools are reviewed along with “Rule 25” and DSM-IV criteria. You will practice advanced counseling skills and motivational interviewing techniques. This course meets the 30-hour state requirement for “Rule 25” training. Must be taken A–F.
Prerequisites: COUN 2510, COUN 2520, COUN 2540; or instructor approval.

**COUN 2630: Case Management and Legal and Ethical Standards**
3.00 credits (3.00 lec)
This course provides the knowledge and skills necessary for successful case management for professional addiction counseling. You will learn about the twelve core functions of addiction counseling: screening, intake, orientation, assessment, treatment planning, case management, crisis intervention, client education, referral, reports and record keeping, and consultation with other professionals. You will also address the cultural, mental health and legal/ethical factors of clinical practice. Must be taken A–F.
Prerequisites: COUN 2510, COUN 2520, COUN 2540; or instructor approval.

**COUN 2640: Group Counseling**
3.00 credits (3.00 lec)
This course teaches the theoretical and practical skills of group counseling for alcohol- and drug-abuse treatment. You will learn about group stages, group leader skills, group rules and goals, types of group therapy and clinical record keeping. Must be Taken A–F.
Prerequisite: Instructor permission required.

**COUN 2650: Practicum Assessment and Preparation**
1.00 credit (1.00 lec)
In this course, faculty will evaluate your readiness for a practicum and guide you in selecting practicum sites for the next semester. You will examine your strengths and areas for improvement as a potential alcohol- and drug-abuse counselor, develop goals and criteria for internship site selection, and interview at a variety of possible treatment and program sites. At the end of this course you must choose and be accepted by an appropriate practicum site approved by program faculty. You must earn at least a “C” (2.0) grade in this course in order to be eligible for practicum the following semester. You must undergo a criminal background check through the Minnesota Department of Human Services. Must be Taken A–F.
Prerequisite: COUN 2640 or instructor approval.

**COUN 2730: Addiction Counseling Group Practicum I**
5.00 credits (5.00 int)
You will transfer the knowledge and skills acquired in coursework to the clinical setting in this first of two required practica. You will demonstrate competence in the Transdisciplinary Foundations of Practice Dimensions (12 core functions) of a counselor. The experience may take place in a variety of agencies. You will collaborate with faculty on internship planning with the intent of meeting your individualized career goals. The two practica must total 880 hours and one must be at least 440 hours. You will also attend biweekly two-hour group classroom sessions as part of practicum supervision. Must be taken Pass/Fail.
Prerequisite: COUN 2650.

**COUN 2830: Addiction Counseling Group Practicum II**
5.00 credits (5.00 int)
This course is the second required practicum in which you transfer knowledge and skills learned in coursework to the clinical setting. You will demonstrate competence in the Transdisciplinary Foundations of Practice Dimensions (12 core functions) of a counselor. The experience may take place in a variety of agencies. You will collaborate with faculty on internship planning with the intent of meeting your individualized career goals. The two practica must total 880 hours and one must be at least 440 hours. You will also attend biweekly two-hour group classroom sessions as part of practicum supervision. Must be taken Pass/Fail.
Prerequisite: COUN 2730.
COUN 2930: Co-Occurring Substance Abuse and Mental Health Disorders
3.00 credits (3.00 lec)
In this elective course, you will learn and apply skills and competencies for screening, assessing and counseling persons with co-occurring substance abuse and mental health disorders described in SAMHSA TIP 42 “Substance Abuse Treatment for Persons with Co-Occurring Disorders.” You will learn the most contemporary evidence-based treatments, methods, and skills for working with multidisciplinary behavioral health teams. Must be taken A–F.
Prerequisites: COUN 2510, COUN 2540, COUN 2520; or faculty approval.

Air Traffic Control

ATCT 2000: Introduction to Air Traffic Control
3.00 credits (3.00 lec)
This online course introduces you to Aviation and Air Traffic Control (ATC) and provides you with the basic knowledge of aviation terms and concepts you will need to become an Air Traffic Controller. You will learn the background and history of ATC as well as the development of the ATC system. You also will develop an understanding of the environments of ATC, terminal and en route. You will examine rules, procedures and phraseology used in both environments.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; ENGL 1110; MATH 1110.

ATCT 2100: Introduction to Aviation Weather
3.00 credits (3.00 lec)
This online course introduces you to aviation weather and those points necessary for a basic understanding and application of aviation weather as used by air traffic controllers. You will learn the general characteristics of weather formation. You will also compare several sources of weather information used by controllers and different formats for issuing weather to pilots, learning to encode and decode weather information on each.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; ENGL 1110; MATH 1110.

ATCT 2110: Aviation Knowledge
3.00 credits (3.00 lec)
This course provides an introduction to the basic terminology, definitions, rules and requirements used in aviation. It will cover the fundamental principles of flight and introduce you to the pilot’s environment. You will examine various publications pertinent to aviation, including the Aeronautical Information Manual and Federal Aviation Regulations.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; ENGL 1110; MATH 1110.

ATCT 2120: Basic Navigation/Flight Operations
3.00 credits (3.00 lec)
This course examines basic navigation procedures and navigation equipment used in Air Traffic Control. In addition, the course will provide an overview of rules and procedures used by pilots and air traffic controllers in general as well as commercial flight operations.
Prerequisites: ATCT 2000, ATCT 2100, ATCT 2110 and ATCT 2135.

ATCT 2135: Aviation Law: Accident Investigation Analysis and ATC Applications
3.00 credits (3.00 lec)
This online course examines regulatory agencies, FAA enforcement of Federal Aviation Regulations (FARs) and the relationships between the needs of commercial, military, and general aviation and their impact on ATC. You will analyze and discuss FARs. You will also analyze accidents that have significance in ATC.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; ENGL 1110; MATH 1110.

ATCT 2310: Principles of En Route Non-Radar Separation
3.00 credits (3.00 lec)
This course explores non-radar separation in the en route ATC environment. You will learn aircraft flight characteristics, navigational aids and airspace used in this unique training environment. You will also examine documentation procedures and the language of ATC, phraseology. You will explore and begin to apply non-radar separation rules and procedures by participating in creative classroom exercises. Must be taken A–F.
Prerequisites: ATCT 2000, ATCT 2100, ATCT 2110 and ATCT 2135.
Co-requisite: ATCT 2120.
ATCT 2350: Principles of Terminal ATC
3.00 credits (2.00 lec/1.00 lab)
This course explores the terminal ATC environment. You will learn aircraft flight characteristics, navigational aids, airfield lighting, airfield signage, airfield markings and types of airspace used in the terminal area of ATC. You will also examine documentation procedures and the language of ATC, phraseology. You will explore and begin to apply terminal separation rules and procedures by participating in creative classroom exercises. Must be taken A–F.
Prerequisites: ATCT 2000, ATCT 2100, ATCT 2110 and ATCT 2135.

ATCT 2355: Advanced Application of Terminal ATC
3.00 credits (1.00 lec/2.00 lab).
This course expands your knowledge of the terminal ATC environment. You will apply your knowledge of aircraft flight characteristics, navigational aids, airfield lighting, airfield signage, airfield markings and types of airspace used in the terminal area of ATC. You will also apply documentation procedures and the language of ATC, phraseology. You will apply terminal separation rules and procedures by participating in creative simulated realistic tower and radar labs. Must be taken A–F.
Prerequisites: ATCT 2000, ATCT 2100, ATCT 2110 and ATCT 2135.

ATCT 2415: ATC Computers and Flight Data
3.00 credits (1.00 lec/2.00 lab)
This course teaches ATC flight data computers and communication systems used in en route ATC facilities. You will learn to compose and format messages for coordination and documentation of ATC clearances. You will develop an understanding of the actual computers and communication systems used in en route facilities today.
Prerequisites: ATCT 2120 and ATCT 2310.
Co-requisite: ATCT 2425.

ATCT 2425: Application of En Route Non-Radar and Introduction to Radar Separation
6.00 credits (2.00 lec/4.00 lab)
This course teaches application of separation procedures in ATC and is divided into two parts, both taught primarily in a realistic simulation lab. In part one of this course, you will learn to apply non-radar separation and procedures. In part two, you will apply rules and procedures to separate aircraft using radar. You will participate in hands-on simulated traffic scenarios. You will also develop effective communication, critical-thinking and problem-solving skills needed in ATC.
Prerequisites: ATCT 2120 and ATCT 2310.
Co-requisite: ATCT 2415.

ATCT 2445: Human Factors in ATC
3.00 credits (2.00 lec/1 lab)
This course teaches advanced human factors as they relate to air traffic control. You will learn teamwork, effective communication skills, situational awareness, and efficient workload management in classroom and air traffic control lab settings.
Prerequisites: ATCT 2415 and ATCT 2425.
Co-requisite: ATCT 2500.

ATCT 2500: Advanced Radar and Radar-Associated Application
9.00 credits (2.00 lec/7.00 lab)
This course will teach advanced non-radar, radar and radar-associated procedures in a simulated environment. You will learn to perfect separation of aircraft in departure, en route and arrival stages of flight. You will also learn advanced application of board management, phraseology, vectoring, traffic advisories, emergency procedures, instrument and visual approaches, and handoffs and point outs in a realistic lab setting.
Prerequisites: ATCT 2415 and ATCT 2425.
Co-requisite: ATCT 2445.
American Indian Studies

AMIS 1000: Native America
3.00 credits (3.00 lec)
This class focuses on the historical and contemporary cultures and issues of American Indians on this continent with special focus on Minnesota. You will learn about the earliest cultures in America, clashes with European contact, resistance movements, and legislation and policies. There will be special emphasis on the Ojibwe and Dakota nations. You will also learn about cultural contributions (such as music, literature, agriculture, dance and spirituality) and contemporary issues within Native America. You will develop critical thinking, writing, and speaking skills and apply these skills to specific course content. You will be given opportunities for civic engagement within the local Native American community.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

AMIS 1100: Native American Literature
3.00 credits (3.00 lec)
This course is an introduction to the traditional and contemporary literature of Native American authors. The focus is both international and regional. You will study both oral and written literature. Storytelling, myths, legends, rituals, prayers, chants, songs, speeches, humor, fiction, poetry, drama and nonfiction essays are all a part of this course.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

AMIS 1120: Community Development and Indigenous Cultures
3.00 credits (3.00 lec)
In this course, you will be introduced to the concept of community from indigenous perspectives through nonprofit organizations, private consulting firms, advocacy groups and government. You will examine the interconnected political, economic, and physical environments of social and cultural groups that maintain an identity, with a focus on Native American reservation and off-reservation communities. This course will include a service learning component with a community different from your own.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

AMIS 1200: Native American Art and Art History
3.00 credits (3.00 lec)
This course is an overview of Native American art and art history before and after contact with Europeans. Through slide shows, lectures and guest speakers, you will study tribal art ranging from Meso-American to Inuit. You will also create and critique art projects.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

AMIS 1300: Native Americans in Cinema and Popular Culture
3.00 credits (3.00 lec)
This course is a survey of the representation of Native peoples in cinema, television and popular culture. You will examine the presentation of Native peoples in classic and popular films. You will critique the accuracy of cultural depiction, the evolution of past and present stereotypes, and discuss trends in current media.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

AMIS 1350: American Indian Education: Past & Present
3.00 credits (3.00 lec)
This course is an overview of the nature, purpose, history, philosophy, and programs of traditional and contemporary American Indian Education. You will learn the history of Indian education, including a chronology of relevant legislation while exploring current issues.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL.

American Sign Language

AMSL 1000: American Sign Language 1
4.00 credits (4.00 lec)
This course is an introduction to American Sign Language (ASL), a visual/gestural language used by Deaf people. You will learn sign vocabulary, grammar and learn about Deaf culture.
Fulfills MnTC Goal Area 8.
AMSL 1100: American Sign Language 2  
4.00 credits (4.00 lec)  
This course is an extension of ASL 1. You will continue to learn ASL vocabulary, structure, syntax and grammar with a focus on mastering the basics of fingerspelling, numbers, colors, facial grammar and sentence structure. You will also learn about Deaf culture, including Deaf humor.  
Fulfills MnTC Goal Area 8.  
Prerequisite: AMSL 1000.

AMSL 2000 American Sign Language 3  
4.00 credits (4.00 lec)  
This course continues building ASL skills learned in ASL 1 and 2. You will examine grammatical features of ASL such as descriptive and location classifier hand-shapes. You will also learn advanced sentence structure and use of space and continue building vocabulary. You will have the opportunity to create and perform stories and role plays in ASL for feedback.  
Fulfills MnTC Goal Area 8  
Prerequisite: AMSL 1100.

AMSL 2998: Directed Study  
Prerequisite: One course in AMSL.

American Studies

AMST 1000: American Radicalism  
3.00 credits (3.00 lec)  
This course surveys the evolution of American Radicalism (Right and Left Wings) from 1860 to the present. Organizations/Movements discussed include: the KKK, American Nazi Party, Aryan Nations, White Aryan Resistance, Posse Comitatus, Militias, Christian Right, Socialism, Anarchism, Communism, New Left, Women’s Movement, American Indian Movement and The Black Panther Party.  
Fulfills MnTC Goal Areas 5 and 8.  
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

AMST 1100: Contemporary American Culture: Survival in a Changing World  
3.00 credits (3.00 lec)  
This course focuses on the study of social, cultural, economic, ecological, technological, institutional, and psychological needs, demands and issues as American society hurries toward the future. Accelerated change and the overstimulation of high-speed life in America are examined. The “limits to growth” debate on projections of the interrelationship of population, food, industrialization, pollution and the consumption of nonrenewable resources is analyzed.  
Fulfills MnTC Goal Area 5.  
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

AMST 1132: Ethnic America  
3.00 credits (3.00 lec)  
Ethnic America celebrates the diversity of American culture through the contributions that various groups (including Native Americans, Hispanics, Africans, Asians, and Europeans) have made to this country, especially in literature and the arts. You will examine the histories of the peoples who make up this country and the myths and realities of the American “melting pot.”  
Fulfills MnTC Goal Areas 6 and 7.  
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

AMST 1140: Introduction to Chicana/o Studies  
3.00 credits (3.00 lec)  
This interdisciplinary course explores the experiences, both past and present, which have impacted Mexican Americans (Chicanas/os) living in the United States. You will gain an elementary understanding of the history, heritage, culture and sociopolitical issues affecting Chicanas/os and learn about Chicana/o cultural expression through an examination of literature, music, film and art. You will also learn to respond critically to relevant course materials and will explore in depth one topic of your choice.  
Fulfills MnTC Goal Areas 6 and 7.  
Prerequisite: one course from MnTC goal area 1.
AMST 1152: Popular Culture in 20th-Century America
3.00 credits (3.00 lec)
This class begins by attempting to define the term “popular culture.” You then will explore music, film, literature, media, advertising and various cultural icons in American history. From this exploration, you will gain an understanding of the influence of popular culture in the 20th century. You will also explore the various forms of popular culture that have emerged in diverse ethnic, racial and sexual groups.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: One course from the MnTC Goal Area 1.

AMST 1155: Culture vs. Counterculture: America in the 1960s
3.00 credits (3.00 lec)
This course is a study of American art, literature, politics, music and social values in the 1960s. You will closely examine the impact of African-American, Native American, and other minorities—including gay and lesbian communities—in building a viable counterculture that shaped American cultural values to the present time.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

AMST 2998: Directed Study
Prerequisite: One course in AMST.

Anthropology

ANTH 1104: Human Origins
3.00 credits (3.00 lec)
This course is an introduction to the archaeological evidence and theories developed by physical anthropologists to explain the origin and evolution of the human species. The course examines theories related to evolution, adaptation and variation. Primates, as human predecessors, are examined in order to understand the first step in human evolution. Each stage of human development is then examined. Prehistoric evidence uncovered by archaeologists, the foundation of the course, is studied.
Fulfills MnTC Goal Area 5.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ANTH 1105: Introduction to Cultural Anthropology
3.00 credits (3.00 lec)
Cultural anthropology is the study of contemporary and historically recent human societies and cultures. The main focus of this field is culture—the customs and beliefs of human groups. Anthropologists are especially fascinated by the great variety of the world’s people and cultures; therefore, describing and attempting to understand and explain this cultural diversity is one of the discipline’s major objectives. During the semester, you will examine the concept of culture, the diversity in adaptive strategies; diversity in kinship, marriage and family; economic systems; ideas about gender; political life; relationships with the supernatural; and social inequalities cross-culturally.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ANTH 1110: Introduction to Archaeology
3.00 credits (3.00 lec)
This course is an introduction to the archaeological field and profession. Archaeology is the study of human material culture, the things we create, carry around and leave behind. Through artifact and site study, lectures and videos, you will examine archaeology’s history, theory, and methods including possible careers. You will gain a solid understanding of how archaeology is used on a daily basis, highlighting questions of ethics, economy, subsistence, status, race, consumption, inequality and gender.
Fulfills MnTC Goal Area 5.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ANTH 1150: Women Across Cultures
3.00 credits (3.00 lec)
This course examines the theories, concepts and methods that anthropology brings to the study of women. Sex and gender are central features shaping our lives, and you will explore the biological constructions of the female sex and cultural constructions of the feminine gender. You will also analyze the ways in which women’s lives differ and are comparable cross-culturally and how you can understand these differences and similarities.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
ANTH 1200–1220: Current Issues in Anthropology
1.00–3.00 credits (1.00–3.00 lec)
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ANTH 2105: Globalization and Culture Change
3.00 credits (3.00 lec)
This course explores ways in which globalization has changed both traditional cultures and western societies. You will learn about capitalism, trade, the environment, human rights, labor, poverty, hunger, and related issues. You will also examine the people and organizations attempting to resist corporate power, including voices from traditional cultures of the world.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 200 or ESOL 0052; Placement into ENGL 1110 or completion of ENGL 900 or ESOL 0051.

ANTH 2998: Directed Study
Prerequisite: One course in ANTH.

Apparel Technologies

APRL 1000: Industrial Sewing Methods
4.00 credits (3.00 lec/1.00 lab)
This hands-on course provides technical, detail-oriented sewing instruction through lecture, demonstration, practice and application in an industrially equipped laboratory. Upon completion of this course, you will have knowledge of industrial sewing techniques, basic garment construction order, industrial equipment operation and basic maintenance. In this course, use of standard techniques and terminology prepares you for further coursework in the Apparel Technologies program. Must be taken A–F.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

APRL 1025: Fashion Imaging
3.00 credit (1.00 lec/2.00 lab)
This course will provide an introduction to fashion illustration using a variety of traditional methods and computer based Vector illustration basic applications. You will learn about technical (flats) and stylized drawing. Must be taken A–F.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisites: APRL 1000, APRL 1100, APRL 1360.

APRL 1050: Open Lab
1.00 credit (1.00 lab)
This is an elective course that permits you to spend an additional 100 minutes per week of faculty-supervised time working in program laboratories on projects required by coursework being taken concurrent with the open lab. Must be taken A–F.
Co-requisite: Concurrent registration in another APRL course.

APRL 1100: Textiles
3.00 credits (2.00 lec/1.00 lab)
Because fabric is the primary component of apparel and many sewn products, an in-depth study of cloth fabrication will be covered in this class. Natural and manufactured fibers, yarns, fabrics, finishes and regulations affecting textiles will be studied. Must be taken A–F.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

APRL 1200: Pattern Grading and Size Analysis
2.00 credits (2.00 lec)
This course will explain and demonstrate the skill of developing multiple-sized patterns by simple and reliable methods. You will learn fundamental methods that are useful guides to grading patterns for all styles of ready-to-wear clothing. You will have a better understanding of the mechanics of grading and realize the importance of knowing how to grade properly. Must be taken A–F.
Prerequisite: APRL 1360.
APRL 1360: Pattern Development 1
3.00 credits (1.00 lec/2.00 lab)
This course covers the development of basic bodice and sleeve slopers, using body measurements. You will learn to take accurate measurements, analyze fit, and make pattern adjustments. You will create style variations by learning to manipulate basic slopers. You will learn appropriate terminology and use drafting tools to make working and final patterns. Must be taken A–F.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisites: APRL 1000, APRL 1100.

APRL 1400: Garment Construction
3.00 credits (2.00 lec/1.00 lab)
This course provides the basic techniques of garment construction. You will apply these techniques by constructing a lined vest and pant. You will also explore other garment construction techniques, such as zipper applications, interfacing, pocket construction, closures and hemming. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1025, APRL 1100, APRL 1360.
Co-requisites: APRL 1400, APRL 2150, APRL 2350, APRL 2750.

APRL 1660: Fitting Analysis and Application
3.00 credits (1.00 lec/2.00 lab)
This course provides techniques for solving fitting problems with a variety of garments. You will analyze and devise solutions to fitting problems with pants, skirts, blouses, shirts, jackets, and dresses. You will then practice sizing, fitting and sewing alterations. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1400.

APRL 1800: Draping and Pattern Workroom
4.00 credits (2.00 lec/2.00 lab)
Draping is the art of creating patterns by draping fabric on a dress form; it is the three-dimensional method that allows for visual analysis. You will start with basic bodices and advance through bias draping. You will also learn the industrial pattern workroom process from design through production patterns. Must be taken A–F.
Prerequisite: APRL 1360.

APRL 2015: Knitwear
3.00 credits (1.00 lec/2.00 lab)
This course will introduce the student to pattern development and construction techniques used for knitwear and specialty fabrics. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1025, APRL 1100, APRL 1360.
Co-requisites: APRL 1400, APRL 2150, APRL 2350, APRL 2750.

APRL 2150: Computer Aided Design
4.00 credits (2.00 lec/2.00 lab)
This course provides training using standard industry software. You will learn digitizing, grade-rule application, and marker making, as well as plotting patterns and markers. You will apply flat pattern design skills to the computer and develop pattern pieces and models. Computer-aided design software will allow you to create and alter patterns using imperial and metric measurements. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1025, APRL 1100, APRL 1360.

APRL 2350: Pattern Development 2
3.00 credits (1.00 lec/2.00 lab)
This course will provide you with the technical skills essential for developing industry standard patterns for complex designs. You will analyze, develop and construct patterns for notched collars, kimono sleeves, and torso- and sheath-style garments. You will identify and apply dart manipulation methods and construct original patterns. Must be taken A–F.
Prerequisites: APRL 1025, APRL 1360, or instructor approval.
Co-requisites: APRL 1400, APRL 2150, APRL 2750.

APRL 2420: Advanced Garment Construction
3.00 credits (1.00 lec/2.00 lab)
This course presents advanced levels of garment construction. You will explore pattern adjustment, fitting techniques, and specialized construction applications. You will learn and use specialized techniques for a variety of ready-to-wear and couture garments. You will analyze fit, perform pattern adjustments, and construct a jacket and shirt. Must be taken A–F.
Prerequisites: APRL 1400, APRL 2350; or instructor approval.
Co-require: APRL 1800.
**APRL 2550: Clothing Line Design**
4.00 credits (2.00 lec/2.00 lab)
This course is a capstone to the Apparel Technologies program. You will have the opportunity to demonstrate concepts and skills by developing a line of clothing. You will explore fashion history, color theory, concept and theme development, and the creative process. Also, you will examine market categories, fabrication and sourcing. Must be taken A–F.
Prerequisite: APRL 2350 or instructor approval.
Co-requisites: APRL 1660, APRL 1800, APRL 2420; or instructor approval.

**APRL 2650: Internship**
2.00 credits (2.00 lab)
This course provides experiences in an industrial setting with an apparel manufacturer. You will have the opportunity to review portfolios, develop interview skills, practice time management and apply apparel technology skills at an actual worksite. Internships are only available to advanced-certificate-seeking students. Must be taken A–F.
Prerequisites: APRL 1360, APRL 1400, APRL 2350; or instructor approval.

**APRL 2750: Product Development and Manufacturing**
3.00 credits (1.00 lec/2.00 lab)
This course provides techniques in the product development and manufacturing process of garments. You will design, spec, and manufacture an apparel or soft goods product. You will learn about trends, line development, prototypes, fabric sourcing, costing and operations. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1100, APRL 1360.

**APRL 2900: Bridal and Special Occasion**
3.00 credits (1.00 lec/2.00 lab)
This course will cover fitting and construction skills specific to the bridal and special occasion markets, with an emphasis on couture techniques. You will construct samples and, as a capstone project, a bridal or evening wear test garment. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1360; or instructor approval.
Co-requisite: APRL 1400.

**APRL 2940: Leather and Fur Construction**
3.00 credits (2.00 lec/1.00 lab)
This course provides insight into the origin of leather and into its manufacturing process. You will gain practical experience in making a leather garment and finishing techniques in fur. Must be taken A–F.
Prerequisites: APRL 1000, APRL 1360; or instructor approval.
Co-requisite: APRL 1400.

**APRL 2998: Directed Study**
Must be taken A–F.
Prerequisites: One course in APRL; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**Arabic**

**ARAB 1000: Beginning Arabic 1**
5.00 credits (5.00 lec)
Beginning Arabic introduces you to the classic, contemporary Arabic language, including the written alphabet and sound system. You will develop basic listening, speaking, reading and writing skills necessary to communicate about self, family and daily life, as well as basic survival needs. You will also explore cultural aspects of the Arabic-speaking world, as well as various dialectical variations in the Arabic-speaking world.
Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
ARAB 1100: Beginning Arabic 2  
5.00 credits (5.00 lec)  
This course builds upon the skills developed in ARAB 1000. You will be able to initiate conversation and ask questions related to their needs, family, education and other basic communication idioms. You will demonstrate these skills in speaking, writing, listening and reading. You will learn vital sociocultural aspects of oral communication and compose simple narratives in classic, contemporary Arabic. You will also learn regional dialectical variations of the language.  
Fulfills MnTC Goal Area 8.  
Prerequisites: ARAB 1000; Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ARAB 2000: Intermediate Arabic 1  
5.00 credits (5.00 lec)  
This course is a continuation of Arabic 1000 and 1100. You will advance your writing, conversation and comprehension skills in Arabic to a higher level of competency. In addition, as an intermediate Arabic student, you will improve your ability to create independent sentences, while reading authentic Arabic texts. You will also deepen your understanding of cultural differences among various Arabic-speaking countries.  
Fulfills MnTC Goal Area 8.  
Prerequisite: ARAB 1100 or equivalent.

ARAB 2100: Intermediate Arabic 2  
5.00 credits (5.00 lec)  
This course is a continuation of Arabic 2000. You will advance your written, conversational and understanding skills in Arabic to a higher level of competency. In addition, as the second intermediate Arabic language course, you will improve your ability to create independent sentences, while reading authentic Arabic texts. You will also read and discuss a variety of short cultural and historical texts to deepen your understanding of the cultural differences amongst various Arabic-speaking countries. You will further develop your language proficiency in the modern standard Arabic in the four language skill areas.  
Fulfills MnTC Goal Area 8.  
Prerequisite: ARAB 2000 or equivalent.

Architectural Technology

ARCH 1000: Architectural Technology Lab 1  
6.00 credits (6.00 lab)  
This course introduces you to the production of residential construction drawings. Principles of hand-sketching techniques will be used to assemble plan, elevation and section views. You will sketch and use computer drafting software to prepare sets of house plans for a variety of wood construction types.  
Prerequisite: Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.  
Co-requisites: ARCH 1020 and ARCH 1030.

ARCH 1010: Architectural Orientation  
2.00 credits (2.00 lec)  
This course is an introduction to the architectural profession. Topics cover office practice, construction analysis, current architects’ and students’ work, as well as a review of architectural plans. The course focuses on what to expect from a job with an architectural firm.  
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1020: Building Technology 1  
2.00 credits (2.00 lec)  
This course will introduce you to the technology needed to assemble a residential construction document package. Construction materials such as windows, wood, concrete, roofing and steel will be analyzed. Emphasis will be given to incorporating construction products into buildings that you are preparing in lab assignments (ARCH 1000).  
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1030: AutoCAD 1  
2.00 credits (2.00 lec)  
This course introduces you to the computer application of two-dimensional AutoCAD as applied to architectural drafting. Classes address basic and advanced drawing and editing commands used to produce and manipulate technical drawings within the AutoCAD environment.  
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
ARCH 1200: Architectural Technology Lab 2
6.00 credits (6.00 lec)
This course will involve you in the assembly of construction drawings for two commercial/institutional projects. Exploration of the theory and application of various building materials, systems, and drawing conventions is emphasized.
Prerequisite: ARCH 1000.
Co-requisite: ARCH 1220.

ARCH 1220: Building Technology 2
2.00 credits (2.00 lec)
The course focuses on the technology needed to assemble institutional projects. A variety of light-frame commercial systems will be examined, including steel framing, exterior finishing systems, interior walls and ceilings, and details. The course will analyze the assembly of projects assigned in ARCH 1200.
Prerequisite: ARCH 1020.

ARCH 1230: REVIT 1
2.00 credits (2.00 lec)
This course focuses on introducing Revit Architecture and Building Information Modeling (BIM). The beginning of the course will focus on the Revit user interface and the core commands. The last half of class will focus on the modeling and documentation capability within Revit Architecture.
Prerequisite: ARCH 1030.

ARCH 1500: Building Structures
3.00 credits (3.00 lec)
This course provides a basic understanding of the structural design for beams, columns, and joists in wood, steel, and concrete. It emphasizes the nature of frame structures and is intended to provide an architectural technician with the knowledge necessary to work with a structural engineer.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1510: Mechanical and Electrical Systems
3.00 credits (3.00 lec)
This course provides an overview of the selection criteria and the design process for heating, ventilating and air conditioning, electrical systems, water supply and sanitation, lighting, lighting, and elevator systems. The interrelationship of architecture and the engineering functions is explored.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1520: Building Codes/Zoning/Specifications
2.00 credits (2.00 lec)
This course is a study of standards and codes used to design buildings and sites. These regulations govern the materials and construction of building design and are critical to ensuring public safety. You will review zoning ordinances and their relationship to how communities plan for comfort, safety, and growth. Investigation of product specifications and how it impacts project design will also be included.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1530: Architect's Professional Practice
2.00 credits (2.00 lec)
The course presents the contracts and documents that are used in the architectural profession. You will examine American Institute of Architects (AIA) documents ranging from change orders to the AIA general conditions. The course will review the importance of conducting an architectural practice in a businesslike way.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 1540: Architectural History
3.00 credits (3.00 lec)
You will review the history of architecture through the evolution of styles from ancient Egyptian through postmodern. The class will analyze the architectural styles of civilizations from 2300 BC to the 20th century and study major buildings from the Parthenon to the Pantheon.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

ARCH 2000: Architectural Technology Lab 3
6.00 credits (6.00 lab)
This course covers the assembly of a commercial construction drawing package for a building that is approximately 25,000 square feet. You will develop a CAD working drawing set (from a design development package) that will include structural framing, plans, elevations and detailed section drawings.
Prerequisite: ARCH 1200.
Co-requisites: ARCH 2020, ARCH 2030.
ARCH 2020: Building Technology 3
2.00 credits (2.00 lec)
This course is an advanced exploration into the technology required to assemble a two-story commercial building. The course will study detailed assembly of conditions ranging from hydraulic elevators to building flashing. The lab project assembly of a commercial building (ARCH 2000) will be used as a model to research construction conditions.
Prerequisite: ARCH 1200.

ARCH 2030: REVIT Families
2.00 credits (2.00 lec)
This course assumes you are proficient with AutoCAD. The course focuses on introducing Revit Architecture and Building Information Modeling (BIM). This course also seeks to develop your understanding of Computer-Aided Design (CAD) and the application of CAD through multiple applications. The beginning of the course will focus on the Revit user interface and the core commands. The last half of class will focus on the modeling and documentation capability within Revit Architecture.
Prerequisite: ARCH 1230.

ARCH 2200: Architectural Technology Lab 4
6.00 credits (6.00 lab)
This course assumes you have completed ARCH 1000 and ARCH 1200 in the Architectural Technology program and have a working knowledge of construction details. You will be provided with a site and building program at the beginning of the semester. You will develop a design for the building based on the criteria provided and develop a set of construction documents for the building design.
Prerequisite: ARCH 1200.
Co-requisites: ARCH 1220, ARCH 1230.

ARCH 2220: Building Technology 4
2.00 credits (2.00 lec)
This course will analyze the construction technology necessary to assemble a commercial building that you program and design in ARCH 2200 (taken concurrently). The course will address materials research and detail analysis that is necessary to generate construction drawings.
Prerequisite: ARCH 1220.

ARCH 2230: Advanced Computer Modeling
2.00 credits (2.00 lec)
This course assumes you understand the core Revit Architecture drawing and modeling commands and can perform sheet setup and plotting with little or no instructor input. This course focuses on becoming familiar with Revit’s 3D capability and learning to customize building information models (BIM). This course also seeks to develop your ability with Revit Architecture. The first two-thirds of the course will focus on customization and family creation and editing. The last third of the class will focus on 3D visualization.
Prerequisite: ARCH 1230.

ARCH 2500: Office Internship
7.00 credits (7.00 int)
The course will provide on-the-job experience in an architect’s office. The course will provide hands-on experiences ranging from using CAD to working with an architectural team to produce construction drawings.
Prerequisites: ARCH 2000, ARCH 2200.

ARCH 2550: Independent Study
3.00 credits (3.00 lec)
This course will allow you to develop a research model on topics ranging from construction products to computer-aided drafting. The independent study involves developing questions in a specific field, conducting research and proving the results.
Prerequisite: ARCH 1000.

ARCH 2998: Directed Study
Prerequisite: ARCH 1020.

Art

ARTS 1110: Introduction to Art
3.00 credits (3.00 lec)
This course is an introduction to basic concepts of the visual arts in various media. Topics include the significance and language of art. Activities include text reading, slide lectures and gallery tours. You will learn to evaluate artists’ work, understand various interpretations of works, and recognize the assumptions underlying these interpretations.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
**ARTS 1111: Art History: Ancient to Medieval**  
3.00 credits (3.00 lec)  
This course is a worldwide survey of art from the prehistoric through the Medieval period. Through slide lectures, discussions, videotapes, and museum visits, you will learn to understand art within its historical and social context and to interpret the meaning of art in an informed manner.  
Fulfills MnTC Goal Areas 6 and 8.  
*Prerequisites:* Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**ARTS 1112: Art History: Renaissance to 18th Century**  
3.00 credits (3.00 lec)  
This course is a worldwide survey of art from the Renaissance through the 18th century. Through slide lectures, discussions, videotapes, and museum visits, you will learn to understand art within its historical and social context and to interpret the meaning of art in an informed manner.  
Fulfills MnTC Goal Areas 6 and 8.  
*Prerequisites:* Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**ARTS 1113: Art History: Modern to Contemporary**  
3.00 credits (3.00 lec)  
This course is a survey of modern and contemporary art from the 19th century to the present. Through slide lectures, discussions, videotapes, and museum visits, you will learn to understand art within its historical and social context, and to interpret the meaning of art in an informed manner.  
Fulfills MnTC Goal Areas 6 and 8.  
*Prerequisites:* Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**ARTS 1121: Drawing 1**  
3.00 credits (1.00 lec/2.00 lab)  
This course is an introduction to the basic drawing principles of line, perspective, composition and shading. Demonstrations, slides and studio sessions teach you to respond critically to art, as well as to apply aesthetic principles to your own and others’ work.  
Fulfills MnTC Goal Area 6.

**ARTS 1125: Ceramics 1**  
3.00 credits (1.00 lec/2.00 lab)  
This course introduces you to primary methods of forming clay. It focuses on hand-building methods; however, you are also introduced to wheel-throwing techniques. While the primary focus is on making ceramics, critiques and lectures will introduce the class to a general historical background and to fundamental design issues.  
Fulfills MnTC Goal Area 6.

**ARTS 1132: Printmaking**  
3.00 credits (1.00 lec/2.00 lab)  
This course will focus on three primary ways of making prints: monoprinting, relief printing and intaglio. While making prints with these methods in both traditional and experimental ways, you will arrive at a style that is uniquely your own. You will also learn about the history of printmaking to understand the uniqueness of prints in the context of other media.  
Fulfills MnTC Goal Area 6.

**ARTS 1133: Sculpture**  
3.00 credits (1.00 lec/2.00 lab)  
This course introduces you to artwork done in three dimensions. You will use a variety of materials and will work with both traditional and contemporary methods of forming. Primary forming methods include casting, modeling, carving, assembling and fabricating; primary materials include clay, plaster, wire, paper and foam. Lectures and critiques include some historical emphasis and some emphasis on design issues as they relate to form, volume, planes and space.  
Fulfills MnTC Goal Area 6.

**ARTS 1141: Design: Foundations of Studio Art**  
3.00 credits (3.00 lec)  
This course helps you understand the way art is put together. The class will practice design elements and principles (i.e. color, space, composition, contrast) by making designs (art) in various media. Both two-dimensional and three-dimensional design concepts are studied.  
Fulfills MnTC Goal Area 6.
ARTS 1142: Painting 1
3.00 credits (1.00 lec/2.00 lab)
This course explores important concepts in painting. While most of the emphasis is on painting, lectures and critiques allow for some investigation of painting in a historical context. This course defines painting in a broad sense and allows for an exploration of both traditional and nontraditional methods. Acrylic paint is the medium used. The course is designed to help you with all levels of experience.
Fulfills MnTC Goal Area 6.

ARTS 2211: Women in Art
3.00 credits (3.00 lec)
This course examines women’s contributions to the visual arts, primarily as creators of art, but also as viewers and patrons. You will consider the ways in which women throughout history have been represented as the subject of visual images, as well as the social and cultural attitudes reflected in those presentations. A portion of the semester is devoted to a survey of women artists of diverse cultures, from the Renaissance to the present, focusing on art in a variety of media, including painting, sculpture, photography, the graphic arts, textiles and more.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ARTS 2212: Painting 2
3.00 credits (1.00 lec/2.00 lab)
This course refines and expands on concepts learned in Painting 1. It also guides you to develop a personal style so that you may interpret your world in an individual way. Important to the class is the discussion of paintings—your own and the paintings of others. You will learn about well-known painters and paintings and use community galleries and museums as a source for study.
Fulfills MnTC Goal Area 6.
Prerequisite: ARTS 1142.

ARTS 2213: Watercolor
3.00 credits (1.00 lec/2.00 lab)
This course provides an introduction to the basic principles of watercolor, including technique, color usage and composition. There are demonstrations, slide lectures and studio sessions. You will learn to respond critically to watercolors and to apply aesthetic principles to your own and others’ work.
Fulfills MnTC Goal Area 6.

ARTS 2214: A.F.A. Portfolio
2.00 credits (1.00 lec/1.00 lab)
This course provides the fundamental skills needed to present your own art. You will select a body of work that has visual or thematic continuity and represents the culmination of your A.F.A. studies. You will install an exhibition of the results of that study. The exhibition will be accompanied by your written artist’s statement. You will develop a portfolio in preparation for an advanced degree.
Fulfills MnTC Goal Area 6.
Prerequisites: ARTS 1121, ARTS 1125, ARTS 1133, ARTS 1141, ARTS 1142 and PHOT 1100.

ARTS 2221: Life Drawing
3.00 credits (1.00 lec/2.00 lab)
This course is devoted to understanding and using life forms (primarily human) as a subject in fine art. Lessons will incorporate a variety of art media and styles to render and interpret subjects. Many sessions of this course will use the human figure, both clothed and nude, as a subject.
Fulfills MnTC Goal Area 6.
Prerequisite: ARTS 1121.

ARTS 2222: Drawing 2
3.00 credits (1.00 lec/2.00 lab)
This course is a continuation of the principles dealt with in Drawing 1. Such subjects as portraiture, the human figure, landscape and still-life are explored. There will be demonstrations, slide lectures and studio sessions. You will learn to respond critically to drawings and to apply aesthetic principles to your own and others’ work.
Fulfills MnTC Goal Area 6.
Prerequisite: ARTS 1121.

ARTS 2225: Ceramics 2
3.00 credits (1.00 lec/2.00 lab)
This course refines and expands on concepts learned in Ceramics 1. It guides you to develop a personal style in clay so that you may interpret your world in an individual way. Wheel-throwing techniques are concentrated in design and function of ceramic vessels, while hand-building methods focus on narrative sculpture. Firing and glazing techniques will be discussed in detail. You will learn about well-known historic and contemporary ceramic artists and use community galleries and museums as a source for your studies.
Fulfills MnTC Goal Area 6.
Prerequisite: ARTS 1125.
ARTS 2233: Sculpture: Direct Metals
3.00 credits (1.00 lec/2.00 lab)
This course investigates figurative, nonfigurative, environmental and spatial problems through the use of basic oxygen-acetylene and electric arc welding. You will have ample opportunity to practice techniques needed to make original sculptures. This course will discuss and present major periods and styles of metal art from 3500 B.C. to postmodern times, with emphasis on developing your visual concepts through technical application and experimentation. You will also discuss how to set up an economical studio, purchase stock and maintain equipment. Fulfills MnTC Goal Area 6.

ARTS 2234: Sculpture 2
3.00 credits (1.00 lec/2.00 lab)
In this course, you will expand three-dimensional investigations using spatial relationships and techniques begun in Sculpture I in both figurative and nonfigurative forms. Your research will focus on awareness and appreciation of personal perceptions and interpretations that will develop critical thinking, formal language, and methods used in advanced sculpture courses. Fulfills MnTC Goal Area 6. 

Prerequisite: ARTS 1133.

ARTS 2998: Directed Study
Prerequisite: One course in ARTS.

ASTR 1110: Astronomy
3.00 credits (3.00 lec)
This survey course introduces you to the objects and processes in the universe with particular emphasis on collections of ordinary matter like planets, stars and galaxies; more exotic matter like pulsars, black holes and dark matter; their interactions; and the human place in and responsibility to the environment. Topics include: stargazing; the scale of our universe; some history of astronomy; how we get information from the universe; our solar system; comparative environments; threats to our environment; the Greenhouse Effect; other solar systems; the birth, life and death of stars; dark matter and dark energy; and the origin and fate of our universe. The optional lab is necessary for transfer as a lab science and to satisfy some Natural Science competencies. Fulfills MnTC Goal Area 3. Completion of the optional lab (ASTR 1115) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3. 

Prerequisite: High school algebra or equivalent.

Barbering

BARB 1000: Introduction to Barbering and Histology
4.00 credits (4.00 lec)
This course covers ethics, the history of barbering, fundamentals of haircutting on mannequins, current trends, tools, bacteriology and sanitation; as well as the structure of hair, skin and its appendages; and scalp and skin ailments. This course is intended for students who are admitted to the Barbering program at the beginning of a semester. 

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1010: Introduction to Barbering
2.00 credits (2.00 lec)
This course covers ethics, the history of barbering, fundamentals of haircutting on mannequins, current trends, tools, bacteriology and sanitation. This course is intended for students who are admitted to the Barbering program midsemester. 

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1020: Histology
2.00 credits (2.00 lec)
This course covers the structure of hair, skin and its appendages, and scalp and skin ailments. This course is intended for students who are admitted to the Barbering program midsemester. 

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
**BARB 1050: Basic Lab 1**
3.00 credits (3.00 lab)
This lab provides you with the practice of basic barbering on clientele.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1100: Basic Lab 2**
3.00 credits (3.00 lab)
This lab provides you with continuing practice of basic barbering on clientele.
Prerequisites: BARB 1050; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1150: Basic Fundamentals of Barbering Services**
4.00 credits (4.00 lec)
This course covers shaving, shampooing and facial procedures.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1200: Survey Lab 1**
3.00 credits (3.00 lab)
This lab provides you with an opportunity to develop the practical skills of contemporary men's haircutting necessary to work in a barber shop.
Prerequisites: BARB 1000 and BARB 1100; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1250: Survey Lab 2**
3.00 credits (3.00 lab)
This lab provides you with continuing opportunities to develop the practical skills of contemporary men's haircutting necessary to work in a barber shop.
Prerequisites: BARB 1050, BARB 1100, BARB 1200; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1300: Anatomy and Physiology in Barbering**
2.00 credits (2.00 lec)
This course covers human anatomy and physiology in relation to barbering.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1350: Chemical Services**
2.00 credits (2.00 lec)
This course covers cosmetic chemistry, wrapping perms, and safely applying hair color and chemicals when working with clientele.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1360: Intermediate Lab 1**
3.00 credits (3.00 lab)
This lab provides you with an opportunity to develop skills specific to women's and children's haircutting necessary to work in a barber shop and/or salon.
Prerequisites: BARB 1050, BARB 1100, BARB 1200; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1370: Intermediate Lab 2**
3.00 credits (3.00 lab)
This lab provides you with continuing opportunity to develop skills specific to women's and children's haircutting necessary to work in a barber shop and/or salon.
Prerequisites: BARB 1050, BARB 1100, BARB 1200, BARB 1250, BARB 1360; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**BARB 1400: Business Management in Barbering**
2.00 credits (2.00 lec)
This course introduces you to management and sales fundamentals with an emphasis on Minnesota laws and reciprocity. It provides you with experience in customer relations, business and professional ethics, and shop management.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
BARB 1450: Advanced Technology
2.00 credits (2.00 lec)
This course covers theory behind the identification, creation, application, cutting and care of hairpieces. Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1460: Advanced Lab 1
4.00 credits (4.00 lab)
This lab provides you with expanded practice in men’s, women’s and children’s hairstyling. Prerequisites: BARB 1050, BARB 1100, BARB 1200, BARB 1250, BARB 1360, BARB 1370; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1470: Advanced Lab 2
4.00 credits (4.00 lab)
This lab provides you with continuing expanded practice in men’s, women’s and children’s hairstyling. Prerequisites: BARB 1050, BARB 1100, BARB 1200, BARB 1250, BARB 1360, BARB 1370, BARB 1460; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1500: Open Lab 1
4.00 credits (4.00 lab)
This lab provides you with in-depth preparation for the Minnesota State Board of Barbering Examination. Prerequisites: BARB 1050, BARB 1100, BARB 1200, BARB 1250, BARB 1360, BARB 1370, BARB 1460, BARB 1470; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1510: Open Lab 2
4.00 credits (4.00 lab)
This lab provides you with continuing in-depth preparation for the Minnesota State Board of Barbering examination. Prerequisites: BARB 1050, BARB 1100, BARB 1200, BARB 1250, BARB 1360, BARB 1370, BARB 1460, BARB 1470, BARB 1500; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 1520: Job Seeking
1.00 credit (1.00 lec)
In this course, you will create a résumé, write job application letters, complete a job application form and prepare for an employment interview. Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BARB 2998: Directed Study
Prerequisites: One course in BARB; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

Biology

BIOL 1100: Introduction to Biology
4.00 credits (3.00 lec/1.00 lab)
This course presents biology as a series of fundamental concepts, all focusing on the theme of the unity and diversity of life. It examines four broad topics: genetics (including Mendelian inheritance, mitosis, meiosis and molecular genetics); evolution (Darwin’s theory, evidence of evolution and the history of life, including humans); organismal biology (the classification, diversity, and evolutionary history of prokaryotes and eukaryotes); ecology (energy flow, nutrient cycling, ecosystems and biogeography); and conservation biology. The course includes two hours of laboratory instruction per week. Fulfills MnTC Goal Area 3. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

BIOL 1120: Nutrition
3.00 credits (3.00 lec)
This course considers the nutrients and their functions in the human body, basic nutritional requirements, nutrition tools, and guidelines for making sound food choices and reading food labels. You will learn how to plan a balanced diet and how to evaluate nutrition behaviors using popular nutrition literature. No previous coursework in biology is required. Offered as both an on-campus and Web course. This course fulfills the lab-like experience requirements for MnTC Goal Area 3. Fulfills MnTC Goal Area 3. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
**BIOL 1127: Human Biology**
3.00 credits (3.00 lec)
This one-semester course is designed to introduce concepts needed to study the complexity of humans in a biological world. The body systems are investigated and understood in a pattern of wellness. Ecological and genetic topics are also studied. This course does not satisfy the anatomy and physiology requirement of the Nursing program or replace BIOL 2200 as a prerequisite to BIOL 2224: Anatomy and BIOL 2225: Physiology. Fulfills MnTC Goal Area 3. Completion of the optional lab (BIOL 1128) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BIOL 1128: Human Biology Lab**
1.00 credit (1.00 lab)
Laboratory examination of topics covered in BIOL 1127. Fulfills MnTC Goal Area 3. Completion of the optional lab (BIOL 1128) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: BIOL 1127.

**BIOL 1136: Environmental Science**
3.00 credits (3.00 lec)
This course provides an introduction to the relationships between people and the environment in the past, present, and future. You will explore these relationships from an interdisciplinary perspective, including a solid foundation in the natural sciences, and topics ranging from history, economics, and politics to philosophy. The goal is to help you think critically about the local and global impacts of our increasing demand for natural resources. Pollution, landscape destruction, and loss of species, with their respective effects on environmental and human health, force us to explore alternatives for more sustainable relationships with the Earth. Offered as both an on-campus and Web course. Fulfills MnTC Goal Areas 3 and 10. Completion of the on campus optional lab (BIOL 1137) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BIOL 1137: Environmental Science Lab**
1.00 credit (1.00 lab)
This on-campus laboratory course examines topics raised in BIOL 1136 through lab experiments and fieldwork. Examples are assessment of water quality, the use of a GIS, biodiversity and acid rain, among others. Fulfills MnTC Goal Areas 3 and 10. Completion of the on campus optional lab (BIOL 1137) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: BIOL 1136.

**BIOL 1160: Biology of Women**
3.00 credits (3.00 lec)
This course is designed to give you an opportunity to explore aspects of biology that apply specifically to women. You will learn aspects of the reproductive system (for example, pregnancy and fetal development as well as menstruation and menopause); health concerns and management of other body systems are addressed as well. You will collect and analyze data on your own health and fertility. No previous coursework in biology is required. This course fulfills the lab-like experience requirements for MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BIOL 1180–1184: Special Topics in Biology**
2.00 credits (2.00 lec)
These courses examine a current issue or problem in biology, or provide a field or lab experience not included in the scope of the traditional biology curriculum. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BIOL 1190: Biomedical Terminology**
2.00 credits (2.00 lec)
This course develops a standard base of commonly used Greek and Latin stem words, prefixes and suffixes from which a working technical vocabulary can be constructed for those in nursing, natural sciences, pre-professional fields and other allied health fields. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
BIOL 2200: Principles of Biology
4.00 credits (3.00 lec/1.00 lab)
This course examines the major concepts of biology and is designed for students majoring in Biology, Nursing, and other science-related fields. Topics provide you with an understanding of the scientific method, basic biochemistry, cell biology, bioenergetics, reproduction, development, genetics, biotechnology, evolution and ecology. The lecture/theory portion of this course is offered both on campus in the classroom and as a Web course. This course includes two hours of required lab per week, which must be taken on campus. This course is also appropriate for liberal arts students seeking General Education credits.
Fulfills MnTC Goal Area 3.
Prerequisites: CHEM 1020 or high school chemistry with a grade of "C" (2.0) or higher. It is highly recommended that students have a placement into READ 1300.

BIOL 2205: Genetics
4.00 credits (3.00 lec/1.00 lab)
This course presents the principles of genetics at the molecular, cellular and population levels. Chromosome structure and function, gene mapping, mutation and selection, variation, and regulation of gene expression are covered.
This course includes two hours of required lab per week.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2200.

BIOL 2224: Anatomy
4.00 credits (3.00 lec/1.00 lab)
This course provides an in-depth study of tissues and the anatomy of all human body systems. The course focuses on how the shape and composition of the anatomical structures allows them to perform their functions. Pathology of the anatomy may be included, but normal anatomy will be stressed. The lecture/theory portion of this course is offered both on campus in the classroom and as a Web course. This course includes two hours of required lab per week, which must be taken on campus.
Fulfills MnTC Goal Area 3.
Prerequisites: BIOL 2200, CHEM 1020; or one full year of both high school chemistry and general biology with grades of straight "C" (2.0) or above within the last five years.

BIOL 2225: Physiology
4.00 credits (3.00 lec/1.00 lab)
This course provides an in-depth study of the functioning of most body systems including the muscle, nervous, cardiovascular, respiratory, digestive, urinary and endocrine systems. Dysfunctions may be included, but normal physiology will be stressed. The lecture/theory portion of this course is offered both on campus in the classroom and as a Web course. This course includes two hours of required lab per week, which must be taken on campus.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2224.

BIOL 2226: Pathophysiology
2.00 credits (2.0 lec)
This course provides an in-depth study of the chemical, biological and psychological processes involved with alterations of health, using systemic and nonsystemic approaches. This course is offered both on campus and as a Web course.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2225.

BIOL 2230: Microbiology
2.00 credits (2.0 lec)
This course examines the structure, function, genetics, and metabolism of prokaryotic and eukaryotic microorganisms, including a unit on virology. Disease mechanisms and body defenses, including immunology, are covered. This course has an optional lab (BIOL 2231). Both BIOL 2230 (lecture) and BIOL 2231 (lab) are required to meet MnTC Goal Area 3.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2200.

BIOL 2231: Microbiology Lab
2.00 credits (2.0 lab)
In this course, you will learn culturing, microscopy and clinical microbiology techniques. Virology, microbial genetics and immunology are also included. This course meets on campus twice per week in two-hour sessions. Both BIOL 2230 (lecture) and BIOL 2231 (lab) are required to meet MnTC Goal Area 3.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2200.
Prerequisite/Co-requisite: BIOL 2230.
**BIOL 2250: Plant Biology**
4.00 credits (3.00 lec/1.00 lab)
This course examines the fundamentals of botany, including structure, function, physiology, and reproductive biology of plants and plant-like organisms. This course also studies the diversity, evolutionary history, and ecology of flowering plants, algae, fungi, bryophytes, lower vascular plants, ferns, and gymnosperms. This course includes two hours of required lab per week.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 1100 or BIOL 2200.

**BIOL 2260: Animal Biology**
4.00 credits (3.00 lec/1.00 lab)
This course compares the ways in which different animal phyla have solved problems of existence including, for example, support, nervous coordination, locomotion, excretion, respiration and reproduction. Additionally, the course provides a basic framework for understanding the origins and relationships of the major groups of animals. This course includes two hours of required lab per week. Performing dissections is required.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 1100 or BIOL 2200.

**BIOL 2500: Molecular Biology**
4.00 credits (2.00 lec/2.00 lab)
This course will use an applications-based approach to molecular and cellular biology. You will explore the theories needed to understand and use techniques of molecular biology and methods used to establish current theories. The laboratory will expose you extensively to techniques widely used in academic and industry laboratories.
Fulfills MnTC Goal Area 3.
Prerequisite: BIOL 2231.

**BIOL 2998: Directed Study**
Prerequisites: One course in BIOL.

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**Biotechnology**

**BIOT 1000: Introduction to Bioscience**
1.00 credit (1.00 lec)
This course will provide you with an overview of bioscience. You will explore educational and employment opportunities; job-search skills; basic concepts and techniques for effective work in entry-level positions; the scientific basis of the technologies and their historical development; and current applications in medicine, forensics, biomaterials, agriculture and environment. You will learn about national, state and local bioscience laboratories, including the basics of intellectual property law and regulatory agencies that oversee the industry, as well as explore ethical, legal, ecological, and societal issues related to bioscience.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BIOT 2320: Regulatory Affairs and Quality Control**
4.00 credits (2.5 lec/1.5 lab)
This course will address the federal regulations and global, environmental and ethical considerations of bioscience products. You will learn to participate as a responsible stakeholder by following Food and Drug Administration and Environmental Protection Agency regulations. You will gain an understanding of current Good Manufacturing Practices, Quality Control (QC), Good Laboratory Practices, Good Clinical Practices and current Good Tissue Practices. You will apply notions of civic responsibility through study of international regulations, global perspectives, intellectual property laws, and import/export considerations. Laboratory sessions will provide hands-on experience in QC procedures, scientific measurements and safety regulations. You will learn to prepare reagents and solutions, adopt aseptic techniques, sterilization procedures, clean-room procedures and use of various instruments. You will practice critical documentation aspects and learn about Standard Operating Procedures.
Prerequisite: CHEM 1151.
BIOT 2642: Cell Culture Technologies 1
3.00 credit (1.00 lec/2.00 lab)
This course will address principles and techniques of cell culture through lecture and laboratory sessions. You will learn about the importance and applications of primary and immortalized cells and the requirements for culturing cells. You will learn about the biosafety and regulatory aspects. You will appreciate the differences between mammalian, insect cell and yeast culture processes. You will learn about the applications of cell-culture in industry and research. You will explore the current Good Tissue Practices (cGTP) regulations of Food and Drug Administration (FDA), quality control aspects, and learn about cell and tissue banks. You will gain an overview of stem cell culture and regulations. In the laboratory sessions, you will use an applications-based approach to cell culture techniques. You will learn about biosafety and clean room processes and gain hands-on experiences in aseptic techniques, mammalian and insect cell-culture processes, preparation of growth-media, and culturing of cells from frozen master cell bank. You will document your work as per regulatory standards and maintain inventories. You will learn to monitor growth conditions, harvesting and counting of cells, scale-up procedures, and cryogenics for storage of cultured vials. You will explore primary literature for adopting cell culture models for toxicology and other studies. You will learn the methods of processing cultured cells for various downstream applications. You will learn about the regulatory affairs as applied to biologics produced from cultured cells.
Prerequisites: BIOL 2231 and BIOT 2320 or BIOL 2231 and CHEM 2320; instructor approval to take BIOT/CHEM 2320 concurrently.

BIOT 2722: Undergraduate Research Methods
2.00 credits (2.00 lec)
This lecture course will provide students with opportunity to learn the methods and processes in scientific research and is writing-intensive. You will learn about how to pursue research in the sciences, funding sources, and various approval processes. You will understand the importance of ethics in research in science and engineering, responsible conduct of research and reporting of results. You will learn about the types of literature and use library resources and authentic literature databases. You will write a synopsis proposing your research topic. You will find and retrieve primary scientific literature effectively and efficiently. You will have an understanding of embargos, copyrights and other intellectual property aspects. You will learn about patents and related aspects. You will effectively read, synthesize and analyze primary scholarly articles from peer-reviewed primary scientific literature on your chosen topic. You will evaluate the information and its sources critically and use the information effectively to write a scientific review report on the chosen topic. You will understand the different styles of citing references and incorporate the style relevant to your discipline.
You will participate in peer review and editing. You will attend research seminars and participate in a field-trip to the University of Minnesota libraries. You will learn the processes involved in publishing scientific work. You will present your research work in the annual poster symposium at MCTC.
Prerequisite: CHEM 1152 or BIOL 2200.

BIOT 2701–2706: Biotechnology Internship
1.00–6.00 (1.00–6.00 Int)
This course provides you with an opportunity to be an intern in an industry, government, academic or analytical services laboratory. You will participate in a full- or part-time internship, projects or field experience. You will make arrangements with an internship supervisor and obtain instructor approval before registering.
Prerequisite: BIOT 2320 or CHEM 2320
Co-requisite: BIOL 2420 or BIOL 2500 or CHEM 2620 or BIOT 2642.
BIOT 2723: Undergraduate Research Lab
2.00 credits (2.00 lec)
This course will provide students opportunities to carry out undergraduate research in the sciences in approved topics by the instructors. You will learn the scientific research methods and processes. You will write a literature review evaluating information and its sources critically and use the information effectively to write a research proposal on a chosen project approved by the instructor. You will design a scientific method for the project and carry out the proposed project under the supervision of the instructor. You will learn to do detailed laboratory work accurately with precision and incorporate good laboratory practices, documentation procedures and quality control standards. You will develop analytical ability and data analysis and management skills. Upon completion of the project, you will write a thesis and defend your thesis. You will explore the possibilities of publishing the results and do a poster presentation.
Prerequisites: BIOT 2722 AND BIOL 2231; or BIOT 2722 AND BIOT 2320; or CHEM 2722 AND CHEM 2320; or CHEM 2722 AND BIOT 2320; Instructor approval to take BIOL 2231 or BIOT/CHEM 2320 concurrently.

BUSN 1140: Introduction to Business
3.00 credits (3.00 lec)
This course is designed to give you an understanding of the functional areas of business. Major emphasis is placed on business ownership; business decision-making; management, marketing, finance, budgeting and production; and the relationship among business, government and labor.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

BUSN 1142: Principles of Marketing
4.00 credits (4.00 lec)
You will explore each of the elements of the marketing mix, including product development, pricing strategies, channels of distribution, promotion and buyer behavior. Emphasis will be on analyzing the marketing environment and developing a basic marketing strategy. You will demonstrate your understanding of these marketing elements by analyzing and creating a marketing plan throughout the semester.
Prerequisites: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

BUSN 1143: Principles of Advertising
3.00 credits (3.00 lec)
This course will take a managerial approach to the evaluation and selection of appropriate promotional elements. You will explore topics such as advertising goals, appeals, media evaluation and the advertising agency, leading to the development of a total advertising campaign. You will examine current award-winning newspaper, television, radio, and magazine ads with local representatives from each medium, including exposure to industry professionals.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

BUSN 1145: Small Business Management
3.00 credits (3.00 lec)
This course will provide you with the essential information needed to create and operate a small business. You will examine each of the functional areas of a small business, including marketing, management, accounting and finance.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.
BUSN 1154: Business Communications
3.00 credits (3.00 lec)
This course emphasizes both written and oral skills used in large and small businesses. You will learn to prepare memos, proposals, customer correspondence and other forms of standard written business communications. You will also learn how to prepare oral reports and lead group discussions.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

BUSN 1155: Human Relations and Team Building
3.00 credits (3.00 lec)
This course will provide a broad understanding of the human relations skills necessary to succeed in organizations. You will focus on the development of team building, managing one’s self and one’s career, organizational relationships, workplace diversity, ethics, and personal responsibility.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BUSN 1166: Women in Leadership and Management
3.00 credits (3.00 lec)
This course is specifically designed to provide the unique skills and insights necessary for leadership success. You will focus on the application of managerial skills and the unique problems that impact women’s managerial effectiveness. You will also study role conflict, dual-career issues, acceptance, stereotyping, mentoring and networking.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BUSN 1180: Principles of Banking and Finance
3.00 credits (3.00 lec)
This course gives you an overview of the financial services industry and its relationship to finance. You will learn basic banking principles, such as the evolution of banking, banking legislation, bank compliance issues, monetary policy; and deposit operations, lending functions and the electronic financial services. You will also learn the fundamentals of finance as it relates to banking by exploring funds management, bank investments, and calculating and measuring financial performance.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

BUSN 1182: Principles of Consumer Lending
3.00 credits (3.00 lec)
This course is an overview of each aspect of the consumer credit market. You will focus upon the characteristics of each consumer credit product, methods and procedures for issuing consumer credit loans, the regulatory requirements in making these loans, and how to determine the profitability of these loans for the lender.
Prerequisites: BUSN 1180; Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

BUSN 1183: Principles of Commercial Lending
3.00 credits (3.00 lec)
This course covers the wide range of the commercial credit lending process and focuses specifically on small businesses. You will learn each category of commercial loan and the regulations affecting those loans. You will learn the loan application process; how to conduct personal and financial statement credit investigations; the specific process of loan documentation; loan closings; and cross-selling techniques used in the commercial lending process.
Prerequisites: BUSN 1180; Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
BUSN 1190: Selling Financial Institution Products
3.00 credits (3.00 lec)
You will develop the necessary skills required to facilitate successful relationships between sales staff and customers in a financial institution setting. You will explore the techniques of cross-selling and relationship selling within a sales-oriented bank culture. In addition, you will actively engage in the sales process by matching the needs of a customer to a depository solution set; understand customer problems and solution requirements and then apply the proper product set; and rigorously study bank products and the short-term/long-term impact each solution offers to customers. The sales pieces of cross-selling and relationship management will provide you with a well-rounded approach to sales by learning from several viewpoints, including the bank’s and the customer’s. Prerequisites: BUSN 1180; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

BUSN 1200: Computer Applications in Home and Business
3.00 credits (3.00 lec)
This intermediate-level course builds on fundamental computing skills and concepts. You will use the productivity tools and features of MS Office software to solve problems and to create documents, databases, spreadsheets and presentations needed for other college courses or personal and professional use. You should have previous computer experience and keyboarding skills. Prerequisites: CSCI 1100 or COML 1000 or COML 1100 or ITEC 1100 or BTEC 1010 or satisfactory completion of the college computer literacy “Test out” option; keyboarding skills recommended.

BUSN 2202: Financial Accounting
4.00 credits (4.00 lec)
Accounting as a process of providing useful financial information to investors, creditors, managers and other users is explored in this course. Emphasis is on understanding the accounting process, financial statements, and the use and limitations of accounting information. Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

BUSN 2224: Managerial Accounting
4.00 credits (4.00 lec)
This course is designed to provide you with an understanding of what kind of information is needed by management; where this information can be obtained; and how this information is used by managers as they carry out their planning, control, and decision-making responsibilities. Prerequisite: BUSN 2202.

BUSN 2252: Principles of Management
4.00 credits (4.00 lec)
This course provides a theoretical overview of management by examining the managerial functions of planning, leading, organizing and controlling an organization’s resources. Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

BUSN 2254: Entrepreneurship
3.00 credits (3.00 lec)
In this course, you will learn the process of launching a new business venture from an original or innovative idea. The focus will be on the stages of development of the new venture including research, planning, feasibility analysis, capitalization and management. It is recommended for students who are in the process of or planning to start their own businesses. Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

BUSN 2256: Supervision and Leadership Skills
3.00 credits (3.00 lec)
This course is designed to give you an introduction to management functions and principles as they apply to the supervisory level of management. A major portion of this course will focus on the leadership skills and techniques necessary for successful group leadership.
BUSN 2260: Legal Environment of Business
4.00 credits (4.00 lec)
This course is designed to give you an understanding of the rights and duties you have as citizens, individually and in the business world. It covers such business-oriented subjects as contracts, agencies, bills and notes; the law of negligence; the system of courts; and instruction on criminal law with emphasis on protections afforded businesses.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

BUSN 2270: Introduction to International Business
3.00 credits (3.00 lec)
This course presents an overview of international business. You will explore the role of corporations throughout the world. In addition, you will actively assess the role of culture in international business decisions. You will understand the basics of international accounting, marketing, and the legal issues surrounding multinational firms. You will study international agencies and the relationship between foreign and domestic markets. You will study the ways currency and investments affect business decisions. Must be taken A–F.
Prerequisites: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

BUSN 2301: Community Development Process
3.00 credits (3.00 lec)
This course prepares you for work in careers with not-for-profit organizations, commercial development companies, private consulting firms, advocacy groups and government agencies. You will explore community development with special attention to indigenous cultures, including a focus on Native American community development. This course will introduce you to the basic concepts, principles, and practices of community development, as well as the role of citizen participation. The course will include a service learning component. Upon completion, you will be able to make informed decisions about career pathways into community development, organizing or planning.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.

BUSN 2302: Community Development and Project Management
3.00 credits (3.00 lec)
This course provides an understanding of the best practices of community development project management. You will examine the roles and responsibilities of project development team members and managers. You will become familiar with budgeting, finding funding and financing methods. You will also participate in a service learning component. You will make informed decisions about career pathways into community development, organizing or planning.
Prerequisite: BUSN 2301 or instructor approval.

BUSN 2998: Directed Study
Prerequisite: One course in BUSN.

Business Office Technology

BTEC 1020: Introduction to Computer Applications
4.00 credits (4.00 lec)
This course teaches computer applications as a business productivity tool. Topics will include introduction to Windows operating system, hardware and software, data communications, data security, and the Internet and Worldwide Web. You will use MS Word to create a Word document, MS Access to create a database, MS Excel to create a worksheet with a chart, MS PowerPoint to create a presentation, and MS Outlook email for communicating and networking with Outlook. Must be taken A–F.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060. Keyboarding skills of at least 25 wpm are strongly recommended.

BTEC 1060: Keyboarding 1
3.00 credits (1.00 lec/2.00 lab)
In this course, you will develop touch-control of the keyboard and proper keyboarding techniques; build speed and accuracy; and practice applying basic skills to the formatting of letters, reports, memos, tables, emails and other kinds of business communication. The keyboarding goal will be to attain a minimum speed of 40 WPM with five errors or fewer on a five-minute timing. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052. It is strongly recommended that students can touch type 25 WPM or successful completion of a high school keyboarding course.
**BTEC 1080: Microsoft Word**

3.00 credits (3.00 lec)
This Microsoft Word course is designed to cover all of the learning objectives for the Microsoft Office Specialist (MOS) exam. Microsoft Office Specialist-approved textbooks and courseware are used for this course. You will learn to navigate Microsoft Office Word software at the feature and functionality level. You will learn the features and capabilities of Microsoft Office Word. You will learn to use Microsoft Office Word to create and edit professional-looking documents for a variety of purposes and situations. Topics covered in this class include: sharing and maintaining documents, formatting content, applying page layout and Reusable Content, Including Illustrations and Graphics in a document, proofreading documents, applying references and hyperlinks, and performing mail merge operations. Must be taken A–F. **Prerequisite: BTEC 1020.**

**BTEC 1125: Medical Terminology and Disease Condition 1**

3.00 credits (3.00 lec)
This course is designed for students wanting an understanding of how medical terms are created, pronounced, spelled and used in a medical setting. Classes will include a study of medical word roots, prefixes and suffixes common to the medical field. System terminology will focus on pathology, clinical procedures, laboratory procedures and abbreviations. Must be taken A–F. **Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.**

**BTEC 1135: Medical Machine Transcription**

2.00 credits (2.00 lec)
In this course, you will learn dictation of medical transcription materials. You will key dictated medical reports while being introduced to body systems and medical procedures. Must be taken A–F. **Prerequisite: BTEC 2125.**

**BTEC 1145: Technology in the Law Office**

3.00 credits (2.00 lec/1.00 lab)
This course builds a strong foundation in technology concepts, applications and vocabulary for students to work effectively in today’s law office. You will develop a hands-on understanding of the most popular legal software programs, including AbacusLaw, Tabs3, SmartDrawLegal, LexisNexis, CaseMap, TimeMap and Sanction II. You will review case studies, legal ethics and learn how to file discovery electronically. You will learn technical legal terminology. Must be taken A–F. **Prerequisite: BTEC 1060.**

**BTEC 1160: Legal Office Procedures**

3.00 credits (2.00 lec/1 lab)
In this course, you will develop skills essential for work in a legal office. Your experience will include study of legal terminology, ethics and confidentiality, time and billing records, scheduling, court dates, depositions and appointments, maintaining client files, telephone techniques, and preparation of legal documents and legal correspondence. You will also study the three branches of government and the state and federal court systems. Must be taken A–F. **Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.**

**BTEC 1165: Legal Transcription**

3.00 credits (1.00 lec/2.00 lab)
In this course, you will use digital transcription software in transcribing dictated material for a legal office into usable documents. You will experience working with a wide variety of legal documents, develop speed and accuracy in transcribing, as well as acquire proofreading and correcting skills. Must be taken A–F. **Prerequisite: BTEC 1060.**

**BTEC 1225: Professional Development**

1.00 credit (1.00 lab)
This course is designed to develop your talents and abilities as effective group members and/or group leaders. You will examine student, professional, and local organizations and may assume organizational and planning responsibilities as a volunteer. You will meet three times as a group, and volunteer projects will be done independently with a final report presented to the group. Must be taken A–F. **Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.**
**BTEC 1275: Medical Office Procedures**
3.00 credits (2.00 lec/1.00 lab)
This course utilizes both classroom discussion and real-world simulation exercises to prepare you to perform the variety of tasks needed to work in a medical setting. Emphasis will be placed on customer service, legal and ethical responsibilities, and filing and handling correspondence. Discussions will also focus on making travel arrangements; planning meetings; discussing fees and credit; and performing banking, billing, and daily accounting; as well as preparing and processing insurance claims. Computer simulations using Medisoft software will be completed during this course. Must be taken A–F.
Prerequisite/Co-requisite: BTEC 1060.

**BTEC 1700: Medical Insurance Coding**
3.00 credits (3.00 lec)
This course is designed for individuals who are interested in pursuing a career in healthcare that allows them to assist physicians in assigning procedural and diagnostic codes in an outpatient setting. You will gain a working knowledge of both procedural and diagnostic coding systems, as well as gain hands-on experience assigning codes utilizing the CPT and ICD 9-CM code books. Must be taken A–F.
Prerequisite: BTEC 1125.

**BTEC 1770: Claims and Reimbursement**
3.00 credits (2.00 lec/1.00 lab)
This course introduces you to medical insurance reimbursement; medical insurance plans and payers; regulations and accreditation in medical insurance, as well as the claims processing sequence; collection of patient information; insurance verification; and encounter-form preparation. You will also learn about linkage and compliance, provider payment calculations, claims preparation and claims transmission. Coding guidelines will also be reviewed. The hospital claims and billing process will also be addressed. Computer simulations using Medisoft software will be covered during this course. Must be taken A–F.
Prerequisite: BTEC 1700.

**BTEC 1835: Business English**
3.00 credits (3.00 lec)
In this course, you will develop business English skills appropriate for work in a professional business office; review and practice grammar usage, punctuation, and capitalization; and develop an extensive vocabulary emphasizing business and legal terms. Skills learned in this course will enable you to become a more effective business communicator. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

**BTEC 2030: PowerPoint Business Presentations**
3.00 credits (3.00 lec)
This Microsoft Office PowerPoint course is designed to cover all of the learning objectives for the Microsoft Office Specialist (MOS) exam. MOS-approved textbooks and courseware are used for this course. You will learn to navigate Microsoft Office PowerPoint software at the feature and functionality level. You will learn to create complex slide shows, such as product plans, reports and marketing materials. You will create slide shows based on custom templates generated by others and frequently reuse slides. You will create slides that include sophisticated data presented in visual formats. You will learn how to pause and move back and forth in slide shows, jump to specific slides, drill down to supporting data, and mark up slides. Must be taken A–F.
Prerequisite: BTEC 1020.

**BTEC 2100: Microsoft Excel**
3.00 credits (3.00 lec)
This Microsoft Office Excel course is designed to cover all of the learning objectives for the Microsoft Office Specialist (MOS) exam. MOS-approved textbooks and courseware are used for this course. You will learn to navigate Microsoft Office Excel software at the feature and functionality level. You will learn to use Microsoft Office Excel to create and edit professional-looking spreadsheets for a variety of purposes and situations. You will learn the features and capabilities of Microsoft Office Excel. You will learn skills in: managing the worksheet environment, creating cell data, formatting cells and worksheets, managing worksheets and workbooks, applying formulas and functions, presenting data visually, sharing worksheet data with other users, and analyzing and organizing data. Must be taken A–F.
Prerequisite: BTEC 1020.
**BTEC 2110: Microsoft Access**
3.00 credits (3.00 lec)
This Microsoft Office Access course is designed to cover all of the learning objectives for the Microsoft Office Specialist (MOS) exam. MOS-approved textbooks and courseware are used for this course. You will learn to create, modify, and extend functionality of basic database objects, including tables, queries, forms, and reports. Skills you will learn include: managing the access environment, building tables, building forms, creating and managing queries, and designing reports. Must be taken A–F. Prerequisite: BTEC 1020.

**BTEC 2125: Medical Terminology and Disease Condition 2**
3.00 credits (3.00 lec)
This course is designed to follow Medical Terminology and Disease Condition 1. Classes will focus on system terminology, disease terminology and specialty terminology. Emphasis will also be placed on terminology related to clinical procedures, laboratory procedures, surgical procedures and medical abbreviations related to covered systems. Must be taken A–F. Prerequisite: BTEC 1125.

**BTEC 2225: Speech Recognition Editing**
3.00 credits (3.00 lec)
You will learn common scientific terms relevant to speech recognition technology. Topics covered include differences between front-end and back-end speech recognition technology. Productivity and quality issues. Implications of speech recognition technology in the future of the MT industry. Must be taken A–F. Prerequisites: BTEC 1135, BTEC 2125.

**BTEC 2375: Business Communications**
3.00 credits (3.00 lec)
In this course, you will develop the writing skills appropriate for business by composing and editing business memos, letters, and reports. You will use communication theory and critical thinking to solve business problems using effective writing, and apply this knowledge and skill in resolving your own personal business writing problems. Ongoing discussion and practice of correct grammar and punctuation usage is designed to heighten each writer’s effectiveness. You will compile a portfolio of your written work, including a final research report. All assignments will be typed on the computer. Must be taken A–F. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052. Keyboarding skills of at least 25 WPM are strongly recommended.

**BTEC 2445: Internship Assessment and Preparation**
3.00 credits (3.00 int)
This course is completed in preparation for BTEC 2450 Internship. You will learn, understand and gain experience in a variety of areas in administrative support. You will learn the expectation of interns in various settings and will confirm that opportunities in your program match your career goals. Must be taken A–F. Prerequisites: BTEC 2825 with a “C” (2.0) or above. Must be a BTEC A.A.S. major and completed your third semester of the A.A.S. degree.

**BTEC 2450: Administrative Assistant/Software Support Internship**
3.00 credits (3.00 int)
The BTEC internship provides occupational experience in your major field. A training plan is developed for you in cooperation with a supervisor at the training site. You will apply skills and knowledge acquired in coursework to an actual work setting. The 3-credit BTEC Internship requires a total of 120 hours of on-site training. Must be taken Pass/Fail. Prerequisites: BTEC 2445. Grade of “C” (2.0) or higher in all BTEC courses and must be a BTEC A.A.S. degree major. Must be taken in the last semester.

**BTEC 2555: Medical Office Internship**
3.00 credits (3.00 int)
This class provides a real world learning environment in which you will be able to apply and test the knowledge and skills that have been learned in the classroom. You will further develop your interpersonal skills in working with professional colleagues and patients. You will demonstrate your responsibility, dependability, and initiative to an employer. Must be taken Pass/Fail. Prerequisites: BTEC 2445. Grade of “C” (2.0) or higher in all BTEC courses and must be a BTEC A.A.S. degree major. Must be taken in the last semester.

**BTEC 2730: The Professional Office**
3.00 credits (3.00 lec)
This is an introductory course for the BTEC administrative professional. Emphasis is on skills needed to succeed in a business environment. You will learn skills in developing a professional image, self-management, written and verbal communications etiquette, records management, meeting and event planning, and professional responsibilities for the administrative assistant. Must be taken A–F. Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
BTEC 2780: Keyboarding 2
3.00 credits (1.00 lec/2.00 lab)
In this course, you will further refine touch-control of the keyboard and proper keyboarding techniques; continue to build speed and accuracy; and practice applying advanced skills to the formatting of letters, reports, memos, tables, emails and other kinds of business communication. The keyboarding goal will be to attain a minimum speed of 50 WPM with five errors or fewer on a five-minute timing. Must be taken A–F. 
Prerequisite: BTEC 1060.

BTEC 2825: Career Management
2.00 credits (2.00 lec)
This course offers a highly individualized approach to developing career management skills. You will create résumés, write cover and thank-you letters, complete job application forms, utilize the Internet in your job search, and participate in an employment interview. Consideration will also be given to critical attitudes needed for career success. Must be taken A–F. 
Prerequisite: BTEC 1060.

BTEC 2998: Directed Study
Prerequisites: One course in BTEC; Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

Central Services Technician

CSIP 1000: Role of the Central Services Technician
3.00 credits (2.00 lec/1.00 lab)
This course is designed for students interested in health-related careers. It prepares you to perform the role of Central Service Technician in such positions as instrument tech and case cart tech. Foundational anatomy and physiology and basic principles of microbiology will be presented. Course competencies include decontamination, preparation and packaging for sterilization; sterilization process; and sterile storage. Basic surgical instrumentation and medical terminology that is necessary for this area of employment in the healthcare setting will also be presented. The lab will include campus- and hospital-based practice settings. Upon completion of CSIP 1000 and 1002, students are eligible to take the certification exam from the Certification Board for Sterile Processing and Distribution, Inc. (CBSPD).
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 and ESOL 0033 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
Co-requisites: HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070, HCCC 1100.

CSIP 1002: Central Services Technician Internship
2.00 credits (2.00 int)
The 80-hour internship course prepares you for employment and to become eligible for Central Services Technician certification. Through this practicum experience, you will become familiar with all aspects related to the central services of a hospital. The focus of this course is to provide you with comprehensive skills to be able to perform your job competently and safely. You will have hands-on practice sessions to develop the skills and techniques required in performing various activities in the central services areas. This course must be completed within one term of CSIP 1000.
Prerequisites: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; successful completion of the following: HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070, HCCC 1100; grade of “C” (2.0) or better in CSIP 1000. Clear background check.
Co-requisite: HCCC 1100 (only if enrolled in online section).
Chemistry

CHEM 1020: Introduction to Chemistry
4.00 credits (3.00 lec/1.00 lab)
This course is intended as a broad introduction to chemistry for the non-science major. Topics covered include the scientific method, atomic structure, the periodic table, bonding, acids and bases, nomenclature, equations, stoichiometry, gas laws, and oxidation and reduction. The lecture/theory portion of this course is offered both on campus in the classroom and as a Web course. This course includes two hours of required lab per week, which must be taken on campus. The laboratory introduces you to safe handling of chemicals, appropriate use of lab ware, and transcription of observations and data. Concurrent registration in lab is required, and attendance in the first week lab safety session is mandatory.
Fulfills MnTC Goal Area 3.
Prerequisite: Placement into MATH 0080 or completion of MATH 0070 or MATH 0077. It is strongly recommended to have also placed into READ 1300 or have completed READ 0200.

CHEM 1140: Chemistry in Your Life
4.00 credits (3.00 lec/1.00 lab)
This course offers an introduction to chemistry and its applications in personal life and modern society. The chemistry concepts you will study include the structure of matter, elements and compounds, chemical bonding, reactions, energy changes, and an introduction to organic chemistry. You will consider and investigate the relevance of chemistry in everyday life—with a focus on many contemporary topics, such as, environmental issues, energy resource issues, medicine, food and health, as well as consumer chemistry. Concurrent registration in lab is required.
Fulfills MnTC Goal Areas 3 and 9.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

CHEM 1145: Forensic Science 1
4.00 credits (3.00 lec/1.00 lab)
This course uses an application-based approach to understand the basic theories and methods for scientific investigation of physical evidence found at the scene of a crime, with an emphasis on laboratory analysis methods currently in use. You will explore the scope of forensic science, services provided by forensic laboratories, the role of a forensic scientist, the processing of a crime scene, and the importance of as well as the types of physical evidence. You will learn how various kinds of physical evidence—such as chemical substances, microscopic evidence, hair, fiber, paints, glass, soil, body fluids, DNA, fingerprints, etc., are collected and analyzed. You will perform several laboratory experiments to learn the methods used in such analyses. Concurrent registration in lab is required. Some lab sessions will be held off-campus.
Fulfills MnTC Goal Areas 3 and 9.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051. It is strongly recommended to have also placed into READ 1300 or have completed READ 0200 and have placed into MATH 0070 or MATH 0077 or have completed MATH 0060.

CHEM 1151: Principles of Chemistry 1
5.00 credits (4.00 lec/1.00 lab)
This course is the first semester of a two-semester sequence designed to give you a broad introduction to the field of chemistry. This course will cover a general introduction to the scientific method, basic stoichiometry, thermodynamics, atomic and molecular structure and bonding, gas laws, solution chemistry, and environmental topics. The required on-campus laboratory meets three hours per week. The laboratory experiments illustrate concepts covered in the lecture material, emphasize experimental techniques, and use computer-assisted data acquisition and manipulation. The lecture/theory portion of the course is offered on campus in the classroom and also as a Web course during some terms (check the term schedule).
Fulfills MnTC Goal Area 3.
Prerequisite: Placement into MATH 1110 or completion of MATH 0080 or MATH 0088. It is strongly recommended to have had either CHEM 1020 or one full year of high school chemistry with a grade of “C” (2.0) or higher.
CHEM 1152: Principles of Chemistry 2
5.00 credits (4.00 lec/1.00 lab)
This course is the second semester of a two-semester sequence designed to give you a broad introduction to the field of chemistry. This course will cover solution chemistry, kinetics, acids and bases, equilibrium reactions, buffer solutions, solubility products, nuclear chemistry, thermodynamics, representative elements, transition metal chemistry, and environmental topics. The required on-campus laboratory meets three hours per week. The laboratory experiments illustrate concepts covered in the lecture material, emphasize experimental techniques, and use computer-assisted data acquisition and manipulation.
Fulfills MnTC Goal Area 3.
Prerequisite: CHEM 1151.

CHEM 2204: Organic Chemistry 1
4.00 credits (4.00 lec)
This course is the first semester of a two-semester sequence that covers the synthesis, reactions, nomenclature and structure of organic compounds. Topics include chemical structure, kinetics and enthalpy of reactions, reaction mechanisms, stereochemistry; the syntheses and reactions of alkanes, alkenes, alkynes, conjugated systems, alcohols, ethers, aldehydes, and ketones; as well as NMR, IR, UV, and mass spectroscopy. Molecular modeling software is used during instruction to assist in visualizing reactions and is available for your use outside of class.
Fulfills MnTC Goal Area 3.
Prerequisite: CHEM 1152 (“C” (2.0) grade or above). It is strongly recommended to have either completed CHEM 2224 or to take it concurrently with CHEM 2204.

CHEM 2205: Organic Chemistry 2
4.00 credits (4.00 lec)
This course is the second semester of a two-semester sequence which covers the synthesis, reactions, nomenclature and structure of organic compounds, aromatic compounds, carboxylic acids, acid derivatives, amines, heterocycles, acetooacetic and malonic acid syntheses, carbohydrates, amino acids, proteins, lipids, polymers, industrial chemistry, agrochemical, and pharmaceuticals. Molecular modeling software is used during the lecture to visualize molecules and reactions and is available for your use outside of class.
Fulfills MnTC Goal Area 3.
Prerequisite: CHEM 2204.

CHEM 2224: Organic Chemistry 1 Lab
2.00 credits (2.0 lab)
This course is the laboratory component that accompanies CHEM 2204: Organic Chemistry 1. The laboratory work consists of separation, purification, and identification techniques, both with ordinary chemical methods and with IR spectroscopy, gas chromatography, column chromatography, and refractive index instrumentation.
Fulfills MnTC Goal Area 3.
Prerequisite: CHEM 1152.
Prerequisite/Co-requisite: CHEM 2204.

CHEM 2225: Organic Chemistry 2 Lab
2.00 credits (2.0 lab)
This course is the laboratory component that accompanies CHEM 2205: Organic Chemistry 2. The laboratory work consists of synthesis, purification and reactions of organic compounds and unknown identification, both with ordinary chemical methods and with IR spectroscopy, gas chromatography, column chromatography, and refractive index instrumentation.
Fulfills MnTC Goal Area 3.
Prerequisite: CHEM 2224.
Prerequisite/Co-requisite: CHEM 2205.

CHEM 2320: Regulatory Affairs and Quality Control
4.00 credits (2.5 lec and 1.5 credit lab)
This course will address the federal regulations and global, ethical, and environmental considerations of bioscience products. You will learn to participate as a responsible stakeholder by following Food and Drug Administration and Environmental Protection Agency regulations. You will gain an understanding of current Good Manufacturing Practices, Quality Control (QC), Good Laboratory Practices, Good Clinical Practices and current Good Tissue Practices. You will apply notions of civic responsibility through study of international regulations, global perspectives, intellectual property laws, and import/export considerations. Laboratory sessions will provide hands-on experience in QC procedures, scientific measurements and safety regulations. You will learn to prepare reagents and solutions; adopt aseptic techniques, sterilization procedures, and clean-room procedures; and use various instruments. You will practice critical documentation aspects and learn about standard operating procedures.
Prerequisite: CHEM 1151.
CHEM 2410: Analytical Chemistry and Instrumentation Theory
3.00 credits (3.00 lec)
This lecture course introduces the principles of analytical methods and instrumentation. You will learn the theories of various chemical and biochemical methods of analyses. You will explore the principles of ionic equilibria, acid-base, complexometric, redox and electro analytical techniques. You will gain an understanding of various instruments, including spectroscopic and chromatographic methods. You will appreciate the application of analytical chemistry in meeting the regulatory requirements of the Food and Drug Administration and Environmental Protection Agency in a variety of industrial and research applications. You will learn about HVAC requirements in clean-room environments and develop the necessary skills to document and statistically analyze data.
Prerequisite: CHEM 1152 and CHEM 2320; or CHEM 1152 and BIOT 2320. Instructor approval is required to take CHEM/BIOT 2320 concurrently.
Co-requisite: CHEM 2420.

CHEM 2420: Analytical Chemistry and Instrumentation Laboratory
2.00 credits (2.00 lab)
This laboratory course will use an applications-based approach to chemical and biochemical methods of analyses. You will carry out classical analytical techniques, as well as instrumental methods of analysis. You will incorporate mathematical calculations, statistical analysis of data and computational methods. You will apply aqueous ionic equilibria principles, explore a compendium of methods, and adopt various instrumentation methods including chromatography and spectrometry. You will explore analytical methods and standards important in quality control in regulatory environments. You will learn to do detailed work with precision and accuracy. You will incorporate documentation procedures and validation principles according to regulatory affairs standards.
Prerequisite: CHEM 2320 or BIOT 2320. Instructor approval is required to take CHEM/BIOT 2320 concurrently.
Co-requisite: CHEM 2410.

CHEM 2610: Biochemistry—Theory and Principles
3.00 credits (3.00 lec)
This course introduces the fundamental principles in biochemistry. You will learn the structure and function of biomolecules, kinetics of enzyme-catalyzed reactions, major metabolic pathways that synthesize and degrade biomolecules, and the storage and transmission of genetic information in organisms.
Prerequisites: BIOL 2200, CHEM 1152 and CHEM 2204; all prerequisites/Co-requisites for these courses apply. Students must have either completed CHEM 2610 lecture course or concurrently register for it to be eligible for laboratory course.

CHEM 2620: Biochemistry Laboratory
2.00 credits (2.00 lab)
This laboratory course will use an application-based approach to biochemical techniques. You will apply the concepts learned in the biochemistry theory course to gain experience in protein purification and characterization, modern molecular biology techniques, enzyme kinetics, and immunological techniques. You will extensively utilize biochemical techniques and instrumentation widely used in academic and industry laboratories, apply the regulatory affairs standards, and document your work as per these standards.
Prerequisites: BIOT 2320 or CHEM 2320 or CHEM 2420 or instructor approval to take concurrently. Students must have either completed CHEM 2610 lecture course or concurrently register for it to be eligible for laboratory course.
CHEM 2722: Undergraduate Research Methods
2.00 credits (2.00 lec)
This lecture course will provide students with opportunity to learn the methods and processes in scientific research and is writing-intensive. You will learn about how to pursue research in the sciences, funding sources, and various approval processes. You will understand the importance of ethics in research in science and engineering, and responsible conduct of research and reporting of results. You will learn about the types of literature and use library resources and authentic literature databases. You will write a synopsis proposing your research topic. You will find and retrieve primary scientific literature effectively and efficiently. You will have an understanding of embargos, copyrights and other intellectual property aspects. You will learn about patents and related aspects. You will effectively read, synthesize and analyze primary scholarly articles from peer-reviewed primary scientific literature on your chosen topic. You will evaluate the information and its sources critically and use the information effectively to write a scientific review report on the chosen topic. You will understand the different styles of citing references and incorporate the style relevant to your discipline. You will participate in peer review and editing. You will attend research seminars and participate in a field trip to the University of Minnesota libraries. You will learn the processes involved in publishing scientific work. You will present your research work in the annual poster symposium at MCTC.
Prerequisite: CHEM 1152 or BIOL 2200.

CHEM 2723: Undergraduate Research Lab
2.00 credits (2.00 lab)
This course will provide students opportunities to carry out undergraduate research in the sciences in approved topics by the instructors. You will learn the scientific research methods and processes. You will write a literature review evaluating information and its sources critically and use the information effectively to write a research proposal on a chosen project approved by the instructor. You will design a scientific method for the project and carry out the proposed project under the supervision of the instructor. You will learn to do detailed laboratory work accurately with precision and incorporate good laboratory practices, documentation procedures, and quality-control standards. You will develop analytical ability and data analysis and management skills. Upon completion of the project, you will write a thesis and defend your thesis. You will explore the possibilities of publishing the results and do a poster presentation.
Prerequisites: BIOT 2722 AND BIOL 2231; or BIOT 2722 AND BIOT 2320; or CHEM 2722 AND CHEM 2320; or CHEM 2722 AND BIOT 2320; Instructor approval to take BIOL 2231 or BIOT/CHEM 2320 concurrently.

CHEM 2998: Directed Study
Prerequisites: One course in CHEM; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Chinese

**CHIN 1000: Beginning Chinese 1**

5.00 credits (5.00 lec)
This course is a comprehensive introduction to Mandarin Chinese. You will learn the pronunciation system, character writing, and basic skills in listening, speaking, reading and writing; master standard pronunciation, the four tones, basic grammatical patterns, and vocabulary that is highly relevant to a beginning Chinese learner; lay a firm foundation for their future study of Chinese and be able to function in a Chinese-speaking environment. You will accomplish these goals not only with the language skills, but also with Chinese cultural awareness.
Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**CHIN 1100: Beginning Chinese 2**

5.00 credits (5.00 lec)
This course is a continuation of Chinese 1000. You will further develop standard pronunciation, the four tones, basic grammatical patterns and practical vocabulary; have a better and deeper understanding of the language and the culture; be able to recognize and write about 600 Chinese characters, write short essays, and have conversations with native Chinese speakers about yourself, your family, and other everyday topics; and be ready for intermediate study in Chinese.
Fulfills MnTC Goal Area 8.
Prerequisites: CHIN 1000; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Cinema Production

**CIPR 1101: Cinema Production 1**

3.00 credits (2.00 lec/1.00 lab)
This course provides a working introduction to the aesthetic and technical aspects of cinema production. Using 16mm film and digital media, you will design, shoot, and edit several short projects. You will be introduced to the role of computers in the digital, nonlinear, postproduction environment.
Prerequisites: Admission to the Cinema Division; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

**CIPR 1102: Cinema Production 2**

3.00 credits (2.00 lec/1.00 lab)
This course examines narrative structure and conventions in cinematic storytelling. You will learn advanced production methods, post-production techniques, basic motion graphics and the elements of both visual structure and sound design. You must work collaboratively as well as individually throughout the semester.
Prerequisites: Admission to the Cinema Division; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

**CIPR 1104: Advanced Production Lab**

3.00 credits (3.00 lab)
This lab is intended to provide you with the opportunity to produce specifically designed projects to complement your knowledge and experience, collaborate with your peers as a crew member on their works, and critique and analyze the ongoing productions. You will be required to make a plan and complete your project as agreed upon with the instructor.
Prerequisite: CIPR 1101.
CIPR 1105: Topics in Cinema Production
3.00 credits (2.00 lec/1.00 lab)
This course provides an opportunity to study in depth a variety of cinema production topics and technologies. Prerequisite: Admission to the Cinema Division; Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

Cinematic Studies

CIST 1101: Cinema History 1
3.00 credits (2.00 lec/1.00 lab)
This course introduces you to the history, theory, and criticism of cinema from its origins in the silent era through the sound era of classical Hollywood, German expressionism, Russian montage, and French poetic realism. You will examine cinema as a unique art in the context of other arts and the American and European social milieus. You will also interpret films in terms of their historical positions, national origins and aesthetics. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

CIST 1102: Cinema History 2
3.00 credits (2.00 lec/1.00 lab)
This course is a study of the history of film language and style. You will begin with the transition from the classical studio system to American film noir, Italian neorealism, French new wave, new German cinema, international co-production and the contemporary American independents. You will also focus on analysis and interpretation of films that are representative of evolving national traditions of cinema, with recognition of their divergent cultural milieus.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

CIST 1103: World Cinema History
3.00 credits (2.00 lec/1.00 lab)
This course explores classic and contemporary films created by the most influential filmmakers throughout the world. These films will allow you to examine the cross-pollination between traditional Hollywood cinema and various international film movements. To better understand how film shapes our perceptions of other cultures, you will analyze the social, cultural and political dynamics involved in making and viewing these films. Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

CIST 1104: Documentary History
3.00 credits (2.00 lec/1.00 lab)
This course explores the history, theory, and practices of documentary film and video, tracking the genre from the actuality films of the early 1900s through the present-day resurgence in documentary film and video. You will examine what constitutes a documentary, analyzing the fundamental aesthetic tools of documentary filmmaking (camera, sound, structure, and interviewing,) as well as the role of technology in the current democratization of the genre.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

CIST 1105: Topics in Cinema History
3.00 credits (2.00 lec/1.00 lab)
This course provides an opportunity to study in depth a variety of cinema topics. Possible topics include studies of directors, genres, and national cinemas, as well as different cinematic perspectives (gender, race, ethnicity, history, literature, theater, art and music).
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.
CIST 1106: History of Photography
3.00 credits (3.00 lec)
This course explores developments in technology, aesthetics and cultural significance of photography from its origins to the present. You will examine the works of major photographers and the relationships of those works to history, art and commerce. Must be taken A–F. Fulfills MnTC Goal Area 6 and 8.

CINEMATOGRAPHY

CINE 2103: Camera and Lighting
4.00 credits (3.00 lec/1.00 lab)
This course provides an in-depth study of advanced camera and lighting systems used in cinema production. Using these technologies, you will become adept in the art and craft of cinematography through exercises and camera tests involving lighting setups, lens choices, camera movement, special effects, and other tools of the industry. You will learn the choices and decisions the cinematographer must make in service to the production.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: CINE 2104.

CINE 2104: Cinematography 1
4.00 credits (3.00 lec/1.00 lab)
This course explores the cinematographer’s role in a motion picture production. You will study and practice the relationship with the director and other members of the crew through the production of a short film. You will also learn other aspects of working with a crew, including the roles of assistant camera and gaffer.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: CINE 2103.

CINE 2105: Cinematography 2
4.00 credits (3.00 lec/1.00 lab)
This course applies the aesthetic and technical knowledge introduced in CINE 2104 toward a complete production in collaboration with a director. You will implement advanced style and production techniques to the course projects, producing a professional Cinematographer’s Reel as a capstone project.
Prerequisites: CINE 2103, 2104.

CINE 2106: Commercial Cinematography
4.00 credits (3.00 lec/1.00 lab)
This advanced course in Cinematography will explore the role of a Cinematographer in the commercial and industrial environment. Building on what you have learned in Cinematography 1 and Camera and Lighting, you will develop your skills by working on projects designed by an agency or client, and you will collaborate to complete a spec or sample commercial and a PSA.
Prerequisites: CINE 2103, 2104.

CINE 2107: Internship
2.00 credits (2.00 int)
This course provides an opportunity to work in a production facility or on a set. Your internship placement will reflect your personal aesthetics in cinematography. You must obtain your internship coordinator’s approval in advance of internship. Placement is limited to program students.
Prerequisite: Completion of the Cinema Production Certificate.

CINE 2998: Directed Study
Prerequisite: Completion of the Cinema Production Certificate.

CINEMA: DIGITAL ANIMATION

ANIM 2101: Introduction to Digital Animation
3.00 credits (2.00 lec/1.00 lab)
This course provides introductory three-dimensional, computer-based animation experiences. Output will be in digital file formats. You will study basic 3D modeling and animation as you develop skills, functional knowledge, and techniques through lecture, demonstration, and completion of regular assignments and final projects. Must be taken A–F.
Prerequisites: CIPR 1102, SCRN 1102, CIST 1102, and ENGL 1111.

ANIM 2102: Advanced 3D Animation
4.00 credits (3.00 lec/1.00 lab)
This course covers advanced three-dimensional cinematic issues, including modeling, animating, rendering and outputting computer-generated animation files. You will use a variety of software packages to explore 3D animation used extensively in multimedia, TV and cinema productions. Must be taken A–F.
Prerequisite: ANIM 2101.
Co-requisites: ANIM 2103, ANIM 2104.
ANIM 2103: Advanced CGI Software
4.00 credits (3.00 lec/1.00 lab)
This course introduces advanced software in Animation and Special Effects. You will study alternative Computer Graphic Imaging (CGI) software and specialized CGI tools, and you will produce a final animated piece using these tools. You will focus on advanced modeling technologies and animation techniques. Must be taken A–F.
Prerequisite: ANIM 2101.
Co-requisites: ANIM 2102, ANIM 2104.

ANIM 2104: Animation—Advanced Project
4.00 credits (3.00 lec/1.00 lab)
This course applies the aesthetics and technical knowledge introduced in previous courses. You will participate in a production in collaboration with a director and an editor. You will implement advanced animation techniques to the projects over the semester and produce a professional reel as a capstone project. Must be taken A–F.
Prerequisite: ANIM 2101.
Co-requisites: ANIM 2102, ANIM 2103.

Cinema: Directing

DREC 2104: Directing 1
4.00 credits (3.00 lec/1.00 lab)
This course introduces you to directing for the camera based on the production foundation created in the first two semesters. You will learn the central aspect of the director’s craft—cinematic staging—where acting, camera work, and editing intersect; and you will supervise cast and crew efforts and lead them toward a common objective—a work of unified vision and expression. Scene studies, screenings, discussions, readings and collaborative production assignments (with Screenwriting, Cinematography and Editing students as well as actors), will provide an understanding of the director’s role in narrative fiction work.
Prerequisite: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.

DREC 2105: Directing 2
4.00 credits (3.00 lec/1.00 lab)
Directing 2 is the final production course for Directing majors in the Cinema Division. You will plan, produce, and direct projects based on previously learned aesthetic and technical knowledge. You will collaborate with Screenwriting, Cinematography and Editing students on all projects.
Prerequisite: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.

DREC 2106: Documentary Production
4.00 credits (3.00 lec/1.00 lab)
This course focuses exclusively on producing documentary work. You will research, produce and edit short documentary exercises during the semester, learning to distinguish the documentary genre from other forms of nonfiction audio-visual expression. You will turn complex social issues and subjects into compelling documentary stories through screenings, readings, lectures, research, discussions and collaborative work.
Prerequisite: DREC 2104.

DREC 2107: Internship
2.00 credits (2.00 int)
The internship provides second-year program students with an opportunity to work in a professional film or video production facility. Internship placement will be supervised by the program internship coordinator and will reflect the individual student’s personal direction in filmmaking. You will produce a final report at the end of the internship. On-site internship supervisor’s approval must be obtained in advance of enrollment. NOTE: The internship is available only to degree-seeking students.
Prerequisite: DREC 2104.

DREC 2108: Directing Actors for Cinema
4.00 credits (3.00 lec/1.00 lab)
This course helps directing students understand the craft of cinematic acting. You will learn how to work with actors through directing exercises, improvisations and scripted projects. You will develop skills in building and shaping character as well as performance.
Prerequisite: CIPR 1102.
Co-requisite: DREC 2104.

DREC 2998: Directed Study
Prerequisite: Completion of a DREC course.
Cinema: Editing and Post-Production

EDIT 2103: Post-Production
4.00 credits (3.00 lec/1.00 lab)
This course introduces the basic aspects of film and video post-production. You will complete the final steps of an edited film or video project and prepare it for distribution. Through this process, you will learn how to work effectively with a film director and conceive a professional workflow for a specific project. You will also take a field trip to a post-production house to acquire knowledge of state-of-the-art services available in the community.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: EDIT 2104.

EDIT 2104: Editing 1
4.00 credits (3.00 lec/1.00 lab)
This course introduces the basics of the technical and aesthetic aspects of editing motion pictures. You will learn professional editing software such as Final Cut Pro software, the process and language of editing, the Editor/Director relationship and you will complete several edited projects.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: EDIT 2103.

EDIT 2105: Editing 2
4.00 credits (3.00 lec/1.00 lab)
This course explores advanced editing technical and aesthetic issues introduced in EDIT 2104. You will analyze the work of a diverse group of master film editors; learn strategic approaches to different types of editing and compositing. You will complete several advanced editing projects and create an editor’s reel.
Prerequisites: EDIT 2103, EDIT 2104, and completion of the Cinema Production Certificate.

EDIT 2106: Advanced Post-Production
4.00 credits (4.00 Lec)
This course explores advanced aspects of film and video post-production. You will learn the non-linear editing (NLE) software, Avid, as well as other professional software such as After Effects. You will master the structure and responsibilities of a Post-Production team. You will acquire the necessary skills involved in the online phase of post-production.
Prerequisites: EDIT 2103, EDIT 2104.
Co-requisite: EDIT 2105.

EDIT 2107: Internship
2.00 credits (2.00 int)
This internship provides second-year editing students with an opportunity to work in the industry. During the internship, you will work with local and national film and video organizations and post-production houses. Internships are only available to degree students.
Prerequisites: EDIT 2104 and completion of the Cinema Production Certificate.

EDIT 2998: Directed Study
Prerequisite: Completion of the Cinema Production Certificate.

Cinema: Producing

PROD 2103: Creative Producing
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to the basics of the producing craft. You will learn the aesthetic principles of creative producing, acquiring the rights and dealing with creative properties as well as packaging a specific movie for production. You will be able to implement the acquired learning into the movies directed by the Cinema Division’s Directing students.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102.
Co-requisite: PROD 2104.

PROD 2104: Producing 1: Introduction to Producing
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to the entertainment and media industries from a producer’s perspective. You will learn the principles of budgeting and scheduling a movie, crewing up, contracting above-the-line and below-the-line personnel, working with union and non-union artists, as well as producing for different movies and TV program genres, and all the industry delivery requirements. You will be able to apply the acquired learning to the movies directed by the Cinema division’s Directing students.
Prerequisites: CIPR 1102, CIST 1102, SCRN 1102.
Co-requisite: PROD 2103.
PROD 2105: Producing 2: Marketing and Distribution
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to the art of movies and television programs’ marketing and distribution. You will learn how to create marketing and distribution plans for your projects, four-walling, working with reps, dealing with distribution economics and navigating the international film markets. You will be able to apply the acquired learning to the movies directed by the Cinema Division’s Directing students.
Prerequisites: PROD 2103, PROD 2104.
Co-requisite: PROD 2106.

PROD 2106: Financing, Accounting and Management
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to financing movies and other video or TV programs, as well as managing and accounting their successful production. You will learn how to create business plans, packages, types of financing and about other tax implications. You will also learn how to navigate the international financing world and about the art of co-production.
Prerequisites: PROD 2103, PROD 2104.
Co-requisite: PROD 2105.

PROD 2107: Internship
2.00 credits (2.00 int)
This internship provides second-year producing students with an opportunity to work in a professional film or video production facility or on a qualifying shoot in the Twin Cities or anywhere in the country. Internship placement will be supervised by the producing instructor and will reflect your specific interests in a producing career. You will create a final report at the end of the internship. NOTE: Working on regular student productions through the MCTC programs cannot be considered as an internship.
Prerequisites: PROD 2103, PROD 2104.

Cinema: Screenwriting

SCRN 1101: Introduction to Cinematic Storytelling
3.00 credits (3.00 lec)
This course provides an introduction to the basic elements of fictional cinematic storytelling with an emphasis on the techniques and craft that distinguish screenwriting from other forms of writing. You will complete a series of specific scripted scenes using the master scene screenwriting format and implementing such elements as character, mood and rhythm.
Prerequisites: Admission to the Cinema Division.
Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

SCRN 1102: Writing the Short Fiction Screenplay
3.00 credits (2.00 lec/1.00 lab)
Drawing heavily on the basics learned in Screenwriting 1101, this class will examine advanced storytelling techniques and the specific art of dialogue writing. You are expected to develop, draft and rewrite a short fiction script.
Prerequisites: SCRN 1101; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

SCRN 2103: Script Analysis and Structure
4.00 credits (3.00 lec/1.00 lab)
This class will focus mainly on mastering the dramatic structure through a combination of lectures, scene rewritings from specific movies, a thorough analysis of professional screenplays and a precise evaluation/comparison of the movies based on those same screenplays. You are expected to analyze two complete professional scripts and rewrite several scenes from produced features.
Prerequisites: CPRR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: SCRN 2104.
SCRN 2104: Writing Nonfiction Scripts
4.00 credits (3.00 lec/1.00 lab)
This class focuses on learning the other non-narrative forms and structures of screenwriting: documentary, television, industrial, corporate, educational, training, animation, commercials, news, and the alternative markets. You are expected to develop and complete several short nonfiction scripts.
Prerequisites: Admission to the Cinema Division, CIPR 1102, CIST 1102, SCRN 1102 and ENGL 1111.
Co-requisite: SCRN 2103.

SCRN 2105: Writing the Fictional Feature-Length Script
4.00 credits (3.00 lec/1.00 lab)
This class introduces you to the dramatic fictional feature-length screenplay. You will research, develop, plot, structure and draft a feature-length fictional script, through all the required professional steps: ideation, characterization, synopsis, treatment, breakdowns, etc. A finished draft is required for graduation.
Prerequisites: SCRN 2103 and SCRN 2104.
Co-requisite: SCRN 2106.

SCRN 2106: Screenwriting Practicum
4.00 credits (3.00 lec/1.00 lab)
This course focuses on three major activities: exploring the fundamental principles and the legal aspects of the business as they relate to the screenwriting profession; analyzing the feature scripts developed in SCRN 2105 and their structure; and learning how to orally pitch a feature idea or a script to professionals. Using concepts from classical and contemporary dramatic structures, you will learn how to write, rehearse and pitch their scripts to professionals from New York or Los Angeles.
Prerequisites: SCRN 2103 and SCRN 2104.
Co-requisite: SCRN 2105.

SCRN 2107: Internship Lab
2.00 credits (2.00 int)
This internship connects you with local organizations such as The Minnesota Film and Television Board, The Independent Feature Project Minnesota, The Screenwriters Workshop, the McKnight Foundation and other local film and video organizations. You will participate for one semester in the industry as Reader/Story Analyst, write professional coverages for original scripts and get the unique chance to participate in the preproduction of local and national cinema projects filmed in town. Internships are available only to second-year degree students and may be repeated.
Prerequisites: SCRN 2103 and SCRN 2104.

SCRN 2998: Directed Study
Prerequisites: One course in SCRN.

Cinema: Sound for Cinema

SNDC 2101: Production Sound for Motion Pictures
4.00 credits (3.00 lec/1.00 lab)
This course introduces techniques used in the acquisition of sound for motion pictures. You will learn how to record and mix for live sound and how to use single and double system and multitrack recording for pictures. You will complete specific sound assignments in class and participate in the advanced students' Cinema productions. Must be taken A–F.
Prerequisites: CIPR 1102, SCRN 1102, CIST 1102, ENGL 1111.
Co-requisite: SNDA 1310.

SNDC 2102: Post-Production Sound for Motion Pictures
4.00 credits (3.00 lec/1.00 lab)
This course introduces advanced workflows for Post-Production sound. You will learn to use professional Digital Audio Workstation (DAW) software, advanced plug-ins and effects, and Automated Dialogue Replacement (ADR) techniques. You will study the theories of editing and mixing audio in stereo and surround environments. You will complete assignments in class and participate in advanced Cinema productions. Must be taken A–F.
Prerequisites: SNDC 2101, SNDA 1310.
Co-requisite: SNDC 2103.

SNDC 2103: Advanced Sound for Cinema Project
4.00 credits (3.00 lec/1.00 lab)
This course utilizes the aesthetics and technical knowledge introduced in prerequisite courses. You will participate in a cinematic sound production in collaboration with a director and an editor. You will implement advanced techniques to the projects over the semester and produce a professional reel as a capstone project. Must be taken A–F.
Prerequisites: SNDC 2101, SNDA 1310.
Co-requisite: SNDC 2102.
**Cinema: Visual Effects**

**CVFX 2001: Visual Effects 1: Motion Graphics and Compositing**
4.00 credits (3.00 lec/1.00 lab)
This course introduces you to the field of Motion Graphics and Compositing. You will design and build short animated sequences utilizing 2D and 3D planes to achieve specific objectives required by a script. You will use industry-standard software and select production pipelines and output options. Must be taken A–F.
Prerequisites: CIPR 1102, SCRN 1102.

**CVFX 2002: Visual Effects 2: Introduction to Animation and CGI**
4.00 credits (3.00 lec/1.00 lab)
This course provides introductory three-dimensional, computer based animation and Computer Graphic Imaging (CGI) experiences. Output will be in digital file formats. You will study basic 3D modeling and animation as you develop skills, functional knowledge and techniques through lecture, demonstration, completion of regular assignments and final projects. Must be taken A–F.
Prerequisites: CIPR 1102, SCRN 1102.

**CVFX 2103: Visual Effects 3: Stereoscopy**
4.00 credits (3.00 lec/1.00 lab)
This course provides practical, hands-on production experience in the growing realm of digital 3D, stereoscopic cinema. Must be taken A–F.
Co-requisite: CVFX 2104.

**CVFX 2104: Visual Effects Advanced Project**
4.00 credits (3.00 lec/1.00 lab)
This course utilizes the aesthetics and technical knowledge introduced in prerequisite courses. You will participate in a cinematic VFX production in collaboration with a director and an editor. You will employ advanced techniques in projects over the semester, as well as produce a professional reel as a capstone project. Must be taken A–F.
Co-requisite: CVFX 2103.

**CVFX 2107: Internship**
2.00 credits (2.00 int)
This course provides an opportunity to work in a production facility or on a set. Your internship placement will reflect your personal aesthetics in cinematography. You must obtain your internship coordinator’s approval in advance of internship. Placement is limited to program students. Must be taken A–F.
Prerequisites: CVFX 2001.

**Communication Studies**

**CMST 1000: Introduction to Communication Studies**
3 credits (3.00 lec)
This course explores foundational communication concepts and fosters communication skills in interpersonal communication, group communication and public speaking. You will learn concepts, principles and skills designed to help you become a more effective communicator in a variety of contexts.
Fulfills MnTC Goal Area 1.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**CMST 1005: Public Speaking**
3.00 credits (3.00 lec)
This course focuses on introductory public speaking concepts and skills. You will study the process of formal speaking, with an emphasis on comfortable and competent delivery of speeches. You will learn how to overcome anxiety, choose a topic, organize and outline your speeches, and critically analyze speech-making choices. You will demonstrate effective presentation techniques by delivering informative, persuasive and impromptu speeches.
Fulfills MnTC Goal Area 1.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
CMST 1010: Interpersonal Communication
3.00 credits (3.00 lec)
Interpersonal Communication focuses on the examination and acquisition of positive and effective interpersonal and intrapersonal communication skills. You will examine your self-concept, relationships with others, perceptions, emotions, nonverbal communication, listening ability, conflict-resolution skills and other aspects of interpersonal communication. You will learn and enhance new communication skills through exercises in class and applications to daily life outside of class.
Fulfills MnTC Goal Area 1.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 1013: Introduction to Family Communication
3.00 credits (3.00 lec)
This course explores how communication functions within families and emphasizes understanding families as unique communication systems within cultural contexts. You will have the opportunity to explore your family of origin and other family systems to further understand why and how families behave as they do. You will be provided with several theoretical and practical approaches to better understand the dynamics of interaction occurring in families and will develop skills to improve competence in family communication.
Fulfills MnTC Goal Area 1.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 1650: Environmental Communication
3.00 credits (3.00 lec)
This course introduces basic concepts and theories designed to develop an understanding of how the environment and communication interact. You will learn the basic theories and principles of communication as they apply to the environment and develop skills to enhance your understanding, framing, and communication about environmental issues.
Fulfills MnTC Goal Areas 1 and 10.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

CMST 2000: Speaking in the Community
3.00 credits (3.00 lec)
This course provides individuals who have some speaking experience and knowledge with an opportunity to develop and enhance their oral communication skills and performance abilities. You will work individually with the instructor and in peer sessions to prepare speeches to take out into the community. You will have opportunities for self-expression, public interaction, outreach and exchange; take an active part in selecting your topics and audiences; and use feedback and evaluations to assist you in shaping the content and delivery of your presentations.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 2005: Communication and Gender
3.00 credits (3.00 lec)
This course introduces basic concepts and theories designed to develop an understanding of how gender and communication interact. You will learn the basic theories and principles of communication as it applies to gender and develop skills to enhance communication between and among gender groups.
Fulfills MnTC Goal Areas 1 and 7.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 2010: Argumentation and Advocacy
3.00 credits (3.00 lec)
This course introduces the basic concepts of argumentation, reasoning, and decision-making theory and practice. You will analyze and research contemporary social issues, discuss and critique issues to identify valid and invalid arguments, as well as present your own arguments and positions through oral argument and debate. You will gain knowledge about argumentation theory and principles of valid reasoning, and learn how to formulate positions, present arguments and advocate for a position.
Fulfills MnTC Goal Areas 1 and 9.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
CMST 2011: Small Group Communication
3.00 credits (3.00 lec)
This course examines the dynamics and processes of group interactions and effective problem-solving in groups. You will gain knowledge of the nature of groups, how and why groups form and function, and how norms and roles evolve within groups. You will learn about group processes, problem-solving procedures and the role of communication in creating positive group outcomes. You will learn how to enhance your communication skills to be an effective group member and leader through group work assignments and group presentations.
Fulfills MnTC Goal Area 1.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 2012: Intercultural Communication
3.00 credits (3.00 lec)
This course examines the interconnections between communication and culture and identifies ways to develop effective communication strategies in multicultural contexts. You will assess the impact of culture on people’s worldviews, perceptions, and behaviors, and learn how to identify difficulties and eliminate barriers when communicating across cultures. You will read about, discuss, and explore the impact of culture on communication processes, and learn strategies for effective communication across cultures.
Fulfills MnTC Goal Areas 1 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

CMST 2998: Directed Study
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Community Health Worker

CMHW 1001: The Community Health Worker Role: Advocacy and Outreach
2.00 credits (2.00 lec)
This course focuses on the role of the community health workers’ personal safety, self-care, personal wellness, and the promotion of health and/or disease prevention of clients. Must be taken A-F.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.

CMHW 1016: Organizations and Resources: Community and Personal Strategies
1.00 credits (1.00 lec)
The course focuses on the community health worker’s knowledge of the community and the ability to prioritize and organize work. Emphasis is on the use and critical analysis of resources and problem-solving. Must be taken A-F.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.

CMHW 1025: Community Health Worker’s Role in Teaching and Capacity-Building
2.00 credits (2.00 lec)
This course focuses on the community health worker’s role in teaching and increasing capacity of the community and of the client. Emphasis is on establishing healthy lifestyles and clients developing agreements to take responsibility for achieving their health goals. You will learn and practice methods for planning, developing and implementing plans with clients to promote wellness.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.
Co-requisite: CMHW 1001.
CMHW 1035: The Community Health Worker: Legal and Ethical Responsibilities
1.00 credit (1.00 lec)
This course focuses on the legal and ethical dimensions of the community health worker’s role. You will study the boundaries of the community health worker position, agency policies, confidentiality, liability, mandatory reporting, and cultural issues that can influence legal and ethical responsibilities.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.
Co-requisite: CMHW 1001.

CMHW 1045: Community Health Worker: Coordination, Documentation and Reporting
1.00 credit (1.00 lec)
This course focuses on the importance and ability of the community health worker to gather, document, and report on client visits and other activities. The emphasis is on appropriate, accurate, and clear documentation with consideration of legal and agency requirements.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.
Co-requisite: CMHW 1001.

CMHW 1055: Communication Skills and Cultural Competence
2.00 credits (2.00 lec)
This course provides the content and skills in communication to assist community health workers in effectively interacting with a variety of clients, their families, and a range of healthcare providers. You will learn about communicating verbally and nonverbally, listening and interviewing, networking, building trust, and working in teams. You will practice communication skills in the context of a community’s culture and the cultural implications that can affect client communication.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.
Co-requisite: CMHW 1001.

CMHW 1065: Health Promotion Competencies
3.00 credits (3.00 lec)
This course provides basic concepts regarding healthy lifestyles, and specific information about heart disease and stroke, diabetes, cancer, oral health, mental health, and maternal/child/teen health necessary for the Community Health Worker to foster holistic health practices and implement prescribed plans of care with clients. Must be taken A–F.
Prerequisites: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent.
Prerequisites/Co-requisites: CMHW 1001, CMHW 1016, CMHW 1035, CMHW 1045.

CMHW 1100: Community Health Worker Internship
2.00 credits (2.00 int)
The 80-hour internship course provides you the opportunity to prepare for independent work as a Community Health Worker. You will work in a role promoting the health and well-being of individuals through an agency experience. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 and ESOL 0033 or equivalent. Clear background check.
Prerequisite/Co-requisite: CMHW 1001.

Computer Literacy

COML 1000: Computer Literacy Basics
1.00 credit (1.00 lab)
This course is intended for those students with keyboarding skills but with little or no computer experience. It covers basic computer topics that are essential for the use of computers in all fields of study. Topics covered include: basic computer hardware, applications software, and systems software terminology; operating system basics; word-processing basics; and communications and email.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
**COML 1100: Computer Literacy Basics with Keyboarding**

2.00 credits (1.00 lec/1.00 lab)
This course is intended for those students with little or no computer experience or keyboarding skills. It covers basic computer topics essential for the use of computers in all fields of study, as well as efficient keyboarding for the successful college student. Topics covered include alphabetic and numeric keyboards for use in basic formatting; basic computer hardware; applications software and systems software technology; operating systems basics; word-processing basics; and communications and email.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**Computer Science**

**CSCI 1050: Designing Web Pages**

3.00 credits (3.00 lec)
In this course, you will learn the basics of webpage design and how to publish Web pages on the Internet. You are introduced to Hyper Text Markup Language (HTML), and learn how to design Web pages using an HTML editor program. You will learn and use FrontPage 2003 to create a functional website and learn to upload content using a file-transfer program.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052 or an introduction to the Internet class or workshop, OR experience with Windows or Mac operating systems AND experience using a Web browser such as Netscape or Microsoft Explorer.

**CSCI 1100: Introduction to Computers**

3.00 credits (3.00 lec)
This course is designed to provide a basic understanding of computer concepts and applications and to show how computers are used in the home, business, and organizations. Topics will include essential concepts of computers, the Internet, software basics, multimedia, files and storage, computer architecture, ethics, and current trends. You will use email and the Internet and gain hands-on experience using computer applications for word processing, spreadsheets, file organization, databases, and presentation graphics in the Microsoft environment using Word, Excel, Access, and PowerPoint.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052. Keyboarding skills recommended.

**CSCI 1200: Computer Applications in Home and Business**

3.00 credits (3.00 lec)
This intermediate-level course builds on fundamental computing skills and concepts. You will use the productivity tools and features of Microsoft Office software to solve problems and to create documents, databases, spreadsheets and presentations needed for other college courses or personal and professional use. You should have previous computer experience and keyboarding skills.
Prerequisite: CSCI 1100 or COML 1000 or COML 1100 or ITEC 1100 or BTEC 1020. Keyboarding skills recommended.

**CSCI 1500: Introduction to Programming and Problem-Solving**

3.00 credits (3.00 lec)
This is an introductory computer course for those interested in programming but who have no programming experience. The course emphasis is on the use of problem-solving techniques to develop computer program solutions to simple programming problems. Topics include number systems; information representation in memory; programming languages and development environments; problem-solving, program design, and pseudocode; loops and decisions, functions, arrays, structures, and recursion. You will write programs using one or more programming languages (such as C++ or Java).
Prerequisite: Placement into MATH 1110 or MATH 1116 or completion of MATH 0080.

**CSCI 1700: Introduction to Computer Programming in Java**

4.00 credits (4.00 lec)
This course is intended for students who are interested in learning about a modern object-oriented programming language. You will learn object-oriented programming concepts using Java. Topics covered will include: Introduction to Java applets and applications, software development in Java, strings and characters, console input and output, control structures, methods, arrays, classes and objects, inheritance and polymorphism, exception handling, File input/output, and recursion.
Prerequisites: CSCI 1500; MATH 1110 or MATH 1116 or MATH 1125.
CSCI 1730: Introduction to Object-Oriented Programming With C++

4.00 credits (4.00 lec)
This course presents an introduction to object-oriented programming using C++. Topics covered will include loops, decisions, structures, functions, objects and classes, arrays, operator overloading, inheritance, pointers, polymorphism, streams, and files. In addition, the course teaches the problem-solving skills required to design programming solutions in C++.
Prerequisites: CSCI 1500; MATH 1110 or MATH 1116 or MATH 1125.

CSCI 1901: Structure of Computer Programming 1

4.00 credits (4.00 lec)
This is an entry-level course for students planning to pursue a four-year degree in computer science. The course emphasizes problem-solving techniques for writing computer programs. The programming language Scheme will be used to solve problems, but this is not a language course. Topics covered will include: expressions, procedures, recursion and iteration, procedures as arguments and as returned values, procedures using lambda, introduction to data abstraction, hierarchical data, symbolic data, multiple representations for abstract data, assignment and local state, the environment model of evaluation, modeling with mutable list structure and queues, and streams.
Prerequisites: CSCI 1500; MATH 1110 or MATH 1116 or MATH 1125.

CSCI 1902: Structure of Computer Programming 2

4.00 credits (4.00 lec)
This is a follow-up course to CSCI 1901 and is intended for students planning to pursue a four-year degree in computer science. The course uses an object-oriented language, such as C++ or Java, to cover additional data structures and algorithms. You will implement data structures and their operations as abstract data types using an object-oriented approach. Topics to be covered in this course include: data abstraction through classes, introduction to data structures, stacks, queues, linked lists, sorting and searching.
Prerequisite: CSCI 1700 or CSCI 1730 or CSCI 1901.

CSCI 2011: Discrete Mathematics

4.00 credits (4.00 lec)
This course is intended to give students studying computer science the mathematical foundation they will need for their future studies. However, it may be taken by students in a wide variety of majors, including mathematics and engineering. Topics covered will include logic, sets, functions, sequences, complexity of algorithms, number theory, matrices, methods of proof, mathematical induction, recursive algorithms, counting methods, discrete probability, relations, graphs, and tree fundamentals.
Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1180.

CSCI 2998: Directed Study

Prerequisites: One course in CSCI; placement into READ 1300 or completion of READ 0200 or ESOL 0052 and department approval.

Culinary Arts

CULA 1005: Culinary Fundamentals

5.00 credits (2.00 lec/3.00 lab)
This course introduces basic food preparation skills and industry sanitation practices. You will learn about cooking theories and the principles used in the food service industry. The hands-on laboratory will introduce you to knife skills and basic cookery methods. You will prepare stocks, soups, sauces, proteins, breakfast items and cold foods.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
Co-requisite: CULA 1109.

CULA 1105: Foodservice Purchasing and Receiving

2.00 credits (2.00 lec)
This course provides a basic understanding of the purchasing function in the food service sectors. You will learn about the ways in which value can be added by members of the food service distribution channel. You will also discuss the necessary elements or purchase specifications and how to select and evaluate distributor partners. You will develop and understanding of ethics, group purchasing, electronic purchasing methods, and food safety issues.
Prerequisite: Placement into ENGL 0900.
CULA 1106: Introduction to Baking  
3.00 credits (1.00 lec/2.00 lab)  
This course covers baking terminology, the function of ingredients, proper mixing and baking methods, and texture and taste of the finished products, such as yeast breads, quick breads, pies, cakes, merengues, custards, puddings and cookies.  
Prerequisite: Placement into MATH 0060.  
Co-requisite: CULA 1109.

CULA 1109: ServSafe Sanitation  
2.00 credits (2.00 lec)  
This course develops the understanding of the principles of sanitation and safety necessary to maintain a safe and healthy environment for both the consumer and the employee in the food service industry. You will learn about the laws and regulations related to food safety and sanitation in food service operations. Upon successful completion of this course, you will be ServSafe certified.  
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

CULA 1110: Food Service Nutrition  
3.00 credits (3.00 lec)  
This course introduces sound nutritional practice, menu planning and the identification of nutritional trends and considerations. You will gain skills and knowledge that you can apply in menu writing and analysis and food preparation.  
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

CULA 1115: Hospitality Supervisory Management  
3.00 credits (3.00 lec)  
This course covers the organization and management of a workforce. You will learn about the recruitment, selection, orientation, training and development of employees. You will also learn about performance appraisals, compensation, and discipline methods, and you will develop leadership skills to become a successful manager within the culturally diverse hospitality industry.  
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.

CULA 1120: Casual Restaurant Operations  
5.00 credits (1.00 lec/4.00 lab)  
This course develops production skills at assigned workstations within a student operated restaurant. The types of menu items prepared are those served in casual service (sports bar/family) restaurants emphasizing current dining trends. You will prepare menu items, such as appetizers, salads, sandwiches, soups, entrees, vegetables, breakfast and bakery selections. You will perform daily mise en place and cleanup procedures and use a variety of service styles to serve prepared meals to the dining public.  
Prerequisites: CULA 1005, CULA 1109.

CULA 1125: International Cuisine  
3.00 credits (1.00 lec/2.00 lab)  
This course focuses on foods served in restaurants around the world. You will develop an understanding of the evolution of regional flavors. Discussions will include history and effects of bordering countries, geography, climate, indigenous foods, culture, and religious influences on menu offerings. You will prepare and serve food in a fully functional restaurant.  
Prerequisites: CULA 1005, CULA 1109.

CULA 1150: Menu Planning  
2.00 credits (2.00 lec)  
This course examines the basic concepts and principles of menu planning, including pricing, merchandising, document layout, and design. You will develop menus for various styles of operations, and you will learn to apply efficiencies to production in relation to profitability.  
Prerequisite: Placement into MATH 0060.

CULA 2000: Artisan Baking  
3.00 credits (3.00 lab)  
This course provides work experience in the fundamentals of professional baking. You will produce and finish a variety of yeast doughs, specialty breads, cookies, pastries, pies and cakes. You will study the materials used in baking and how they relate to one another in the mixing, processing and baking of specific products.  
Prerequisites: CULA 1106, CULA 1109.
**CULA 2100: Event Planning Methods**
3.00 credits (3.00 lec)
This course provides the skills and methods needed for planning a buffet, banquet or catered event. You will complete a portfolio that includes all the documents needed for a catered event. Your plan will consist of a culinary experience that involves the production, supervision, nutrition, sanitation and food costing skills learned in other CULA courses.
*Prerequisites: CULA 1005, CULA 1109.*

**CULA 2103: Advanced Pastry and Baking**
3.00 credits (1.00 lec/2.00 lab)
This course covers baking terminology, the function of ingredients, proper mixing and baking methods, decoration, and the construction of finished baked products served in a fine dining establishment.
*Prerequisites: CULA 1106, CULA 1109.*

**CULA 2500: Beverage Management**
3.00 credits (3.00 lec)
This course is the study of beer, wine and distilled spirits, as well as the facilities in which they are served. You will develop an understanding and appreciation for various beverage and food affinities. You will study the social impacts, trends, and responsibilities associated with the consumption of alcohol. You will complete the National Restaurant Association Education Foundation ServSafe Alcohol Advanced Examination.
*Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052.*

**CULA 2502: Garde Manger**
3.00 credits (1.00 lec/2.00 lab)
Garde Manger is the French term for the pantry, also known as the “Cold Kitchen.” In this course, you will develop skills in the preparation of cold foods that are frequently served on buffets. Decorative work and food presentation are key course components. Discussions and production will include cold hors d’oeuvres, protein fabrication, sausage-making and salt-curing and smoking foods. You will be applying principles of platter design and buffet setup as well.
*Prerequisites: CULA 1005, CULA 1109.*

**CULA 2510: Full Service Restaurant Operations**
5.00 credits (1.00 lec/4.00 lab)
This course develops production skills at assigned workstations within a student-operated restaurant. You will prepare menu items prepared typical of a full-service (formal/classic) restaurant, emphasizing current dining trends: appetizers, salads, sandwiches, soups, entrees, vegetables and bakery selections. You will perform daily mise en place and cleanup procedures, and you will use a variety of service styles to serve prepared meals to the dining public.
*Prerequisites: CULA 1005, CULA 1109.*

**Dakota**

**DAKO 1000: Dakota 1**
5.00 credits (5.00 lec)
This course provides an introduction to the language and culture of the Dakota people. You will develop basic listening, speaking, reading and writing skills necessary to communicate about self, family, and daily life, as well as basic survival needs. You will also explore cultural aspects of the Dakota speaking world.
*Fulfills MnTC Goal Area 8.*

**DAKO 1100: Dakota 2**
5.00 credits (5.00 lec)
This course is a continuation of Dakota 1. You will further develop listening, speaking, reading and writing skills necessary to communicate about self, family, and daily life, as well as basic survival needs. You will further explore cultural aspects of the Dakota speaking world.
*Fulfills MnTC Goal Area 8.*
*Prerequisite: DAKO 1000.*
DAKO 1900: Dakota Culture and History
3.00 credits (3.00 lec)
This course is an introduction to the history and culture of the Dakota nation. You will gain cultural, historical, and sociological knowledge and understanding of the Dakota nation through readings, lectures, guest speakers, and media. You will be encouraged to engage critically with historical and contemporary issues and be inspired towards activism.

Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

Dental Assistant

DNTA 1000: Introduction to the Dental Field
2.00 credits (2.00 lec)
This course provides an introduction to professional opportunities within the dental field. You will focus on dental history, terminology, the roles and responsibilities of each dental health team member, and the Minnesota Dental Practice Act. The course will build upon competencies achieved in the Healthcare Core Curriculum.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070 and HCCC 1100.

Co-requisite: DNTA 1000.

DNTA 1015: Customer Service Skills for the Dental Office
3.00 credits (3.00 lec)
This introductory course provides skills to work in a supportive role in a dental office. You will focus on reception skills, clerical applications, business office equipment and the commonly used scheduling methods used in the dental office setting. This will include computerized software and standard types of processes used in current dental practices to effectively schedule and communicate with patients. You will build upon competencies achieved in the Healthcare Core Curriculum and apply them specifically to the dental office.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070 and HCCC 1100.

Co-requisite: DNTA 1000.

DNTA 1025: Clinical Support for the Dental Office
2.00 credits (2.00 lec)
This course provides the skills needed to safely support other clinical personnel. You will focus on charting techniques, disease transmission, infection control and health/safety issues in dentistry. You will participate in a lab setting to simulate patient interactions and master the skills required to be an effective member of the dental health team. The course will build upon competencies achieved in the Healthcare Core Curriculum.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070 and HCCC 1100.

Co-requisite: DNTA 1000.

DNTA 1035: Dental Office Support Skills Lab
2.00 credits (2.00 lab)
This course provides the opportunity to use and practice skills learned in DNTA 1000, DNTA 1015 and DNTA 1025. You will identify and observe various employment opportunities available in dental office and participate in laboratory sessions on-campus and at dental clinics in the community. You must pass DNTA 1000, DNTA 1015, and DNTA 1025 prior to attending the community-based learning. Must be taken Pass/Fail.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070 and HCCC 1100.

Co-requisites: DNTA 1000, DNTA 1015 and DNTA 1025.

DNTA 1101: Introduction to Dental Assisting
3.00 credits (3.00 lec)
This course introduces you to the dental profession and to dental assisting, as well as provides knowledge of legal terms, ethical standards, and legal issues as they relate to dentistry. The course will focus on program requirements, dental terminology, dental history, roles and responsibilities of each member of the dental team, dental office procedures and communications, levels of supervision, dental ethics and legal issues, and the Minnesota Dental Practice Act.

Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
DNTA 1110: Dental Science  
3.00 credits (3.00 lec)  
This course is a basic introduction to anatomy, physiology, embryology, and pathology, with an emphasis on the head, neck, and oral cavity. The course will focus on the human body systems, specific tissues, structures, and landmarks of the head, neck and oral cavity, to include the primary and permanent dentition.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1115: Dental Anatomy  
1.00 credit (1.00 lec)  
This course is a basic introduction to the anatomy, physiology, embryology, histology and pathology of the oral cavity. You will focus on the tissues and structures of the oral cavity, and on the primary and permanent dentition.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1120: Preclinical Dental Assisting  
1.00 credit (1.00 lec)  
This course will provide basic scientific concepts related to the causes of disease, its spread and methods for control. You will focus on disease transmission and protection of the patient and dental personnel through the use of Universal Precautions Centers for Disease Control (CDC) Standards and Occupational Safety and Health Administration (OSHA) Standards.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1130: Chairside Dental Assisting 1  
3.00 credits (2.00 lec/1.00 lab)  
This course will provide knowledge in patient management, chairside assisting and the concepts of four-handed dentistry. You will focus on medical/dental histories, vital signs, medical and dental emergencies, drug classifications, and commonly used drugs in dentistry. You will have the opportunity to demonstrate the appropriate armamentarium for dental procedures, seating positions, instrument transfer and operator setup for full utilization of a chairside assistant.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.  
Co-requisites: DNTA 1101 and DNTA 1120 or approval from the program director.

DNTA 1140: Chairside Dental Assisting 2  
2.00 credits (2.00 lec)  
This course provides you with the knowledge of the dental specialties that assist and provide supportive functions specific to each area. This course will focus on terminology, armamentarium, procedures and the clinical aspect of each dental specialty.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1170: Clinical Externship 1  
3.00 credits (3.00 int)  
This course provides you with the opportunity to develop skills learned in the classroom through practical application. The course will focus on assisting in a dental office and participating as a member of the dental health team. Must be taken Pass/Fail.  
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
DNTA 1201: Introduction to Expanded Functions
2.00 credits (1.50 lec/0.50 lab)
This course will introduce you to expanded functions legal in Minnesota for a licensed dental assistant to perform. The course will focus on program requirements and review of anatomy and physiology, dental specialties, dental materials, pharmacology, and microbiology/infection control. This course will also identify the levels of supervision, dental ethics and legal issues as they relate to the Minnesota Dental Practice Act.
Prerequisites: Acceptance into the Expanded Functions Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1210: Dental Materials
3.00 credits (1.00 lec/2.00 lab)
This course provides the background knowledge, functions and manipulative skills in dental materials. The course will focus on commonly used dental materials, their purpose, properties, manipulation, placement, care, hazards and storage.
Prerequisites: Acceptance into the Dental Assistant program; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1250: Radiology 1
3.00 credits (2.00 lec/1.00 lab)
This course introduces you to oral radiology, as well as the preclinical application of radiographic techniques. This course will focus on key landmarks, principles of radiation, radiation health and safety, radiographic techniques using both the parallel and bisecting-angle techniques, mounting radiographs, and radiograph evaluation. You will begin to practice on skulls.
Prerequisites: DNTA 1101, DNTA 1110, DNTA 1120 and DNTA 1130. Required of students enrolled in the diploma program only.
Co-requisite: DNTA 1201 or approval from the program director is required of students enrolled in the certificate program only.

DNTA 1260: Dental Assistant Expanded Functions 1
4.00 credits (1.00 lec/3.00 lab)
This course is part of the advanced functions legal in Minnesota for a licensed dental assistant to perform. The course will focus on delineation of duties; knowledge, and opportunity to perform orthodontic, periodontal, oral, and maxillofacial surgery expanded duties; as well as on the preclinical and clinical skills in dental dam, excess cement and bond removal; and taking an alginate impression to include a bite registration.
Prerequisites: DNTA 1101, DNTA 1110, DNTA 1120, DNTA 1130, DNTA 1140, DNTA 1210 and CPR or acceptance into the Expanded Functions Dental Assistant program or approval from the program director.

DNTA 1274: Clinical Externship 2
4.00 credits (4.00 int)
This course is a continuation of Clinical Externship 1 and will provide you with the opportunity to continue developing skills initiated in the classroom and previous dental clinic experience, through practical application. The course will focus on assisting in a dental office and participating as a member of the dental health team. Must be taken Pass/Fail.
Co-requisites: DNTA 1210; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

DNTA 1350: Radiology 2
3.00 credits (1.00 int/2.00 lab)
This course is a continuation of Radiology 1 and provides you with an opportunity to develop skills in exposing, processing, and evaluating radiographs. This course will focus on the preclinical and clinical application of radiographic techniques. You will expose radiographs on patients.
Prerequisite: DNTA 1250.
DNTA 1360: Dental Assistant Expanded Functions 2
4.00 credits (1.00 lec/1.00 int/2.00 lab)
This course continues with the advanced functions legal in Minnesota for a licensed dental assistant to perform. The course will focus on nutrition as it relates to oral health; oral hygiene instruction; mechanical polishing of the clinical crowns; application of fluoride; preclinical and clinical skills in the induction of nitrous oxide-oxygen inhalation analgesia and the application of pit- and fissure sealants.
Prerequisite: DNTA 1260 or approval from the program director.

DNTA 2998: Directed Study
Prerequisites: One course in DNTA or approval from the program director; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

ECED 1004: Working with Children During Out-of-School Time
3.00 credits (3.00 lec)
This foundational course introduces you to career opportunities working with school age children (5–12) during out-of-school time. You will examine the roles of school-age providers, basic program elements and regulations, professionalism, and current issues. You will increase your understanding of national standards and the skills necessary to successfully work with school-age children in an out-of-school-time program. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1215.

ECED 1200: Introduction to Early Childhood Education
3.00 credits (2.00 lec/1.00 lab)
This course provides an overview of the Early Childhood profession including: history, program types, regulations, roles, responsibilities, developmentally appropriate practice, play, home-school connections, diversity, community resources, reflective practice, and ethics. You will learn about the multiple aspects and settings of the Early Childhood profession. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1215.

ECED 1215: Growth and Development for Educators
3.00 credits (3.00 lec)
This course addresses typical and atypical child development from birth through age 12. You will examine all developmental domains, including the physical, social, emotional, cognitive, language, gender and cultural development, as well as consider how development is viewed from differing theoretical perspectives. Must be taken A–F.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Prerequisite/Co-requisite: ECED 1200 or EDUC 1500.

ECED 1220: Child Safety, Health and Nutrition
3.00 credits (3.00 lec)
This course will examine key components of regulations, standards, and policies that ensure physical and psychological health, safety, and nutrition for both children and staff in early-childhood settings. You will integrate these concepts into planning, evaluating, and implementing environments and curriculum that emphasize these basic concepts, recognizing the importance of collaboration with families and health professionals. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1300.
ECED 1244: Creating Environments for School-Age Children
3.00 credits (3.00 lec)
This course provides you with an introduction to arranging the physical environment to meet the developmental needs of school-age children in after school and out-of-school-time programs. You will learn how to arrange furniture, select and organize materials, plan the daily schedule, and manage transitions. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1300: Guiding Children’s Behavior
3.00 credits (3.00 lec)
This course will examine the impact of child development, relationships, culture, and the environment on positive behavioral guidance in early-childhood settings. You will explore strategies for interacting with individual children, small or large groups, and developing caring social communities with a focus on developmental approaches that consider self-discipline as an emerging skill and acknowledges collaboration between school and home settings. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1215.

ECED 1505: Working with Diverse Families and Children
3.00 credits (3.00 lec)
This course examines how to work with many types of families. You will investigate the importance of family/school partnerships, study methods of effectively communicating with families, and identify community organizations and networks that support families. You will explore various classroom strategies emphasizing culturally and linguistically appropriate antibias approaches supporting all children in becoming competent members of a diverse society. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1220.

ECED 1540: Infant-Toddler Development and Learning Experiences
3.00 credits (2.00 lec/1.00 lab)
This course provides an overview of infant/toddler theory and development in home- or center-based settings. You will integrate knowledge of developmental needs, developmentally appropriate environments, effective caregiving and teaching strategies and observation methods. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1545: Learning Environments and Curriculum
3.00 credits (2.00 lec/1.00 lab)
This course presents an overview of knowledge and skills related to curriculum and environments for young children. You will implement the principles of developmentally appropriate practice in writing learning objectives and assessments for content areas such as motor development, language and literacy, social and emotional, sensory, process art, music, math, blocks, and science. You will also consider how to plan environments and select materials that provide play experiences that support development, independence, and exploration through sequential and integrated learning. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1220.

ECED 1575: Observation and Assessment
3.00 credits (2.00 lec/1.00 lab)
This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning in conjuncture with families and professionals in promoting children’s success. You will explore recording strategies, rating systems, multiple assessment tools and portfolios, with a focus on increasing objectivity in observing and interpreting children’s behavior, observing developmental characteristics, and increasing the awareness of normal patterns of behavior. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.
ECED 1600: Practicum 1
3.00 credits (1.00 lec/2.00 int)
This course provides students an opportunity to demonstrate early-childhood-teaching competencies under guided supervision in licensed early-childhood programs to make connections between theory and practice and developing professional behaviors. You will design, implement, and evaluate experiences that promote positive development and learning for all young children by applying comprehensive understanding of children and families using developmentally appropriate, child-centered, play-oriented approaches to teaching and learning, and knowledge of curriculum content areas. Must be taken A–F.
Prerequisite/Co-requisite: ECED 1505. This course requires instructor permission to register.

ECED 1640: Language Development and Literature/Literacy Experiences
3.00 credits (3.00 lec)
This class provides an overview of language learning, theories and developmental stages, national literacy initiatives, and a detailed study of emergent literacy skills of young children. You will integrate knowledge of children’s language and literacy development, learning environments, and teaching strategies to select, plan, present, and evaluate literacy experiences to children of different abilities and diverse backgrounds. You will also explore quality children’s literature in multiple genres and how a variety of skills are supported through wide range of books. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1641: The Seeds of Emerging Literacy
1.00 credit (1.00 lec)
This course is intended to introduce the concept of “emergent literacy” to paraprofessionals in the public schools and to childcare providers. You will learn information about implementing a literacy-rich classroom for young children and be expected to think critically about the impact of curriculum experiences, classroom organization, and the role of the teacher as the “architect” of learning opportunities on the emergent literacy skills of children. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1642: Social, Emotional and Moral Development Experiences
3.00 credits (3.00 lec)
This course provides an overview of social-emotional learning experiences in either home- or center-based settings. You will integrate knowledge of child development, learning environments, and teaching methods to promote emotional development, self-concept, self-esteem, social skills, diversity awareness and social studies. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1644: Creative Development Experiences
3.00 credits (3.00 lec)
This course provides an overview of creative/aesthetic learning experiences in either home- or center-based settings. You will integrate knowledge of child development, learning environments and teaching methods to promote children’s artistic, musical, movement, and dramatic abilities. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1650: Peaceful Classroom
3.00 credits (3.00 lec)
This course provides an overview of the effects of violence on the development and the behavior of young children. You will explore elements to be incorporated into a peaceful classroom. You will identify behavioral intervention strategies to address challenging behaviors and they create activities and materials to foster peacemaking skills in children. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1652: Sensory Motor Development Experiences
3.00 credits (3.00 lec)
This course provides an overview of sensory-motor learning experiences in either home- or center-based settings. You will integrate knowledge of child development, learning environments, and teaching methods to promote sensory, fine motor, gross motor, perceptual-motor, and self-care skill development. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.
ECED 1654: Math, Science and Technology Experiences
3.00 credits (3.00 lec)
This course provides an overview of cognitive and multimedia learning experiences in either home- or center-based settings. You will integrate knowledge of child development, learning environments, and teaching methods to promote curiosity, attention, perception, memory, problem-solving, logical thinking and media literacy. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1656: Culturally Relevant and Anti-Bias Education
3.00 credits (3.00 lec)
This course provides an overview of culturally relevant and anti-bias education in early-childhood settings. You will examine the major approaches to culturally relevant/anti-bias education, evaluate and make teaching materials, plan and implement culturally relevant/anti-bias learning experiences, and plan culturally relevant/anti-bias curriculum. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1744: School-Age Activities
4.00 credits (4.00 lec)
This hands-on course provides an overview of activities for school-age children in out-of-school-time settings. You will integrate your understanding of children to develop effective approaches to teaching and learning, as well as to design, implement, and evaluate activities that promote positive development and learning for school-age children. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 1925: Children with Differing Abilities
3.00 credits (3.00 lec)
This course examines the child with differing abilities in an early-childhood setting. You will integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to ADA and IDEA; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or emotional/behavioral disorders; work collaboratively with community and professional resources; utilize an individual education plan; adapt curriculum to meet the needs of children with developmental differences; and learn the importance of cultivating partnerships with families who have children with developmental differences. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 2444: School-Age Program Planning
3.00 credits (3.00 lec)
This course examines the “curriculum” of quality school-age and out-of-school-time programs. You will explore many forms of program planning and will develop the tools you need to organize and evaluate yearly, seasonal, monthly, and long-term activity plans. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: ECED 1545.

ECED 2500: Educational Leadership and Management
3.00 credits (3.00 lec)
This course discusses personal and professional reasons for becoming a teacher, ways to advocate in this profession, and will help you develop a plan for continuous education and professional development. You will improve skills in working with others by learning strategies for team-building, coping with stress, advocacy, and problem-solving, as well as study professional ethics and procedures for evaluating staff. Must be taken A–F.
Prerequisite: Child Development Diploma or instructor approval.
Prerequisite/Co-requisite: ECED 1600.
ECED 2545: Curriculum Planning
3.00 credits (3.00 lec)
This course provides an advanced level of curriculum planning. You will organize, implement, and evaluate developmentally appropriate curricula. Must be taken A–F.
Prerequisite: Child Development Diploma or instructor approval.
Prerequisite/Co-requisite: ECED 1600.

ECED 2600: Practicum 2: Developmentally Appropriate Curriculum
3.00 credits (3.00 int)
This course provides an opportunity for students to continue to demonstrate early-childhood teaching competencies under guided supervision in a licensed early-childhood setting, making connections between theory and practice. You will continue to practice professional behaviors as they apply to child-centered, culturally sensitive, play-oriented approaches to teaching and learning. You will demonstrate knowledge of curriculum content areas as they develop, implement, and assess curriculum that promote positive development and learning. Must be taken A–F.
Prerequisite/Co-requisite: ECED 2545. This course requires instructor permission to register.

ECED 2998: Directed Study
Prerequisites: One course in ECED and instructor approval.

Economics

ECON 1000: Consumer Economics
3.00 credits (3.00 lec)
This course examines the role of the consumer in the U.S. economy and the basic process of decision-making in relation to spending on major consumer items. The course will also examine the role of industry, government and protective agencies in relation to the consumer. Topics covered will include: budgeting, credit, food, clothing, housing, transportation, taxes, advertising, fraud, protective agencies and current problems.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

ECON 2000: Principles of Macroeconomics
3.00 credits (3.00 lec)
In this course, economic problems are examined by focusing on national income, employment, inflation, the banking system, monetary and fiscal policy, international trade and growth.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

ECON 2200: Principles of Microeconomics
3.00 credits (3.00 lec)
The economic problem is examined by focusing on demand, supply, prices, elasticity, the firm and its costs, market structure, and government.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

ECON 2500: Contemporary Economic Problems
3.00 credits (3.00 lec)
This course examines contemporary economic problems within alternative basic economic frameworks and within their international context. Problems introduced include unemployment, inflation, environment, poverty, debts, agriculture, military spending, plant closings and the economic future. Several of the problems are examined in depth.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

ECON 2998: Directed Study
Prerequisite: One course in ECON.
Education

EDUC 1000: Careers in Education, Child and Youth Development
1.00 credit (1.00 lec)
This course introduces you to career opportunities for working with children and youth in a variety of settings. The course also examines education and training requirements, licensing regulations, and characteristics of quality programs and settings. You will complete career exploration activities in a variety of settings.

EDUC 1150: Mentoring the Urban Student
2.00 credits (2.00 lec)
This course offers you an opportunity to enrich a young person’s life through mentoring. Through collaboration with Big Brothers Big Sisters, you will be matched with a 6- to 13-year-old attending the Interdistrict Downtown School (IDDS). You will meet with the child at IDDS for an hour each week at a prearranged time based on his or her schedule. In addition, weekly course lectures and discussion occur online. You will examine the role of a mentor, the mentoring process, the urban context, developmental assets, bridging differences, boundaries and limit-setting, and issues that often come up in mentoring urban children and youth. No experience with children is necessary. You will need to complete a thorough application process through Big Brothers Big Sisters prior to the first week of class.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

EDUC 1170: Tutoring Students in Urban Contexts
3.00 credits (1.00 lec/2.00 lab)
This course examines best practices for tutoring urban students in elementary, middle and secondary school settings. You will participate in intensive tutor training and tutor K–12 students. In order to complete this course, you must be able to complete 50–80 hours of tutoring during the semester. All students enrolled in this course will need to complete an application process through a district or charter school, which will include a background check. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: EDUC 1500.

EDUC 1235: Introduction to Culturally Competent Classroom Management
3.00 credits (3.00 lec)
This course is an introduction to different models of guidance and classroom management that demonstrate cultural competence and promote student resiliency, independence and achievement. You will examine your own beliefs about appropriate guidance and develop a cohesive guidance approach with strategies, resources, and pro-social lesson plans for the classroom. You will learn to work with families in ways that engage and involve them in culturally appropriate ways. Throughout the course, you will examine your own biases and how those biases affect classroom guidance and culture.
Must be taken A–F.
Prerequisite: EDUC 1500.

EDUC 1400: Technology for Educators
2.00 credits (2.00 lec)
The purpose of this course is to help future educators develop skills in the thoughtful integration of technology in order to support student learning. You will develop technological skills and explore many different tools for planning, instruction, communication and record keeping. You will develop an ongoing professional development plan to continue to meet the dynamic nature of technology. You will be expected to engage in substantive discussions on the “digital divide” as well as ethical and legal issues around technology and information sharing. You will demonstrate your competence using technology by developing an electronic, standards-based portfolio. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: EDUC 1500.
EDUC 1500: Introduction to Education and Reflective Practice
3.00 credits (2.00 lec/1 lab)
This course gives prospective educator’s perspective on the rewards and challenges of teaching. You will discuss a historical survey of schooling and educational philosophies in the United States. You will discuss current issues facing students, teachers, schools, districts and communities. You will learn strategies for working with and engaging families and communities. You will be expected to critically observe and participate in K–12 schools and community life for at least 30 hours outside of the course time as a requirement for successfully completing the course. Must be taken A–F. Prerequisites: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

EDUC 1800: Multicultural Human Relations in Education
3.00 credits (3.00 lec)
This course introduces prospective teacher candidates approaches of multicultural, anti-oppressive education including issues related to student, family and community diversity based on race, culture, language, class, gender, sexual orientation and ability. You will reflect on your own biases as they relate to oppression, privilege and equity in schools and society. Using mandatory field experiences, you will demonstrate the cultural competence that is required of all successful teachers working with diverse youth. Must be taken A–F. Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

EDUC 1900: Public Work in Urban Schools and Community Sites
3.00 credits (2.00 lec/1 lab)
Using Public Achievement as a teacher-development initiative, you will act on your self-interest and participate on teams to create public work that is nonviolent and contributes to the common good. Working with faculty coaches, you learn the 12 core concepts of Public Achievement and apply them to urban education settings. You will develop collaborative and democratic working skills (Teacher-as-Citizen and Teacher-as-Leader models), both in academic and small-group settings. You will read about democratic pedagogical and community-organizing theories and practices. Prerequisite: EDUC 1500 or coordinator’s approval.

EDUC 2200: Introduction to Language and Language Teaching for ESOL Educators
3.00 credits (3.00 lec)
This course is designed for paraprofessionals and tutors working with ESOL populations and introduces basic concepts of language, language acquisition, and language teaching. You will learn and be able to explain how knowledge of these concepts improves your ability to tutor and teach English. You will also apply these concepts to real-life instructional situations. (This course is not for teaching licensure.) This course can be taken concurrently with EDUC 2300. Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

EDUC 2250: Introduction to Special Education
3.00 credits (3.00 lec)
This course explores special education: the history of the field, definitions, classifications, theoretical approaches, service delivery models, trends and issues. You will examine the physical, social, cognitive, and behavioral challenges that affect children and youth with disabilities. You will also become familiar with the legal aspects and key legislation regarding special education, as well as familial and communal contexts, for students with special needs. Must be taken A–F. Prerequisites: ENGL 1110. Prerequisites/Co-requisites: EDUC 1500.

EDUC 2260: Instruction for Exceptional Learners
3.00 Credits (3.00 lec)
This course emphasizes approaches to working with exceptional learners, including informal assessment, documentation practices and classroom management skills. You will learn prevention and intervention strategies for working with children and youth with special needs in both educational and alternative settings. You will also examine techniques to analyze and manage challenging and disruptive behaviors. Must be taken A–F. Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051. Prerequisite/Co-requisite: EDUC 2250.
EDUC 2270: Learning Disabilities and Behavior Disorders
3.00 credits (3.00 lec)
This course prepares students interested in working with children and youth who have learning disabilities and behavior disorders. You will learn the identifiable characteristics of and examine the trends and issues related to these children and youth. You will analyze the effects of dysfunctional behavior on learning and identify major social, academic, and behavioral characteristics of students with a learning disability and/or a behavior disorder. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Prerequisite/Co-requisite: EDUC 2250.

EDUC 2280: Communication and Collaboration in Diverse Educational Settings
2.00 credits (2.00 lec)
This course prepares students interested in working with children and youth who have special needs. You will acquire and build skills to interact and work effectively with students, teachers, administrators, parents, and alternative-service providers in school and other settings. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Prerequisite/Co-requisite: EDUC 2250.

EDUC 2300: Introduction to English for ESOL Educators
3.00 credits (3.00 lec)
This course is designed for unlicensed educators (such as paraprofessionals and tutors) working with ESOL populations and reviews the grammatical structure and sound system of English as required for work with English language learners. You will identify the grammatical structures and aspects of pronunciation in English that cause problems for English language learners. You will also develop strategies and techniques for teaching and tutoring problematic English grammatical structures and aspects of pronunciation. This course can be taken concurrently with EDUC 1200 or EDUC 1400.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

EDUC 2350: Introduction to Pedagogical Practices
3.00 credits (3.00 lec)
This course will aid you in developing a cohesive curriculum philosophy that reflects your beliefs and values and in assembling an extensive repertoire of instructional strategies, tools, and resources designed to foster increased student power, achievement, and equity in education for all students. You will examine research-based instructional strategies for successfully meeting the varying needs of students from ethnically, ability, culturally, socioeconomically and linguistically diverse groups. You will participate in nontraditional pedagogical models in order to evaluate differences in pedagogy and the effectiveness of successful cooperative learning. Must be taken A–F.
Prerequisites: EDUC 1500.
Prerequisite/Co-requisite: ENGL 1110 or ENGA 1110.

EDUC 2400: Methods and Materials for ESOL Educators
4.00 credits (4.00 lec)
This course is designed for unlicensed educators (such as paraprofessionals and tutors) and introduces methods and materials for teaching and tutoring ESOL reading, writing, listening, speaking/pronunciation, and grammar. You will develop, implement, and revise ESOL lesson plans with special emphasis on working with small groups and individualized tutoring. You will also learn how to use embedded technology. By the end of the course, you will have an e-folio project that captures and demonstrates the best methods/materials developed during your studies.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

EDUC 2600: Public Achievement Coaching—Field Experience
3.00 credits (2.00 lec/1 lab)
Using Public Achievement as a teacher-development initiative, you will coach young people in public work teams, leading (or co-leading) a team of urban students through the students’ Public Achievement experiences. Working with coach coordinators, you will regularly participate in precoaching meetings as well as self- and group-reflective debriefing meetings. Coaching sites vary from semester to semester, but they are always off-campus.
Prerequisites: EDUC 1900; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
EDUC 2650: Education Capstone and Field Work
3.00 credits (2.00 lec/1 lab)
This course serves as a capstone for the Education program. You will have the opportunity to enact the theories and practices you have studied by leading a small group of K–12 students in a semester long “praxis” project. As the teacher-facilitator, you will be responsible for crafting lessons and activities with the students that push them to a final project. You will examine your own practices and reflect on your knowledge, disposition, and skills as an educator, as well as develop a plan that includes taking and successfully passing the Minnesota Teacher Licensure Exam in Basic Skills. Must be taken A–F.
Prerequisites: EDUC 2350.
Prerequisite/Co-requisite: ENGL 1111.

EDUC 2900: Teacher's Experience in Urban Schools
3.00 credits (2.00 lec/1 lab)
This course continues the professional development of urban teaching candidates both by having you critically reflect on your academic and life experiences and by having you refine your electronic portfolios for public viewing. Course work expands and deepens your understanding of urban school settings, learners and politics.
Prerequisites: EDUC 2600; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Co-requisite: ENGL 1111.

EDUC 2998: Directed Study
Prerequisites: One course in EDUC and instructor’s approval.

Electrical Construction and Technology

CNEL 1000: Introductory Electric Circuits
2.00 credits (1.00 lec/1.00 lab)
This course will instruct you in understanding basic D.C. electrical circuit theory, reading electrical circuit diagrams, applying Ohm’s Law, and using electrical measuring devices.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 1010: Semiconductor Circuits
2.00 credits (1.00 lec/1.00 lab)
This course covers basic theory, operation, and practical applications of various diodes and transistors.
Prerequisites: CNEL 1000; HVAC 1050; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 1030: Introduction to Electric Motors
1.00 credits (1.00 lab)
This course covers basic theory, operation, application, maintenance, identification, and repair of electrical motors used in commercial and residential applications. You will learn about hermetic compressors at length, and you will learn about starting components and troubleshooting techniques.
Co-requisites: CNEL 1000, HVAC 1050.

CNEL 1050: A.C. Circuit Analysis
3.00 credits (2.00 lec/1.00 lab)
This course will acquaint you with the concepts of alternating current. This will include sine wave characteristics, vector analysis, capacitive circuits and inductive circuits.
Prerequisites: CNEL 1000; HVAC 1050; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisites: CNEL 1100, CNEL 1050.

CNEL 1100: Single-Phase Transformer Principles
1.00 credit (1.00 lab)
This course will acquaint you with elementary transformer principles in single-phase circuits.
Prerequisites: CNEL 1000; HVAC 1050; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisites: CNEL 1050, CNEL 1150.
CNEL 1150: Introductory Motor Controls
2.00 credits (1.00 lec/1.00 lab)
This course covers interpretation of elementary diagrams and various control components.
Prerequisites: CNEL 1000; HVAC 1050; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisites: CNEL 1050, HVAC 1250 and HVAC 1300.

CNEL 2000: Residential Wiring
4.00 credits (2.00 lec/2.00 lab)
This course covers basic wiring techniques and how to draw and use wiring diagrams that are used in residential applications.
Prerequisites: CNEL 1010, CNEL 1050, CNEL 1100, CNEL 1150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisite: CNEL 2250.

CNEL 2050: Blueprint Reading
2.00 credits (2.00 lec)
This course covers the construction and design of residential and commercial buildings, plans, symbols, and specifications specific to the electrical industry.
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2110: Introduction to Solar Photovoltaics
2.00 credits (1.00 lec/1.00 lab)
This course covers the basics photovoltaic solar energy used for electricity generating systems. You will receive hands-on training and experiment with simulated lab projects involving solar photovoltaic systems.
Prerequisites: CNEL 1000, CNEL 1030, CNEL 1050, CNEL 1100; HVAC 1050, HVAC 1100, HVAC 1250, HVAC 1300.

CNEL 2150: Three-Phase Systems and Transformers
2.00 credits (1.00 lec/1.00 lab)
This course covers three-phase theory. You will also learn single-phase and three-phase transformer connections for power distribution.
Prerequisites: CNEL 1010, CNEL 1050, CNEL 1100, CNEL 1150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisite: CNEL 2250.

CNEL 2200: Electrical Raceway Installation
2.00 credits (1.00 lec/1.00 lab)
This course covers cutting, bending, treading and installation of various types of electrical raceway.
Prerequisites: CNEL 1050, CNEL 1100, CNEL 1150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisite: CNEL 2250.

CNEL 2250: National Electrical Code 1
2.00 credits (2.00 lec)
This course covers the regulations for installing various types of wiring materials, such as nonmetallic sheathed cable, armored cable, electrical metallic tubing and rigid metal conduit. You will also become familiar with requirements for general electrical installations, branch circuit requirements and grounded conductor parameters.
Prerequisites: CNEL 1010, CNEL 1050, CNEL 1100, CNEL 1150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2300: Electrical Rotating Machinery
2.00 credits (1.00 lec/1.00 lab)
This course covers the construction, operation, installation, and maintenance of D.C. and A.C. generators and motors.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Prerequisite/Co-requisite: CNEL 2150.
CNEL 2400: Feeder and Service Installation
2.00 credits (1.00 lec/1.00 lab)
This course covers the techniques and fittings to install large feeders and electric services. You will also learn the requirements of the National Electrical Code Book (N.E.C.) for the installation of feeders and services.
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2450: Advanced Motor Controls
3.00 credits (2.00 lec/1.00 lab)
This course covers the use of more complex timing circuits, counting circuits, photo control circuits and circuits with other high-tech pilot devices. You will also study Article 430 of the National Electrical Code Book (N.E.C.) to learn the various sections of motor circuits and perform calculations pertaining to motor circuits.
Prerequisites: CNEL 1010, CNEL 1050, CNEL 1100, CNEL 1150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2500: N.E.C. Calculations
2.00 credits (2.00 lec)
This course covers the various calculations required throughout the National Electrical Code Book (N.E.C.).
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2550: National Electrical Code 2
2.00 credits (2.00 lec)
This course introduces complex electrical equipment and its installation requirements. You will cover grounding, hazardous locations, lighting fixtures, appliance circuits, air conditioning circuits, electric heating, and special occupancies and special equipment.
Prerequisites: CNEL 1000; CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2600: Commercial Wiring
3.00 credits (1.00 lec/2.00 lab)
This course covers the complete installation of various types of raceways and wiring methods found in commercial and industrial occupancies.
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
Co-requisite: CNEL 2650.

CNEL 2650: Programmable Controls
2.00 credits (1.00 lec/1.00 lab)
This course covers the theory, operation, installation, hardware, software and practical application of the programmable logic controller.
Prerequisites: CNEL 2150, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2700: Trade and Industry Relations
1.00 credit (1.00 lec)
This course profiles the framework for obtaining and maintaining healthy relationships within the work and social structure of the electrical industry.
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

CNEL 2750: Digital Electronic Circuits
1.00 credit (1.00 lab)
This course introduces integrated circuit technology. It covers integrated circuits for logic control, operational amplifiers, counting and timing circuits, and display decoders.
Prerequisites: CNEL 2000, CNEL 2150, CNEL 2200, CNEL 2250, CNEL 2300, CNEL 2450; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.
**CNEL 2800: Electrical Circuit Design**
1.00 credit (1.00 lec)
This course covers the various factors that affect the efficiency of an electrical distribution system.
Prerequisites: CNEL 2150; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

**CNEL 2998: Directed Study**
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; placement into ESOL 0041 or completion of ESOL 0031.

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**Electroneurodiagnostic Technology**

**ENDT 1010: Foundations of Electroneurodiagnostic Technology**
6.00 credits (3.00 lec/3.00 lab)
This course has both a lab and a lecture component; the theory portion is an introduction to electroencephalography, EEG. You will learn about your role as a member of the healthcare team, the scope of practice for electroneurodiagnostic technologists and ethical considerations in healthcare. You will also learn about these topics: patient assessment and history taking, the 10/20 system of electrode placement and application, recording techniques, and parameters and pattern recognition. For the lab portion of this course, in a simulated EEG laboratory, you will practice the skills listed above. Emphasis will be on patient interactions, confidentiality and safety practices.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; completion of ESOL 0043 or “exempt in listening and speaking” on placement exam.
Co-requisites: ENDT 1030.

**ENDT 1030: Introduction to Electroneurodiagnostic Technology**
3.00 credits (3.00 lec)
This course covers the history and evolution of electroneurodiagnostic technology (ENDT) including: the scope of practice, credentialing, job descriptions, patient interactions, safety and ethical considerations, patient confidentiality and documentation, and multicultural considerations. You will learn about your role as an ENDT and member of a healthcare team. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077; completion of ESOL 0043 or “exempt in listening and speaking” on placement exam.
Co-requisite: ENDT 1010.

**ENDT 1100: Clinical Neurology for ENDT**
4.00 credits (4.00 lec)
This course provides a basic understanding of nervous system anatomy and physiology. You will learn about the neurological exam, diagnostic tools and neurological disorders. The course will highlight major clinical neurological conditions and EEG correlates across the lifespan.
Prerequisites: Grades of “C” (2.0) or higher in the following: ENDT 1010, ENDT 1030, HCCC 1100, BIOL 1127, BIOL 1128, COML 1100 or successful completion of computer literacy requirement.
Co-requisites: ENDT 1510, ENDT 1525.
Prerequisite/Co-requisite: ENGL 1110 or ENGA 1110.

**ENDT 1510: Technical Concepts and Equipment**
6.00 credits (3.00 lec/3.00 lab)
This course has both a theory and a practical component. In the theory portion, you will learn about the principles of ENDT instrumentation according to technical recording guidelines and standards. In the lab portion, you will complete a hookup and a recording of an EEG according to technical guidelines and standards. You will ensure patient safety, apply electrodes and other monitors, collect data, perform procedures, recognize characteristics of EEG waveforms and artifacts, and write up a technical description of the EEG. Must be taken A–F.
Prerequisites: Grades of “C” (2.0) or higher in the following: ENDT 1010, ENDT 1030, COML 1100, HCCC 1100, BIOL 1127, BIOL 1128.
Co-requisites: ENDT 1525, ENDT 1100.
Prerequisite/Co-requisite: ENGL 1110 or ENGA 1110.
ENDT 1525: Clinical Correlates 1
2.00 credits (2.00 lab)
This course provides hands-on interaction with doctors, residents, fellows and preceptors in various settings, emphasizing clinical correlations. You will participate in conferences, case reviews, record reading and review, and continuing education held at the clinical affiliate sites. You will also follow EEG recording guidelines and standards of practice. Must be taken A–F.
Prerequisites: Grades of “C” (2.0) or higher in the following: ENDT 1010, ENDT 1030, HCCC 1100, BIOL 1127, BIOL 1128, and COML 1100 or successful completion of computer literacy requirement.
Co-requisites: ENDT 1510, ENDT 1100.
Prerequisite/Co-requisite: ENGL 1110 or ENGA 1110.

ENDT 1850: Clinical Internship 1
4.00 credits (4.00 int)
In this introductory internship, you will prepare patients for EEG monitoring in the clinical setting. You will care for patients, ensuring their safety, as well as preparing, initiating and completing routine EEG testing on patients across the lifespan. Must be taken Pass/Fail.
Prerequisites: Grades of “C” (2.0) or higher in the following: ENDT 1510, ENDT 1525, ENDT 1100, ENGL 1110. Clear background check.
Prerequisite/Co-requisite: PSYC 1110.

ENDT 2010: Evoked Potentials for the ENDT
3.00 credits (2.00 lec/1.00 lab)
This course provides a basic understanding of evoked potentials (EPs) and how they are used in neurodiagnostic medicine. You will learn evoked potential instrumentation, recording methods, troubleshooting and waveforms with clinical correlations. You will ensure patient safety. Must be taken A–F.
Prerequisites: Grades of “C” (2.0) or higher in PSYC 1110, ENDT 1850.
Prerequisite/Co-requisite: CMST 1012.
Co-requisites: ENDT 2030, ENDT 2050.

ENDT 2030: Nerve Conduction Studies
3.00 credits (2.00 lec/1.00 lab)
This course provides a basic understanding of Electromyograms (EMGs) and Nerve Conduction Studies (NCSs) and how they are used in neurodiagnostic medicine. You will study instrumentation, recording methods and waveforms with clinical correlations emphasizing patient safety. In the lab, you will learn the basics of nerve and muscle stimulation and recording with surface electrodes.
Prerequisites: Grades of “C” (2.0) or higher in PSYC 1110, ENDT 1850.
Prerequisite/Co-requisite: CMST 1012.
Co-requisites: ENDT 2050, ENDT 2010.

ENDT 2050: Clinical Internship 2
8.00 credits (8.00 Int)
In this clinical course, you will apply previously learned theoretical EEG concepts and skills on patients across the lifespan. You will become more independent in data attainment and pattern recognition in the clinical setting. You will provide EEG testing to patients with a range of neurological conditions, from simple to complex. You may also have the opportunity to observe advanced procedures in Nerve Conduction Studies, EMG and Evoked Potentials in the clinical setting and operating room. Must be taken Pass/Fail.
Prerequisites: Grades of “C” (2.0) or higher in PSYC 1110: Successful completion of ENDT 1850. Clear background check.
Co-requisites: ENDT 2010, ENDT 2030.
Prerequisites/Co-requisites: CMST 1012.

ENDT 2400: Intraoperative Monitoring
5.00 credits (3.00 lec/2.00 lab)
This course covers the technologist’s role in the operating room, including methods of recording, factors affecting waveform resolution, actions of different pharmacologic agents, surgical outcomes and trouble shooting. You will practice patient safety, including infection control; electrical safety and hazard; and patient rights and confidentiality. To enroll in this course, you must either meet the prerequisites or obtain instructor approval by having successfully graduated from a CAAHEP-accredited ENDT program or holding the following credentials: R. EEGT. and/or R.EPT.
Prerequisites: ENDT 2010, ENDT 2030; or instructor approval.
**ENDT 2525: Clinical Correlates 2**

2.00 credits (2.00 lab)
This course provides advanced interaction with physicians in a variety of settings emphasizing clinical correlations. You will participate in conferences, case reviews, record reading and review, and continuing education held at the clinical affiliate sites. You will follow ENDT recording guidelines and standards of practice with integration of additional complex EEG, EP and NCS/EMG concepts. Must be taken A–F.

**Prerequisites:** Grades of "C" (2.0) or higher in the following: ENDT 2010, ENDT 2030, CMST 1012, ENDT 2050.

**Prerequisite/Co-requisite:** PSYC 2240.

**Co-requisites:** ENDT 2550.

**ENDT 2550: Clinical Internship 3**

8.00 credits (8.00 int)
This course provides experiences in a variety of patient care settings. You will perform basic EEG procedures under limited supervision. Under direct supervision of clinical preceptors, you will perform complex EEG procedures, evoked potentials and nerve conduction studies. You will apply theoretical content to meet clinical objectives. Must be taken Pass/Fail.

**Prerequisites:** Grades of "C" (2.0) or higher in the following: ENDT 2010, ENDT 2030, CMST 1012, ENDT 2050.

**Clear background check.**

**Prerequisite/Co-requisite:** PSYC 2240.

**Co-requisites:** ENDT 2525.

**ENGA 0900: Accelerated Fundamentals of Written English**

2.00 credits (2.00 lec)
This course will prepare you for college-level writing and supports the material taught in ENGA 1110. You will write several essays and a reflective letter. Your essays will include your perspective on an issue and your analysis of other writers’ ideas. You will focus on learning the writing process so that you can generate ideas and organize them into essays; you will also review grammar and mechanics. A committee will evaluate two of your essays and your letters to decide whether you pass the class. Must be taken Pass/No Credit.

**Prerequisite:** Placement into ENGL 0900 or completion of ESOL 0041.

**ENGA 1110: College English 1**

3.00 credits (3.00 lec)
This course gives you instruction and practice in writing essays for a variety of purposes and audiences. You will receive instruction and help in developing ideas, thinking critically, organizing your writing, and revising and editing sentences. By approaching writing as a process involving prewriting, drafting, peer response, revising, and editing, you will be able to write more clearly, fully, and gracefully. ENGA 1110 must be taken in conjunction with the corresponding ENGA 0900 section during the same semester, which provides additional classroom instruction in the aforementioned writing skills and is designed for students who place into ENGL 0900 and READ 0200 or above.

**Fulfills MnTC Goal Area 1.**

**Prerequisite:** Placement into READ 0200 or completion of READ 0100.

**English**

**ENGL 0900: Fundamentals of Written English**

5.00 credits (5.00 lec)
This course will prepare you for college-level writing. You will write several essays and a reflective letter. Your essays will include your perspective on an issue and your analysis of other writers’ ideas. You will focus on learning the writing process so that you can generate ideas and organize them into essays; you will also review grammar and mechanics. A committee will evaluate two of your essays and your letters to decide whether you pass the class. Must be taken Pass/No Credit.

**Prerequisite:** Placement into ENGL 0900 or completion of ESOL 0041.

**ENGL 1108: Technical Writing**

3.00 credits (3.00 lec)
This course focuses on analyzing and practicing workplace communications such as reports, proposals, instructions, letters, memos and email. A balance between learning the process and creating the product will help you understand the expectations and issues surrounding common and complex workplace writing.

**Prerequisite:** ENGL 0900 completion or equivalent placement.
ENGL 1110: College English 1
3.00 credits (3.00 lec)
This course gives you instruction and practice in writing essays for a variety of purposes and audiences. You will receive instruction and help in developing ideas, thinking critically, organizing your writing, and revising and editing sentences. By approaching writing as a process involving prewriting, drafting, peer response, revising, and editing, you will be able to write more clearly, fully, and gracefully.
Fulfills MnTC Goal Area 1.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

ENGL 1111: College English 2
3.00 credits (3.00 lec)
This course teaches you how to write a research paper. Some sections have particular topics, such as “Race, Gender and Identity,” and other sections allow you to choose your own topic, subject to the instructor’s approval. All sections teach valuable research methods. You will find, analyze, and synthesize information from inside and outside of the library, and write well-reasoned, detailed research papers with properly cited sources.
Fulfills MnTC Goal Area 1.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1150: Literature and the Environment
3.00 credits (3.00 lec)
This course covers a wide range of writing about human experience and the environment, such as essays, stories, journals, poems, music lyrics, and plays. You will read literature of the Americas written over several centuries that will focus on our changing and diverse human experience within the environment, as well as on our attitudes toward the physical world.
Fulfills MnTC Goal Areas 6 and 10.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1151: Introduction to Literature: Short Story
3.00 credits (3.00 lec)
This course covers a variety of short stories from authors from around the world and explores the texts through critical analysis. You will learn about the basic elements common to all short stories. You will also consider the cultural and national contexts of specific stories and identify significant details, patterns, and cultural values and assumptions. In developing critical responses, you will achieve a greater understanding of literature and yourself.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1152: Introduction to Literature: Novel
3.00 credits (3.00 lec)
This course covers the basic elements of the novel. You will apply critical skills in discussing and writing about novels from various ethnic groups and communities from within the United States, possibly including Native American, European-American, Hispanic-American, Asian-American, and African-American. You will identify patterns, values and assumptions within the novels. By developing critical responses, you will increase your understanding of the novel as an art form, of the societies in which the novels arose and of yourself.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1153: Introduction to Literature: Poetry
3.00 credits (3.00 lec)
This course offers an analysis of various forms of poetry and their structures. You will use critical-thinking procedures to work your way through the elements of poetry, as well as the contexts in which poetry is written. As a result of this course, you will appreciate and enjoy poetry more, while also developing your analytical skills. You will examine a cross-section of poetic styles and eras and will read and think critically about poetry from a variety of culturally and ethnically diverse American writers.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.
ENGL 1154: Introduction to Literature: Drama
3.00 credits (3.00 lec)
This course gives you the chance to read and go to plays. You will learn the fundamentals of drama, such as comedy, tragedy, plot setting, character, staging and irony; go to local theaters to see how a play is actually staged; and discuss and write about plays to analyze what you have read and seen on stage.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1156: Science Fiction and Fantasy
3.00 credits (3.00 lec)
This course reviews selected readings and films from the evolving genres of science fiction and fantasy. You will learn how to analyze these texts from a variety of viewpoints: aesthetic, historical, feminist, psychoanalytical and ethical. You will examine the works as reflections of real contemporary issues in environmental, technological, cultural, economic and political spheres. Through discussions, writings and projects, you will connect the concerns raised in the works to your own society and its values.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1157: Cross-Cultural Literature
3.00 credits (3.00 lec)
This course surveys the cultural expressions, values and lifestyles of North America’s many peoples, including minority and majority cultures. You will read and think critically about American literature written by a variety of culturally diverse authors, including Native Americans, African-Americans, and other immigrant and cultural groups.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1158: Women’s Literature
3.00 credits (3.00 lec)
This course explores a range of literature written in English by women within the United States. The course will focus on multiple literary genres: poetry, drama, long and short fiction, journals, essays, autobiography and memoir. You will read the literature of women across diverse cultures within the United States. You will explore themes of power, culture, class, ethnicity, and sexuality, and you will learn about feminist literary theory.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1160: Lesbian, Gay, Bisexual, Transgender, Queer Literature
3.00 credits (3.00 lec)
This course offers a definition and a survey of lesbian/gay/bisexual/transgender/queer (LGBTQ) literature from ancient times to the present. You will read a wide range of literary and historical texts, with an emphasis on 20th-century poetry, fiction, creative nonfiction, and drama, and you will engage in the questions that invigorate this evolving field. This course has a strong cross-cultural emphasis.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 1161: Children’s Literature
3.00 credits (3.00 lec)
This course introduces you to the wide range of children’s literature. You will study the genres and history of children’s literature, the critical responses to it, and the reasons for valuing this unique art form. The course addresses the interests of college students, educators and parents.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

3.00 credits (3.00 lec)
This course will introduce you to creative writing by both African and African-descended writers, exploring how diasporic Africans created viable lives for themselves in a “New World,” which includes the Americas, the Caribbean, and Western Europe. You will examine the common experiences shared by African Diaspora writers: cultural traditions, histories of domination and resistance, slavery and emancipation, colonialism and imperialism, anticolonial and antiracist movements.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.
ENGL 2212: Introduction to Creative Nonfiction Writing
3.00 credits (3.00 lec)
This course is an introduction to the varied genre of creative nonfiction: memoir, personal essay, cultural commentary, nature writing, political satire, etc. You will practice creative self-expression and develop voice, style, and audience awareness. You will also learn the craft of effective writing by observing how published writers use various themes, styles and methods of story development.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2213: Introduction to Creative Writing
3.00 credits (3.00 lec)
This course covers practice in writing both poetry and fiction, with emphasis on development of individual style and form, as well as an analysis of professional works and devices. In addition to working on creative self-expression, you will develop the abilities, craft and discipline needed to produce quality writing that allows you to reach an audience: training your voice, developing a personal style, experimenting with structure, enhancing your descriptive skills, improving your command of language, and establishing techniques for revising. You will study various types of poetry and fiction, and give and receive feedback online from peers and your instructor.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2214: Introduction to Writing Poetry
3.00 credits (3.00 lec)
This course covers aspects of writing effective poetry. In addition to working on creative self-expression, you will develop the abilities, craft and discipline needed to produce quality poetry that allows you to reach an audience: training your poetic voice, developing a personal style, experimenting with structure, enhancing your descriptive skills, improving your command of language, and establishing techniques for revising. You will study various types of poetry: lyric, narrative, free and formal verse, surreal and collage forms. You will give and receive feedback in student workshops.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2215: Introduction to Writing Fiction
3.00 credits (3.00 lec)
This course covers various aspects of writing effective fiction. In addition to working on creative self-expression, you will develop the abilities, craft and discipline needed to produce quality fiction that allows you to reach an audience: training your voice, developing a personal style, experimenting with structure, enhancing your descriptive skills, improving your command of language, and establishing techniques for revising. You will study various types of contemporary fiction: realism, surrealism, magical realism, experimental writing, children’s stories and fairy tales. You will give and receive feedback in student workshops.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2215: Introduction to Writing Fiction
3.00 credits (3.00 lec)
This course covers various aspects of writing effective fiction. In addition to working on creative self-expression, you will develop the abilities, craft and discipline needed to produce quality fiction that allows you to reach an audience: training your voice, developing a personal style, experimenting with structure, enhancing your descriptive skills, improving your command of language, and establishing techniques for revising. You will study various types of contemporary fiction: realism, surrealism, magical realism, experimental writing, children’s stories and fairy tales. You will give and receive feedback in student workshops.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2215: Introduction to Writing Fiction
3.00 credits (3.00 lec)
This course covers various aspects of writing effective fiction. In addition to working on creative self-expression, you will develop the abilities, craft and discipline needed to produce quality fiction that allows you to reach an audience: training your voice, developing a personal style, experimenting with structure, enhancing your descriptive skills, improving your command of language, and establishing techniques for revising. You will study various types of contemporary fiction: realism, surrealism, magical realism, experimental writing, children’s stories and fairy tales. You will give and receive feedback in student workshops.
Fulfills MnTC Goal Area 6.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2225: World Literature—Asia and the Middle East
3.00 credits (3.00 lec)
This course introduces you to the literature of Asia and the Middle East from ancient to modern times. You will read, discuss, and write about short stories, novels, poems, and religious and philosophical literature from the Middle East, South Asia, Southeast Asia, and East Asia. You will gain insight into the commonalities of human experience, as well as the diversity of human life and expression in Asia and the Middle East. You will come to understand how ethnic and cultural differences influence human expression.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

ENGL 2226: World Literature—Europe, Africa, Latin America
3.00 credits (3.00 lec)
This course introduces you to the literature of Europe, Africa and Latin America from ancient to modern times. You will read, discuss, and write about short stories, novels, poems, and religious and philosophical literature from Europe, Africa, and Latin America. You will gain insight into the commonalities of human experience, as well as the diversity of human life and expression, in those regions. You will come to understand how ethnic and cultural differences influence human expression.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.
**ENGL 2231: American Literature 1**
3.00 credits (3.00 lec)
This course examines the literature of the Americas, concentrating on literature produced in the territory that became the United States from European conquest through the mid-19th century. Among the literature you read will be Native American works; writings of the European conquerors and colonists; African-American works; and early-to-middle-19th-century fiction, poetry, and prose.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2232: American Literature 2**
3.00 credits (3.00 lec)
This course examines literature of the United States from after the Civil War through the present. You will read and consider fiction, poetry, and prose that reflect the diverse social, cultural, and literary experiences of the inhabitants of the United States.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2251: British Literature 1**
3.00 credits (3.00 lec)
This course covers selected English literature from the Anglo-Saxon period through the age of Johnson. In studying this period, you will be a witness to major foreign invasions of England and to the evolution of English language and literature, which are both products of interactions between the native populations and the outside world. You will study literary works in their historical, social, and world contexts; engage these works from your own perspective; and gain insight into British culture and how it is the result of ethnic and cultural influences within the British Isles, the European continent, and beyond.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2252: British Literature 2**
3.00 credits (3.00 lec)
This course covers selected English literature from the Romantic period through the present. You will come to understand these works in terms of historical, social and world contexts. You will also gain insight into British culture and how it is the result of ethnic and cultural influences within the British Isles, on the European continent, throughout the former British Empire, and in the world beyond.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2261: African American Literature 1**
3.00 credits (3.00 lec)
This course explores the emergence and formal development of the historical African American literary tradition. You will read texts beginning in the 17th century through the latter half of the 20th century, including work by slaves, ex-slaves, those surviving Reconstruction, those surviving the era of Jim Crow, those from the Harlem Renaissance, and those flourishing in the Black Arts Movement. You will examine diverse genres, which may include but are not limited to the following: slave narratives, novels, plays, poems, speeches, song lyrics and music.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2262: African American Literature 2**
3.00 credits (3.00 lec)
This course explores the emergence and formal development of the contemporary African American literary tradition. Popular writers such as Terry McMillan and Walter Mosely will be featured, as well as younger writers who are just beginning their careers. You will explore themes including relationships, race/racism, family life, neighborhoods, work life, through genres as diverse as short stories, poems, novels, song lyrics, speeches, hip hop, rap, and blues.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: ENGL 1110 or ENGA 1110.

**ENGL 2998: Directed Study**
Prerequisite: One course in ENGL.

**English as a Second Language**

**ESOL 0031: Writing and Grammar 3**
5.00 credits (5.00 lec)
This course focuses on practicing and developing basic writing skills by applying them to a variety of situations. You will improve your grammar, writing fluency, self-editing ability and ability to write short essays. You will also learn to follow a writing process that will include using computers to edit and revise your essays. Must be taken Pass/No Credit.
Prerequisite: Placement into ESOL 0031.
ESOL 0032: Reading 3
5.00 credits (5.00 lec)
This course introduces the skills and strategies necessary for understanding a variety of written materials. You will learn to identify main and supporting details in nonfiction, increase your reading rate and comprehension, and analyze features of fiction. In addition, you will build vocabulary using a variety of strategies. Must be taken Pass/No Credit.
Prerequisite: Placement into ESOL 0032.

ESOL 0033: Academic Listening and Speaking 3
5.00 credits (5.00 lec)
This course provides the knowledge and practice necessary to further improve your listening, speaking and pronunciation skills in English in order to help you be more successful in future academic courses. You will work on these skills through activities such as listening to lectures and tapes and watching videos; taking notes in English; doing dictations; participating in discussions; doing interviews; giving presentations and doing exercises in the language lab. Must be taken Pass/No Credit.
Prerequisite: Placement into ESOL 0033.

ESOL 0041: Writing and Grammar 4
4.00 credits (4.00 lec)
This course develops higher level writing skills in a variety of situations. You will improve your grammar, writing fluency, self-editing ability, and learn to write essays of varying lengths and genres. You will also practice and improve your writing skills through extensive writing and word processing. Must be taken Pass/No Credit.
Prerequisites: Placement into ESOL 0041 and ESOL 0033 or completion of ESOL 0031.

ESOL 0042: Reading 4
4.00 credits (4.00 lec)
This course develops your ability to understand a variety of written materials. You will learn to identify main ideas and supporting details in nonfiction, increase your reading rate and comprehension, and analyze features of fiction. In addition, you will increase your vocabulary using a variety of strategies. Must be taken Pass/No Credit.
Prerequisites: Placement into ESOL 0042 and ESOL 0033 or completion of ESOL 0032.

ESOL 0043: Academic Listening and Speaking 4
4.00 credits (4.00 lec)
This course provides the knowledge and practice necessary to further improve your listening, speaking and pronunciation skills in English in order to help you be more successful in future academic courses. You will work on these skills through activities such as listening to lectures and tapes and watching videos; taking notes in English; doing dictations; participating in discussions; doing interviews; giving presentations and doing exercises in the language lab. Must be taken Pass/No Credit.
Prerequisite: Placement into ESOL 0043 or completion of ESOL 0033.

ESOL 0051: Writing and Grammar 5
4.00 credits (4.00 lec)
This course focuses on providing advanced writing students whose native language is not English with the ability to understand and use aspects of grammar, style and organization that cause unique problems for non-native English speakers. You will learn a variety of writing skills necessary to succeed in entry-level college writing courses. Must be taken Pass/No Credit.
Prerequisites: Placement into ESOL 0051 or completion of ESOL 0041 and teacher recommendation into ESOL 0051.
Prerequisite/Co-requisite: ESOL 0043 or “exempt in listening and speaking” on placement exam.

ESOL 0052: Reading 5
4.00 credits (4.00 lec)
This course develops your ability to comprehend and discuss topics related to a variety of academic reading materials. You will learn to identify main and supporting details in nonfiction, increase your reading rate and comprehension, analyze features of fiction, and apply critical thinking skills. In addition, you will build your academic vocabulary using a variety of reading strategies. Must be taken Pass/No Credit.
Prerequisites: Placement into ESOL 0052 or completion of ESOL 0042 and teacher recommendation into ESOL 0052.
Prerequisite/Co-requisite: ESOL 0043 or “exempt in listening and speaking” on placement exam.
**ESOL 1000: English Pronunciation for Professionals**
3.00 credits (2.00 lec/1.00 lab)
This course for advanced students will focus on the sounds and rhythm of American English. Classroom and computer-based activities will show you how to speak more clearly. You will also work intensively on voice quality and American English tones and speed to improve your overall clarity for the workplace. This course requires two hours of practice per week in the language lab.
Prerequisite: Placement into ESOL 0043 or completion of ESOL 0033.
Co-requisite: ESOL 0043.
Prerequisite/Co-requisite: ESOL 0033.

**ESOL 2998: Directed Study**
Prerequisite: One course in ESOL.

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**First Year Experience**

**Student Transitions**

**FYST 1000: Orientation to Higher Education**
2.00 credits (2.00 lec)
This course provides you with specific skills needed to accomplish your academic and personal goals. Through lecture, discussion, group exercises, videos and self-reflection, you are introduced to a variety of topics critical to your success. These topics include, but are not limited to: learning styles, time management, test taking, critical thinking, diversity relationships and money management.
Fulfills MnTC Goal Area 2.
Prerequisite: Students must be enrolled in Starting Point.

**FYST 1010: Career Planning**
2.00 credits (2.00 lec)
This course examines interests, values, skills and personality styles and how they relate to the selection of a career and/or academic major. You will review occupational and educational information in order to determine which career/major path is appropriate for you and establish specific goals related to your choice of career and/or major. You will explore the job search process and engage in activities such as résumé writing and mock interviewing, which will help prepare you for your eventual job search and/or transfer to a four-year college or university.
Fulfills MnTC Goal Area 2.
Prerequisites: Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041; placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042.

**FYST 1015: ESOL Strategies for College Success**
2.00 credits (2.00 lec)
This course provides English speakers of other languages (ESOL) with specific skills needed to accomplish their academic and personal goals. Through lectures, discussion, group exercises, videos and career-exploration activities, you are introduced to a variety of topics necessary for success in school and employment. These topics include, but are not limited to: organizational techniques, time management, notetaking, critical thinking, test-taking strategies and learning styles.
Fulfills MnTC Goal Area 2.
Prerequisite: Placement into ESOL 0031.

**FYST 1100: Strategies for College Success**
2.00 credits (2.00 lec)
This course is designed to increase your success in college by assisting you in obtaining skills necessary to reach your educational objectives. Topics include college requirements and expectations, academic and career goal-setting, time planning, stress management, communication skills, learning styles, and an overview of study skills.
Fulfills MnTC Goal Area 2.
Prerequisite: Placement into ENGL 0900 or ESOL 0051.
FYST 1130: Becoming Assertive
1.00 credit (1.00 lec)
In this course, you will learn how to be assertive in your daily life without infringing on the rights of others. Appropriate techniques for expressing points of view, disagreeing and confronting conflict will be discussed. If interested in career fields such as nursing, human services and addiction counseling, you may find this course helpful, as will liberal arts students who wish to improve their communication skills.

FYST 1150: Career and Academic Strategies
1.00 credit (1.00 lec)
This course explores interests, skills, values and abilities as they relate to different careers and majors. You will establish specific goals related to your career and/or major choice. Fulfills MnTC Goal Area 2.
Prerequisites: Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041; placement into READ 0200 or ESOL 0052 or completion of ESOL 0042.

FYST 1180: Thinking Skills for Solving Personal Problems
1.00 credit (1.00 lec)
In this course, you will learn strategies to overcome problems you face in daily life. Personal responsibility is acknowledged, and skills such as positive self-talk, realistic attribution of causes and predicting right rewards are stressed.

FYST 2998: Directed Study
Prerequisite: One course in FYST.

French

FREN 1100: Beginning French 1
5.00 credits (5.00 lec)
This course is the first in a sequence of courses providing an introduction to the language of France and other French-speaking countries. You will explore many aspects of the language through listening, reading, writing and speaking, which will help you understand and appreciate your own language from another point of view. Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

FREN 1100: Beginning French 2
5.00 credits (5.00 lec)
This course is the second in a sequence of courses providing an introduction to the language of France and other French-speaking countries. You will explore many aspects of the language through listening, reading, writing and speaking, which will help you understand and appreciate your own language from another point of view. Fulfills MnTC Goal Area 8.
Prerequisites: FREN 1000 or equivalent; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

FREN 1200: Introduction to French
2.00 credits (2.00 lec)
This is an introductory French course designed for students who have had no previous instruction in French or for beginners who would like to brush up on their French. You will practice useful and practical vocabulary of the spoken French language. You will become more sensitive to cultural differences and find it useful for business and travel. Taught in summer only.
Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

FREN 1300: French Culture
2.00 credits (2.00 lec)
This English language course examines the history and culture of French-speaking societies, focusing on several major francophone areas of the world: France, North America, sub-Saharan Africa, the Caribbean and North Africa (the Magreb). You will study the following topics: geography and the environment, history, literature and the arts, social patterns and conventions, and social institutions. No knowledge of French is necessary.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
**FREN 2000: Intermediate French Language and Culture 1**

5.00 credits (5.00 lec)
This is an intermediate-level class that follows the Beginning French sequence. You will further develop skills with grammar and idiomatic expressions to facilitate greater fluency in speaking, writing, reading and listening. You will read a variety of literary excerpts to develop skills of literary analysis in French. Cultural readings will stimulate conversation and composition to develop skills of cultural analysis and criticism as well. You will develop the ability to present ideas and opinions, as well as to support them.
Fulfills MnTC Goal Area 8.
Prerequisites: FREN 1100 or equivalent ability; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**FREN 2100: Intermediate French Language and Culture 2**

5.00 credits (5.00 lec)
This class follows the Intermediate 1 course. You will further develop skills with grammar and idiomatic expressions to facilitate greater fluency in speaking, writing, reading and listening. You will read a variety of literary excerpts to develop skills of literary analysis in French. Cultural readings will stimulate conversation and composition to develop skills of cultural analysis and criticism as well. You will develop the ability to present ideas and opinions, as well as to support them. In order to succeed in this course, you should have, as a minimum, ability corresponding to the ACTFL intermediate-low rating. For more information, contact the French Department.
Fulfills MnTC Goal Area 8.
Prerequisites: FREN 2000 or equivalent ability; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**FREN 2998: Directed Study**

Prerequisites: One course in FREN; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

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**Geography**

**GEOG 1101: Human Geography**

3.00 credits (3.00 lec)
This course offers an introduction to geographic facts, theories and methods as they relate to humans and their occupation of the Earth. It uses a general systems perspective and a thematic approach to understanding where, why and how humans live. Various themes covered are the human-Earth relationship, population, migration, cultural systems, language, religion, social customs, social systems, development, politics, urbanization, agriculture, industrialization and natural resource use.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**GEOG 1102: The Physical Environment**

3.00 credits (3.00 lec)
This course offers an introduction to geographic facts, theories and methods as they relate to the Earth’s physical environment. This course uses a general-systems perspective and a thematic approach to understanding the natural environment and how it is impacted by human occupation. Various themes covered include the solar system, atmosphere, climate, ozone depletion, greenhouse effect, hydrosphere, waste disposal, fresh water, lithosphere, soil, natural disasters, biosphere and biodiversity.
Fulfills MnTC Goal Areas 5 and 10.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**GEOG 1103: The Global Economy**

3.00 credits (3.00 lec)
This course is an introduction to geographic facts, theories and methods as they relate to economic systems used throughout the world, and the rising pattern of global economic interdependence. This course uses a general-systems and thematic approach to understanding how people and groups cooperate in providing what they need and want. Various themes covered include economic theory and practice, development, production, labor force, land use, natural resources, trade, international organizations and global economic problems.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
GEOG 1104: Minnesota
3.00 credits (3.00 lec)
This course is an introduction to Minnesota, its regions and cities. It examines the people, social and cultural institutions, and physical makeup of our home state and cities. It will trace the spatial and historical evolution of our area and examine today’s Minnesota. It will also explore environmental issues and decisions faced by Minnesotans. The course includes self-guided walking tours of Minneapolis and optional self-guided driving tours of other parts of the metro area and the state.
Fulfills MnTC Goal Areas 5 and 10.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

GEOG 2204: Peoples of the World
3.00 credits (3.00 lec)
This course is an introductory survey of people and their social and cultural institutions throughout the world. After an overview of basic geographic concepts, each of the world’s major regions are studied in depth. Finally, the course examines some global issues and global citizenship.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

GEOG 2998: Directed Study
Prerequisites: One course in GEOG; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Geology

GEOL 1120: Physical Geology
3.00 credits (3.00 lec)
This course explores the principles and processes of geology with an emphasis on the study of the Earth’s structures, materials (internal and external) and plate tectonics. Topics covered in the course include igneous, sedimentary and metamorphic rocks. Special attention is paid to the dramatic role of volcanoes, earthquakes, erosion and landslides in the shaping of our planet. Field trips are an optional part of the course.
Fulfills MnTC Goal Area 3. Completion of the optional lab (GEOL 1130) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GEOL 1130: Physical Geology Lab
1.00 credit (1.00 lab)
This course introduces the general principles and techniques of mineral and rock identification. Other topics covered include topographic map and stratigraphic analysis, as well as structural geology.
Fulfills MnTC Goal Area 3. Completion of the optional lab (GEOL 1130) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: GEOL 1120.

GEOL 1140: Historical Geology
3.00 credits (3.00 lec)
This course serves as an introduction to the general principles and processes of geology with an emphasis on the study of geologic time (absolute and relative), and the correlation of geologic time with the rock record, past life forms and geographies. Topics covered include the formation of our planet within the context of the solar system, as well as the evolution of our Earth’s surface and the life forms which inhabit it. Special emphasis is placed upon the cycles our planet experiences, which seemingly control its destiny. Field trips are an optional part of the course.
Fulfills MnTC Goal Area 3. Completion of the optional lab (GEOL 1150) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GEOL 1150: Historical Geology Lab
1.00 credit (1.00 lab)
This course introduces the general principles and techniques of sedimentary rock, mineral and fossil identification. Other topics covered include sedimentary environments, tectonic settings and age relations.
Fulfills MnTC Goal Area 3. Completion of the optional lab (GEOL 1150) is necessary for transfer as a lab science and to satisfy MnTC Goal Area 3.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Prerequisite/Co-requisite: GEOL 1140.

GEOL 2998: Directed Study
Prerequisites: One course in GEOL; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
Global Studies

GLOS 1121: World Cultures 1
3.00 credits (3.00 lec)
This course is an active, interdisciplinary examination of European, Asian, African, and New World cultures in art, literature, architecture, and music from prehistory to approximately 1500. Creations of these various cultures are examined in light of aesthetic, philosophical, ethical and political issues relevant to each continent. You will learn to respond critically to relevant literature and other art forms through the use of readings, lectures and discussions, and visual aids.
Fulfills MnTCGoal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 1122: World Cultures 2
3.00 credits (3.00 lec)
This course is an active, interdisciplinary examination of European, Asian, African, and New World cultures in art, literature, architecture, and music from approximately 1500 to the present day. Creations of these various cultures are examined in light of aesthetic, philosophical, ethical and political issues relevant to each continent. You will learn to respond critically to relevant literature and other art forms through the use of readings, lectures and discussions, and visual aids.
Fulfills MnTCGoal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 1190: World Religions
3.00 credits (3.00 lec)
This course surveys major religious traditions of the East and West, including Hinduism, Buddhism, Daoism, Confucianism, Islam, Judaism, and Christianity. You may study other religions depending on the special interests of the instructor and students. You will use various approaches, including historical and comparative, as well as experiential. Upon completion, you will know of the origins, history, beliefs, and practices of the religions studied. You will be able to apply your knowledge of the religions covered to current critical world issues, such as peace and violence, gender relations, environment and globalization.
Fulfills MnTCGoal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 1200: Chinese Arts and Culture
3.00 credits (3.00 lec)
This course introduces you to Chinese culture through the study of its various forms of art. You will learn about calligraphy, poetry and painting—often called “Three Perfections”; architectural arts, such as the garden, pagoda and temple; and performing arts—drama, music and film. You will also learn about the two most well-recognized Chinese products—silk and porcelain, as they have long been important media for Chinese art. Through a careful examination of different contexts (social, historical, philosophical and religious) in which various art works are produced, you will learn the fundamental values and beliefs of the Chinese people, their understanding of nature and humanity, as well as their interactions with the outside world.
Fulfills MnTCGoal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 1210: Art and Cultural Studies in China
3.00 credits (3.00 lab)
The purpose of this course is to further your education in Chinese arts and culture by traveling to China for three weeks of intensive study. You will learn firsthand how calligraphy, poetry and painting are incorporated into daily living; hear lectures on various topics, from history and culture to family and education; visit art museums to see both traditional and modern art; and tour some of the most well-known architectural masterpieces: the Forbidden City, the Temple of Heaven, the Great Wall, the Summer Palace, as well as famous gardens, pagodas and Buddhist/Taoist temples, to reinforce previous learning about Chinese architectural arts in GLOS 1200. A tour to silk-worm farms and a silk factory will introduce you to the silk-production process and the aesthetic and economic values of silk. You will also see traditional Chinese operas and hear Chinese musicians play traditional Chinese musical instruments. During the trip, you will keep a travel journal, interact with local people, and develop a fine sensitivity and understanding of the Chinese culture and people.
Fulfills MnTCGoal Area 6.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
GLOS 1300: Race and Culture: A Global Perspective
3.00 credits (3.00 lec)
This course explores the range of meanings associated with race and culture and identifies their conceptual and practical uses and abuses. You will use historical resources and contemporary realities to gain an enhanced understanding of how various constructions of race and culture shape global practices, policies, and expressions. You will focus on the dynamics between majority and minority populations, in particular, racial oppression, cultural identification, and social affirmation. Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 1500: Introduction to Global Studies
3.00 credits (3.00 lec)
This is an interdisciplinary course designed to introduce you to the basic concepts of global studies. The course will examine the dynamics of changes in global systems, both in the past and at present, from natural and social perspectives—what causes global changes, what are the real and possible effects of these changes, and how do we deal with changes in both local and global settings. The main objective of the course is to provide you with a foundation from which to pursue further studies of related topics. You will also develop communication, critical-thinking and problem-solving skills particular to the subject of global studies. Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GLOS 2998: Directed Study
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

Global Health and Healing Arts

GHHA 1100: Introduction to Energy Medicine
3.00 credits (3.00 lec)
This course covers the physics of energy and its application to the internal body and relationships to the external world. You will learn the principles of energy, which is both the life force itself and responsible for healing. From traditional and cross-cultural views of energy, you will discover the anatomy of the human energy body and the energy systems, such as the meridian and chakra systems, that work alongside and with the physical body. You will explore the scientific basis for and the basic principles of healing techniques in energy medicines such as Reiki, therapeutic touch, presence, and shamanism. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GHHA 1200: Exploration of Shamanic Apprenticeship
3.00 credits (3.00 lec)
This course introduces the ways in which, in traditional shamanic communities, work is sacred, with a deep understanding and respect for the sense of being “called” to one’s chosen field or role. You will learn about the traditional and modern call to apprenticeship. You will also explore the selection and education of shamans and community elders. Discussions and exercises will help you discern your unique calling and provide you with tools and resources for future learning.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GHHA 1300: Healing Traditions in Our Diverse Community
3.00 credits (3.00 lec)
This course explores the healing traditions of shamans, healers, and medicine people found in many cultures around the globe, including those embraced by the largest ethnic/minority groups in the Twin Cities’ metropolitan area. You will have an opportunity to hear several guest speakers who are traditional healers in their communities. You will also gain the tools and skills to research the historical healing skills from your own ethnic background.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
GHHA 1400: Introduction to Traditional Chinese Medicine
3.00 credits (3.00 lec)
This course examines the origins and evolution of Traditional Chinese Medicine (TCM), its scope of practice, and its variety of healing modalities. You will learn TCM’s diagnostic theories and methods, adjunctive therapies, and how TCM differs from Western medicine. This course examines the latest research concerning TCM’s efficacy and its most current applications. You will learn why TCM is in the forefront of complementary forms of medicine.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

GHHA 1500: Introduction to Meditation and Mindfulness
2.00 credits (2.00 lec)
You will develop an understanding of the cultural and historical background of meditation in major world religions. You will examine current research on meditation, mindfulness and health. You will develop your ability to enter a calm and centered state of awareness through working with the body, the breath, and the mind.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

GHHA 1600: Introduction to Chinese Patent Medicine
3.00 credits (3.00 lec)
This class will introduce you to the world of Chinese patent medicine (classic herbal formulas based on Traditional Chinese Medicine (TCM). You will learn the history behind the development of prepared Chinese herbal medicines, their use globally and their availability in the United States. You will learn about basic TCM diagnostic principles and methods and how to apply them to the selection of patent medicine. You will gain the knowledge to select the appropriate patent medicine to sustain health, as well as those used to help heal a variety of common complaints and illnesses.
Prerequisites: placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

GHHA 1700: Introduction to Chinese Dietary Therapy
3.00 credits (3.00 lec)
In this course, you will learn the ways Traditional Chinese Medicine (TCM) makes use of the therapeutic value of food. You will learn how the TCM perspective on food is finding its way onto the global table and the ways TCM principles can be used to inform choices about food for maintaining health as well as for treating illness. You will learn how to apply basic TCM diagnostic principles to the selection of food. You will gain the knowledge to select the most appropriate food to sustain a healthy diet and help heal common illnesses.
Prerequisites: placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Graphic Design: Print Media

GRPH 1101: Typography 1
3.00 credits (2.00 lec/1.00 lab)
This course covers the history, structure and principles of typography, as well as special considerations of designing with type. You will work with the traditional elements of typography: form, spacing, layout, color, mixing fonts and the integration of type with images.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0052; placement into MATH 0070 or completion of MATH 0060.
Prerequisite/Co-requisite: GRPH 1130.

GRPH 1120: Layout and Design 1
3.00 credits (2.00 lec/1.00 lab)
This course introduces the elements of design, creative thinking techniques, and the fundamentals of layout design, including balance, movement, unity, clarity, simplicity, emphasis, and color. You will explore layout styles, reconstruct existing layouts and develop a proficiency with markers as a layout tool.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060.
**GRPH 1130: Introduction to Graphics Software**  
3.00 credits (2.00 lec/1.00 lab)  
This course introduces the multiple elements and techniques of using the computer and basic software applications used in the graphic design industry. You will work with an individual workstation, tutorial software, and word processing and graphics software to enter text and create graphics. Emphasis is on typesetting concepts, proofreading and working within prescribed sets of design specifications.  
**Prerequisites:** Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; keyboarding (25 WPM) experience required, or COML 1100.

**GRPH 1140: Color Theory**  
3.00 credits (2.00 lec/1.00 lab)  
Using lecture, demonstration and studio work, this course introduces color theory, its application, and reproduction. You will learn about the psychophysical, cultural, and perceptual parameters of color, and you will explore the theory and history of a variety of color systems. You will develop the ability to use and manage color effectively in creative applications by studying correct scientific and artistic theories related to color, organization, perception, reproduction and interaction.  
**Prerequisites:** Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**GRPH 1540: History of Graphic Design**  
3.00 credits (3.00 lec)  
This course explores graphic design through the ages, identifying important design elements, movements, innovators and applications, as well as the impact of graphic design on life and culture from signage to packaging.  
**Prerequisites:** Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**GRPH 1560: Print Production 1**  
3.00 credits (2.00 lec/1.00 lab)  
This course covers the basic materials, methods, and mechanical processes necessary to the production of print-ready publications and other print media. You will learn the language of print production, be introduced to the studio skills/equipment, work with a computer/laser printer/ scanner, and produce one/two-color projects. You will learn the fundamentals of paper specifying, print buying, proofing, and meeting and managing production deadlines.  
**Prerequisites:** GRPH 1101, GRPH 1130, GRPH 1140.  
**Prerequisite/Co-requisite:** GRPH 1585.

**GRPH 1570: Adobe Illustrator**  
3.00 credits (2.00 lec/1.00 lab)  
This course covers the basics of Adobe Illustrator, a vector-based drawing program used to produce logos and artwork for printed publications, multimedia, and Web graphics. Topics covered include: creating basic shapes, working with points and lines, using transformation tools, blending elements, tracing templates, creating masks, using filters, customizing colors, and creating and formatting text.  
**Prerequisites:** GRPH 1130 or instructor approval; or for PHDI majors only, PHDI 1020 instead of GRPH 1130.

**GRPH 1585: Adobe InDesign**  
3.00 credits (2.00 lec/1.00 lab)  
This course is an introduction to Adobe InDesign page layout software, used to create professional quality single and multiple-page documents that are designed for printing, Web publication, and other electronic delivery systems. You will learn the fundamentals of style sheets, master pages, importing and manipulating text and images, typographic controls, color management, preflighting and output options as applied to practical projects for commercial printing and the web.  
**Prerequisites:** Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; and GRPH 1130 or instructor approval.  
**Prerequisite/Co-requisite:** GRPH 1101.

**GRPH 2101: Typography 2**  
3.00 credits (2.00 lec/1.00 lab)  
This course provides specific experiences that focus on the technical and aesthetic issues of typographic form in communication design. Emphasis is on the inventive use of type and typography throughout the whole creative process, from concept to application. You will merge traditional typographical aesthetics with current electronic technologies, developing typographical solutions for print, digital, and corporate identity assignments.  
**Prerequisites:** GRPH 1101, GRPH 1120 or instructor approval.  
**Prerequisite/Co-requisite:** GRPH 1585.
GRPH 2110: Adobe Photoshop
3.00 credits (2.00 lec/1.00 lab)
This course provides a practical understanding of the knowledge and skills required of digital content creators to use Photoshop in today’s digital design studio. Computer lab assignments and lectures will provide diversified experiences. Various interdisciplinary aspects will be explored.
Prerequisites: GRPH 1130 or instructor approval; or for PHDI majors only, PHDI 1020 instead of GRPH 1130.

GRPH 2125: Digital File Preparation and Management
3.00 credits (3.00 lec)
This course focuses on the Adobe Acrobat work environment and the advanced document features of Adobe InDesign. You will produce high quality documents as Portable Document Formats (PDFs) for print and the Web. You will also create interactive forms and media. You will explore topics including creating books from multiple files; building tables of contents, indexes and cross-references; exploring document delivery options; using XML; modifying security to PDF documents; and adding navigation to and obtaining data from PDFs.
Prerequisites: GRPH 1101, GRPH 1120 (or WEBI 1416), GRPH 1130, GRPH 1140, and GRPH 1585.

GRPH 2130: Graphic Design Problems 1
3.00 credits (1.00 lec/2.00 lab)
This course involves concepting and executing marketable print solutions for advertising and publishing needs. You will develop original concepts and navigate between software, as necessary to produce portfolio-quality digital outputs.
Prerequisites: GRPH 1120, GRPH 1520, GRPH 1540, GRPH 1560, GRPH 1585, GRPH 2110; or instructor approval.
Prerequisite/Co-requisite: GRPH 2101.

GRPH 2145: Graphic Design Internship
3.00 credits (3.00 int)
The graphic design internship is an opportunity for you to obtain supervised work experience that provides an important learning practical knowledge, as well as a useful link to the job market. You will obtain an internship site that supports your special area of interest and provides opportunities to interact with design professionals in a creative working environment. The internship requires 120 hours of residency at a design studio, advertising agency or related organization approved by the internship coordinator.
Prerequisite: GRPH 1585 or instructor approval.

GRPH 2233: Adobe Photoshop: Advanced
3.00 credits (2.00 lec/1.00 lab)
This course builds on the skills learned in Beginning Adobe Photoshop (GRPH 2110) and concentrates on a deeper understanding and a creative use of the software through a variety of advanced techniques. You will demonstrate insights into complex digital image manipulation and adjustments within the context of creating original images.
Prerequisites: GRPH 1130, GRPH 2110; or instructor approval; or for PHDI majors only, PHDI 1020 instead of GRPH 1130.

GRPH 2530: Graphic Design Problems 2
3.00 credits (1.00 lec/2.00 lab)
In this course, you will learn the effect of rendering digitally in natural media, image editing and animation. This course is a continuation of Graphic Design Problems 1, providing more challenging projects in advertising design and publishing markets. Working within industry standards and practices, you will produce portfolio-quality digital output of their solutions.
Prerequisites: GRPH 1570, GRPH 2130; or instructor approval.
Prerequisites/Co-requisites: GRPH 2540, GRPH 2550.

GRPH 2540: Career Planning and Professional Practices
3.00 credits (2.00 lec/1.00 lab)
This course prepares you for a smooth transition into the design industry, covering such topics as identifying markets, customizing interview portfolios, networking, writing professional correspondence, creating résumés and interviewing. You will learn about industry standards practices and ethical guidelines, and you will design and produce individualized professional-identity systems, Web sites, and marketing materials. You will learn the necessary tools and skills to be in charge of a job search and lifelong planning. You will gain job-seeking skills through personal workbooks, informational interviews, readings, discussions, presentations and lectures. This course will give you an opportunity to prepare professional materials and skills in a supportive, cooperative and enthusiastic learning environment.
Prerequisites: GRPH 1570 and GRPH 2101 or WEBI 1811 and WEBI 2023.
Co-requisite: GRPH 2550.
GRPH 2550: Portfolio Prep/Exhibit
3.00 credits (2.00 lec/1.00 lab)
This course includes refining and adapting artwork for cohesiveness, as well as professional packaging of the general portfolio. You will also participate in the planning, organization and execution of a class exhibit.
Prerequisites: GRPH 1570, GRPH 2101, 2130 or WEBI 1811 and WEBI 2023.
Co-requisite: GRPH 2540.

GRPH 2622: Freelance Business for the Creative Professional
3.00 credits (3.00 lec)
This course introduces the student to small business practices required for operating a successful freelance business. The topics can be utilized by anyone seeking to build a freelance business in apparel design, graphic and web design, photography, freelance writing, videography, or any other creative endeavor. The student will develop a complete business plan essential to any startup business. Topics include: sales strategies, practical business concepts, accounting, personal finances, business communications, and issues of copyright. Relevant social media and social networking are researched and analyzed as a part of the overall promotional and advertising strategy.
Prerequisites: Any ANIM, APRL, ARCH, CINE, CSCI, CVFX, CULA, DREC, EDIT, GRPH, PHDI, SCRN, SNDC, or WEBI course or instructor approval.

WEBI 1416: Web Layout and Design
3.00 credits (2.00 lec/1.00 lab)
You will apply design principles and layout fundamentals to communicate solutions to various demographics. You will design with concern for Web dynamics such as format, browser, font and platform issues, as well as consider user-end monitor size and page control while adapting navigational strategies for optimal user engagement.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.
Prerequisite/Co-requisite: GRPH 1611, WEBI 1611.

WEBI 1611: HTML/XHTML Authoring 1
3.00 credits (2.00 lec/1.00 lab)
You will develop a basic understanding of HTML/XHTML, Cascading Style Sheets Level 1, JavaScript and CGIs by authoring Web pages and completing a website. Current Web tools and design issues will be surveyed. Objective will be to produce clean and fast HTML/XHTML pages built and verified to Worldwide Web Consortium standards. Instruction will include online readings and tutorials.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.
Prerequisite/Co-requisite: WEBI 1416.

WEBI 1622: HTML/XHTML Authoring 2
3.00 credits (2.00 lec/1.00 lab)
A follow-up to Authoring 1, this course will introduce you to cutting-edge issues concerning HTML and related technologies. XML, XHTML, site accessibility, and CSS2 will be covered. JavaScript is revisited. Web design for alternative devices (wireless, WebTV, aural browsers) will be discussed. You will author and troubleshoot Web pages and complete at least one website.
Prerequisites: WEBI 1416, WEBI 1611, WEBI 1911; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.

WEBI 1711: Web Tools—Dreamweaver
3.00 credits (2.00 lec/1.00 lab)
This course explores Web tools and applications that are associated with creating and managing professional websites. You will design quality websites that adhere to Web standards.
Prerequisites: GRPH 1130, WEBI 1416; or for PHDI majors only: PHDI 1020 instead of GRPH 1130; or instructor approval.
Prerequisites/Co-requisites: GRPH 1611, WEBI 1611.
WEBI 1811: Web Animation and Interactivity
3.00 credits (2.00 lec/1.00 lab)
This advanced Web course provides a working knowledge of Adobe Flash, and other software that creates interactive animation and navigation. You will develop content for current desktop computer and smart device web browsers. You will also learn HTML 5, Action Scripting, and other scripts to deliver both audio and video via the web. You will work collaboratively as well as individually, to execute a series of creative projects taken from concept to completion. Your designs will be applied to various projects for professional portfolio development and delivery. Prerequisites: GRPH 1130; or for PHDI majors only, PHDI 1020 instead of GRPH 1130; or instructor approval.

WEBI 1911: Scripting Overview
3.00 credits (2.00 lec/1.00 lab)
This course is an overview of client-side solution technologies for enhancing the user experience on the Worldwide Web. Javascript, Java, and DHTML will be covered along with current industry trends and standards. You will be introduced to basic programming concepts and write scripts in several languages. Prerequisites: GRPH 1130; WEBI 1416, WEBI 1611; or instructor approval.

WEBI 2000: Content Management System Development—WordPress
3.00 credits (2.00 lec/1.00 lab)
This course explores Content Management Systems (CMS) for publishing content to the web. You will learn configuration and customization of WordPress. You will also learn other CMS solutions. Prerequisites: WEBI 1416, WEBI 1611; or instructor approval.

WEBI 2012: Scripting Overview 2
3.00 credits (2.00 lec/1.00 lab)
This course is an overview of server-side solution technologies for enhancing the user experience on the Worldwide Web. You will plan and design relational databases for use in dynamic web applications. You will explore topics including database planning, connectivity, and Structured Query Language (SQL). You will create a website using popular web application frameworks. Must be taken A–F. Prerequisites: WEBI 1911; or instructor approval.

WEBI 2023: Web Layout and Design 2
3.00 credits (2.00 lec/1.00 lab)
This course explores the advanced technical and aesthetic principles of creating and designing images and graphics for the Web. You will create and produce several advanced Web design projects in preparation for your final portfolio courses. Prerequisites: WEBI 1416, WEBI 1711, GRPH 1101, GRPH 1130, GRPH 2110; or instructor approval.

WEBI 2116: Type in Motion
3.00 credits (2.00 lec/1.00 lab)
This advanced course examines the theory and application of Type in Motion, using lecture, demonstration, and collaborative studio work. You will focus on the application of type for the Web, Cinema, Interactive Media, and other evolving presentation formats, in which type is integrated with other motion visuals. You will develop the ability to use and experiment with the design and the application of type in order to create an effective emotional impact through interaction, texture, color and storytelling. Prerequisites: GRPH 1101, GRPH 2110; or instructor approval.

WEBI 2644: Internship
2.00 credits (2.00 int)
The electronic publishing internship is an opportunity for supervised work experience that provides an important learning experience, as well as a useful link to the job market. You obtain an internship site that supports your special areas of interest and provides opportunities to interact with professionals in their working environment. The internship requires 120 hours of residency in a printing or publishing department, service bureau, desktop publishing firm, or related company approved by the internship coordinator. Prerequisite: Satisfactory completion of all 30 credits of GRPH/WEBI coursework or instructor approval.

WEBI 2998: Directed Study
Prerequisites: one course in WEBI, instructor approval; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0070 or completion of MATH 0060.
Health

**HLTH 1000: Introduction to Sleep and Rest**  
3.00 credits (3.00 lec)  
This course introduces you to content areas related to the basic human need area of sleep and rest. You will learn about the importance of sleep and rest for a healthy life, sleep cycles, the history of sleep, and common sleep disorders. The field of sleep science and its relevance to other allied health professions is introduced. This course is open to the public and is also a required course in the Polysomnographic Technology A.A.S. program.  
*Prerequisites:* Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into or completion of ENGL 1110 or ENGL 1108.

**HLTH 1101: Personal and Community Health**  
3.00 credits (3.00 lec)  
This course examines modern concepts and practices of health and holistic living as applied to the individual. It includes discussion of selected topics to stimulate your critical thinking and problem-solving skills. Personal development, self-discipline, health maintenance, integration of the mind/body concept and drug education is stressed.

**HLTH 1107: Service-Learning in Special Populations**  
2.00 credits (1.00 lec/1.00 lab)  
This course will provide you with experience in individual and group interactions with people that have disabilities. Much of the time during the semester will be done in a service-learning placement. You will find your own community placement, which must be approved for service. You will survey the historical/social context of people with disabilities in America, legislation, terminology and begin to discover your own attitudes and behaviors around a wide range of abilities. Must be taken A–F.

**HLTH 1128: Bridging Community and Personal Health**  
3.00 credits (2.00 lec/1.00 lab)  
This course teaches that personal health is more than a series of individual choices; it is universal. You will learn about the community context that shapes the decisions you make about your health. You will learn how to impact environments that do not support health and wellness, and you will clarify your own values, participate on a team, and engage in public work. Must be taken A–F.

**HLTH 1132: Managing Stress, Managing Life**  
2.00 credits (2.00 lec)  
This course is presented from a holistic view, so all aspects of life will be discussed. It is intended to give you workable tools to manage stress in your life and critique how to manage distress in your life. You will complete awareness exercises, problem-solve, do personal inventories and make personal plans. Topics will include: perception of stress, strength intervention, coping and managing, psychophysiology, stress and illness, risk-taking, and stress and communication.

**HLTH 1135: Fitness Nutrition**  
2.00 credits (2.00 lec)  
This course covers the role nutrition, complemented by physical activity and exercise, plays in determining one’s health. You will gain a basic understanding of the anatomy, physiology, and biomechanics of exercise and the importance nutrition plays in the enhancement of fitness based on the choices you make in your everyday life.  
*Prerequisite:* Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042.

**HLTH 1140: Grief, Loss and Growth**  
2.00 credits (2.00 lec)  
This course focuses on coping with the major changes that can occur in life. You will learn about a holistic approach to loss by viewing it as “change and transition.” You will understand the theories and stages of grief, which are helpful in the transition to overall health. You will obtain knowledge and tools needed to maintain wellness and make healthy choices when changes occur.  
*Prerequisites:* Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 and faculty recommendation into ESOL 0052; and placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.

**HLTH 1150: First Aid and CPR**  
2.00 credits (2.00 lec)  
In this course, you will learn to administer first aid in treating injuries and sudden illness, including training for breathing and cardiac emergencies. Certification will be earned upon successful completion of the course requirements.
HLTH 1171: Human Sexuality
2.00 credits (2.00 lec)
In this course, you will learn the biological and psychosocial aspects of human sexuality across the lifespan, including human sexual anatomy and physiology. An understanding of the influences on individual sexuality and how your sexuality impacts relationships, attitudes, and communication will be presented. Other topics include contraception, challenges to sexual functioning and sexual orientation. Current statistics and information regarding transmission, diagnosis, treatment and prevention of sexually transmitted infections will be included. Community resources, prevention and advocacy of current sexual health issues will be emphasized. 
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HLTH 1172: Food and Culture
3.00 credit (2.00 lec/1.00 lab)
This course will provide you with the knowledge and skills for developing intercultural competence in the area of food and nutrition. You will understand food in the context of culture by examining the historical, religious and sociocultural influences on meal patterns and eating customs. You will apply these competencies to positively influence the health and nutritional status of the various cultural and ethnic groups or clients you may serve. 
Prerequisites: Placement into READ 200 or ESOL 0052 or completion of READ 100 or ESOL 0042 and faculty recommendation into ESOL 0052; AND Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.

HLTH 1173: Healthy Strategies for Weight Management
3.00 credit (2.00 lec/1.00 lab)
This course will include all aspects relating to managing weight, including causes of weight gain, health risks and lifestyle. You will explore the disadvantages of engaging in unhealthy approaches to weight management. You will participate in a variety of healthy weight-reduction practices including basic nutrition, exercise, behavior modification, stress management and communication. 
Prerequisites: Placement into READ 200 or ESOL 0052 or completion of READ 100 or ESOL 0042 and faculty recommendation into ESOL 0052; AND Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.

HLTH 1180–1184: Health Topics
1.00 credit (1.00 lec)
This course will examine in depth timely topics in the health field. These topics will be pertinent to everyday living and may include: tobacco/marijuana use, fetal alcohol syndrome, parenting, personal assessment of health, consumer issues in health, etc.

HLTH 2200: Environmental Issues in Health and Wellness
2.00 credits (2.00 lec)
This course is an introduction to the principles of toxicology and how environmental agents, such as pesticides and pollutants, affect human health, specifically in the areas of disease and injury. You will assess your toxicant risk and ecological footprint and use these results to research various methods on how to improve your environmental health, such as sustainable agriculture and green living. This course also explores how you can use the environment to promote health and actually heal the mind and body. 
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HLTH 2210: Infectious Diseases: An Application to Everyday Life
3.00 credits (3.00 lec)
In this course, you will learn about infectious diseases and disease concepts, with emphasis on prevention and control of infectious diseases in the individual, family and community. You will study a broad spectrum of infectious-disease topics, including disease causes, transmission, outbreaks, and personal and family protection; debate the influence of geography, culture, politics and economic factors on infectious diseases; and discuss common diseases such as influenza, food-borne illnesses, and sexually transmitted diseases; as well as more exotic diseases, such as pandemic influenza, newly emerging diseases, and diseases caused by bioterrorism. 
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HLTH 2249: First Responder
3.00 credits (3.00 lec)
This course presents information essential for providing emergency care in the event of injury or illness. Course material is specifically designed for those with a job-related duty to act in the event of acute injury or illness. This course fulfills the requirement for those students entering the Law Enforcement program. The Minnesota First Responder Certificate is earned upon successful completion of the course requirements.
HLTH 2255: Effects of Drugs on Children and Adolescent Health
3.00 credits (2.00 lec/1.00 lab)
This course uses the Public Achievement model to take a unique approach on learning the effects of drugs on children and adolescents from a physical, social, emotional, and mental health perspective. You will evaluate addiction theories; gain an understanding of basic licit and illicit drug pharmacology; learn about family dynamics and the role of school and the community in the lives of this population; and develop awareness around the best practices for drug education, interventions and treatments for children and adolescents. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HLTH 2998: Directed Study
Prerequisites: One course in HLTH and permission of instructor.

Healthcare Core Curriculum

HCCC 1000: Health Career Exploration
0.00 credit (0.00 lec)
This module provides information about the various types of healthcare workers in various healthcare settings. Included are education and licensure/certification requirements, scope of work, types of interactions with clients, residents, their family members, peer groups and team members, and the impact healthcare workers have meeting the healthcare needs of these individuals. Also included is information about selecting, entering, and advancing in a healthcare career. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1010: Behaviors for Success in Health Careers
0.50 credit (0.50 lec)
This module focuses on the requirements needed by healthcare workers to effectively work in a variety of healthcare settings. This includes types of healthcare facilities and systems, applying for employment, accountability and responsibility; standards of dress, workplace behavior, and approaches needed to assist clients and residents; expectations of teams and team members; common healthcare facility policies and requirements; and selected medical and departmental abbreviations. Also included is discussion about how healthcare workers can impact the quality of healthcare and balance their work and personal lives to maintain personal wellness. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1020: Communication in Healthcare
1.00 credit (1.00 lec)
This module emphasizes the importance of effective communication between and among healthcare workers, clients, residents and their family members. Included are verbal and nonverbal communication, listening skills, interpersonal communication, team communication, documentation and reporting, and the use of electronic communication devices in healthcare facilities. Focus is on the development of effective communication skills to support quality client care. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1030: Awareness and Sensitivity to Client Needs
0.50 credit (0.50 lec)
This module presents challenges and issues related to the awareness and sensitivity needed to understand the healthcare needs of clients, residents and their family members. Included is the impact disease has on individuals; the emotional, spiritual, and social needs of clients; as well as the type of care needed by different age groups. Also included is the process of death and dying and how that affects these individuals and their families. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
HCCC 1040: Respecting Client and Staff Diversity
0.50 credit (0.50 lec)
This module provides a framework for dealing with diverse residents, clients and staff. Included are belief systems, cultural practices, and respect and sensitivity to cultural and gender issues. Emphasis is placed on awareness and use of effective strategies to appropriately deal with diversity in the workplace. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1050: Healthcare Safety and Standard Precautions
0.50 credit (0.50 lec)
This module focuses on the rules and standards related to regulatory policies required of healthcare facilities, as well as personal safety standards and requirements to work in healthcare settings. Included are the principles and standards of infection control; standard precautions; healthcare facility safety policies and strategies to ensure personal, client and resident safety; and procedures to respond to emergencies. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1060: Legal Issues in Healthcare
0.50 credit (0.50 lec)
This module focuses on the legal issues related to clients, residents and healthcare workers. Such areas as healthcare laws, client rights and responsibilities, confidentiality, liability, documentation, and regulation are explored. The relationship between ethics and legal issues is discussed, as well as the impact law and regulation has on healthcare systems. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1070: Healthcare Ethics
0.50 credit (0.50 lec)
This module emphasizes the use of sound ethical practices in healthcare. Included are ethical principles and standards as they relate to the care of clients and interactions with peers, colleagues, and team members. Ethical frameworks are provided for discussion on understanding the types of ethical challenges in healthcare and the difficult decisions that need to be made. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1080: Nursing Assistant Skill Set
2.00 credits (2.00 lab)
This course is an introduction to basic nursing concepts and skills at the level of the nursing assistant. Skills related to personal care, activity and exercise, nutrition, elimination, vital signs and measures, special needs, safe environment, organizational skills, and problem-solving will be taught in the classroom and clinical settings. Completion of this course and the four-credit Health Care Core Curriculum prepares the student to take the national examination to be certified as a nursing assistant. Must be taken Pass/Fail.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HCCC 1100: Medical Terminology
1.00 credit (1.00 lec)
This course focuses on the recognition and understanding of medical terms after you learn the meaning of word parts. A systems approach based on human anatomy is used. You will also learn to interpret and implement common medical abbreviations and symbols by utilizing healthcare forms and medical records. Correct pronunciation and spelling of terminology is emphasized.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
HCCC 1200: Dosage Calculations
1.00 credit (1.00 lec)
This course focuses on the development of the skills necessary to accurately calculate medical dosages for clients in healthcare settings. You will have an opportunity to choose dimensional analysis or ratio and proportion as a means of calculating metric and household medication orders. The course will also introduce special topics of pediatric dosages, syringe markings and powdered medications. You will explore calculations through three-dimensional classroom activities, as well as traditional paper- and-pencil problem-solving. Must be taken Pass/Fail.
Prerequisites: Placement into MATH 0060; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

HVAC 1000: Refrigeration Fundamentals
2.00 credits (1.00 lec/1.00 lab)
You will learn the theory of refrigeration involving temperature/pressure relationship, heat transfer, sensible and latent heat, and laws of thermal dynamics. The mechanical refrigeration cycle (including compressors, metering devices, evaporators, and condensers) will be covered, along with refrigeration pressure controls and heat pump theory.
Prerequisite: Placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

HVAC 1050: Trade Tools and Test Instruments
2.00 credits (1.00 lec/1.00 lab)
This course covers specialty hand tools and power equipment used by HVACR technicians and electricians. Use and maintenance of various test instruments to diagnose and repair commercial and residential HVACR equipment will also be covered. Instruments used to perform electrical work will be covered as well.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HVAC 1100: Metal Fabrication
3.00 credits (1.00 lec/2.00 lab)
This course will teach techniques for cutting, bending, swaging, flaring, soldering, and brazing various types and sizes of refrigeration tubing and pipe. Refrigeration fittings, correct installation procedures and basic welding procedures will also be covered.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HVAC 1150: Refrigerant Management
2.00 credits (2.00 lec)
This course is the study of all refrigerants used in today’s refrigeration and air conditioning industry. Topics include safe handling, refrigeration oils, health hazards, application, UL classifications, ozone-depletion issues, and ozone-safe replacement refrigerants. This course also covers refrigerant retrofit procedures.
Prerequisite: HVAC 1000.

HVAC 1250: Interpreting Schematic Drawings
2.00 credits (2.00 lec)
This course gives a systematic approach for reading, creating, and troubleshooting electrical diagrams for HVAC and R equipment, as well as other electrical equipment. Multiple voltage, single- and three-phase circuits will be covered.
Prerequisite: CNEL 1000.

HVAC 1300: HVAC and R Controls
2.00 credits (1.00 lec/1.00 lab)
This course covers advanced control circuits for commercial and residential heating, ventilation, air conditioning and refrigeration equipment. Diagnostic procedures involving advanced HVAC and R schematics, temperature controls, timing controls, modulating motors, heat pump controls, and other various HVAC and R electrical components will also be covered.
Prerequisite: HVAC 1050.

HVAC 2000: Service Procedures for HVAC and R Technicians
1.00 credit (1.00 lec)
This course covers business procedures necessary to be successful in the refrigeration, air conditioning and heating occupation. Customer relations skills will be taught to prepare you to deal with a variety of situations encountered each day by HVAC and R technicians.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
HVAC 2010: HVAC and R Internship 1
1.00 credit (1.00 int)
This course is designed to give you exposure to the refrigeration, air conditioning and heating service trade. You will ride with HVAC and R technicians from a variety of service companies for a week to gain real-life experience in this industry.
Prerequisites: CNEL 1050, CNEL 1100, CNEL 1150, HVAC 1100, HVAC 1150, and HVAC 1300.

HVAC 2050: HVAC and R Internship 2
1.00 credit (1.00 int)
This course is designed to give you exposure to the refrigeration, air conditioning and heating service trade. You will ride with HVAC and R technicians from a variety of service companies for a week to gain real-life experience in this industry.
Prerequisites: CNEL 1050, CNEL 1100, CNEL 1150, HVAC 1100, HVAC 1150, and HVAC 1300.

HVAC 2100: HVAC Design
2.00 credits (2.00 lec)
This course covers air conditioning theory involving psychometrics (load calculations for residential heating and cooling) using the Manual “J” method of load calculation and load calculation computer software programs. Ventilation and duct-sizing calculations, as well as the use of various air conditioning tools and test instruments, will also be taught.
Prerequisite: HVAC 1000.

HVAC 2150: Central Air Conditioners
2.00 credits (1.00 lec/1.00 lab)
You will learn procedures for the installation, maintenance, troubleshooting and repair of residential split-type air conditioning systems. The course will also cover charging procedures for high-efficiency equipment.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150; HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.

HVAC 2200: Commercial Air Conditioners
3.00 credits (1.00 lec/2.00 lab)
This course includes: troubleshooting, repair, and maintenance of commercial air conditioning equipment, including large console units, computer room systems, cooling towers and large air handlers. Basic concepts of reciprocating and centrifugal chillers will also be covered.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150, HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.

HVAC 2250: Heat Pumps
2.00 credits (1.00 lec/1.00 lab)
This course covers characteristics and operation of commercial and residential heat pump systems, including air-to-air, water-to-air, and ground loop systems. Instruction will be given on heat pump controls, diagnostic procedures and energy calculations.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150; HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.

HVAC 2300: Commercial Refrigeration
4.00 credits (2.00 lec/2.00 lab)
This course covers troubleshooting, repair, maintenance, and installation of commercial refrigeration equipment, including walk-in coolers and freezers, soft-serve machines, commercial refrigerators, milk coolers, and supermarket equipment. You will learn about various electrical and mechanical components specific to commercial refrigeration systems.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150, HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.

HVAC 2350: Commercial Ice Machines
2.00 credits (1.00 lec/1.00 lab)
This course covers troubleshooting, repair, maintenance, and installation of commercial ice-making equipment (such as Manitowoc, Scotsman, Crystal Tips, Koldraft, Whirlpool, and Hoshisaki). Instruction on both flake and cube ice machines will be provided.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150, HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.

HVAC 2400: HVAC Rooftop Systems
2.00 credits (1.00 lec/1.00 lab)
In this course, you will learn procedures for maintenance and repair of commercial roof-top units used for heating and cooling purposes. This course will cover equipment, interpretation of electrical diagrams and economizer packages.
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100, CNEL 1150; HVAC 1000, HVAC 1050, HVAC 1100, HVAC 1150, HVAC 1250, and HVAC 1300.
HVAC 2450: Indoor Air Quality
2.00 credits (1.00 lec/1.00 lab)
This course covers theory, operation, and installation of commercial and residential air-filtration equipment, including media air filters and electronic air cleaners. Commercial and residential humidifiers, theory, operation and installation of residential air-exchange systems, and carbon monoxide testing will be covered. 
Prerequisite: HVAC 1250.

HVAC 2500: Gas-Fired Furnaces
3.00 credits (1.00 lec/2.00 lab)
Troubleshooting, repair, maintenance, and installation of forced-air gas-fired heating equipment, standing pilot, spark ignition, hot-surface ignition, condensing, and pulse-combustion furnaces are covered in this course. Gas fuels, piping and venting procedures will also be explored. 
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100; HVAC 1250, and HVAC 1300.

HVAC 2550: Oil-Fired Furnaces
1.00 credit (1.00 lab)
Troubleshooting, repair, installation and maintenance of residential forced-air, oil-fired heating equipment are covered in this course, along with combustion analysis. 
Prerequisites: CNEL 1000, CNEL 1050, CNEL 110, HVAC 1250, and HVAC 1300.

HVAC 2600: Residential Boilers
2.00 credits (1.00 lec/1.00 lab)
This course includes procedures for the installation, troubleshooting, repair, and maintenance of residential hot-water-heating systems. Piping techniques, gas, oil, electric heat sources, and water treatment will also be covered, along with boiler electrical controls and schematic diagrams. 
Prerequisites: CNEL 1000, CNEL 1050, CNEL 1100; HVAC 1250, and HVAC 1300. 
Co-requisite: HVAC 2500.

HVAC 2640: Introduction to Solar Thermal Systems
2.00 credits (1.00 lec/1.00 lab)
This course covers the basics of thermal solar energy used for space heating and potable hot water. You will receive hands-on training and experiment with simulated lab projects involving solar thermal energy systems. 
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HVAC 2650: HVAC Sheet Metal
3.00 credits (1.00 lec/2.00 lab)
This course covers the procedure for constructing sheet metal parts for the HVAC industry. It will cover layout and proper use of common sheet metal hand tools and fabrication equipment. Basic duct design and air measurement will also be explored. 
Prerequisite: Placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

HVAC 2700: Residential Blueprint Reading
1.00 credit (1.00 lec)
This course will cover the interpretation of residential blueprints as they apply to mechanical installation within the structure. Various blueprints from different types of structures will be presented.

HVAC 2750: Mechanical Building Code
2.00 credits (2.00 lec)
This course covers the regulations required for installing various types of mechanical equipment in a residence, including gas piping, ductwork, refrigeration piping and hydronic installations. You will become familiar with the use of the Uniform Mechanical Building Code manual. Energy code requirements that apply specifically to Minnesota will also be covered. Licensing requirements for installing HVAC equipment in Minnesota will be covered.

HVAC 2800: Furnace and Central Air Conditioner Installation
2.00 credits (2.00 lab)
This course teaches the skills necessary to properly install residential gas and oil furnaces, including high- and standard-efficiency equipment, gas piping, low-voltage wiring, and sheet metal transitions. 
Prerequisite: HVAC 2650.

HVAC 2850: Advanced HVAC Sheet Metal
2.00 credits (2.00 lab)
This course teaches you to construct advanced HVAC sheet metal fittings necessary to residential HVAC equipment. Field layout and retrofit procedures will be covered. Use of air measurement instruments will be covered as well. 
Prerequisite: HVAC 2650.

HVAC 2900: Radiant Floor Systems
2.00 credits (1.00 lec/1.00 lab)
This course covers the installation of residential radiant-floor-heating systems.
HVAC 2998: Directed Study
Prerequisites: One course in HVAC; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070.

Herbal Studies

HERB 1000: Foundations of Herbal Medicine
3.00 credits (3.00 lec)
This course provides an overview of the ancient systems of medicine including Greek, Ayurvedic, Native American and Traditional Chinese. Through comparison of various systems of medicine, you will learn how herbal medicine was developed as a part of a holistic approach to health and well-being. Beginning with the ancient systems you will follow the historical thread to the holistic medicine movements in the United States from colonization to the current times. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HERB 1100: Introduction to Herbal Medicine
3.00 credits (3.00 lec)
Introduction to Herbalism focuses on basic concepts of herbalism including how to research both traditional and modern information pertaining to herbal use, how to examine herb safety and analyze scientific research on herbs. You will learn to assess through research and writing assignments how to choose herbal providers, herbal remedies for personal use, and herbal products. You will be introduced to careers where knowledge of herbalism is used, including; Ethno-botany, product marketing, herb grower, herb manufacturer and health practitioner. You will be introduced to the 24 most commonly used and advertised herbs.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HERB 1200: Herbal Pharmacy
3.00 credits (2.00 lec/1.00 lab)
This is a hands-on course providing techniques for harvesting and drying herbs and incorporating them into herbal products, such as decoctions, infusions, tinctures, lotions, steams, and salves. You will participate in field trips that include identification of medicinal herbs to develop an understanding of how and when individual herbs are harvested. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HERB 1220: Materia Medica
3.00 credits (3.00 lec)
This course provides a comprehensive approach to Materia Medica focusing on 25 commonly used herbs. You will receive detailed information about the plants, encompassing both traditional and contemporary understanding of the key therapeutic actions, indications, constituents, cautions, contraindications, dosages and toxicity of each medicinal herb; alongside nomenclature, habitat, morphology and preparation of indicated forms of delivery of the medicinal herb. You will attend field trips to local natural areas to identify plants. You will be introduced to how herbal medicines work to promote health in the organ systems of the body, including the respiratory, digestive and nervous systems. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

HERB 1240: Lifespan and Gender Specific Herbs
3.00 credits (3.00 lec)
In this course, you will learn how herbal medicine can support health in specific life stages and for both women and men. You will discuss modern health concerns, focusing on traditional and contemporary herbal treatments that positively affect health throughout life. Through lectures, case studies and research, you will identify effective strategies for using herbs safely as well as how to change dosages for the age of the individual. You will study how herbal medicine works on organs systems in the body, including the respiratory, digestive, cardiovascular and reproductive systems. Must be taken A–F.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
History

HIST 1000: World History 1: Ancient and Pre-Modern World
4.00 credits (4.00 lec)
This course is a survey of world history examining ancient, classical and medieval civilizations prior to the emergence of the West as a world power (c. 3500 BCE–1450 CE). The course explores how environmental, economic, political, social, religious, and other intellectual and cultural factors combined in different ways to influence the development of major world regions—Africa, EurAsia and the Americas. The goal is for you to understand how fundamental institutions and cultural norms of different world regions developed out of internal environments, as well as in response to developments and influences from other cultural systems and historical forces.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1010: World History 2
4.00 credits (4.00 lec)
This course is a survey of modern world history from the rise of Europe to the present era, and of how the globe was linked through cultural, racial, religious contact and clashes; migration industrialization; and imperialism. You will examine how technological, economic, social, religious, political and cross-cultural factors combined to influence the expansion of the West and, in turn, the development of Africa, Latin America, and Asia. Both global and interdisciplinary perspectives will be used to help you develop a better understanding of how different people understood, construed and developed their place in the modern world; how different regions of the world influenced each other in their response to the West; and why there were both similarities and differences in the ways people both accommodated and resisted Western domination.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1020: Contemporary World History: Issues and Themes
3.00 credits (3.00 lec)
This course explores developments and issues in contemporary world history from 1950 until the present. It provides a broad background and introduction to key people, events, and larger social, economic, technological, political, cross-cultural and global forces that have shaped our current world and created many of the problems of today. Drawing on examples from each major region of the world, you will study such topics as the beginning, impact and end of the Cold War; patterns of decolonization and national independence; diverse strategies for economic development and experiences of national building; revolution and liberation struggles; international division of labor and livelihood; cultural identity; nationalism and ethnonationalism, race and gender relations; movements for peace; and human rights and the environment.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1100: American History 1
3.00 credits (3.00 lec)
American History 1 surveys the history of America from the contributions of the indigenous Indian peoples through the Colonial Era (17th and 18th centuries) to the American Revolution and Early Republic (18th and 19th centuries). This course examines how historical American culture, institutions and events influence the present United States in the latter part of the 20th century.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
HIST 1110: American History 2
3.00 credits (3.00 lec)
American History 2 surveys the history of America from the 19th to the 20th century, with emphasis on the Civil War, social and cultural history of the 19th and 20th centuries, the Great Depression of the 1930s, race relations, and the war in Vietnam.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1200: European History to 1500: Ancient Greece and Rome to Medieval Europe
3.00 credits (3.00 lec)
This course provides a comprehensive survey of European history from the earliest civilization in the Mediterranean to 1500, when Europe was poised to become a global power. You will learn about the governments, societies and religions of many European peoples across a span of over 2000 years, including Classical Greece, the Roman Empire, and Medieval Europe.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1210: European History since 1500: The Age of Global Contact to Present
3.00 credits (3.00 lec)
This course covers European history since 1500, when Europe was starting to make contact with the rest of the world, to the Europe of today. You will learn about the Europe’s Age of Exploration and conquest, the Enlightenment, the revolutionary period, the world wars, the divisions of the Cold War and the drive for unification.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1300: African-American History 1
3.00 credits (3.00 lec)
This course examines the African experience in the Americas from the pre-Columbian era to the Civil War. This includes African civilizations and their cultural characteristics, the formation of capitalism and its slavery roots, and the development of racialistic structures. Included will be issues of cultural hegemony, states’ rights and the Civil War. The progressive attempts by African-American men and women and their Native American and Caucasian allies to obtain freedom and to gain their political rights will be explored.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1310: African-American History 2
3.00 credits (3.00 lec)
This course examines the Reconstruction and Post-Reconstruction issues experienced by African-Americans. The course focuses on African-American support for invention, the legacy of inventions, business and economic expansion, and labor issues that affect family stability in the present. In addition, the roots and development of the Civil Rights Movement will be explored in the context of the legal and social segregation in the United States.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1320: African Historical Experience and Legacy in Latin America
3.00 credits (3.00 lec)
This course examines the political, economic, social and cultural aspects of the African experience in Latin America. Included in this survey are the rise of capitalism and the legacy of music, art, performance art, political activity, and social fabric.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
HIST 1500: Native American History  
4.00 credits (4.00 lec)  
This course is an introduction to the history of Native Americans from the pre-Columbian period to the present, with special emphasis on Native Americans in Minnesota. This approach to history is multidimensional with emphasis on oral history: personal history, through memoirs and speeches; tribal history, by focusing on the history of one reservation; and international history, by focusing on government policies and Indian experiences. Fulfills MnTC Goal Areas 5 and 7.  
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1510: Caribbean History  
2.00 credits (2.00 lec)  
This course is a survey of the four major eras in the Caribbean’s multicultural history: Pre-Hispanic indigenous people—Ciboney, Carib, Taino/Arawak (pre-European history–15th century); African slave trade, Asian indentured servant and plantation economics (16th to the 19th centuries); and fragmented nationalism in the contemporary Caribbean (20th century). Fulfills MnTC Goal Areas 5 and 7.  
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1520: History of Mexico  
3.00 credits (3.00 lec)  
This course is a broad survey that examines the political, economic, social and cultural aspects of the Mexican historical experience from its Native American roots to the present. Fulfills MnTC Goal Areas 5 and 7.  
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 1600: History of Work and American Workers  
3.00 credits (3.00 lec)  
This course is a survey of the labor history of work and workers and of how it has been transformed by class, race and gender over the course of American history. Beginning with indigenous American Indian cultures and ending with the global capitalist economy of the present, this course examines how economic, technological, political, social, and cultural forces, including sexism and racism, interacted to change work and U.S. society. The course also looks at how different groups of working people, women and men of diverse ethnic and racial backgrounds, struggled to organize and respond to the changes going on around them. Fulfills MnTC Goal Areas 5 and 7.  
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 2241: Women in Early America  
3.00 credits (3.00 lec)  
This course studies women’s experience from the 1600s to the Civil War. Major themes include: women writing and publishing the debates about democracy; women’s work during the Revolutionary War; resistance to colonization by indigenous women of Seminole, Creek, Cherokee and Anishinabe nations; women’s founding of community service, educational and reform organizations; and women’s leadership from the 1830s through the 1860s in the social movement to abolish slavery. The class will read original documents (biography, letters, newspapers, speeches and pamphlets) to interpret the laws intended to keep women in slavery and indentured servitude. You will discover how women created resistance and fought for justice. Fulfills MnTC Goal Areas 5 and 9.  
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
HIST 2242: Women in Modern America
3.00 credits (3.00 lec)
This course explores women’s leadership on the civic stage from 1865 to the present. Major themes include leadership in passing civil rights amendments to the Constitution; Women’s Christian Temperance Union, the moderate reformers who built communities all over America; the radical women who ran for local, state, and national political office; women’s leadership for economic justice in Minnesota from the 1860s–WWI; Nonpartisan Leaguers and Farmer Laborites 1924–1944; leadership in the development of mothers’ pensions and welfare; women in the Holocaust; women fighters in the Civil Rights Movement; indigenous women in struggle; and the idealists of the 1960s and 1970s. The extensive use of original documents for reading and discussion will enhance your skills in the interpretation of historical documents.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HIST 2243: Contemporary China: from 1949 to present
3.00 credits (3.00 lec)
This course introduces you to the study of contemporary China, wherein you will examine the changes that have shaped the People’s Republic of China (PRC) from the Communist Revolution under the leadership of Mao Zedong through Deng Xiaoping’s economic revolution to the present. You will explore the following aspects of China’s history: the Communist (CCP) Revolution and establishment of the PRC; the Nationalist (KMT) exit to Taiwan and establishment of the Republic of China (ROC); the Great Proletarian Cultural Revolution; Deng Xiaoping’s reforms—the “four modernizations”; the democracy movement and the events at Tiananmen Square on June 4, 1989; recent social, cultural, economic changes; and China’s growing presence in this 21st-century world.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; ENGL 1110 recommended. Intro course in Social Sciences or HIST 1000 or HIST 1010 or HIST 1020.

HIST 2998: Directed Study
Prerequisite: One course in HIST.

Homeland Security

HLSC 1000: Introduction to Homeland Security
3.00 credits (3.00 lec)
This course will present the background and purpose of “homeland security,” including a historical perspective of federal and state agencies that lead up to the current state and the development of the Department of Homeland Security. You will examine the parts of the department, how they interrelate, and your purpose in responding to both natural and man-made disasters. You will assess the role of Homeland Security in protecting the country from threats both within and without its borders.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HLSC 1110: Emergency Management Systems
3.00 credits (3.00 lec)
This course will introduce you to the emergency management systems in place in both the state of Minnesota and the federal government, exploring the intricacies of an integrated system dependent on teamwork. You will critique these systems and develop creative ideas for improving emergency management systems.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HLSC 1220: Hazardous Materials Awareness
3.00 credits (3.00 lec)
In this course, you will gain an understanding of the potential-hazardous-materials problem at local, state and federal levels. You will examine the ways to recognize and identify the presence of hazardous materials and how to determine the material’s harmful characteristics through the use of several identification strategies. You will also explore the concepts of contamination and decontamination, personal protective gear, evacuation, and responsibilities of first responders.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
**HLSC 1330: GIS for Homeland Security**
3.00 credits (3.00 lec)
Geographic Information Systems (GIS) technology for Homeland Security is mission critical in supporting our nation’s Homeland Security efforts to protect life, property and infrastructure. You will receive an overview of how GIS systems can be used to help institutions and businesses at the local, state, and federal levels collect and analyze information to provide a common operating picture for emergency and crisis management. You will work in project teams to utilize GIS data to create response plans for strategic planning or tactical operations as needed.
*Prerequisite: HLSC 1000.*

**HLSC 1400: Emergency Management Command and Control**
3.00 credits (3.00 lec)
This course will equip you with the skills required to function within the current incident-management systems that exist at the county and state levels. By examining the concepts of command and control, you will analyze the Minnesota Incident Management System. You will focus on how that system interacts with the federal system and the Minnesota Emergency Operations Center.
*Prerequisites: HLSC 1000 and HLSC 1110.*

**HLSC 2200: Terrorism and Emergency Management**
3.00 credits (3.00 lec)
This course is designed to prepare students acting as first responders at the scene of a potential terrorist incident. The course will provide a general understanding and recognition of the terrorist threat, defensive considerations, as well as command and control issues associated with criminal incidents. You will be able to implement self-protective measures, secure the scene, complete appropriate notifications to authorities, and assist in a smooth transition from emergency to recovery and termination of the incident.
*Prerequisite: HLSC 1110.*

**HLSC 2220: Hazardous Risk Assessment**
3.00 credits (3.00 lec)
In this course, you will demonstrate the skills necessary to assess the risks hazardous to persons and property at a variety of sites, including business, school, industrial, and residential. These skills will include general target hardening, personal security, hazardous materials and OSHA issues.
*Prerequisite: HLSC 1220.*

**HLSC 2330: Crisis Management, Recovery and Continuity**
3.00 credits (3.00 lec)
This course will introduce the concept of managing a crisis situation with a goal of recovering and continuing vital services. These services will include government services, utilities, public works (water, sewer, roadways, etc.), police and fire protection, medical services, food distribution, and vital business and industrial output.
*Prerequisite: HLSC 1400.*

**HLSC 2440: Weapons of Mass Destruction**
3.00 credits (3.00 lec)
In this course, you will be presented with the concept of weapons of mass destruction and their different forms and threats (radiological, chemical, biological, pathogens, explosive devices, etc.). Strategies used to prevent the use of these weapons, responding to their use, mitigating loss of life and property, and planning will be analyzed.
*Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.*

**HLSC 2500: Homeland Security Contingency Planning**
3.00 credits (3.00 lec)
You will be introduced to the planning process of Homeland Security and disaster management; be able to identify the necessary elements of a sound contingency plan for different segments of a community, including government, essential services, business and industry, as well as the general citizenry; and create a model plan.
*Prerequisite: HLSC 2330.*

**HLSC 2550: Homeland Security Practicum**
3.00 credits (3.00 lec)
This course provides you with the opportunity to observe and apply the skills learned in the program courses. Through on-site visits to emergency operations centers, 9-1-1 communications centers, emergency hospital triage areas, and other critical locations involved in emergency operations, you will record and analyze your observations and present an oral and written summary of your findings. Other strategies for observation and fact finding will include interviews with emergency operations managers, planners, and others directly involved in Homeland Security and disaster management, or participation in disaster-management exercises.
*Prerequisite: Instructor approval.*
HLSC 2560: Transportation and Border Security
3.00 credits (3.00 lec)
The role of transportation in Homeland Security is fundamental in supporting our nation’s Homeland Security efforts to protect life, property and infrastructure. You will receive an overview of how the national transportation infrastructure operates and its societal impacts. You will delve into the modal aspects of transportation security, the diverse technology implications, and the relationship between the nation’s physical and economic security. You will see how a logistically based global society is impacted by transportation security and the resulting need for dual-outcome logistical solutions and transportation technology that enables secure supply chain management. You will develop an understanding of how a smart, sustainable, and secure transportation infrastructure can support both national security and economic well-being, while also enabling effective response to recover from man-made and natural disasters. Must be taken A–F.

Human Services

HSER 1001: Introduction to Human Services and Career Assessment
4.00 credits (4.00 lec)
This course combines a basic overview of human-services knowledge with self-assessment exercises to help you evaluate your choice to work in the helping professions. Topics include the human services field and profession, the history of human services, future trends, and multicultural perspective. This knowledge is combined with exercises, some small group work, and experiential learning to help you assess your personal attitudes, values, and interests in the field. Community service project outside of class may be required.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; and placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HSER 1002: Multicultural Aspects of Human Services
2.00 credits (2.00 lec)
This course focuses on the knowledge, skills and attitudes that human service students need in order to work effectively in culturally diverse communities. Included is an overview of the dynamics of privilege and discrimination as they affect human services. Using the diversity represented in the class, you will explore your own and each other’s cultural identities, values, attitudes, and behaviors. You will learn how to assess the impact of cultural differences in human service situations and how to adjust communication, goals, and services to meet the needs of people with whom you work.
Prerequisite/Co-requisite: HSER 1001.

HSER 1004: Individual Counseling Skills
4.00 credits (4.00 lec)
In this course, you are introduced to a microskills model for learning beginning-level counseling skills. The model emphasizes joining, challenging, and addressing problem-management stages in addition to responding to interpersonal communication style differences. You will practice skills in small groups in class supervised by the instructor and in media-recorded role-plays, which are critiqued in class by the instructor and peer evaluator groups. By the end of the course, you will use the skills effectively to conduct basic counseling interviews. Lab time required outside of class.
Prerequisite/Co-requisite: HSER 1001.

HSER 1051: Current Issues in Human Services
1.00 credit (1.00 lec)
This course systematically examines a current issue (often a problem or target population) in the field of human services that is timely and important. The course will offer a definition of the topic, historical background, current data and research on the topic, and possible solutions and action plans if a problem has been defined. This Human Services elective course is offered occasionally with varied issues as the focus. You may take this course only once, regardless of topic.
Prerequisites: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
HSER 1052: Current Issues in Human Services
2.00 credits (2.00 lec)
This course systematically examines a current issue (often a problem or target population) in the field of human services that is timely and important. The course will offer a definition of the topic, historical background, current data and research on the topic, and possible solutions and action plans if a problem has been defined. This Human Services elective course is offered occasionally with varied issues as the focus. You may take this course only once, regardless of topic.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HSER 1105: Promoting Systems Change
2.00 credits (2.00 lec)
This course provides the theoretical background to systems change, as well as the practical application to implement such change at the individual and community levels. You will study theories and strategies for change from a systems perspective and apply them to a real problem in human services. Must be taken A–F.
Prerequisite/Co-requisite: HSER 1001.

HSER 1110: Working with Youth
2.00 credits (2.00 lec)
This course focuses on the knowledge, skills and attitudes necessary to work effectively with youth. You will learn about basic human behavior related to youth, youth leadership, basic methods of counseling and youth advocacy with an emphasis on individual values in working with youth.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HSER 1111: Using Personality Types in Human Services
2.00 credits (2.00 lec)
This course provides theory and practice using a variety of orientations to personality style. You will use personality style theory to look at what your own style might be, your strengths and weaknesses, and possible applications of each theory in human services work. The course will encourage you to see power in recognition of diversity among personality styles.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HSER 1115: Self-Care and Wellness for Helping Professionals
2.00 credits (2.00 lec)
This course covers theories and practical exercises related to wellness. You will learn how to enhance your own wellness and promote wellness with others. The experiential nature of the course will include textbook readings, an optional online wellness assessment, buddy support dyads, weekly journals and a wellness promotion project, all of which will involve work in and outside of the classroom. Must be taken A–F.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

HSER 2001: Introduction to Group Skills
3.00 credits (3.00 lec)
This course provides theory and supervised practice in group counseling. Topics include types and purposes of groups, group process, forming a group, group stages and stage-appropriate group leadership skills, membership issues, and professional and ethical group conduct. You will participate in a group as a member and co-leader. You will study and practice basic communication skills to improve your listening and verbal skills in a group.
Prerequisite: HSER 1004 passed with a grade of “C” (2.0) or above.
Prerequisite/Co-requisite: HSER 1105.

HSER 2002: Case Management Skills
4.00 credits (4.00 lec)
This course introduces and provides practice in a case management model, including intake, assessment, goal-setting, referral, clinical writing, record-keeping and evaluation. You will create a case file and learn about ethical guidelines and the use of the Diagnostic and Statistical Manual (DSM).
Prerequisite: HSER 1004 passed with a grade of “C” (2.0) or above.
HSER 2003: Internship Assessment and Preparation
1.00 credit (1.00 lec)
This course focuses on preparation for an internship in Human Services. Faculty will evaluate your readiness for an internship and will guide you in selecting an internship site for the next semester. You will examine your strengths and areas for improvement as a potential human service worker, develop goals and criteria for internship site selection, and interview at a variety of possible community sites. At the end of this course, you must choose and be accepted by an appropriate internship site approved by program faculty. You must earn at least a “C” (2.0) grade in this course in order to be eligible for internship the following semester. You will be required to complete a criminal background study through the Minnesota Department of Human Services.
Prerequisites: HSER 1002 and HSER 1004 passed with a grade of “C” (2.0) or above.
Prerequisites/Co-requisites: HSER 1105; HSER 2001; HSER 2002.

HSER 2004: Internship
6.00 credits (6.00 int)
This course is a capstone off-campus, experiential-learning component for the Human Services program. You will spend 240 hours at the human services internship site you selected during HSER 2003. You will be supervised by experienced professionals in the field and evaluated by faculty advisors from the HSER program. As an intern, you will apply and enhance your knowledge and skills learned in the program.
Prerequisites: HSER 2003 passed in the preceding semester with a grade of “C” (2.0) or above. Clear background check.

HSER 2005: Internship Seminar
1.00 credit (1.00 lec)
This course is a biweekly meeting on campus for students currently engaged in their Human Services internships (HSER 2004 or HSER 2006). In this seminar, you will participate in a supportive forum with MCTC faculty advisors to discuss your internship progress and concerns and to explore common issues in the field.
Prerequisite: HSER 2003 passed with a grade of “C” (2.0) or above.
Co-requisite: HSER 2004 or HSER 2006.

HSER 2006: Internship for Community Healthcare Workers
4.00 credits (4.00 int)
You may register for this internship ONLY if you have completed CMHW 1000 and CMHW 1015. Hours and assignments will be identical to but prorated from HSER 2004. Please see the course description for HSER 2004. Must be taken A–F.
Prerequisites: HSER 2003 passed with a grade of “C” (2.0) or above; CMHW 1000 and CMHW 1015. Clear background check.

HSER 2998: Directed Study
Prerequisites: One course in HSER and placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Information Studies

INFS 1000: Information Literacy and Research Skills
2.00 credits (1.00 lec/1.00 lab)
This course is an introduction to information skills including an understanding of how information and knowledge are produced and organized within a societal context; how to organize a strategy for finding information; how to use print and electronic sources, including the Internet, to locate information; and how to evaluate information found. This course fulfills the information literacy graduation requirement for students seeking an A.A. degree.
Fulfills MnTC Goal Area 2.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

INFS 2510: Necessary Illusions: Media in the Information Age
3.00 credits (3.00 lec)
This course explores the theories and definitions of the “Information Age” from a critical perspective. You will examine the myths surrounding the Information Age and place it in the context of advanced industrial capitalism. You will focus on the implications of mass media ownership by large corporations; the influence of the public relations industry; the roles of privacy and surveillance in a free society; and the history and role of the alternative press.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: ENGL 1110 or ENGA 1110.
INFS 2520: Alternative Knowledge: How Radical Ideas Are Communicated in Society
3.00 credits (3.00 lec)
This course examines the role of dissident knowledge in shaping and influencing a democratic society. You will be introduced to communication theories; the role of propaganda and consent in a democratic society; and how “mainstream” and “alternative” ideas shape our world views. The course will expose you to specific dissident communities and ideas from the 18th, 19th, and 20th centuries in the areas of politics, economics, and cultural and religious life.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: ENGL 1110 or ENGA 1110.

INFS 2600: Ideas, Censorship and Politics
3.00 credits (3.00 lec)
This course provides an introduction to print culture and the role of print media in the cultural and political life of communities throughout the world and throughout time. You will explore intellectual history and the role of the printed word in shaping culture; concepts such as censorship, bibliocide, and libricide (the destruction of books and libraries); and the history of scholarship and knowledge production.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

INFS 2610: Common Knowledge: A Critical Examination of Intellectual Property
3.00 credits (3.00 lec)
This course provides a cross-cultural and historical examination of how common knowledge and intellectual property are transmitted. You will explore concepts of information sharing and creation across various media and disciplines, investigating historical linkages between copyright and culture. You will compare and contrast western and other global cultures in how they regard and treat knowledge in all its forms, as well as its relationship to the public commons.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

Information Technology

ITEC 1100: Information Technology Concepts
2.00 credits (1.00 lec/1.00 lab)
This course provides an overview of the business data processing environment. Topics include computer hardware, software, input and output, the central processing unit, information storage and file processing, data communication, systems analysis, the computer programming process, programming languages, personal Information Technology, and issues and trends. If entering the Information Technology programs, you have the option of testing out of ITEC 1100 through successful completion of an online examination for credit. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1110: Information Technology Skills
2.00 credits (1.00 lec/1.00 lab)
This course provides you with an overview of skills you will need to communicate as IT professionals. It covers computer skills that introduce you to word processing, graphics, databases, spreadsheets, business presentation programs and Internet applications. This course is Web assisted. If entering the Information Technology programs, you have the option of testing out of ITEC 1110 through successful completion of an online examination. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.
ITEC 1150: Programming Logic and Design
3.00 credits (2.00 lec/1.00 lab)
This course is a prerequisite for all computer programming courses and a required course for the Computer Support and Network Administration program. You will learn the basic principles of problem analysis, algorithm development, language selection, and program design and development. You will develop documentation and design logical solutions through flowcharting and pseudocode. MS Visual BASIC is used to develop simple applications. No prior computer programming experience is necessary. If entering the Information Technology programs, you have the option of testing out of ITEC 1150 through successful completion of an online examination. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1250: Microsoft Windows Operating Systems
3.00 credits (2.00 lec/1.00 lab)
This course introduces you to the most important topics of the Windows Operating (OS) Systems, beginning with the desktop, property, recycle bin and online help. You learn to customize the desktop, work with drives, folders, and files, and use Find and Windows Explorer. You are also introduced to more advanced topics, such as troubleshooting Windows OS, working with a startup disk, using DOS with Windows, implementing a backup strategy, and optimizing disks with Scan Disk/Disk Cleanup and Disk Defragmenter; learn to work with applications, use object linking and embedding, and use the connectivity features of Windows OS with networks; and use basic DOS commands to understand the interaction between the user and the PC for command line language OS. This is a lecture and hands-on tutorial-based course. If entering the Information Technology programs, you have the option of testing out of this course (ITEC 1255) through successful completion of an online examination. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1255: Macintosh Operating Systems
3.00 credits (2.00 lec/1.00 lab)
This course introduces the most important topics of the Macintosh Operating Systems (OS), beginning with the desktop, property, recycle bin and online help. You will learn to customize the desktop, work with drives, folders, and files, and use Find. You will learn advanced topics, such as troubleshooting Mac OS, implementing a backup strategy, and optimizing disks and Disk Defragmenter. You will also learn to work with applications and use the connectivity features of Mac OS with networks. You will use UNIX, a command line language, to understand the interaction between the user and the Mac. Students in the ITEC program have the option of testing out of this course (ITEC 1255) through successful completion of an online examination. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1310: Microcomputer System Maintenance
4.00 credits (3.00 lec/1.00 lab)
This course provides the operation, diagnosis, troubleshooting and simple maintenance of microcomputer components. You will learn hardware compatibility, system architecture; disassembly and reassembly of a personal computer; and installation of fixed and diskette units, memory chips, and circuit cards into expansion slots for use as emulators, fax/modems, and network adapters. Furthermore, you will learn about input devices, video displays, modems, printers and multimedia. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1250.

ITEC 1375: Database Design and Implementation
4.00 credits (3.00 lec/1.00 lab)
This course will help you learn to design, implement and manage database systems, teaching you database fundamentals and design, data storage and retrieval techniques, security, normalization, and administration of a database management system. You will reinforce these concepts by creating, maintaining, and naturalizing data using individual and group hands-on lab exercises. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150, ITEC 1250.
ITEC 1425: Data Communications
4.00 credits (3.00 lec/1.00 lab)
This course provides an introduction to data communications in business and industry. You will gain an understanding of data communications, terminals, modems, multiplexers, wire-based media, wireless transmission, optical transmission, satellite communication, protocols, flow control, error detection and correction, communications software, network topologies, local and wide-area networks, intranets, Internets, PC software, browsers, network architectures, ISDN< ATM, and network design and management. Furthermore, during lab, you will participate in projects in data communication applications, configure and install a modem, dial-up an information service, download files, transfer files between PCs, operate a PC remotely and more. Must be taken A–F.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1460: SQL Server Database Design and Implementation
4.00 credits (3.00 lec/1.00 lab)
The course builds on SQL Server database knowledge to help you prepare for database certification. You will gain hands-on design experience and develop databases using the Microsoft SQL Server relational database management system; gain an understanding of the product’s architecture; and, through the accompanying labs, attain experience with procedures to plan, configure, and implement database solutions and cover all other objectives of the industry certification exam. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150, ITEC 1250.

ITEC 1465: MySQL Database Design and Implementation
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to the open source MySQL relational database software. You will install and configure the database software and a query tool in one or more operating system environments e.g. MS Windows, Linux. No prior database experience is necessary. You will learn to use the power of the MySQL dialect effectively and efficiently. Beyond developing queries and views, you will study issues of data security and integrity. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150, ITEC 1250.

ITEC 1475: Linux System Administration
4.00 credits (3.00 lec/1.00 lab)
This course provides hands-on, task-oriented projects, useful tips, and technical information to get you started using the Linux operating system. You will learn elementary operating system tasks, such as logging on and creating files, to advanced techniques, system commands, and operating system installation and configuration. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110 and ITEC 1150.
Prerequisite/Co-requisite: ITEC 1425.

ITEC 1555: Web Programming
4.00 credits (3.00 lec/1.00 lab)
This course will help you learn to develop Web pages using HTML including hyperlinks, images, lists, tables, style sheets, forms and frames. Furthermore, you will program in JavaScript and perform simple programming tasks. As the culminating activity, you will develop a final project in which you create a website on the Internet, using what you learned during the course. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150 and ITEC 1250.

ITEC 1585: E-Commerce Development and Implementation
4.00 credits (3.00 lec/1.00 lab)
This course explores e-commerce applications of the Internet and intranets and the ways they can be used for business operations, management, marketing, and secure financial transactions. You will learn about Web-authoring theory and practice, as well as address legal and ethical questions. Furthermore, you will explore issues related to e-business implementation. Topics include the role of competition, consumer and business relationship considerations, and strategies for integration to existing business operations and legacy systems. You will study successful real-life implementations of e-business solutions. Must be taken A–F.
Prerequisite: ITEC 1555.
ITEC 1700: Visual C#.NET 1
4.00 credits (3.00 lec/1.00 lab)
This is the first of two courses in C#.NET programming on PCs. C#.NET is a well-established programming language that is used for creating software applications on many kinds and sizes of computers. C was standardized by ANSI, the American National Standards Institute, in 1990. C++ builds upon the C language by adding object-oriented classes and methods. You will enter code and create, test, and debug C#.NET programs. You will also write numerous short programs that demonstrate the abilities of the languages. Must be taken A–F.

ITEC 1725: Mobile Applications Development 1
4.00 credits (3.00 lec/1.00 lab)
This course, the first of two courses in mobile applications, is hands-on and task-oriented, covering the use of a Mobile Platform to implement market-driven, Web-based applications. You will learn several skills: creating and running common types of mobile programs; building user interfaces and navigation applets; constructing transitions, multitouch events, networks and audio programs. You will design and implement your own mobile applications for evaluation. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150 and ITEC 1255.

ITEC 1750: Visual BASIC .NET 1
4.00 credits (3.00 lec/1.00 lab)
This is the first of two courses in Visual BASIC programming on PCs. Visual BASIC is a high-level, event-driven programming language for use in the Windows operating system. You will learn to enter code, manipulate Windows objects and apply object-oriented tools, which enable the building of custom visual applications with a familiar Windows “look and feel.” You will write, test and debug computer programs using Visual BASIC. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 1771: Java 1
4.00 credits (3.00 lec/1.00 lab)
Java 1 is a hands-on task-oriented course that teaches you how to utilize the Java Platform to implement market driven, Web-based applications. You will learn how to create and run three common types of Java programs (applications, applets and servlets); how applications, applets, and servlets are similar and/or different; how to build a basic user interface that handles simple end-user input; how to read data from and write data to files and databases; and how to send and receive data over the network. This course takes you through the more common programming features available in the Java platform. You will submit your own design and implementation of Java programs for evaluation. You should have some experience with other computer languages and be familiar with common programming concepts such as displaying text or graphics or performing simple calculations. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1150, ITEC 1250 or approval or department chair: placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 1865: Global IT Business: Emerging U.S.-India Partnerships
3.00 credits (3.00 lec)
This course provides the opportunity to learn about how businesses are adapting to expanding globalization of business processes and information technology applications. In particular, you will learn how Indian businesses are partnering with U.S. firms; the diverse industries affected by these relationships, and an in-depth analysis of the benefits, potential pitfalls, and solutions that are likely to emerge through the coming decade. You will also address the need for innovation and development of niche industries to keep pace in a new world with a more level playing field. As part of the course, you will travel to HITEC City in Hyderabad, India and the IT centers in Bangalore, India. There are additional fees for travel.
ITEC 1950: Computer Telephony Integration
4.00 credits (3.00 lec/1.00 lab)
This course will teach you convergence technologies, giving you knowledge in both voice and data communications concepts and how the industry is implementing converged networks. You will learn about data communications, telecommunications, computer telephony integration, local area networks, broadband technologies and voice over IP. Each module contains a final examination that will lead to a Certified Convergent Network Technologies (CCNT) certification at the course’s completion. Exam costs are included in the price of the training kit. Must be taken A–F. 
Prerequisite: ITEC 1425.

ITEC 2075: Application Support and Resource Utilization
4.00 credits (3.00 lec/1.00 lab)
This course provides you the basics of user support for software, hardware and network through the utilization of important resources. You will develop skills in managing records; purchasing, negotiating and reviewing contracts; understanding and enforcing warranty and license agreements; developing procedures; shopping for the best price; and managing a budget. You will learn to understand the needs of technical support personnel, sales people, managers and end users; learn to install and support applications on a computer, and how to design and implement a help desk and provide user assistance; and create a troubleshooting guide and user manual. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1150 and ITEC 1250.

ITEC 2245: Computer Gaming Design and Development
4.00 credits (3.00 lec/1.00 lab)
This course provides hands-on development of games. You will survey a variety of software technologies relevant to games, including programming languages, scripting languages, operating systems, file systems, networks, simulation engines, and multimedia design systems. You will also study some of the underlying scientific concepts from computer science and related fields, including simulation and modeling, graphics, artificial intelligence, real-time processing, and game theory. Group projects will involve system implementation but emphasize design and use of existing tools and will require you to go through all phases of system conceptualization, specification, design, implementation, and evaluation. Must be taken A–F.
Prerequisites: ITEC 1555, ITEC 1750, or ITEC 1771.

ITEC 2400: Visual C#.Net 2
4.00 credits (3.00 lec/1.00 lab)
This is the second of two courses in C# programming on PCs. In this course, you continue to enter code, create, test and debug C# programs, but stronger emphasis will be placed on learning the use of C# object-oriented programming techniques using concepts of inheritance and polymorphism. You will write programs that include arrays, pointers, complex operators, structures, classes and other complex data types; and analyze and design programs using object-oriented theory and techniques. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 2410: Mobile Applications Development 2
4.00 credits (3.00 lec/1.00 lab)
This course is the second in the series of two courses that cover mobile applications. You will learn how to implement the advanced features and libraries of Mobile Applications using a variety of tools. You will learn several skills: developing platform-based programs; working with integration tools; using data and control structures; working with data types and expressions; building modular applications, classes and scripts; integrating databases; developing multithreading applications; programming drag-and-drop mechanisms; and developing security models. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 2425: Infotech Project Management
4.00 credits (3.00 lec/1.00 lab)
This course helps you understand the importance of project management and its key role in the success of information technology projects. You will develop your familiarity with various IT methodologies and industry-recognized project management terminology and techniques. In addition, this course includes various individual and group projects to prepare you to become productive project contributors within the Information Technology industry. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, and ITEC 1250.
ITEC 2450: Visual BASIC .NET 2
4.00 credits (3.00 lec/1.00 lab)
This is the second of two courses in Visual BASIC programming on PCs. You will continue to write, test and debug computer programs using Visual BASIC. Programs written by you will include advanced techniques using dynamic link libraries, object linking and embedding, dynamic data exchange, dynamic controls and menus, and help screen development. You may also use Visual BASIC within the Microsoft Access database system. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 2541: Java 2
4.00 credits (3.00 lec/1.00 lab)
Java 2 is a hands-on, task-oriented course that teaches you how to implement advanced features and libraries of the Java Platform. This course includes coverage on multithreading in Swing programs, JDBC2, CORBA (security), the drag-and-drop mechanism, and the Java security model, as well as complex GUI components. The course also explores the design of the Java collections framework and shows how to use the fundamental data structures that the standard Java library supplies. In addition, this course provides coverage on networking and remote objects. You will submit your own designs and implementations of Java programs for evaluation. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 2555: Web Client/Server Programming
4.00 credits (3.00 lec/1.00 lab)
This course builds on your knowledge of Web programming and covers advanced aspects of client-side Web programming. You will learn to implement server-side Web programming; learn about several popular scripting languages, build Web pages that contain dynamic content, integrate existing data into a Web page and apply methods of gathering information from site visitors; and apply scripting with JavaScript and use XML, schemas, and XSL, using a task-based approach. This course will also introduce you to the concepts of server-side programming, as well as to several methods to help you build dynamic Web pages. You will also apply methods for selecting and integrating data, using tools such as SQL Server and Coldfusion. Must be taken A–F.
Prerequisite: ITEC 1150.

ITEC 2710: Microsoft Network Administration
4.00 credits (3.00 lec/1.00 lab)
This course provides you with the skills to plan for, install, configure and administer Windows network servers and Windows desktop clients. You will become familiar with the concepts and basic administration of a local area network and understand how various components work together to build a functioning network system. Additionally, you will learn how to plan for deployment, develop security strategies, work with group policies and user profiles, configure access control, configure resource sharing, manage hardware and media, use the registry, monitor performance, administer Active Directory, configure DNS & DHCP, optimize, and troubleshoot. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1250 and ITEC 1425.

ITEC 2725: Macintosh Network Administration
4.00 credits (3.00 lec/1.00 lab)
This course provides the skills to plan for, install, configure and administer Macintosh network servers and Macintosh desktop clients. You will become familiar with the concepts and basic administration of a local area network (LAN) and understand how various LAN components work together to build a functioning system. You will learn additional skills: planning for deployment; developing security strategies; working with group policies and user profiles; configuring access control and resource sharing; managing hardware and media; using the registry; monitoring performance; and troubleshooting. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1255, ITEC 1425.

ITEC 2775: Systems Analysis and Design
4.00 credits (3.00 lec/1.00 lab)
This course provides you with comprehensive and balanced coverage of systems analysis and design. The content of the course and built-in projects allow them to master the concepts and techniques from both the traditional, structured approach and the object-oriented approach to systems development. You will learn to emphasize fundamentals of systems analysis, while addressing the diverse development environments of today. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, and ITEC 1250.
ITEC 2795: Web Server and TCP/IP Implementation
4.00 credits (3.00 lec/1.00 lab)
This course provides you with a comprehensive coverage of various aspects of a TCP/IP-based network environment and enhances knowledge of various Internet Web-server architectures and implementations. You will develop skills related to TCP/IP design, implementation and trouble-shooting in the first part of the course. Topics include standards, addressing, subnetting, DHCP, DNS, WINS, routing, remote access, Web services interface and security. In the second part, you will plan, design, and implement various Web services on the Windows Server platform, primarily using IIS, with the option of working with other Web-server platforms. Must be taken A–F.
Prerequisite: ITEC 2710.

ITEC 2820: Wireless LAN/WAN Administration
4.00 credits (3.00 lec/1.00 lab)
This course provides a foundational understanding of the theoretical concepts of mobile and wireless technologies and helps develop skills associated with planning, designing, installing and configuring wireless LANs from the principal Wireless LAN vendors, and explores the interrelationship of their hardware, software, and applications. You will develop understanding and skills related to current mobile technologies, along with associated operating systems and standards. The future direction of the wireless and mobile devices, and the trend toward convergent technologies will also be covered. Must be taken A–F.
Prerequisite: ITEC 2710.

ITEC 2855: Computer Forensics
4.00 credits (3.00 lec/1.00 lab)
This course provides a foundational understanding of the field of computer forensics and imparts basic forensic analysis skills. You will gain forensics knowledge and skills on a foundation of operating systems administration and information security. You will cover a comprehensive range of topics, including a survey of forensics tools, crime-scene processing, evidence control and data gathering. In addition to computer forensics analysis concepts, you will gain insight into investigative techniques and expert witnessing as they apply to this specialized field. Must be taken A–F.
Prerequisite: ITEC 2865.

ITEC 2865: Internet/Intranet Security: Implementation and Management
4.00 credits (3.00 lec/1.00 lab)
This course provides you with practical guidance in TCP/IP networking and cryptographic fundamentals, firewall technologies, access control services, communication security protocols for securing today’s Internet applications, and public key infrastructures. You will build familiarity with the fundamentals of computer networks and distributed systems, cryptography and the use of cryptographic protocols in networked and distributed systems. You will also be introduced to the principles and best practices of computer forensics. Must be taken A–F.
Prerequisite: ITEC 2710.

ITEC 2880: Cisco Network Administration
4.00 credits (3.00 lec/1.00 lab)
This course provides you with the skills to manage Cisco LAN/WAN devices and environments through lectures, demonstrations, discussions, and hands-on labs. You will learn the OSI Reference Model, Cisco IOS commands, routing protocols such as RIP and IGRP, TCP/IP configuration and subnetting, router setup and configuration, network-switching concepts and configuration; and you will also understand WAN configuration and services. In addition to learning through lectures, demonstrations and discussions, you will be using router simulator software and actual Cisco routers and switches during hands-on labs. Must be taken A–F.
Prerequisites: ITEC 1100, ITEC 1110, ITEC 1250 and ITEC 1425.

ITEC 2890: Firewall Implementation and Management
4.00 credits (3.00 lec/1.00 lab)
This course provides the knowledge and skills needed to describe, configure, verify and manage various firewall products. You will develop understanding and skills related to the configuration of inbound and outbound translations and connections, filtering, intrusion detection, failover handling, and the implementation of a virtual private network between sites. If entering this course, you are expected to have a working knowledge of network administration and a solid grasp of TCP/IP and fundamental security concepts. Must be taken A–F.
Prerequisite: ITEC 2880.
ITEC 2895: Security Implementation and Risk Analysis
4.00 credits (3.00 lec/1.00 lab)
This course examines the principles, mechanisms, and implementation of network security and data protection with an emphasis on meeting business needs without compromising the integrity, availability, and confidentiality of data. You will gain skills in creating security policies, doing business continuity and disaster recovery planning, and analyzing risk. You will also gain understanding of the 10-key cybersecurity CBK domains, including access control systems and methodology, cyberlaw, ethics, security models, cryptography, and operations security. Must be taken A–F.  
Prerequisite: ITEC 2710.

ITEC 2900: Information Technology Internship
2.00 credits (2.00 int)
In this internship, you will work and learn alongside computer professionals in an employer’s workplace. This is an elective that requires advisor approval. This course is made available to Information Technology students nearing graduation who are not already employed in the computer field. Supervision is required. You must complete at least 80 hours of supervised work and be enrolled in the last semester prior to graduation. Must be taken A–F.  
Prerequisites: Eligibility for graduation from an Information Technology program area. Faculty approval is required. Automobile transportation required for some sites. Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 2910: LAN Implementation and Management
4.00 credits (3.00 lec/1.00 lab)
This course provides you with the skills to plan for, install, configure and administer Windows network servers and Windows desktop clients. You will become familiar with the concepts and basic administration of a local area network (LAN) and understand how various components work together to build a functioning network system. Additionally, you will learn how to plan for deployment, develop security strategies, work with group policies and user profiles, configure access control, configure resource sharing, manage hardware and media, use the registry, monitor performance, administer Active Directory, configure DNS and DHCP, optimize, and troubleshoot. Must be taken A–F.  
Prerequisite/Co-requisite: ITEC 1475 or ITEC 2710 or ITEC 2725.

ITEC 2915: A+ Certification Prep
2.00 credits (2.00 lec)
This course provides you with industry certification-focused instruction on hardware, operating systems and software fundamentals. You will apply content needed to pass the A+ Core exam and the latest coverage of memory, bus, peripherals, and wireless technologies for the A+ Operating Systems exam. If entering this course, you are expected to have a working knowledge of computer installation and systems maintenance.  
Prerequisite: ITEC 1310.

ITEC 2920: Cisco CCNA Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on installing, configuring, and operating, LAN, WAN, and dial access services for networks. You will learn about various protocols and network technologies including IP, IGRP, Serial, Frame Relay, IP RIP, VLANs, RIP, Ethernet, and Access Lists. If entering this course, you are expected to have a working knowledge of Cisco switches and routers and TCP/IP; in the course, you will receive comprehensive instruction to prepare you for industry Cisco Certificate Network Associate (CCNA) certification.  
Prerequisite: ITEC 2880.

ITEC 2925: Linux+ Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on installation, operation and troubleshooting of Linux operating systems. You will learn about fundamental open source resources/licenses, demonstrate knowledge of user administration, understand file permissions/software configurations, and manage local storage devices and network protocols. If entering this course, you are expected to have a working knowledge of the Linux environment; in the course, you will receive comprehensive instruction to prepare them for industry Linux+ certification.  
Prerequisite: ITEC 1475.
ITEC 2930: MCP Client and Server Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on setting up and managing Windows 2000 Client and Server operating systems. You will learn about installing the Windows 2000 Server operating system; configuring the Active Directory; controlling access to system resources; configuring hardware devices and drivers; optimizing system performance, reliability, and availability; managing data storage and disks; configuring network connections; and implementing security. If entering this course, you are expected to have a working knowledge of the Windows client OS and Windows Server environment; in the course, you will receive comprehensive instruction to prepare you for the Microsoft MCP certifications for client and server.
Prerequisite: ITEC 2710.

ITEC 2935: Network+ Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on networking administration and support. You will learn about media and topologies, protocols and standards, network implementation, and network support. If entering this course, you are expected to have a working knowledge of networking and data communications concepts; in the course, you will receive comprehensive instruction to prepare you for the industry Network+ certification.
Prerequisite: ITEC 1425.

ITEC 2945: Security+ Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on general security concepts, communication security, infrastructure security, basics of cryptography and operational/organizational security. You will learn about managing and securing network services, network devices, and network traffic. If entering this course, you are expected to have a working knowledge of computer hardware, operating systems, and managing networks; in the course, you will receive comprehensive instruction to prepare you for the industry Security+ certification.
Prerequisite: ITEC 2865.

ITEC 2950: Information Technology Career Preparation
2.00 credits (2.00 lec)
This course helps graduating students prepare for entering the job market as computer programmers or computer support and network administrators. You will develop the skills and knowledge required to search for appropriate employment in your chosen computer field. Topics include self-assessment, résumé writing, advertisement terminology, letter writing and job-search planning. You are encouraged to network with other computer professionals by attending job fairs, computer user group meetings and computer conferences. Recommended for students in the final semester of the program. Must be taken A–F.
Prerequisites: Eligibility for graduation from a Information Technology program area. Faculty approval is required. Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.

ITEC 2955: SQL Server MCP Certification Prep
4.00 credits (3.00 lec/1.00 lab)
The course builds on SQL Server database knowledge to help you prepare for database certification. You will gain hands-on design experience and develop databases using the Microsoft SQL Server relational database management system; gain an understanding of the product’s architecture; and, through the accompanying labs, attain experience with the procedures to plan, configure, and implement database solutions and cover all other objectives of the industry certification exam.
Prerequisite: ITEC 1425.

ITEC 2960: Wireless Professional Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on RF behavior, and the features and functions of wireless LAN components. You will learn how to install, configure, and troubleshoot wireless LAN hardware peripherals and protocols. If entering this course, you are expected to have Network+, CCNA, CNA, or MCP certification or equivalent knowledge; in the course, you will receive comprehensive instruction to prepare you for Wireless Professional CWNA certification.
Prerequisite: ITEC 2820.
ITEC 2965: VB.Net MCP Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction in the skills required for you to build IT applications for Windows Forms by using the Microsoft .Net Framework. The course will cover the major topics for Windows client application programming on the .Net Framework. If you are already familiar with VB.Net development, in the course, you will receive aggressive training to prepare you for industry certification. 
Prerequisite: ITEC 2450.

ITEC 2970: Visual C# .Net MCP Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on the skills required for you to build IT applications for Windows Forms by using the Microsoft .Net Framework. The course will cover the major topics for Windows client application programming on the .Net Framework. If you are already familiar with C# .Net development, in the course, you will receive aggressive training to prepare you for industry certification. 
Prerequisite: ITEC 2400.

ITEC 2975: Sun SCJP Java Certification Prep
2.00 credits (2.00 lec)
This course provides you with certification-focused instruction on the syntax of the Java programming language; object-oriented programming with the Java programming language; creating graphical user interfaces (GUI), exceptions, file input/output (I/O), threads and networking. If you are already familiar with the Java programming language, in the course, you will receive aggressive instruction to prepare you for industry certification.
Prerequisite: ITEC 2541.

ITEC 2980: HTML/JavaScript Certification Prep
2.00 credits (2.00 lec)
This course builds on knowledge in HTML and JavaScript and provides certification-focused instruction on the skills required for you to use the features of the JavaScript language and design client-side, platform-independent solutions. This course also shows you how to correctly write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames and create cookies. If you are already familiar with VB .Net development, in the course, you will receive aggressive training to prepare you for industry JavaScript certification.
Prerequisite: ITEC 1555.

ITEC 2981: XML Certification Prep
2.00 credits (2.00 lec)
This course builds on knowledge in XML and provides you certification-focused instruction on the skills required to build XML Web services and server components using Visual Basic .Net or Visual C# .NET. You will extend your 101/183 expertise through various skill-building exercises. If you are already familiar with XML, and either VB .Net development or Visual C#, in the course, you will receive aggressive training to prepare you for the industry MCAD certification.
Prerequisite: ITEC 2400 or ITEC 2450, ITEC 2555.

ITEC 2985: Project+ Certification Prep
2.00 credits (2.00 lec)
Building on your project-management knowledge and experience, this course provides certification-focused instruction on conflict resolution, negotiation, communication, team building/leadership, and setting and mapping expectations. The course will show you traditional project management practices, as well as the problem-solving and communications skills required by project managers involved in such varied projects as product development, software development/engineering, EFP, and IT. In the course, you will receive aggressive training to prepare you for the Project+ industry certification.
Prerequisite: ITEC 2425.

ITEC 2990: Ethical Hacking and Network Defense
4.00 credits (3.00 lec/1.00 lab)
This course is an introduction to ethical hacking and security testing. You will learn to use tools and techniques that ethical hackers and security testers use to discover vulnerabilities and offer solutions to protect computer networks. You will learn about security testing concepts, documentation of security tests, ethical and legal ramifications, and many others.
Prerequisite: ITEC 1425.

ITEC 2998: Directed Study
Must be taken A–F.
Prerequisites: One course in ITEC: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.
Japanese

JAPN 1000: Beginning Japanese 1
5.00 credits (5.00 lec)
Beginning Japanese 1 offers you the foundations for basic, contemporary, conversational Japanese. You will learn practical vocabulary and conversational patterns; the Japanese syllabaries—hira- gana and katakana—which will be gradually introduced; and, by the end of the term, you will be able to write basic sentences. You will establish firm foundations for further development of your Japanese language skills. Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

JAPN 1100: Beginning Japanese 2
5.00 credits (5.00 lec)
Beginning Japanese 2 offers a continuing foundation course for basic, contemporary, conversational Japanese. You will further develop basic sentences and conversational patterns. You will also learn Kanji and Kanji compounds to expand your working vocabulary. You will be prepared to effectively transfer to an intermediate-level course. Fulfills MnTC Goal Area 8.
Prerequisite: JAPN 1000 or equivalent.

JAPN 2998: Directed Study
Prerequisite: One course in JAPN.

Journalism

JOUR 1000: Introduction to Mass Communications
3.00 credits (3.00 lec)
This course will examine ways in which new forms of digital communication (social networking, mobile devices, email, blogs, etc.) affect contemporary culture. You will investigate the changing media landscape. You will also look in depth at the "old," traditional mass media that use print, broadcast, sound, and filmic ways of producing and conveying messages to audiences, and critically evaluate their role in this new, digital environment. Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

JOUR 1100: Reporting and News Writing
3.00 credits (3.00 lec)
This course introduces the craft of news writing and reporting. You will focus on traditional news values; the basic news article; investigative and feature reporting; hard and soft leads; sources, interviewing techniques and background research, including use of the Internet; broadcast journalism and electronic news gathering; and media ethics and the law, with emphasis on the First Amendment.
Prerequisite: ENGL 1110 or ENGA 1110.

JOUR 1200: Newspaper Activity
2.00 credits (2.00 lec)
This is a hands-on journalism workshop. After considering traditional news values and the elements of the news story, you may participate in the production of the college’s newspaper. You will receive practical instruction in writing news stories and headlines, photography, layout, proofreading, copy editing, and advertising and distribution. Invited professional journalists will share their experience with the class. This class may be taken three times for a total of six credits.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

JOUR 2998: Directed Study
Prerequisite: One course in JOUR.

Law Enforcement

LAWE 1215: Police and Community
3.00 credits (3.00 lec)
This course addresses the effect-oriented aspects of contemporary law enforcement. Specific topics include crime prevention, police-community relations, ethical decision-making, cultural diversity, bias-motivated crimes and interpersonal communications.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
LAWE 1220: Juvenile Justice
3.00 credits (3.00 lec)
In this course, you will develop a knowledge of the Minnesota statutes relating to juveniles. You will explore the history and philosophies of the juvenile system, including theories related to causation and the effects of delinquency, as well as learn strategies for working with juveniles in the prevention of delinquency.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

LAWE 1250: Introduction to Corrections
3.00 credits (3.00 lec)
This is an introductory course designed to provide you with an overview of the problems and ethical dilemmas that face America’s correctional system. The institution of corrections is not only a study of our prison system; it is myriad complex interrelationships among many components and institutions of society. This course will uncover the factors that influence corrections, both those who work and administer in corrections and the forces outside of the corrections industry.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

LAWE 2251: Criminal Justice Service Learning Internship
1.00–3.00 credits (1.00–3.00 lab)
Service learning in Law Enforcement encourages students to develop an appreciation for individual rights and diversity within the community. Learning occurs in a variety of settings, including community-based organizations, law-enforcement-community-oriented policing units and criminal-justice-service organizations. Students provide a variety of services while learning through faculty-facilitated experiences.

LAWE 2998: Directed Study
Prerequisite: One course in LAWE.

Library Information Technology

LIBT 1100: Introduction to Information Agencies
3.00 credits (3.00 lec)
This course surveys the history, organization, personnel and functions of libraries and information agencies in the United States. You will learn about major theories and ideas relevant to the field. You will discuss the various job opportunities that exist in information agencies and allied fields.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; or instructor approval.

LIBT 1200: Introduction to Technical Information Services
3.00 credits (3.00 lec)
This course surveys all aspects of library and information agency technical services, including acquisitions, serials management, resource description and access, government documents management, collection maintenance, automation systems, and basic budget management. You will explore the philosophy, policies, and procedures of each service area and how they interrelate.
Prerequisite/Co-requisite: LIBT 1100 or instructor approval.

LIBT 1300: Introduction to Public Information Services
3.00 credits (3.00 lec)
This course surveys all aspects of library and information agency public services, including circulation, interlibrary loans, reserves, reference and research services, and children’s and young adult services. You will explore the philosophy, policies, and procedures of each service area and how they interrelate.
Prerequisite/Co-requisite: LIBT 1100 or instructor approval.
LIBT 1400: Preserving History and Memory: Archives in Current Society
3.00 credits (3.00 lec)
This course examines archives as powerful repositories of history and memory and the archivist as an active agent in the process of shaping our knowledge of the past. You will look at the traditional functions of archives, which are selection, preservation and access, as well as the roles of archivists and support staff, both in their institutional settings and within the context of the wider society they serve.
Prerequisite/Co-requisite: LIBT 1100 or instructor approval.

LIBT 1410: Topics in Library and Information Technology
1.00 credit (1.00 lec)
This course provides an opportunity to study a variety of topics in library and information technology. Possible topics include studies of collection development, management, online privacy and the role of libraries, trends in social media and relevant technologies.
Prerequisite: LIBT 1100 or instructor approval.

LIBT 1420: Libraries and Social Justice
3.00 credit (3.00 lec)
This course explores the connections between library information work within the context of social justice. You will discuss the role of academic, school, public and special libraries as change agents and will learn about the work of radical, progressive efforts within librarianship. You will debate and critique related topics such as information as human rights, library neutrality and whether or not library practices further social justice movements. Finally, you will participate in a mandatory service learning project that will provide an opportunity to connect course content readings and discussions to an information organization environment.
Prerequisite: LIBT 1100 or instructor approval.

LIBT 2200: Introduction to Cataloging
3.00 credits (3.00 lec)
This course introduces cataloging and classification of information resources, including print, audiovisual, and digital formats. You will apply cataloging metadata standards to create original and edit existing MARC records in OCLC. You will be introduced to Dewey Decimal and Library of Congress classification schemes. You will use Library of Congress Subject Headings and other controlled vocabularies for subject analysis of resources. You will be introduced to professional and ethical standards for cataloging, emphasizing user access to information.
Prerequisite: LIBT 1200 or instructor approval.

LIBT 2210: Introduction to Indexing and Abstracting
3.00 credits (3.00 lec)
This course introduces indexing and abstracting theory and practice. You will learn about metadata standards, language control and index quality. You will practice back-of-the-book as well as information-object indexing. You will work with traditional print resources and digital material. You will be introduced to professional and ethical standards for indexing and abstracting, emphasizing user access to information.
Prerequisite: LIBT 1200 or instructor approval.

LIBT 2300: Online Searching and Reference Services
3.00 credits (3.00 lec)
This course provides hands-on training in locating, searching, and evaluating a variety of web-based databases and virtual libraries. You will develop the skills necessary to effectively match the patron’s request for information with the appropriate resources. You will explore ways of delivering electronic reference services and the dynamics of the online reference interview.
Prerequisite: LIBT 1300 or instructor approval.

LIBT 2310: Library Community & Outreach Services
3.00 credits (3.00 lec)
This course examines community and outreach services provided by libraries of all types. You will explore how academic, public, and special libraries, as well as school media centers in the United States, build partnerships and serve their broader communities, with emphasis on those who are traditionally underserved.
Prerequisite: LIBT 1300 or instructor approval.
LIBT 2500: Information Ethics and Legal Issues
3.00 credits (3.00 lec)
This course introduces you to ethical and legal issues related to information use and dissemination in libraries and society. You will examine the library profession’s stance on intellectual freedom and censorship; ethical and legal theories of information; professional ethics and law; copyright and intellectual property; and security and privacy issues.
Prerequisites: LIBT 1200, LIBT 1300; or instructor approval.

LIBT 2900: Library/Information Agency Internship
3.00 or 4.00 credits (3.00 or 4.00 int)
This internship provides structured on-the-job training in a library or information agency. You will work with an assigned site supervisor at an approved library or information agency to design a custom work plan, allowing you to develop your practical skills. You will also develop a working résumé and participate in an instructor-led seminar throughout the semester. Course must be taken Pass/Fail.
Prerequisites: LIBT 2200, LIBT 2210, LIBT 2300, LIBT 2310.

Machine Tool Technology

MTTC 1010: Blueprint Reading 1
3.00 credits (3.00 lec)
Basic blueprint-reading principles related to visualizing shapes, line usage, title blocks, dimensioning, sectional views and tolerancing are taught in a classroom setting. Additional subjects include contours, angles, threads and machining details.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
Co-requisites: MTTC 1000, MTTC 1010, MTTC 1015.

MTTC 1015: Applied Machine Shop Math 1
2.00 credits (2.00 lec)
Both machine-shop math and linear-measurement theory are presented in this course. Common fractions and mixed numbers are added, subtracted, multiplied and divided. Decimal fractions are also studied in a similar manner. Powers and roots of numbers are used to compute areas and volumes of geometric figures. English and metric units of measurement are studied as they are applied to steel rules, vernier calipers, micrometers, and gage blocks. Standard machine-shop calculations involving speeds, feeds, thread and taper calculations are computed.
Prerequisite: Placement MATH 0080 or completion of MATH 0070.
Co-requisites: MTTC 1000, MTTC 1010, MTTC 1015.

MTTC 1020: Engine Lathe
5.00 credits (2.00 lec/3.00 lab)
Basic lathe operating theory is presented in a classroom and laboratory setting. Topics studied include cutting tools, lathe nomenclature and controls, and the many lathe machining operations. The laboratory portion of the course covers basic lathe machining operations, including turning, parting and form tools.
Prerequisites: MTTC 1000, MTTC 1025, MTTC 1525; or instructor approval.

MTTC 1025: Drills and Drilling Machines
2.00 credits (2.00 lab)
This course covers drill presses, drills and drilling methods in a laboratory setting. The use of the drill press for tapping, counterboring and reaming is studied. Hand and machine sharpening of drills is studied and practiced.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; or instructor approval. Must meet READ requirement for instructor approval.
**MTTC 1030: Machine Trades for Related Careers**
2.00 credits (2.00 lab)
This one-semester course is designed for students in careers related to the Machine Trades such as Industrial Engineering, HVAC-R, Construction Electricity, Fluid Power, Plastics and Precision Metal Forming. The theory and application of common machining operations will be emphasized.
Prerequisite: Placement into MATH 0080 or completion of MATH 0070.

**MTTC 1510: Vertical Milling**
4.00 credits (1.00 lec/3.00 lab)
This course presents the theoretical aspects of vertical milling machine operation, including cutting, tool selection, clamping and indexing, workholding and fixturing, and feeds and speeds selection. The laboratory portion of the course covers safe operating practices, machine setup, cutting tool selection and the use of various milling attachments. Sample parts will be produced to test your understanding of the subject matter.
Prerequisites: MTTC 1000, MTTC 1025, MTTC 1525; or instructor approval.

**MTTC 1515: Applied Machine Shop Math 2**
2.00 credits (2.00 lec)
The course is designed to teach you to apply algebra, geometry and trigonometry to obtain correct part dimensions from blueprints.
Prerequisite: MTTC 1015 or instructor approval.

**MTTC 1520: Blueprint Reading 2**
3.00 credits (3.00 lec)
Advanced blueprint reading principles are studied in this course. Topics include orthographic projection, section views, auxiliary views and rotated projections. Spur and bevel gear drawings, position dimensioning, tapered pipe thread specifications, and assembly drawings are analyzed.
Prerequisite: MTTC 1010 or instructor approval.

**MTTC 1525: Benchwork/Power Saws**
4.00 credits (1.00 lec/3.00 lab)
This course covers the use of various hand tools used on the bench, including the use of hand-held power tools for making prototype tooling and parts. Layout tools are demonstrated and used for the manufacture of tools and fixtures. Power saws and blades are studied in both a classroom and laboratory setting. Proper care and use of power hacksaws, bandsaws, friction, and saw blades are demonstrated.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; or instructor approval. Must meet READ requirement for instructor approval.

**MTTC 1530: Advanced Lathes Lab**
4.00 credits (1.00 lec/3.00 lab)
Advanced lathe operations are conducted using soft jaws, face plates, radius tools and taper-turning attachments. Additional projects studied include eccentric diameters, acme threading, tapered pipe threads, and the use of a steady rest for machining long shafts. A variable-speed turret lathe with pneumatic bar feed is set up and operated with many of the turret tools available for this machine.
Prerequisite: MTTC 1020 or instructor approval.

**MTTC 2005: Grinding**
5.00 credits (2.00 lec/3.00 lab)
You will learn theory for both surface and cylindrical grinding and will apply theory to produce surface and cylindrical ground parts.
Prerequisites: MTTC 1520, MTTC 1525; or instructor approval.

**MTTC 2010: Advanced Milling Lab**
4.00 credits (1.00 lec/3.00 lab)
This course includes both basic horizontal milling machine work and intermediate vertical mill operations. It includes safety, setup, selection of tooling, indexing, and workholding methods for both horizontal and vertical mill operations. The use of milling attachments is also studied.
Prerequisite: MTTC 1510 or instructor approval.

**MTTC 2020: Geometric Tolerancing**
2.00 credits (2.00 lec)
This course teaches interpretation of geometric symbols and terminology in modern blueprints as related to the form, fit, and function of manufactured parts.
Prerequisite: MTTC 1520 or instructor approval.
MTTC 2035: CNC Programming and Operation
4.00 credits (3.00 lec/1.00 lab)
In this course, you will perform basic CNC (Computer Numerical Control) programming and operation including word address programming and absolute positioning. Prerequisites: MTTC 1530, MTTC 2010; or instructor approval.

MTTC 2040: CNC Milling Center
3.00 credits (1.00 lec/2.00 lab)
This course consists of complex CNC (Computer Numerical Control) programming and operation for milling applications. Prerequisites: MTTC 1530, MTTC 2010; or instructor approval.

MTTC 2045: CNC Turning Center
3.00 credits (1.00 lec/2.00 lab)
This course consists of complex CNC (Computer Numerical Control) programming and operation for turning applications. Prerequisites: MTTC 1530, MTTC 2010; or instructor approval.

MTTC 2055: Advanced Machining Skills
5.00 credits (1.00 lec/4.00 lab)
In this course, you will work with classmates as a team to produce complex parts from blueprints and assemble the machined parts into correct assemblies. You will utilize all machine tools to produce the parts, such as grinders, mills, lathes and other appropriate equipment. Use of the Bridgeport E-Z TRAK is encouraged. A team project is included. Prerequisites: MTTC 1530, MTTC 2010; or instructor approval.

MTTC 2520: Welding for Machinists
2.00 credits (1.00 lec/1.00 lab)
This course covers all the basic welding processes as they relate to machine shop operations. Subjects covered include safety, oxy-fuel gas welding, brazing, silver soldering, SMAW (Arc) welding, GTAW (Tig) welding, GMAW (Mig) welding and the reading of welding blueprints. Welding equipment requirements and an introduction to welding metallurgy are also covered. Prerequisite: Placement into MATH 0080 or completion of MATH 0070. This course is not recommended for first semester.

MTTC 2998: Directed Study
Prerequisite: One course in MTTC.

Mathematics

ABE Mathematics
0.00 credits
This course is offered on campus free of charge by the Minneapolis Public Schools Adult Basic Education (ABE) program. This course is designed for adults who need to learn or refresh their arithmetic skills. There are four units covered: whole numbers, fractions, decimals and ratios. Besides reviewing computational skills, each unit also includes estimating, using a calculator and problem-solving. Class activities include short lectures, small group work and lab activities. A four-function calculator is required.

MATH 0060: Preparing for Algebra and Technical Programs
4.00 credits (4.00 lec)
This course prepares you for algebra and technical programs. You should be competent in whole numbers and decimals before taking this course, and you should need only a brief review of fractions and ratios. Topics include the following: percents; applications of ratio and percent; interpreting and constructing graphs; statistics (mean, median, mode); metric and English measurement; basic geometry concepts; and preparation for algebra. Class activities include short lectures, small group work and lab activities. Must be taken Pass/No Credit. NOTE: For programs having a mathematics requirement of MATH 0060 only, students should take MATH 0060 instead of MATH 0077. Prerequisite: Placement into MATH 0060 or pass the on-campus Adult Basic Education exit test.

MATH 0065: Applied Introductory Algebra
4.00 credits (4.00 lec)
This course is part of a sequence designed for liberal arts students who do not plan to pursue majors in science, technology, engineering or math (STEM). You will learn the properties of real numbers, operations and their inverses, polynomial arithmetic, solving linear equations and inequalities in one variable, solving quadratic equations in one variable, graphing linear equations in two variables, simplifying radical, exponential and logarithmic expressions, and you will solve radical, quadratic, exponential and logarithmic equations with one-variable-like terms. You will also learn to solve literal equations and rational equations. Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
MATH 0070: Introductory Algebra
5.00 credits (5.00 lec)
This course is designed for students beginning the study of algebra or for those who need a review. Course content includes: signed numbers, integer exponents, operations with algebraic expressions, factoring, solving linear and quadratic equations in one variable, literal equations, solving linear inequalities in one variable, graphing linear equations in two variables, roots and radicals, and word problems and modeling. Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

MATH 0075: Applied Intermediate Algebra
3.00 credits (3.00 lec)
Strong emphasis is placed on application of algebra and especially on current uses of function models (linear, quadratic, polynomial, rational, radical, logarithmic and exponential). The relationship among data, graphs and functions is thoroughly explored. Translating statements and questions from English into mathematics, answering those questions using algebraic procedures and then stating the results again in English will also be discussed in depth. Only symbolic manipulations that have immediate applications will be studied. MATH 0075 is the minimum algebra preparation for MATH 1140: Introductory Statistics, MATH 1160: Mathematical Ideas, and MATH 1165: Mathematics for Teachers. This course does not prepare students for MATH 1110: College Algebra. Prerequisite: Placement into MATH 0075 or completion of MATH 0070 or MATH 0077 or completion of MATH 0065.

MATH 0077: Beginning Algebra with ALEKS
1:00–5.00 Variable credits (number of credits will be determined by initial ALEKS assessment)
This course provides an alternate, self-directed way to learn beginning algebra concepts using ALEKS, a Web-based math assessment and learning system. First, ALEKS will determine your individual study plan and the number of credits for which you need to register. In the classroom, you will use ALEKS at your own pace with the help of an instructor. In the course, you will demonstrate mastery of these concepts: arithmetic readiness, geometry and data analysis, real numbers and variables, algebraic expressions, linear equations and inequalities, literal equations, functions, graphing linear equations in two variables, integer exponents, polynomial arithmetic and factoring, rational expressions and proportions, radicals and rational exponents, and quadratic equations. NOTE: For programs having a mathematics requirement of completion of MATH 0060 only, students should take MATH 0060 instead of MATH 0077. Prerequisite: Placement into MATH 0077 or MATH 0060.

MATH 0080: Intermediate Algebra
5.00 credits (5.00 lec)
This course is a continuation of MATH 0070: Introductory Algebra. Course content includes: sets and interval notation; functions and relations; systems of linear equations; compound inequalities; absolute value equations and inequalities; more polynomial factoring; rational expressions, functions, and equations; variation word problems; more literal equations; radicals, radical functions, and rational equations; complex numbers; graphing quadratic functions; quadratic and rational inequalities; composition of functions; inverse functions; logarithmic and exponential functions and equations; and graphing circles. Prerequisite: Placement into MATH 0080 or completion of MATH 0070 or MATH 0077.
MATH 0088: Intermediate Algebra with ALEKS
1.00–5.00 Variable credits (number of credits will be determined by initial ALEKS assessment)
This course, a continuation of MATH 0077, provides an alternate, self-directed way to learn intermediate algebra concepts using ALEKS, a Web-based math assessment and learning system. First, ALEKS will determine your individual study plan and the number of credits for which you need to register. In the classroom, you will use ALEKS at your own pace with the help of an instructor. In this course, you will demonstrate mastery of these concepts: real numbers and linear equations and inequalities, graphs and linear functions, systems of linear equations, exponents and polynomials, rational expressions and equations, variation applications, radicals and rational exponents, complex numbers, quadratic equations, solving radical and quadratic equations and inequalities, parabolas, functions, function composition and inverse functions, exponential and logarithmic functions and equations, distance and midpoint formulas, and circles.
Prerequisite/Co-requisite: MATH 0077.

MATH 0145: Statway 1
5.00 credits (5.00 lec)
This is the first semester of a two-semester course for non-STEM students. You will learn the concepts and methods of statistics with an emphasis on data analysis. Over the two semesters, you will learn methods for collecting data, graphical and numerical descriptive statistics, correlation, confidence intervals, hypothesis tests for means and proportions, and chi-square tests. The developmental mathematics concepts that serve as a foundation for statistical analysis are integrated into the course. Upon successful completion of both MATH 0145 and MATH 1145, you will fulfill MnTC Goal Area 4.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

MATH 1110: College Algebra
4.00 credits (4.00 lec)
This course offers comprehensive coverage of functions (polynomial, rational, root, logarithmic, exponential), and their graphs; conic sections; inequalities; complex numbers; the fundamental theorem of algebra; systems of equations; matrices; and linear and quadratic modeling. Additional topics may include sequence and series and the binomial theorem. Also offered as an online course. Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1110 or completion of MATH 0080 or MATH 0088. It is strongly recommended that students have completed MATH 0080 or 0088 with a grade of “C” (2.0) or higher.

MATH 1116: College Algebra with ALEKS
1.00–4.00 Variable credits (number of credits will be determined by initial ALEKS assessment)
This course provides an alternate, self-directed way to learn college algebra concepts using ALEKS, a Web-based math assessment and learning system. You will use ALEKS to determine your individual study plan, and the necessary number of credits you will register for. In the classroom, you will use ALEKS at your own pace with the help of an instructor. You will demonstrate mastery of these concepts: functions and graphs, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations and matrices, sequences and series, and conic sections. Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1116 or completion of MATH 0088 or MATH 0080. It is strongly recommended that students have completed MATH 0080 or 0088 with a grade of “C” (2.0) or higher.

MATH 1120: College Trigonometry
3.00 credits (3.00 lec)
Topics in this course include trigonometric functions, graphs, identities, equations, multiple-angle formulas, inverse trigonometric functions, law of sines and cosines, vectors, trigonometric forms of complex numbers, De Moivre’s theorem, equations in polar coordinates and their graphs, and applications. Fulfills MnTC Goal Area 4.
Prerequisite/Co-requisite: Placement into MATH 1120 or completion of MATH 1110 or MATH 1116.

MATH 1125: Precalculus
5.00 credits (5.00 lec)
This course is for students who have previously had high school algebra and trigonometry, but who are not prepared to start calculus, and want to take on a fast-paced refresher course covering precalculus topics. Topics will include: Functions—graphing and properties; polynomial and rational functions; modeling; fundamental theorem of algebra; exponential and logarithmic functions; trigonometric functions; trigonometric identities, formulas, equations, and inverses; systems of linear equations; partial fraction decomposition; polar coordinates; conics; and parametric equations. Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1125 or completion with a grade of “A” in MATH 0080 or MATH 0088. Completion of MATH 1110 is not a prerequisite for MATH 1125.
MATH 1130: Finite Mathematics
3.00 credits (3.00 lec)
This course covers the business and social science applications of the following topics: systems of linear equations, matrices, linear programming, sets and counting, probability, Markov Chains, and mathematics of finance. This course is also appropriate for liberal arts students seeking General Education credits. Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1110 or MATH 1116 or MATH 1125.

MATH 1140: Introductory Statistics
3.00 credits (3.00 lec)
Rather than statistical calculations, this course emphasizes the interpretation and evaluation of surveys, experiments, probabilities, graphic/tabular displays, data summaries, or other statistical reports encountered in daily life. Topics include: data collection, numerical and graphic summaries, basic ideas of probability, the normal distribution, estimation, hypothesis testing, correlation and regression, and index numbers. Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1140 or completion of MATH 0075 or MATH 0080 or MATH 0088.

MATH 1145: Statway 2
4.00 credits (4.00 lec)
This is the second semester of a two-semester course where you will learn the concepts and methods of statistics with an emphasis on data analysis. Over the two semesters, you will learn methods for collecting data, graphical and numerical descriptive statistics, correlation, simple linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, and chi-square tests. The developmental mathematics concepts that serve as a foundation for statistical analysis are integrated into the course. Upon successful completion of both MATH 0145 and MATH 1145, you will fulfill MnTC 4.
Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1140 or completion of MATH 0075 or MATH 0080 or MATH 0088.

MATH 1150: Statistical Analysis
4.00 credits (4.00 lec)
This course is an introduction to the fundamental concepts of descriptive and inferential statistics, with an emphasis on applications. Course content includes: sample surveys and experiment designs; graphic presentation of data; measures of central tendency, variation and position; exploratory data analysis; introductory probability; random variables and probability distributions; binomial and normal distributions; the Central Limit Theorem; estimation; hypothesis testing; comparisons of two populations; correlation and regression; applications of chi-square; and analysis of variance (ANOVA). The course assumes that the student is familiar with basic computer applications software. Statistical software and/or statistical graphing calculators are introduced and used extensively.
Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1110 or MATH 1116 or MATH 1125. Completion of CSCI 1100 or equivalent computer experience is also recommended.

MATH 1160: Mathematical Ideas
3.00 credits (3.00 lec)
Topics in this course are selected from numeration systems, elementary number theory, elementary logic, problem-solving strategies, chaos theory, networks, topology, non-Euclidean geometry, counting methods and probability. Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1165 or completion of MATH 0075 or MATH 0080 or MATH 0088.

MATH 1165: Mathematics for Teachers
5.00 credits (5.00 lec)
This course develops the foundations of the mathematical topics taught in grades K–6 and will also explore mathematical reasoning, problem-solving strategies and historical themes to recognize that mathematics is a way of thinking rather than a collection of rules. You will learn number systems, algorithms and their rationale; and basic geometry, including proofs, number theory, probability and elementary statistics. This course is appropriate for future elementary teachers and also for secondary teachers whose intended license is other than math and/or science and is also appropriate for liberal arts students seeking General Education credits. Must be taken A–F.
Fulfills MnTC Goal Area 4.
Prerequisite: Placement into MATH 1165 or completion of MATH 0080 or MATH 0088.
MATH 1170: Calculus for Business and Social Sciences
4.00 credits (4.00 lec)
This is a one-semester calculus course for prebusiness and social science students. Topics covered are: functions, limits, differentiation and integration of algebraic, exponential, logarithmic, and two-variable functions, with applications in social science and business. Students who need more than one semester should register for the first two semesters of the calculus sequence (MATH 1180 and MATH 1190). This course is also appropriate for liberal arts students seeking General Education credits. Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1110 or MATH 1116 or MATH 1125.

MATH 1180: Calculus 1
5.00 credits (5.00 lec)
This is part of a sequence designed for students intending to major in Mathematics, Physics, Engineering or other mathematics-dependent fields. Topics include the differential and integral calculus of single-variable real functions. Limit, continuity, derivatives, integrals and applications are covered. This course is also appropriate for liberal arts students seeking General Education credits. Fulfills MnTC Goal Area 4.
Prerequisites: Placement into MATH 1180; or completion of MATH 1110 or MATH 1116 and MATH 1120 or MATH 1125.

MATH 1190: Calculus 2
5.00 credits (5.00 lec)
This is part of a sequence designed for students intending to major in Mathematics, Physics, Engineering or other mathematics-dependent fields. Topics include integral calculus of single-variable real functions, infinite series and applications. This course is also appropriate for liberal arts students seeking General Education credits. Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1180.

MATH 2011: Discrete Mathematics
4.00 credits (4.00 lec)
This course is intended to give students studying computer science the mathematical foundation they will need for their future studies, but it may be taken by students in a wide variety of majors, including Mathematics and Engineering. Topics covered will include: logic, sets, functions, sequences, complexity of algorithms, number theory, matrices, methods of proof, mathematical induction, recursive algorithms, counting methods, discrete probability, relations, graphs and tree fundamentals.
Fulfills MnTC Goal Area 4.
Prerequisite: MATH 1180.

MATH 2210: Linear Algebra and Differential Equations
5.00 credits (5.00 lec)
This course covers linear algebra, with an emphasis on eigenvalues; introduction to differential equations, including linear differential equations with constant coefficients, solved using eigenvalues; and series solutions and numerical methods for linear and nonlinear differential equations and systems.
Prerequisite: MATH 1190.

MATH 2220: Multivariable Calculus
5.00 credits (5.00 lec)
This course covers algebra and geometry of vectors in two- and three-dimensional space; velocity, acceleration and curvature; functions of several variables; partial derivatives and chain rule; max/min problems; Lagrange multipliers; double and triple integrals; parametric form of curves and surfaces; polar, cylindrical and spherical coordinates; integration on curves and surfaces; vector fields; theorems of Green and Stokes; and Divergence Theorem.
Prerequisite: MATH 1190.

MATH 2283: Sequences, Series and Foundations
4.00 credits (4.00 lec)
You will be introduced to algebraic and analytic proofs and reasoning that are used in advanced mathematics. You will analyze the real number system, power series and convergence (absolute, uniform) of sequences and series. You will apply power series to differential equations.
Prerequisite: MATH 2210 or MATH 2220.

MATH 2998: Directed Study
Prerequisites: Completion of one college-level math course and department approval.
Music

MUSC 1000: Introduction to Music
3.00 credits (3.00 lec)
This is an overview course for anyone who appreciates music and wants to understand musical styles better. You will study music from America’s popular idioms of jazz, gospel, pop and rock; music of non-Western cultures; and music of the Western European art form. The course emphasizes listening and discussion. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1010: American Popular Music 1
3.00 credits (3.00 lec)
This course traces the evolution of the “classical” music form of the United States known as jazz. Beginning with its European and African roots, you will study the precursors of work songs and the blues, to the many subgenres found today. You will gain an understanding of the immense diversity found in jazz and be able to identify key performers, composers, arrangers and performances of these styles. This course is suitable for those who consider themselves musicians, as well as for those who only play the radio. The course is taught through audio/video examples, lectures, in-class and online discussions with an emphasis on the interrelatedness of jazz and United States history and culture. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1020: American Popular Music 2: The History and Development of Rock ’n’ Roll
3.00 credits (3.00 lec)
This course surveys America’s popular musical form, rock ’n’ roll, from its European and African roots through its precursors found in the blues to the many subgenres such as heavy metal, neo-soul, punk and hip hop. By tracing rock’s evolution, you can expect to gain an understanding of the immense diversity found in rock ’n’ roll and to be able to identify key performers and performances of these styles. The course is taught with emphasis on listening and class discussion. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1030: The Music of Latin America and the Caribbean
3.00 credits (3.00 lec)
This course serves as an overview of the musical styles, genres and performers of Latin America and the Caribbean. Through lecture, demonstrations, audio and video presentations, class discussions, and performance, you will gain an understanding of the ways in which culture and music interact and are impacted. Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1040: The Music of Africa
3.00 credits (3.00 lec)
This course serves as an overview of the musical styles, genres and performers of the African continent. Through lecture, demonstrations, audio and video presentations, class discussions, and performance, you will gain an understanding of the ways in which culture and music interact and are impacted. Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1050: The Music of Asia
3.00 credits (3.00 lec)
This course serves as an overview of the musical styles, genres and performers of North, East, South and Southeast Asia. Through lecture, demonstrations, audio and video presentations, class discussions, and performance, you will gain an understanding of the ways in which culture and music interact and are impacted. Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
MUSC 1060: Introduction to World Music
3.00 credits (3.00 lec)
This course presents an overview of the music of four major cultural groups representing Asia, Africa, Latin America/Caribbean and Native North America. In this course, you will learn to explore the music of these groups to compare and contrast musical genres, as well as relate the music to each culture’s values, beliefs, and sense of identity. You will accomplish this through readings, lectures and discussion both in class and online. Audio and visual examples will be provided. You will also learn to perform songs from each group.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1150: Fundamentals of Music
3.00 credits (3.00 lec)
This course introduces the basic vocabulary of music terms, symbols, and elements needed for music reading and writing. You will learn the basics of standard music notation, scales, intervals and chords, and their relationship to the piano keyboard and to sound itself. This course will prepare you for private study, music ensemble participation and further work in music theory. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

MUSC 1160: Music Theory and Design
3.00 credits (2.00 lec/1.00 lab)
This course completes the survey of materials begun in MUSC 1150. You will continue study of the major components of the tonal music system as it applies to Western classical and pop music: chord inversions and sevenths, part-writing, guitar symbols, progressions, and harmonic analysis. You will also explore modes, the blues and nontonal music; begin to train your ears to recognize performed pitches, rhythms, and intervals and to write them as notation; and gain a general understanding of the nature of artistic form and design in sound.
Fulfills MnTC Goal Area 6.
Prerequisite: MUSC 1150.

MUSC 2998: Directed Study
Prerequisite: One course in MUSC.

Music Lessons and Ensembles

MUSL 1210: College Choir
1.00 credit (1.00 lec)
This group is a nonauditioned choir designed to be a creative musical opportunity in an atmosphere that is enjoyable and noncompetitive. You will perform publicly at least once each semester. You will prepare music spanning a wide range of styles from classical to world music. The College Choir is open to all students who enjoy singing and are willing and able to commit to consistent attendance at rehearsals and scheduled performances, and to working to create art as part of a group.

MUSL 1220: Vocal Ensemble
1.00 credit (1.00 lec)
This group is a select choir that sings primarily unaccompanied choral music from around the world. The choir is designed to provide a performing opportunity for the experienced singer. This choir performs publicly at least once each semester. Prerequisite: Audition/interview with director.

MUSL 1230: Chamber Ensemble
1.00 credit (1.00 lec)
This group prepares classical works and indigenous folk music for recital. In this course, you will work in groups as small as duets and as large as the total class size, learning repertoire suited for chamber ensemble. You will perform at least once per semester on campus. Additional performance opportunities are scheduled as time and availability of the ensemble members permits. Prerequisites: Students must be able to read music at an intermediate level or better and provide their own instrument, with the exception of a piano. While it is not mandatory, an applied lesson on the student’s instrument is highly recommended.
MUSL 1240: Jazz Ensemble 1
1.00 credit (1.00 lec)
Music from the swing era through the Latin/Caribbean-influenced genres to jazz-rock fusion are studied and played in this instrumental ensemble. The focus is on arrangements for a small jazz combo rather than a big band. You will perform at least once per semester on campus. Additional performance opportunities are scheduled as time and availability of the ensemble members permits.
Prerequisites: Students must be able to read music at an intermediate level and provide their own instrument, with the exception of a drum trap kit and piano. While it is not mandatory, an applied lesson on the student’s instrument is highly recommended.

MUSL 1500–1900: Applied Music
2.00 credits (2.00 lec)
This course consists of weekly private lessons, each one-half-hour in length, on your chosen instrument. Learning is optimized to your individual level, from beginner to advanced. Instructors will place emphasis on developing your musicianship as well as technical skill. Significant practice time outside of the lesson is expected. A number of practice rooms with pianos are available in the Music Department. Aside from piano, you are expected to provide your own instruments.
There is an added course fee for Applied Music. You must contact your chosen instructor prior to registration. See class schedule for instruments offered and instructors available.

MUSL 2500–2900: Applied Music
4.00 credits (4.00 lec)
This course, for more advanced, serious students, consists of weekly private lessons on their chosen instruments, one hour in length. Learning is optimized to your individual level. Instructors will place emphasis on developing your musicianship as well as technical skill. A number of practice rooms with pianos are available in the Music Department. Aside from piano, you are expected to provide your own instruments.
Requirements are effectively doubled in relation to 1000-level applied music lessons: lesson time is one hour per week, associated practice and preparation time is doubled, and the added course fee is doubled.
You must contact your chosen instructor prior to registration. See class schedule for instruments offered and instructors available.
Prerequisite: Instructor approval.

Nursing

NURS 1000: Foundations of Nursing
3.00 credits (3.00 lec)
The Foundations of Nursing course introduces the student to the concepts of cultural diversity, wellness, holism and the role of the nurse. Other concepts include asepsis, nutrition, psychological care, sexuality and pain management. Body systems are introduced, with an emphasis on the neurological, respiratory, gastrointestinal and genitourinary systems. Physical comfort and safety, care of the older adult, and perioperative care are also addressed.
Prerequisite: Admission to the Nursing program.
Prerequisites/Co-requisites: BIOL 2224 and PSYC 2240.

NURS 1050: Clinical Foundation
3.00 credits (3.00 lab)
This clinical course provides opportunity to apply basic theory and implement skills in a variety of inpatient settings. You will utilize the nursing process to collect data, implement nursing interventions and administer medication. Emphasis is placed on organization, critical thinking, therapeutic communication and a holistic approach to client care. Concepts of health promotion, illness prevention and restoration of health are included.
Prerequisites: NURS 1075 and NURS 1200. Clear background check.
Prerequisites/Co-requisites: BIOL 2224, NURS 1000, NURS 1250 and PSYC 2240.

NURS 1075: Nursing Interventions
2.00 credits (2.00 lab)
Nursing Interventions is an on-campus, lab-based course. Content correlates with the Foundations of Nursing course. The nursing process is introduced and competencies relating to critical thinking, asepsis, oxygenation, nutrition, elimination, and the neurological system are demonstrated and validated. Medical terminology is threaded throughout the course.
Prerequisites/Co-requisites: NURS 1000 and BIOL 2224.
**NURS 1115: Pharmacology in Nursing**

2.00 credits (2.00 lec)

This course provides a theoretical framework for the study of groups of medications. Prototypes of various classifications are presented to enable you to learn methods of action, therapeutic and adverse effects, actions, and related nursing responsibilities. Emphasis is on utilization of this knowledge in application of the nursing process.

*Prerequisites: BIOL 2224; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENLG 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077. Admission to the Nursing Program or permission of instructor. This course is not required for the P.N. Diploma or A.S. degree/Nursing.*

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**NURS 1116: Medication Administration**

2.00 credits (1.00 lec/1.00 lab)

This course introduces legal and ethical practice standards for safe administration of medications with focus on the Licensed Practical Nurse Scope of Practice. You will learn administration of medications by oral, topical, nasal, rectal, eye, ear, enteral (via gastric tube), respiratory, injections and intravenous routes with an emphasis on demonstrated skills. Beginning awareness for therapeutic and adverse effects of major drug classifications is highlighted. You will practice dosage calculation based on dimensional analysis, medical terminology and abbreviations necessary for safe medication administration. Students successfully completing this course fulfill course requirements for employment as a Trained Medication Aide (TMA).

*Prerequisite: Admission to the Nursing program.*

*Prerequisites/Co-requisites: BIOL 2224 and NURS 1000.*

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**NURS 1300: Application of Nursing**

4.00 credits (4.00 lec)

Application of Nursing introduces you to alterations in functioning, including basic disease processes. You will study the integumentary, respiratory, gastrointestinal, genitourinary, endocrine, cardiovascular, hematological, neurological, neurosensory and musculoskeletal systems. You will learn about oncology, end-of-life care, and body responses to stress, disease and therapeutic interventions. You will learn nursing interventions, critical thinking, therapeutic communication and complementary therapies as related to the disease processes.

*Prerequisites: BIOL 2224; PSYC 2240; NURS 1000, NURS 1075 and NURS 1116.*

*Prerequisites/Co-requisites: NURS 1050 and ENGL 1110.*

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**NURS 1350: Clinical Application**

4.00 credits (4.00 lab)

This clinical course facilitates application of complex theory and nursing interventions in a variety of inpatient settings. Holistic application of the nursing process and development of organizational and critical thinking skills in caring for multiple clients is emphasized.

*Prerequisites: Completion of semester 1; BIOL 2224 and PSYC 2240. Clear background check.*

*Prerequisites/Co-requisites: NURS 1300 and ENGL 1110.*

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**NURS 1425: Family Nursing**

4.00 credits (2.00 lec/2.00 lab)

Family Nursing introduces you to the childbearing/childrearing family. You will learn about psychosocial, normal physical and abnormal conditions of pregnancy; the health and illness of the newborn through the adolescent; and the influence of the community on the family. You will also apply growth-and-development theory to direct client care. The clinical component includes on-campus lab and community-based care in pediatric and maternity settings. You will apply critical thinking, therapeutic communication, nursing interventions, and holistic approach in caring for childbearing and childrearing families.

*Prerequisites: Completion of semester 1, BIOL 2224 and PSYC 2240. Clear background check.*

*Prerequisites/Co-requisites: NURS 1300 and NURS 1350.*

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**NURS 1550: Complementary Therapies: A Service Learning Approach**

1.00 credit (1.00 lec)

This course explores various healing modalities from around the globe, which can complement traditional Western or allopathic medicine. You will complete 10 hours of community service and, through writing and discussions, reflect on the benefits of holistic healing for communities as well as individuals.

*Prerequisite: Admission into the Nursing program.*
NURS 1600: Psychosocial Nursing
2.00 credits (2.00 lec)
Psychosocial Nursing introduces you to concepts in mental health care, and the impact of culture on the perception and provision of mental health care, along with ethical and legal considerations. You will learn about therapeutic communication and other modes of treatment in providing mental health care. You will explore nursing care of clients with anxiety, grief and loss, acute and chronic mental illness, impaired cognition and chemical abuse/dependence, in addition to nursing care of clients who have experienced domestic abuse and/or sexual assault.
Prerequisites: Completion of semester 1; BIOL 2224 and PSYC 2240.
Prerequisite/Co-requisite: NURS 1300.

NURS 1850: Transcultural Nursing: A Service Learning Approach
1.00 credit (1.00 lec)
This course explores the influences of culture and the traditions of service as integral to holistic nursing practice. Through writing and presentations surrounding a 10-hour service-learning project, you will prepare for practice in a culturally diverse environment.
Prerequisite: Admission into the Nursing program.

NURS 1885: Introduction to Chinese Healthcare with a Cultural Emphasis
3.00 credits (3.00 lec)
This course provides the opportunity to learn about both traditional and contemporary Chinese healthcare in a broad, cultural context. You will travel to China and explore today’s nursing and medical care and Traditional Chinese Medicine in a classroom setting, while also directly observing current Chinese medical and nursing practice. You will have the chance to study and interact with Chinese nursing students in both academic and practice settings. In addition, you will be introduced to the basics of spoken Mandarin, Chinese culture and Chinese perspectives on the world.
Prerequisite: Admission to Nursing program or permission of instructor.

NURS 1900: Nursing Role Transition
2.00 credit (2.00 lec)
Nursing Role Transition is for the licensed practical nurse returning to nursing education. You will learn and analyze program philosophy, framework, differentiated scope of practice, the nursing process, and current trends and issues in healthcare. You will engage in assessment, planning, implementation and educational aspects of the care surrounding patients with selected problems.
Prerequisites: Licensed Practical Nurse, admission to the Nursing program.

NURS 1950: Nursing Role Transition Practicum
1.00 credit (1.00 lab)
This 32-hour clinical lab course is designed to transition the licensed practical nurse into registered-nurse-level abilities. Application of the nursing process, critical thinking, nursing interventions and therapeutic communication skills are emphasized in on-campus lab and direct client care settings.
Prerequisites: Licensed Practical Nurse, admission to the Nursing program. Verification of 1800 abilities for Non-Minnesota residents who graduated prior to 1983 are validated in this course. Clear background check.
Prerequisite/Co-requisite: NURS 1900.

NURS 2000: Integration of Nursing
3.00 credits (3.00 lec)
This course marks a transition from the practical nurse role to the professional nurse role. You will focus on planning and managing client care and teaching health behaviors across the lifespan. In planning the care of clients, you will integrate many nursing concepts: complementary therapies, health promotion, knowledge of acute and chronic illness patterns, diagnostic studies, and pharmacological principles. This course will emphasize care of medical-surgical clients. You will also review nursing management of other clients; maternity, pediatric, and mental health. You will apply analytical and critical thinking skills in working with clients and their families.
Prerequisites: NURS 1300, NURS 1350, NURS 1425, NURS 1600 and ENGL 1110. Completion of NURS 1900 and NURS 1950.
Prerequisites/Co-requisites: BIOL 2225 and NURS 2010.
**NURS 2010: Health Assessment**

3.00 credits (2.00 lec/1.00 lab)
Health Assessment students learn to perform a comprehensive health history and physical examination. This skill enhances your ability and is central to effective interventions. The development of a holistic database reflecting an understanding of developmental, sociocultural, environmental, sexual and family influences is emphasized. Further emphasis is on the development of communication skills that enhance data-gathering techniques, health teaching and referral skills. Complete health examinations focus on the identification of normal patterns and functions of adults and children.

Prerequisites: BIOL 2224; PSYC 2240; and completion of semester 1 of Nursing Program or Mobility Ready.
Prerequisites/Co-requisites: NURS 1300, NURS 1350 and NURS 1425 or Mobility Ready.

**NURS 2050: Clinical Integration**

4.00 credits (4.00 lab)
This clinical course focuses on the professional nursing role. You will learn how to integrate the various components of the nursing process: assessment and analysis of client data, care plan development, and the evaluation and revision of care plans. The course emphasizes your role as a professional nurse in health teaching, discharge planning and writing health care referrals. You will gain clinical experience with clients across the lifespan and health-illness continuum, including care of clients in maternity, pediatric, mental health and medical-surgical settings.

Prerequisites: Completion of NURS 1900 and NURS 1950. Clear background check.
Prerequisites/Co-requisites: NURS 2000 and BIOL 2225.

**NURS 2100: Synthesis Theory**

3.00 credits (3.00 lec)
This capstone theory course will provide you with the opportunity to synthesize the holistic care of the patient with multiple, complex needs. The impact of illness on the health of individuals, families and communities will be addressed. Theoretical foundations of the role of the professional nurse as case manager and patient advocate are included. Scope of practice, delegation, supervision and legal issues in healthcare are discussed.

Prerequisites: NURS 2000, NURS 2010 and NURS 2050
Prerequisite/Co-requisite: BIOL 2226.

**NURS 2150: Synthesis Clinical**

5.00 credits (5.00 lab)
This clinical course provides you with an opportunity to assess diverse client populations, implement therapeutic interventions for clients with multiple needs and assess the impact of illness on family processes. Emphasis is placed on environmental influences in individual and family health. You will have the opportunity to explore the leadership role of the professional nurse in the clinical setting and provide service to the community through a student-learning project that assesses a community-based need. Precepted clinical experiences are available.

Prerequisites/Co-requisites: NURS 2100 and BIOL 2226.
Clear background check.

**NURS 2550: Clinical Internship Elective**

1.00 credit (1.00 int)
This elective clinical internship course provides you with learning opportunities to apply nursing theory to a nursing practice. The focus is on gaining depth of understanding of the role of the registered nurse, as well as strengthening nursing skills in the clinical setting. You will be precepted by nurses in the practice setting and by nurse faculty. Must be taken Pass/Fail.

Prerequisites: Completion of 36 credits included in the first year of the Nursing Pathway and acceptance into an approved clinical internship program. Clear background check.

**NURS 2998: Directed Study**

Prerequisites: One course in NURS; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENLG 0900 or ESOL 0051; placement into MATH 0080 or completion of MATH 0070 or MATH 0077.
Professional Nursing

NPRO 1000: Introduction to Health Concepts
8.00 credits (4.00 lec/4.00 lab)
Introduction to Health Concepts focuses on introducing the Nursing student to the three identified domains of the individual, nursing, and health care. You will learn about concepts within each domain including: evidenced-based practice, ethics, interdisciplinary teams, informatics, communication, managing care, safety, individual-centered care, medication administration, nutrition, assessment, stress/coping, oxygenation, infection and caring interventions. Upon completion, you will be able to provide safe nursing care incorporating the concepts identified in this course. Must be taken A–F.
Prerequisites: Admission to the Professional Nursing program, placement into ENGL 1110 or completion of ENGL 0900.
Co-requisites: BIOL 2224, ENGL 1110.

NPRO 1100: Wellness-Illness Concepts Across the Lifespan
7.00 credits (3.00 lec/4.00 lab)
Wellness-Illness Concepts Across the Lifespan focuses on further development the concepts within the three domains of the individual, nursing and healthcare. You will learn about concepts within each domain including: acid-base, cellular regulation, oxygenation, perfusion, inflammation, mobility, sensory perception, sexuality, reproduction, stress/coping, grief/loss, mood/affect, behaviors, development, cognition, self, family, health-wellness-illness, communication, professional behaviors, caring interventions, managing care, safety, and advocacy. Upon completion, you will be able to provide safe nursing care incorporating the concepts identified within this course. Must be taken A–F.
Prerequisites: Admission to the Professional Nursing program. NPRO 1100, ENGL 1110.
Co-requisites: BIOL 2224, ENGL 1110.

NPRO 1150: Concepts of Health Assessment
3.00 credits (2.00 lec/1.00 lab)
Concepts of Health Assessment focuses on performing comprehensive health history and physical examinations. You will learn techniques for performing a head-to-toe physical examination on patients across the lifespan. You will practice communication skills that enhance data gathering techniques, health teaching and referral skills. These skills enhance your ability and are central to effective nursing interventions and critical thinking. Must be taken A–F.
Prerequisite: NPRO 1100.
Co-requisite: BIOL 2226.

NPRO 2000: Complex Health Concepts
8.00 credits (4.00 lec/4.00 lab)
Complex Health Concepts focuses on further development the concepts within the three domains of the individual, nursing and healthcare. You will learn about concepts of cellular regulation, metabolism, perfusion, infection, immunity, stress/coping, mood/affect, cognition, self, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety, quality improvement, and informatics. Upon completion, you should be able to provide safe nursing care incorporating the concepts identified in this course. Must be taken A–F.
Prerequisite: NPRO 1150.
Co-requisites: BIOL 2230, BIOL 2231.

NPRO 2100: Synthesis of Health Concepts in Nursing
8.00 credits (3.00 lec/5.00 lab)
Synthesis of Health Concepts in Nursing focuses on the assimilation of the concepts within the three domains of the individual, nursing and health care. You will learn about concepts within each domain including: fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, grief/loss, violence, health-wellness, caring interventions, managing care, professional behaviors, collaboration, safety, healthcare systems, quality improvement, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, you should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry-level nursing care. Must be taken A–F.
Prerequisites: Admission to the Professional Nursing program. NPRO 2000.

NPRO 2998: Directed Study
Prerequisite: One course in NPRO.

Nursing Assistant/Home Health Aide

NAHA 1100: Home Health Aide
1.00 credit (0.50 lec/0.50 lab)
This course introduces the theories and procedures that pertain to the Home Health Aide in a home-care environment. You will participate in the classroom and skill lab, focusing on the theory and skills for the Home Health Aide who seeks employment in a home-care setting. You will gain a basic foundation to be a caregiver.
Prerequisite: Clear background check.
NAHA 1819: Nursing Assistant/Home Health Aide
5.00 credits (3.00 lec/2.00 lab)
This course will introduce you to the concepts of basic human needs, the health/illness continuum, and basic nursing skills in long-term care and the home-care environment. Skills will be taught in a simulated laboratory setting utilizing demonstration and role-playing. Upon successful completion of classroom studies, you will participate in a supervised clinical experience in a long-term care facility. Your presence is mandatory at all class and clinical hours to achieve a passing grade in the course. This course meets the objectives of the Federal Omnibus Budget Reconciliation Act (OBRA) and Minnesota Department of Health Requirements as detailed for educating the nursing assistant. Upon successful completion of the course and clinical, you will be prepared for the Nursing Assistant test out and, upon successful testing, will be placed on the Minnesota Nursing Assistant Registry. Please see Program pages in this catalog for other course requirements. Must be taken Pass/Fail.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052. Clear background check.

NAHA 1850: Nursing Assistants/Home Health Aide Extended Hour
6.00 credits (3.00 lec/3.00 lab)
This extended version of the federal Nursing Assistant course provides you with added support to achieve academic and employment success. In this course, you will receive additional classroom hours and clinical practice to facilitate your mastery of Nursing Assistant theory and technical skills. The emphasis on individual learner styles and group process will assist you in preparing for the Nursing Assistant Test Out (NATO). You must attend all classroom and clinical hours. Please see Programs and Credentials pages in this catalog for other course requirements. Must be taken Pass/Fail.
Prerequisites: Placement into READ 0100 or completion of ESOL 0042. Clear background check.

NAHA 1900: Acute Care Skills for Nursing Assistants
3.00 credits (2.00 lec/1.00 lab)
This course builds on the knowledge, skills and procedures learned in the basic, federally mandated Nursing Assistant curriculum and provides preparation for employment in acute-care settings. You will participate in the on-campus classroom and skills lab and attend a supervised clinical experience in a hospital. Please see Programs and Credentials pages in this catalog for other course requirements. Must be taken Pass/Fail.
Prerequisites: Successful completion of NAHA 1819 or NAHA 1850, and current Minnesota Nursing Assistant Registration. Clear background check.

NAHA 2998: Directed Study
Prerequisite: One course in NAHA.

Ojibwe

OJIB 1000: Ojibwe 1
5.00 credits (5.00 lec)
This course is an introduction to the Ojibwe language, a spoken language of Minnesotan tribes and those of the north central region of North America. You will learn basic communication skills that will prepare you for further study and application. The vocabulary centers on everyday themes and seasonal life. You will also learn language in the context of culture and real-life situations. Fullfills MnTC Goal Area 8.

OJIB 1100: Ojibwe 2
5.00 credits (5.00 lec)
The course is a continuation of Ojibwe 1. You will further develop communication skills to prepare for further study and application. The vocabulary centers on everyday themes and seasonal life. You will learn the language in the context of culture and real-life situations, incorporating more complex grammatical structures, as well as engage in more reading and writing activities. Fullfills MnTC Goal Area 8.
Prerequisite: OJIB 1000.
OJIB 1800: Ojibwe Culture and History
3.00 credits (3.00 lec)
This course is an introduction to the history and culture of the Ojibwe nation, one of the largest Indigenous nations in Canada and the U.S. You will gain cultural, historical, and sociological knowledge and understanding through field trips, readings, lectures, guest speakers, and media.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 0100 or ESOL 0042.

Philosophy

PHIL 1110: Critical Thinking
3.00 credits (3.00 lec)
This course develops skills in critical and evaluative thinking. You will learn to analyze logical relations between facts and interpretations, and to express possible underlying value assumptions governing arguments and information. You will discuss issues derived from a variety of different disciplines, including philosophy, ethics, rhetoric and communications. A variety of media will be used to introduce the issues: professional conveyances, newspaper and television reporting and editorials, and advertising. You will gather relevant factual data, evaluate the bias of data and organize data logically into a presentation.
Fulfills MnTC Goal Area 2.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 1115: Introduction to Philosophy
3.00 credits (3.00 lec)
This course is an introduction to the works and ideas of Western and non-Western philosophers, which emphasizes how philosophical questions and their answers have been dealt with by different thinkers in different contexts. Your development of familiarity with the ideas examined, as well as critical thinking and rhetorical skills essential for functioning effectively in philosophical argument, are the basis of evaluation.
Fulfills MnTC Goal Area 6.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 1130: African-American Philosophy
3.00 credits (3.00 lec)
This course investigates, interprets and criticizes how Black philosophers understand and contribute to the questions of being, knowing and doing. You will examine the Black intellectual tradition on the meaning of race, identity, knowledge and justice. Particular attention will be given to the American experiment in democracy, the paradox of slavery, the problem of the color line and the predicament of prejudice and racial oppression. You will analyze the political ideologies of liberalism, feminism and nationalism, as well as political movements such as integration, black power and black liberation theology. You will develop skills of critical reflection and expository analysis.
Fulfills MnTC Goal Areas 6 and 7.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 1171: Ethics
3.00 credits (3.00 lec)
This course teaches you to apply a range of multicultural ethical theories: Western, African, Asian, Native American, feminist and ecological. You will learn to think critically about ethical questions and apply ethical theories to practical issues. You will be required to demonstrate increasing knowledge of these topics through writing and dialogue. You will be encouraged to integrate the course material with your current academic and personal interests.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 1172: Topics in Contemporary Philosophy
1.00–3.00 credits (1.00–3.00 lec)
This course examines particular sets of issues relevant to contemporary debates in philosophy, undertaking further investigation of themes left undeveloped in Introduction to Philosophy. Topics for the course change from year to year. You will study primary texts as a basis for seminar-style discussions.
Fulfills MnTC Goal Area 6.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
PHIL 2110: Logic
3.00 credits (3.00 lec)
This course provides an introduction to symbolic logic with a focus on propositional and first-order predicate logic. You will learn to symbolize natural language, create deductive arguments, and evaluate existing arguments for validity and soundness. You will learn various methods for conducting proofs, including truth tables, natural deduction, counter-examples and the finite universe method.
Fulfills MnTC Goal Area 4.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 2115: Asian Philosophy
3.00 credits (3.00 lec)
This introductory course explores Asian philosophies, including Chinese, Indian, Buddhist, Southeast Asian and Japanese. You will cover logic, metaphysics, epistemology, philosophy and religion, mind-body dualism, freedom and determinism, and language in a topical fashion, highlighting major historical figures and movements and their interaction with the contemporary landscape of Asian philosophy. You will be required to demonstrate knowledge of these topics, skillful philosophical writing and dialogue, and a specialized understanding of one philosopher or topic of your choice.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 2121: Medical Ethics
3.00 credits (3.00 lec)
This course explores contemporary ethical issues surrounding medicine as a whole, the medical industry, medical professionals, those affiliated with the medical field, health policy and patients. You will examine topics such as abortion and reproductive issues, allocation of medical resources, end-of-life care, informed consent and patient rights, medical research ethics, and genetic engineering. You will learn and apply moral theories to these topics, develop practical and critical thinking skills and cultivate a sensitivity towards the complexity of the issues that impact patients, health care, medical professionals and consumers and producers of medical information.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

PHIL 2171: Environmental Ethics
3.00 credits (3.00 lec)
This course applies a range of multicultural ethical theories to contemporary issues affecting ecosystems: climate change, wilderness preservation, animal rights, food, energy, green initiatives and sustainable growth, among others. You will learn to think critically about the relationship between human beings and the environment, including the place of urban centers in the natural environment and the essence of our moral obligations to the land. You will be encouraged to think about these issues from a global perspective and to gain awareness of global and local connections.
Fulfills MnTC Goal Areas 6 and 10.
Prerequisite: ENGL 1110 or ENGA 1110.

PHIL 2181: Social Ethics
3.00 credits (3.00 lec)
This course is an integration of applied ethics and service learning. You will engage the historical, theoretical, and contemporary landscape of social issues, such as social and economic justice, global hunger and poverty, terrorism, human rights, civil liberties, drug control and addiction, abortion, sexuality and marriage, and the environment. You will think critically about these social issues while integrating your service-learning experiences with a local nonprofit organization of your choice, working on one or more of these social issues. You will be required to fulfill your on-site service-learning hours (approximately 20–30 hours total by the end of the semester.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: ENGL 1110 or ENGA 1110.

PHIL 2215: Feminist Philosophy
3.00 credits (3.00 lec)
This course introduces you to major areas of contemporary feminist philosophy, including the emergence of Latin American, Asian and African feminism. You will investigate the relationship between the mind and the body, the public and the private, and the individual and the collective. Particular attention will be drawn to theories absent in conventional philosophy, including the interaction between multiple forms of oppression, specifically racism, classism, sexism and homophobia.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

PHIL 2998: Directed Study
Prerequisite: One course from PHIL.
### Phlebotomy

**PHLE 1000: Phlebotomy**  
4.00 credits (2.00 lec/2.00 lab)  
This course provides the knowledge and skills essential to perform venipuncture collection safely and competently. You will become familiar with all aspects and methods of specimen collection. In the classroom, you will learn relevant medical terminology and anatomy and physiology, blood-collection procedures, communication skills and the performance and conduct expectations for healthcare professionals. In the on-campus laboratory, you will learn and practice the skills and techniques necessary to perform the required blood collection methods. You must also complete the 120-hour internship course (PHLE 1002) to be able to find employment as a phlebotomist.  
Prerequisites: Acceptance into the Phlebotomy program; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060.  
Prerequisites/Co-requisites: BIOL 1127, BIOL 1128, HCCC 1010, HCCC 1020, HCCC 1030, HCCC 1040, HCCC 1050, HCCC 1060, HCCC 1070, HCCC 1100.

**PHLE 1002: Phlebotomy Internship**  
3.00 credits (3.00 int)  
This 120-hour internship experience provides the opportunity to apply, in a clinical setting, the knowledge and skills from PHLE 1000. You will gain experience and efficiency in performing the skills and techniques required for successful and safe venipunctures using various methods. Upon successful completion of PHLE 1002 internship, you will become eligible for laboratory certification and be prepared to assume employment as a phlebotomist. You must perform a minimum of 100 successful venipunctures during this internship.  
Prior to placement in this internship, you must pass a criminal background check and provide proof of immunity.  
Prerequisite: PHLE 1000.

### Photography

**PHOT 1100: Photography 1**  
3.00 credits (2.00 lec/1.00 lab)  
This course is designed to provide you with a basic understanding of black-and-white photography from camera controls to film development and print processing. Through demonstrations, lectures, slide/video presentations, and assigned projects, you will develop a basic vocabulary for creating, discussing, and criticizing photographs.  
Fulfills MnTC Goal Area 6.

**PHOT 1200: Photography 2**  
3.00 credits (2.00 lec/1.00 lab)  
This course is designed to provide you with further technical, historical and critical support in the making of photographs. It focuses on black-and-white photography, presented as single images within a body of work. Through slides, videos and discussions, you will consider historical concerns in photography as precedents for contemporary photographic practices.  
Fulfills MnTC Goal Area 6.  
Prerequisite: PHOT 1100.

**PHOT 2998: Directed Study**  
Prerequisite: One course in PHOT.
Photography and Digital Imaging

**PHDI 1010: Photo Composition and Design**
2.00 credits (2.00 lec)
This course is an introduction to the concepts of image composition and design as it relates to photography and image-area management. You will utilize the six elements of photographic compositional technique and the seven elements of design as you explore a variety of subject matter including people, landscapes, buildings, and objects as you prepare a portfolio that will help you establish and further explore your personal vision. You will also develop an understanding of photographic aesthetics and demonstrate that knowledge during group critiques. You must provide your own digital camera, minimum of six mega pixels, digital SLR preferred. A digital SLR is required for all PHDI majors.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.

**PHDI 1020: Introduction to Photographic Software**
3.00 credits (2.00 lec/1.00 lab)
This course is an introduction to the image editing software used in the professional photography industry and deals primarily with what to do with the image after it has been captured. You will use Adobe Bridge, Photoshop Lightroom to catalog, manage meta data, process images, edit the color and tonality of images and prepare them for output.
Prerequisite: PHDI 1110.

**PHDI 1030: Photo and Studio Lab 1**
1.00 credit (1.00 lab)
This course is designed to give you further access to the studio areas needed to complete assigned coursework in other courses, master previously learned skills, explore new techniques or simply work on portfolio production.
Prerequisites: PHDI 1110, PHOT 1100; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.

**PHDI 1031: Photo and Studio Lab 2**
1.00 credit (1.00 lab)
This course is designed to give you further access to the darkroom, studio areas, and equipment needed to complete assigned coursework in other courses, master previously learned skills, explore new techniques, or simply work on portfolio production.
Prerequisites: PHDI 1110, PHOT 1100; Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**PHDI 1032: Photo and Studio Lab 3**
1.00 credit (1.00 lab)
This course is designed to give you further access to the darkroom, studio areas, and equipment needed to complete assigned coursework in other courses, master previously learned skills, explore new techniques, or simply work on portfolio production.
Prerequisites: PHDI 1110, PHOT 1100; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

**PHDI 1040: Audio for Media Professionals**
3.00 credits (2 lec/1.00 lab)
This course introduces you to the recording, editing, mixing, and delivery of digital audio for photographers, graphic-designers, and web/interactive media designers. Beginning with the basic physics of sound, the psychology of sound perception, and its manipulation in the digital realm, you will learn the tools and techniques needed to present the audio portion of multimedia in a professional manner.
Prerequisite: PHDI 1020 Intro to Photographic Software or GRPH-1130 Intro to Graphics Software.

**PHDI 1110: Digital Photography 1**
3.00 credits (2.00 lec/1.00 lab)
This course is an introduction to the digital capture process and digital workflow. You will capture digital images using digital SLR cameras. You will download, catalog, process, edit and output digital image files using Raw processing applications and Adobe Photoshop software. A digital SLR is required for this course.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.
Co-requisite: PHDI 1120.
PHDI 1120: Lighting 1
3.00 credits (2.00 lec/1.00 lab)
This course covers basic lighting techniques for both traditional silver-based and digital photography. You will learn the control of the five lighting elements of quality, direction, ratio, quantity and color as they relate to creating three-dimensional contrast. You will explore the application of natural and tungsten lighting in the studio and on location. You must provide your own digital SLR and light meter for this course.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; or instructor approval.

PHDI 1230: Lighting 2
3.00 credits (2.00 lec/1.00 lab)
This course follows up on the skills and techniques learned in Lighting 1. Major emphasis of this course is placed on the setup, operation, and utilization of studio flash photography equipment and accessories. Assignments and course content will allow you to experience studio flash both in the studio and on location. You must provide your own digital SLR camera and light meter for this course.
Prerequisites: PHDI 1010, PHDI 1110, PHDI 1120; or instructor approval.

PHDI 1240: Photo Assistant Training
2.00 credits (1.00 lec/1.00 lab)
This course is designed to help you prepare for employment opportunities as a photo assistant. You will be exposed to the expectations and demands of photo assisting through field trips, guest speakers and opportunities to assist program staff and student photographers.
Prerequisites: PHDI 1110, PHDI 1120; or instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060.

PHDI 1250: Digital Photo 2
3.00 credits (2.00 lec/1.00 lab)
This course is a continuation of the basics learned in Digital Photo 1 but with a greater emphasis on digital SLR camera operation and image output through inkjet computers. You will capture images in the RAW file format on location and in the studio, tethered to a computer. You will use Photoshop Camera Raw and Phase One C1 Pro software. You must provide your own digital SLR camera and light meter for this course.
Prerequisites: PHDI 1010, PHDI 1110, PHDI 1120.

PHDI 1270: Medium Format Photography
2.00 credits (1.00 lec/1.00 lab)
This is a film-based course that provides you with a practical, hands-on experience in the operation and use of medium-format cameras and medium-format photography. You will use Hasselblad, Mamiya and other medium-format cameras in a variety of applications that will enable you to improve your exposure techniques and increase your personal creative vision. You must provide your own light meter for this course.
Prerequisites: PHDI 1010, PHDI 1110, PHDI 1120; or instructor approval.

PHDI 1290: Flash Photography
2.00 credits (1.00 lec/1.00 lab)
This course provides you with a working knowledge of the technical and creative aspects of on-camera flash photography and allows you to use that knowledge to further your creative options and enhance your own personal vision. You will utilize on-camera flash in manual, automatic and TTL shooting modes, while employing a variety of on-camera flash techniques such as direct, bounce, fill-flash, shutter dragging, “slash and flash,” rear curtain sync, fast shutter sync, light painting, slave and multiple flash setups. You must provide your own digital SLR and light meter for this course.
Prerequisites: PHDI 1010, PHDI 1110, PHDI 1120; or instructor approval.

PHDI 2110: Advanced Photographic Software
3.00 credits (2.00 lec/1.00 lab)
This course is a continuation of the skills learned in Intro to Photographic Software. You will use Phase One Capture One software to capture images directly to the computer while shooting tethered in studio situations. You will use this software to edit and process the images as well. You will also gain a deeper understanding and functionality of Adobe Photoshop.
Prerequisites: PHDI 1110, PHDI 1010, PHDI 1120, PHDI 1020 Intro to Photographic Software.
Co-requisite: PHDI 1250.
PHDI 2120: Product Photography
3.00 credits (2.00 lec/1.00 lab)
This studio course covers the planning, setup, execution and presentation of product photography. While utilizing digital technology, you will develop the lighting skills necessary to photograph a variety of products including glassware, fabrics, reflective objects and food. You must provide your own digital SLR and light meter for this course.
Prerequisites: PHDI 1230, PHDI 1250; or instructor approval.

PHDI 2130: Portrait Photography
3.00 credits (2.00 lec/1.00 lab)
This studio course covers the basics of professional portrait photography. You will explore the ins and outs of people photography as you develop interpersonal communication skills and photographer-to-subject rapport; learn lighting and posing techniques for individual, environmental and group portraits; and examine portrait applications in the professional marketplace and the equipment requirements needed to succeed in the portrait photography industry. Upon completing this course, you will have a portrait portfolio consisting of children, groups, couples, individuals and environmental portraits. You must provide your own digital SLR and light meter for this course.
Prerequisites: PHDI 1230, PHDI 1250; or instructor approval.

PHDI 2140: Fashion Photography
2.00 credits (2.00 lec)
This course covers the creative and exciting area of fashion photography. You will develop timing and rapport with your subjects as you prepare fashion photography portfolios for yourself and for individual models. You will also explore some of the legal aspects of fashion photography such as consent, release forms and compensation.
Prerequisites: PHDI 1110 and PHDI 1120.

PHDI 2150: Wedding Photography
3.00 credits (2.00 lec/1.00 lab)
This course introduces you to professional wedding photography techniques. You will learn the tools of the trade, as well as posing techniques, the various types of wedding photography, and the pricing and presentation of wedding photography. There will be a heavy emphasis on guest speakers in this course. You must provide your own digital SLR and light meter for this course.
Prerequisites: PHDI 1110, PHDI 1120, PHDI 1290; or instructor approval.

PHDI 2160: Infrared Photography
2.00 credits (2.00 lec)
This course gives you a thorough background in both the technical and aesthetic uses of infrared black-and-white and color films. You will use infrared films to produce a portfolio of images containing landscapes and architectural subjects, nature studies, portraits and fashion photographs. You must provide your own 35mm SLR, 25A red filter and light meter for this course.
Prerequisites: PHDI 1110, PHOT 1100; or instructor approval.

PHDI 2170: Large-Format Photography
4.00 credits (3.00 lec/1.00 lab)
This course offers a hands-on opportunity to learn the operation and application of the 4x5 view camera. You will learn perspective, sharpness control, magnification, and exposure compensation as you perform classroom exercises and detailed assignments. You must provide your own light meter for this course.
Prerequisites: PHDI 1110, PHDI 1120, PHOT 1100; or instructor approval.

PHDI 2180: Dynamic Media for Photographers
4.00 credits (3.00 lec/1.00 lab)
This course provides Photography and Digital Imaging students with the basic production skills necessary to produce dynamic multimedia presentations involving sound, motion and still photography. You will write basic production scripts, capture sound with external recording devices and capture HD video and still images with digital SLRs. You will use editing software to integrate your captured dynamic media assets into short stories and presentations that will be compatible with a variety of media delivery systems.
Prerequisites: PHDI 1020, PHDI 1110.

PHDI 2195: Visual Journalism
3.00 credits (3.00 lec)
In this course, you will use digital technology to capture and convey a story with images and text, sound and motion. You will photograph and record HD video of news events, feature stories, interview subjects, and write captions as you perform assignments in the field and community publications. You will capture and edit images for publication and web distribution using digital SLR and HDSLR cameras and industry-standard software.
Prerequisite: PHDI 1110.
PHDI 2210: Portfolio Development and Presentation
4.00 credits (3.00 lec/1.00 lab)
This course covers the design, production, marketing concepts and techniques of self-promotion. You will design, identify and organize portfolio components for a specific marketplace or employment opportunity. You will design and print collateral materials, including business cards, self-promo pieces, résumés, and letterhead. Your course will culminate with a student-directed and -produced group photography exhibit. You must provide your own digital SLR, light meter and print materials for this course.
Prerequisite: PHDI 2120 or PHDI 2130 or instructor approval.

PHDI 2390: Advanced Production Lab 1
1.00 credit (1.00 lab)
This is an independent study course intended to provide you with equipment and software access on a self-directed basis. You will be required to plan and complete a project using the media tools of choice, as determined by both you and your instructor.
Prerequisites: Instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; current enrollment in PHDI program.

PHDI 2391: Advanced Production Lab 2
2.00 credits (2.00 lab)
This is an independent study course, intended to provide you with equipment and software access on a self-directed basis. You will be required to plan and complete a project using the media tools of choice, as determined by both you and your instructor.
Prerequisites: Instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; current enrollment in PHDI program.

PHDI 2392: Advanced Production Lab 3
3.00 credits (3.00 lab)
This is an independent study course intended to provide you with equipment and software access on a self-directed basis. You will be required to plan and complete a project using the media tools of choice, as determined by both you and your instructor.
Prerequisites: Instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; current enrollment in PHDI program.

PHDI 2400: Post-Production for Media Professionals
3.00 credits (2.00 lec/1.00 lab)
This course will provide a deeper understanding of advanced editing and creative use of the software through a variety of professional techniques. You will learn advanced post-production skills such as color-correction, multicamera editing, and compositing/motion graphics using industry-standard, commercially available software.
Prerequisite: PHDI 2180.

PHDI 2430: Media Business
3.00 credits (3.00 lec)
This course covers basic business concerns. Types and elements of communication, business structures, record-keeping techniques and tax necessities, résumé essentials and interviewing techniques, budgets, bids and personal/company promotional tactics and materials are covered. You will produce personal promotional materials and perform both a simulated and actual informational interview. You will be required to design, and have printed, collateral materials including business cards, résumés and letterhead.
Prerequisite: PHDI 2120 or PHDI 2130 or instructor approval.

PHDI 2470: Internship
3.00 credits (3.00 int)
This class provides on-the-job work experience with an emphasis on management by objective, as jointly determined by the student, instructor and internship supervisor.
Prerequisite: PHDI 2120 or PHDI 2130 or instructor approval.
PHDI 2490: Advanced Production
3.00 credits (3.00 lab)
This is an independent study course, intended to provide you with equipment and software access on a self-directed basis. You will be required to plan and complete a project using the media tools of choice, as determined by both you and your instructor.
Prerequisites: Instructor approval; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into MATH 0070 or completion of MATH 0060; current enrollment in PHDI.

Physical Education

PHED 1100: Foundations of Fitness and Health
1.00 credit (0.50 lec/0.50 lab)
This course introduces the fundamental concepts of fitness and wellness. Through lecture, discussion, and physical fitness activities, you are introduced to the components of fitness, assessment tools, and various programs that contribute to physical and emotional health.

PHED 1101: Archery
1.00 credit (1.00 lab)
Designed for all skill levels, this course emphasizes fundamental archery skills. Archery tackle, rules, etiquette and safety in target shooting will be covered. Class will meet on campus and at a variety of outdoor archery settings. Transportation is not provided. A small fee may be charged to access certain shooting ranges. You must provide your own arrows. Must be taken Pass/Fail.

PHED 1103: Badminton
1.00 credit (1.00 lab)
This course introduces badminton skills. You will develop and improve your skills through participation, demonstration and discussion. The emphasis is placed on participation. Equipment is provided. Must be taken Pass/Fail.

PHED 1104: Water Exercise
1.00 credit (1.00 lab)
This course teaches exercises in the water to increase range-of-motion, muscle tone and cardiovascular endurance. Swimming skills are not necessary. You will exercise in a warm pool (84 degrees), and exercises are adapted for those with special needs. Class meets off campus for two hours per week. Transportation is not provided. Must be taken Pass/Fail.

PHED 1105: Bowling
1.00 credit (1.00 lab)
Designed for all skill levels, this course emphasizes fundamentals skills, scoring, game courtesies, handicapping, game strategy and progression to advanced skills. In-class league play is included. Class meets off campus for two hours per week. Transportation is not provided. Must be taken Pass/Fail.

PHED 1106: In-Line Skating
1.00 credit (1.00 lab)
Students of all abilities will develop competency in in-line skating. Instruction will begin without skates and cover activity preparation, balance, stopping, standing up, and the art of safe falling. Care and maintenance of the equipment will also be covered. You must provide your own skates and protective equipment. Must be taken Pass/Fail.

PHED 1108: Beginning Hatha Yoga
1.00 credit (1.00 lab)
This course is designed to develop the mind and body through the ancient discipline of yoga. Emphasis will be on yoga stretches, balance through body postures (ASANAS), flexibility, muscle tone, and a centered focus leading to relaxation, as well as holistic discipline. Self-control and self-awareness are required. Must be taken Pass/Fail.

PHED 1109: Beginning T’ai Chi
1.00 credit (1.00 lab)
T’ai Chi is a system of physical exercise based on the principles of effortless breathing, rhythmic movement, and weight equilibrium. It is also a method of self-defense. An understanding of the philosophy behind T’ai Chi is included. Must be taken Pass/Fail.

PHED 1110: Golf
1.00 credit (1.00 lab)
Designed for the beginning golfer, this course emphasizes fundamentals of stance, swing, use of clubs, course procedures, strategy and etiquette. You must have access to golf clubs. Transportation to golf course is not provided. Must be taken Pass/Fail.
PHED 1112: Tennis
1.00 credit (1.00 lab)
Designed to accommodate all skill levels, this course will emphasize the fundamental strokes found in tennis. Class will focus on forehand, backhand, volley, rules, etiquette and scoring. You must provide a tennis racquet and three tennis balls. All other equipment will be provided by the school. Must be taken Pass/Fail.

PHED 1113: Racquet Sports
1.00 credit (1.00 lab)
This course is an introduction to tennis, pickleball, racquetball, badminton and table tennis, with emphasis on rules, etiquette, organization, and appreciation of the fundamental footwork, strokes and strategies for each game. Must be taken Pass/Fail.

PHED 1114: Minnesota Winter Outdoor Activities
1.00 credit (1.00 lab)
Designed for students of all skill levels, this course will provide the opportunity to develop downhill skiing, snowboarding, or cross-country skiing and snowshoeing skills. This course covers selection and care of equipment, appropriate clothing, winter outdoor safety and the fundamental skills found in each activity. It also emphasizes participation and skill development through lecture, videos, demonstration and discussion. You may rent equipment or provide your own. Transportation is not provided. There is an additional fee charged for this course. Must be taken Pass/Fail.

PHED 1116: Racquetball
1.00 credit (1.00 lab)
Designed for the beginning player, this course emphasizes development of fundamental skills through participation, demonstration and discussion. Must be taken Pass/Fail.

PHED 1117: Mat Pilates
1.00 credits (1.00 lab)
This course acquaints you with the basic principles of Pilates: breath, focus, powerhouse and alignment. Through the precision of movement, proper form, and breath you will gain strength in and tone your powerhouse (abdominal, pelvic and back muscles). You will perform all exercises on a mat from your engaged powerhouse while using your own body weight as resistance.

PHED 1123: Weight Training
1.00 credit (1.00 lab)
This course is designed as an introduction to resistive exercise through the use of weight machines and free weights, with emphasis on total fitness through circuit training. You will identify personal needs and pursue a program appropriate to those needs. Must be taken Pass/Fail.

PHED 1126: Effective Bicycling
1.00 credit (1.00 lab)
This is a course for beginning and intermediate adult bicycle riders. It covers conditioning sessions, bike mechanics and maintenance, bike handling principles, emergency maneuvers, cycling physiology, techniques for cycling in traffic, and techniques for dealing with exceptional conditions of weather, lighting, grades and the presence of other cyclists. You must provide your own multiple-speed bicycle. Must be taken Pass/Fail.

PHED 1127: Hiking and Backpacking
1.00 credit (1.00 lab)
This course is designed to provide a camping experience with hiking. The on-campus sessions deal with selection, use and preparation of equipment for a trip. A camp-out with hiking will be arranged off campus, typically at a state park. Must be taken Pass/Fail.

PHED 1128: Recreation and Games: Developing Self and Leadership
2.00 credits (2.00 lab)
This course will heighten your sense of adventure and fun with activities intended to appeal to mind, body, and spirit. You will participate in a series of individual and group games. You will learn to take appropriate risks and sharpen your problem-solving and conflict-management skills. You will learn to build trust within yourself and with others, learn to cooperate with and support classmates, and enhance your physical fitness and self-confidence. You will apply the learning from this course to other areas of your life and participate in an end-of-the-semester experience. Must be taken A–F.
**PHED 1132: Relaxation Techniques**  
1.00 credit (1.00 lab)  
This course is designed for the student interested in developing body awareness and relaxation techniques. It includes learning techniques to reduce distress and quiet the body, stretches for relaxing, diaphragmatic breathing, progressive relaxation, massage, and various other techniques. It also emphasizes decisions and choices that need to be made for acquiring good body awareness, all done within a psychophysical education approach. Must be taken Pass/Fail.

**PHED 1134: Fitness Walking**  
1.00 credit (1.00 lab)  
In this course, you will be introduced to the benefits of walking, learn good walking techniques, set fitness goals and document your activities. Must be taken Pass/Fail.

**PHED 1136: Bicycle Touring**  
1.00 credit (1.00 lab)  
This is a course for intermediate adult bicycle riders who want to learn the techniques of bicycle camping. Topics such as equipment, conditioning, attitude, preparation, nutrition and crisis management are covered. There will be a two-day, self-contained tour covering at least 50 miles per day. You must provide your own bicycle and camping equipment. Must be taken Pass/Fail.  
*Prerequisite: PHED 1126 or instructor approval.*

**PHED 1138: World Dance**  
1.00 credit (1.00 lab)  
This course introduces you to a variety of folk dances. Instruction will focus on many different cultures and the importance of dance as it reflects diverse heritages. Active participation is required. Must be taken A–F.

**PHED 1154: Scuba**  
1.00 credit (1.00 lab)  
The purpose of the scuba course is to provide the basic knowledge and skills to safely gain experience in the diving environment. Successful completion leads to PADI (Professional Association of Diving Instructors) Open Water certificate. If you want to complete PADI Open Water certification, two lake trips are required. Must be taken Pass/Fail.

**PHED 1156: Aerobic Workout**  
1.00 credit (1.00 lab)  
This course is a progression from introductory to advanced aerobic activities to improve cardiorespiratory fitness. You will participate in a variety of low- and high-impact interval and endurance activities and assess your level of physical fitness. Must be taken A–F.

**PHED 1157: Step Aerobics**  
1.00 credit (1.00 lab)  
This course emphasizes cardiovascular and muscle conditioning through the use of the bench step, hand weights and exercise bands. Fitness assessment is included in this course. Must be taken Pass/Fail.

**PHED 1164: Volleyball**  
1.00 credit (1.00 lab)  
This course teaches the fundamentals of volleyball with emphasis on participation, basic skills, rules, strategy, teamwork and tournament play. Must be taken Pass/Fail.

**PHED 1166: Soccer**  
1.00 credit (1.00 lab)  
Designed for all skill levels, this course emphasizes fundamental skills with an emphasis on participation rules, game strategy and teamwork. Must be taken Pass/Fail.

**PHED 1170–1175: Physical Education Topics**  
1.00 credit (1.00 lab)  
This course will focus on skill development in activities that reflect current trends in the physical education field—for example, recreational activities, sports activities, sports officiating or adventure exploration. Must be taken A–F.

**PHED 1176–1179: Physical Education Topics**  
1.00 credit (1.00 lec)  
This course will examine timely topics in the physical education field. These topics will be pertinent to current trends in recreational activities, sports activities, sports officiating adventure exploration, special event planning and will use child-development approaches to activities. Must be taken A–F.
PHED 1180: Fitness Intensity Training
1.00 credit (1.00 lab)
This advanced course is designed for the moderately to vigorously physically active student. You will participate in strength training, flexibility, endurance, and intense interval activities, as well as assess your level of physical fitness. Must be taken A–F.

PHED 1191: Self-Defense for Women
2.00 credit (1.00 lec/1.00 lab)
This course helps you develop physical and psychological skills to avoid or stop physical assault, harassment, and dangerous situations. You will also develop new approaches to Bystander Training that helps communities reestablish their shared responsibility to create safe environments for all members of society. Class sessions will include practicing physical techniques of basic striking and kicking, shifting, blocking, and releasing. Sometime will also be spent learning to analyze dangerous situations, victim behavior, the mentality of attackers, and issues of domestic violence and sexual harassment/violence. Must be taken A–F.

PHED 1199: Supervised Activity Programs
1.00 credit (1.00 lab)
This course is designed to allow you to register for credit for an instructional program or individual fitness program that you design. An activity contract must be completed and approved by the instructor during the first week of the semester. Must be taken Pass/Fail.

PHED 2100: Outdoor Activities and Leadership
2.00 credits (1.00 lec/1.00 lab)
This course is an introduction to outdoor camping and leadership skills. Natural settings are a necessary component to a healthy and balanced life. You will learn how to prep and undertake an outdoor trip, learn about yourself, and you will learn how to build a safe and welcoming environment for others. In addition to participating in classroom settings, you will go on one mandatory weekend camping trip, wherein you can stay in a cabin or a tent. Must be taken A–F.

PHED 2200: Coaching Basketball
2.00 credits (2.00 lec)
This course will examine principles, philosophies, systems and styles involved in coaching basketball. You will learn offensive and defensive theory and strategy, rules study, fundamental techniques and administrative/organizational aspects of coaching basketball.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052 or instructor approval.

PHED 2208 Advanced Hatha Yoga
2.00 credits (1.00 lec/1.00 lab)
This course is designed for students who want to deepen their yoga practice. In addition to performing advanced asanas, such as inversions and arm balances, you will also broaden your knowledge of the yoga way of life. You will explore such topics as the Asthanga pathway, ayruveda, chakras, Sanskrit and proper sequencing for home practice.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; PHED 1108 or permission of instructor.

PHED 2210: Wellness Leadership
2.00 credits (1.00 lec/1.00 lab)
This is a required course for students pursuing the Personal Trainer, Group Exercise, and/or Yoga Teacher Certification. You will learn behavior modification techniques and strategies for instructing participants in various areas of wellness, as well as promoting wellness as a leader in your community. You will apply these principles to teach fitness classes, work with individuals one on one, or organize a community wellness project. Must be taken A–F.
Co-requisite: PHED 2208 or PHED 2211 or instructor approval.

PHED 2211: Personal and Group Exercise Training
3.00 credits (2.00 lec/1.00 lab)
This course prepares students for the National Personal Trainer and Group Exercise Certifications. You will gain knowledge and skills in exercise science, nutrition and assessment for physical activity, as well as exercise program design. You must also take PHED 2210 to complete the certification. Must be taken A–F.
Prerequisite: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042.
Co-requisite: PHED 1180 and PHED 2210.
**PHED 2998: Directed Study**

*Prerequisite: One course in PHED.*

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### Physics

**PHYS 1100: Introduction to Physics**

4.00 credits (3.00 lec/1.00 lab)

This course is an introduction to the basic principles of physics and how these principles explain everyday phenomena. The course is intended for liberal arts students and students interested in taking a basic science course before enrolling in advanced science courses. The lecture/theory portion of this course is offered both on campus in the classroom and as a Web course. This course includes two hours of required lab per week, which must be taken on campus.

Fulfills MnTC Goal Area 3.

*Prerequisite: Placement into MATH 0080 or completion of MATH 0070 or MATH 0077.*

**PHYS 1131: College Physics 1**

5.00 credits (4.00 lec/1.00 lab)

This course is the first of a two-semester course sequence and is an algebra- and trigonometry-based course designed to familiarize you with the physical phenomena underlying both the natural universe and human technology. Subjects include mechanics, heat and thermodynamics, wave phenomena, sound, physical and geometrical optics, electricity, magnetism, and postclassical physics. Many science-related programs, such as pharmacy, architecture and physical therapy, require a physics course of this type. This course also satisfies the physics requirement for some premed curricula. This course must be taken in sequence unless permission of the instructor is obtained. This course includes two hours of laboratory instruction per week.

This course is also appropriate for liberal arts students seeking General Education credits.

Fulfills MnTC Goal Area 3.

*Prerequisites: Two years high school algebra and high school trigonometry OR MATH 1110 and MATH 1120 or MATH 1125.*

**PHYS 1132: College Physics 2**

5.00 credits (4.00 lec/1.00 lab)

This course is the first of a two-semester course sequence and is an algebra- and trigonometry-based course designed to familiarize you with the physical phenomena underlying both the natural universe and human technology. Subjects include mechanics, heat and thermodynamics, wave phenomena, sound, physical and geometrical optics, electricity, magnetism, and postclassical physics. Many science-related programs, such as pharmacy, architecture and physical therapy, require a physics course of this type. This course also satisfies the physics requirement for some premed curricula. This course must be taken in sequence unless permission of the instructor is obtained. This course includes two hours of laboratory instruction per week.

This course is also appropriate for liberal arts students seeking General Education credits.

Fulfills MnTC Goal Area 3.

*Prerequisite: PHYS 1131.*

**PHYS 1211: Physics for Science and Engineering 1**

6.00 credits (5.00 lec/1.00 lab)

Topics include mechanics and thermodynamics. This course satisfies the physics requirement for engineering, premed, and chemistry majors. You must register for a lab section, which is an integral part of this course. This course is also appropriate for liberal arts students seeking General Education credits.

Fulfills MnTC Goal Area 3.

*Prerequisite: High school physics or PHYS 1100 with a grade of “A” or PHYS 1131.*

*Prerequisite/Co-requisite: MATH 1180.*

**PHYS 1221: Physics for Science and Engineering 2**

6.00 credits (5.00 lec/1.00 lab)

Topics include waves and electricity and magnetism, as well as optics if time permits. This course satisfies the physics requirement for engineering, premed and chemistry majors. You must register for a lab section, which is an integral part of this course.

This course is also appropriate for liberal arts students seeking General Education credits.

Fulfills MnTC Goal Area 3.

*Prerequisite: PHYS 1211.*

*Prerequisite/Co-requisite: MATH 1190.*

**PHYS 2998: Directed Study**

*Prerequisite: One course in PHYS.*
Political Science

PSCI 1101: American Government and Politics
3.00 credits (3.00 lec)
This course provides an introduction to American government and politics. It includes the study of the constitutional foundations of the American political system by examining the Constitution, the politics of federalism, and our tradition of civil liberties and civil rights; the study of political processes, participation, and power by examining interest groups, political parties, campaigns, and elections; the study of the institutions of the American government by examining the Congressional, Executive and Judicial branches; and policy and policy formation in American government. Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1102: State and Local Government
3.00 credits (3.00 lec)
This course is an introduction to state and local government with an emphasis on Minnesota and the Twin Cities. The setting and structures of state and local government (the Legislature, governor, courts, county, and city governments) will be examined. Involvement in the political process and application of the political process to an urban problem will be discussed. Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1103: Comparative Government
3.00 credits (3.00 lec)
This course examines and compares the governments of various countries of the world. Countries studied are chosen to illustrate different types of governments, as well as to show the diversity of governmental systems in the world. Examples are taken from the industrial democracies and the emerging democracies, from former communist countries and existing communist countries, from authoritarian regimes and democratic regimes, from the developed world and the developing world. Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1104: World Politics
3.00 credits (3.00 lec)
This introductory course helps you develop a better understanding of the major issues and conflicts that challenge our present global order. The course will cover the following main topics: the politics of intervention; cooperation and conflict in global institutions; south-north relations and the politics of hunger, development, foreign aid, and trade; politics of human rights and the environment; politics of the arms race; and case studies in the politics of international conflicts. The selection will depend on world events as they occur during the semester.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1110: Introduction to Political Science
3.00 credits (3.00 lec)
This course deals with a number of topics that are part of the academic discipline of political science, including political theory, political ideologies, government, political culture, politics of diversity, politics of media, politics of change, political economy, international politics, and comparative government. The course draws its context and contents, its examples and its processes, from a global reality as much as possible, giving the course a special emphasis on the topics of comparative government and international politics. The course also requires you to examine your own political experience, political ideas, political culture, and political socialization in the context of considerations of alternative diverse opinions, interests, and ethical views. Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
PSCI 1111: Reclaiming Democracy: An Introduction to Civic Engagement
1.00 credit (1.00 lec)
This course teaches you about the individual and societal benefits of civic engagement theory and practices and the practical challenges of motivating mass citizen engagement. You will participate in civic engagement projects (or public projects) on campus and within the broader community; explore how to contribute to ethical and democratic governance, foster civil society, build social capital, and advance sustainable communities; and learn how to connect your own political experiences to research on civic engagement theory, history and practice.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1137: Environment, Politics and Society
3.00 credits (3.00 lec)
This course provides an examination of the global environmental challenges confronting the world today and the range of solutions that have been proposed to solve these problems. Scientific, technological, social, economic and political dimensions are integrated into the problem-solving, critical thinking and social-change strategizing that is at the core of this course. Case studies include local, national and international examples of both problems and actions people are taking to "save" the planet.
Fulfills MnTC Goal Areas 5 and 10.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1140: Introduction to Latin America
3.00 credits (3.00 lec)
The purpose of this course is to provide an introductory and interdisciplinary overview of the contemporary problems and achievements of Latin American countries and peoples. You will examine the contemporary history, politics, culture, economy and social structure of the region using the concepts of internal and external conflict, innovation and transformation. Key issues and events include colonial legacies; dilemmas of economic and political development; migration and urbanization; race, ethnicity and gender; religion and cultural identity; relations with the U.S.; and the region’s role in the world today.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1143: Introduction to the Middle East
1.00 credit (1.00 lec)
This course provides an introduction to the region of the Middle East and key conflicts and challenges within it. You will become more familiar with the countries and cultures of the region as we examine the different forces that unite and divide the peoples who live there. Special focus will be given to the politics of oil, post-9/11 wars and conflicts (especially Iraq), the role of Islam and the Israeli-Palestinian conflict. You will also examine different perspectives on the role of U.S. policy, and learn about organizations and resources to continue your education on Middle East issues. (Note: Any major crisis in the region that may exist at the time of each course offering will be integrated into our study.)
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1147: Introduction to China, Japan and the Asian Pacific Rim
1.00 credit (1.00 lec)
This course provides an introduction to the Asian Pacific Rim region in general and especially to the countries of China and Japan. You will become more familiar with the countries and cultures of the region and examine the different forces that unite and divide the people who live there. You will learn about the major internal and external factors that are driving the changes, challenges and conflicts that each country faces. (Note: Any major crisis in the region that may exist at the time of each course offering will be integrated into our study.)
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
PSCI 1149: Introduction to Mexico
1.00 credit (1.00 lec)
This course provides an introduction to the country of Mexico including its relationship with the United States and regional neighbors in Latin America and the Caribbean. In order to better understand contemporary Mexico, you will explore geographic and key historical as well as current internal and external political, economic, social and cultural forces that drive change and spur conflict in this country today. Key topics include migration and immigration, the role of the NAFTA and other trade treaties and the impact of the Zapatista resistance movement. You will also become familiar with the Resource Center of the Americas and other Mexico-related organizations and resources.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1169: Introduction to Human Rights
1.00 credit (1.00 lec)
This course provides an introduction to the concept of human rights and how they have evolved, the tools that exist to pursue them and the kind of work that is being done to define and promote them in the United States and globally. In this class, you will meet human rights activists from a number of fields and become familiar with organizations and resources for continuing your education on human rights issues.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1170: Community Organizing: History, Theory and Practice
3.00 credits (3.00 lec)
This course, designed for those considering a career in nonprofit and social-change fields, explores the history, theory, and practice of community organizing and emphasizes indigenous perspectives of community organizing while it examines the relationship between social action and politics, economics and identity. You will examine the key assumptions of this approach to sociopolitical change and examine the differences and divisions that characterize the field. You will also use collaborative learning approaches and active learning techniques to help you develop basic skills central to community organizing.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisites: Placement into READ 0200 or ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 1175: Political Science Field Experience
3.00–6.00 credits (3.00–6.00 int)
This course combines field work at a governmental or nongovernmental organization engaged in public policy work with an examination of power, politics, and leadership. You will spend approximately three hours per credit per week at your internship site; attend three seminars (orientation, mid-semester, and end-of-semester seminars); develop specific learning goals with your instructor and internship site supervisor; and submit online writing assignments that integrate political science theories with your field experiences. You must arrange an internship placement and obtain permission from the instructor prior to registering for this course. Must be taken A–F.
Prerequisites: PSCI 1101 or PSCI 1102 or PSCI 1110 or AMIS 1120; permission from faculty field-experience supervisor is necessary for registration.

PSCI 1180: Politics, Media and Community Organizing: Indigenous Understandings and Applications
3.00 credits (3.00 lec)
This course examines the relationship between the media, community organizing, and community power, with special emphasis on how various media forms are used in the organizing efforts of indigenous communities. You will learn about the historical connections between community organizing and the media, analyze the relationship between politics, political movements and the media, examine media in politics and society, and explore the effects of the media landscape on community organizing. You will also evaluate how community organizations use various media forms in their efforts to achieve their goals and develop a media plan for a community organization.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisites: Placement in ENGL 1110 or completion of ENGL 0900 or ESOL 0051; Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
PSCI 1200: Introduction to Public Policy
3.00 credits (3.00 lec)
This course will explore the public policy-making process at the local, state, and national levels. You will examine key public policy models and methods and learn how individuals and groups become involved in the policy-making process. You will also learn practical techniques for involving yourself and communities in the design, implementation, and assessment of public policies. You will examine public policies that affect economically disadvantaged communities, communities of color, women, and young people.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: AMIS 1120 or PSCI 1101 or PSCI 1102 or PSCI 1110.

PSCI 2000: Constitutional Law
3.00 credits (3.00 lec)
This course is an overview of the origins of the U.S. Constitution and its continuing evolution through amendment and interpretation. Changing power relationships within government and changing definitions of the basic rights of citizens will be examined through the study of important case decisions, both historic and contemporary, with an eye to demonstrating the fluid nature of our Constitutional system. Emphasis will be placed on the practical impact of the Constitution and of Supreme Court decisions upon the enforcement of criminal laws.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

PSCI 2998: Directed Study
Prerequisite: One course in PSCI.

Polysomnographic (Sleep) Technology

PSOM 1000: Introduction to Sleep and Rest
3.00 credits (3.00 lec)
This course introduces you to the basic human need of sleep and rest. You will learn about the importance of sleep and rest for a healthy life, sleep cycles, the history of sleep and common sleep disorders; and be introduced to the field of sleep science and its relevance to other health professions. This course is open to the public as a health elective and is also a required course in the Polysomnographic Technology A.A.S. program.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSOM 1100: Fundamentals of Polysomnography
3.00 credits (2.00 lec/1.00 lab)
This course examines the scope of practice of a Polysomnographic Technologist and the vocational role within a team of sleep medicine professionals. You will learn about the practical and ethical considerations in providing service to patients with a focus on therapeutic communication, documentation and safety in the sleep laboratory. During laboratory time you will start learning to analyze sleep studies. Specific topics include sleep staging, recognition of abnormal sleep-related breathing patterns, and technical reporting. The course also requires touring an accredited sleep center and spending a nightshift observing the work of a Registered Polysomnographic Technologist (RPSGT).
Prerequisites: Admission to the Polysomnography program; PSOM 1000 OR HLTH 1000.

PSOM 1200: Anatomy and Physiology of Sleep and Breathing
2.00 credits (2.00 lec)
In this course, you will learn neurological and respiratory structure and function as it relates to sleep across the lifespan. Topics include circadian sleep/wake rhythms and the bioelectrical signals generated within the body. An introduction to normal human sleep staging is also included. Course meets the first eight weeks of the term.
Prerequisites: Admission to the Polysomnographic Technology program, BIOL 2224 OR BIOL 1127/1128.
Co-requisite: PSOM 1100.
**PSOM 1300: Pathophysiology and Classification of Sleep Disorders**

2.00 credits (2.00 lec)

In this course, you will explore the pathophysiology of sleep disorders across the lifespan. Topics take in the major categories of sleep disorders described in the International Classification of Sleep Disorders and an introduction to common therapies, including positive airway pressure (PAP), supplemental oxygen, as well as pharmaceutical and surgical treatments. Emphasis will be placed on the effects of pathology and treatment on the polysomnographic recording. Course meets the second eight weeks of the term.

*Prerequisites: Admission to the Polysomnographic Technology program, BIOL 2224 OR BIOL 1127/1128. Co-requisites: PSOM 1100 and PSOM 1200.*

**PSOM 1400: Instrumentation in Polysomnography**

5.00 credits (3.00 lec/2.00 lab)

In this course, you will learn the principles of electricity necessary for polysomnography, with emphasis on signal amplification and filtration, characteristics of waveforms, and recognition of artifacts. The laboratory focuses on the preparation of recording equipment and the patient for polysomnography, including calibrations, the use of ancillary equipment and the application of electrodes and other monitors. Course meets the first eight weeks of the term.

*Prerequisites: PSOM 1100, PSOM 1200, PSOM 1300.*

**PSOM 1500: Monitoring and Introduction to Therapeutic Interventions**

4.00 credits (2.00 lec/2.00 lab)

In this course, you will learn the principles of monitoring and therapeutic interventions in Polysomnography. Theory concepts will be reinforced in the lab setting. Topics include the production of high-quality recordings and the principles of PAP titration and oxygen therapy. You will also learn to respond to recording artifacts and complications of PAP and oxygen therapies.

*Prerequisites: PSOM 1100, PSOM 1200 and PSOM 1300. Prerequisite/Co-requisite: PSOM 1400.*

**PSOM 1650: Internship 1**

2.00 credits (2.00 int)

In this introductory internship, you will prepare patients for Polysomnographic monitoring and therapeutic interventions in the setting of an accredited clinical sleep laboratory. You will practice patient care, education and safety, and you will prepare and initiate routine sleep studies in patients of all ages. *Co-requisite: PSOM 1660. Clear background check. Prerequisite/Co-req.: PSOM 1400, PSOM 1500.*

**PSOM 1660: Internship 1 Seminar**

1.00 credit (1.00 lec)

This seminar meets concurrently with Internship 1. Its purpose is to extend and validate the learning you gain at a partnering accredited sleep laboratory. You will discuss and reflect on internship experiences, report case studies, assess your progress, and participate in group discussions.

*Co-requisite: PSOM 1650. Prerequisite/Co-requisite: PSOM 1400, PSOM 1500.*

**PSOM 2000: Polysomnographic Theory Integration**

4.00 credits (2.00 lec/2.00 lab)

This course requires synthesis of all previously learned sleep technology theory in preparation for taking the national registration exam upon graduation. You will review all of the fundamental knowledge and skills of a Sleep Technologist and advanced topics including mechanical ventilation, cardiac dysrhythmias, EEG effects, and pediatric sleep disorders. You will gain increasing expertise in the assessment of clinical sleep studies. Through individual appointments at accredited sleep centers you will observe and interact with physicians and other specialists as they assess and treat patients with sleep disorders. Must be taken A–F.

*Prerequisites: PSOM 1400, PSOM 1500, PSOM 1650, PSOM 1660.*

**PSOM 2150: Internship 2**

3.00 credits (3.00 int)

In this course you will prepare the patient for Polysomnographic monitoring and therapeutic interventions in the clinical sleep laboratory setting and work with the patient throughout the night, applying therapeutic treatments as ordered by a physician. You will practice patient care and safety, and you will prepare and initiate routine polysomnographic testing. You will conduct therapeutic interventions in patients of all ages, and educate patients. Must be taken Pass/Fail.


**PSOM 2160: Internship 2 Seminar**

1.00 credit (1.00 lec)

This seminar meets in conjunction with Internship 2. Its purpose is to extend and validate the learning you gain at a partnering accredited sleep laboratory. You will discuss and reflect on your internship experiences, report case studies, assess your progress, and participate in group discussions. Must be taken Pass/Fail.

PSOM 2250: Internship 3
4.00 credits (4.00 int)
This internship develops skills such as problem solving and critical thinking in the sleep laboratory. The emphasis is on production of high-quality records, titration of PAP and oxygen therapy, and the accurate and timely scoring and reporting of polysomnographic data. You will also measure daytime sleepiness and cover other daytime skills. Must be taken Pass/Fail.
Prerequisites: PSOM 1650, PSOM 1660. Clear background check.
Co-requisite: PSOM 2260.
Prerequisites/Co-requisites: PSOM 2000, PSOM 2150, PSOM 2160.

PSOM 2260: Internship 3 Seminar
1.00 credits (1.00 lec)
This seminar meets concurrently with Internship 3. Its purpose is to extend and validate the learning you gain at a partnering accredited sleep laboratory. You will discuss and reflect on your internship experiences, report case studies, assess your progress, and participate in group discussions. Must be taken Pass/Fail.
Prerequisites: PSOM 1650, PSOM 1660.
Co-requisite: PSOM 2250.
Prerequisites/Co-requisites: PSOM 2000, PSOM 2150, PSOM 2160.

PSOM 2350: Internship 4
2.00 credits (2.00 int)
This capstone internship allows you to choose a sleep laboratory in which to further demonstrate and develop your skills in Polysomnographic Technology. Through arrangement with the instructor and a participating clinical site, you will have the opportunity to experience working in the sleep laboratory of your choice. You will be encouraged to complete this internship in a place where you are interested in working or developing specialized skills. If you already have a job as a Sleep Technologist, you can receive internship credit for your on-the-job training and experience (assuming cooperation from the employer). Must be taken Pass/Fail.
Prerequisites: PSOM 1650, PSOM 1660. Clear background check.
Co-requisite: PSOM 2360.
Prerequisites/Co-requisites: PSOM 2000, PSOM 2150, PSOM 2160, PSOM 2250, PSOM 2260.

PSOM 2360: Internship 4 Seminar
1.00 credits (1.00 lec)
This seminar meets concurrently with Internship 4. Its purpose is to extend and validate the learning you gain at a partnering accredited sleep laboratory. You will discuss and reflect on your internship experiences, report case studies, and assess your progress. Additionally, you will prepare a professional resume and practice for the registration exam. Must be taken Pass/Fail.
Prerequisites: PSOM 1650, PSOM 1660.
Co-requisite: PSOM 2350.
Prerequisites/Co-requisites: PSOM 2000, PSOM 2150, PSOM 2160, PSOM 2250, PSOM 2260.

Psychology

PSYC 1100: Applying Psychology
3.00 credits (3.00 lec)
The course examines how psychological concepts can be applied to everyday life. A variety of topics focusing on personal adjustment are included, such as the effects of stress, memory formation, interpersonal relationships and strategies for changing behavior. The course is designed for students who are not planning to take General Psychology.
Fulfills MnTC Goal Area 5.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSYC 1110: General Psychology
4.00 credits (4.00 lec)
This course is an introduction to the scientific study of behavior and mental processes. A variety of topics such as the brain, memory, learning, social influence, motivation, emotion, personality, mental disorders and therapy are discussed.
Fulfills MnTC Goal Area 5.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
PSYC 2215: Child and Adolescent Psychology
3.00 credits (3.00 lec)
This course examines how and why people change from the prenatal period through adolescence. While the focus is on typical developmental changes in the cognitive, physical, personality and social-emotional areas, disorders and problems salient to each age are discussed.
Fulfills MnTC Goal Area 5.
Prerequisite: PSYC 1110, placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSYC 2240: Lifespan Development
4.00 credits (4.00 lec)
The course provides a comprehensive view of human development from conception to death. Important aspects of development changes, (biological, cognitive and psychosocial) are examined, as well as problems and issues salient to various developmental stages.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: PSYC 1110, placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.*
*These prerequisites are only for non-Nursing program students. Nursing students should work with Nursing program admissions to determine if prerequisites are met.

PSYC 2250: Abnormal Psychology
3.00 credits (3.00 lec)
Abnormal Psychology expands on the brief sample of psychological disorders studied in General Psychology. This course reviews the personality theories underlying the multiple explanations of psychological disorders and examines the symptoms, etiology and treatment of disorders (e.g. schizophrenia, mood disorders and autism). Assessment and diagnostic procedures and issues are discussed, as well as social, ethical, cultural and legal issues that intersect with the mental health field, especially in regard to the treatment of mental illness.
Fulfills MnTC Goal Area 5.
Prerequisite: PSYC 1110, placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSYC 2260: Social Psychology
3.00 credits (3.00 lec)
Social psychology is the scientific study of how people think about, influence and relate to one another. The four basic themes are: 1) Social thinking: How we view ourselves and others and how we assess the accuracy of our impressions, intuitions and explanations; 2) Social influence: Examining the nature of conformity, persuasion and group influence so we can better recognize their influence upon us; 3) Social relations: Examining positive and negative attitudes and behavior in areas such as attraction, altruism, aggression, violence and peacemaking; and 4) Application of psychological principles to law, business and health.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisites: PSYC 1110, placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSYC 2275: Positive Psychology: The Study of Happiness and Well-Being
3.00 credits (3.00 lec)
Positive psychology will introduce you to theoretical concepts and scientific research regarding human strengths and virtues. You will examine human behavior that contributes to psychological well-being through topics such as happiness, hope, flow, meaning, optimism, and resiliency. Your investigation will focus on scientific assessments of these and related behaviors, their causes, correlates and interventions that have been shown to promote them. To solidify your learning you will be asked to apply positive psychological principles through a variety of experiential learning tasks and share your insights. Must be taken A–F.
Fulfills MnTC Goal Area 5.
Prerequisite/Co-requisite: PSYC 1110.

PSYC 2280: Cross Cultural Psychology
3.00 credits (3.00 lec)
In Cross Cultural Psychology, you will analyze and deconstruct how different aspects of culture (religion, gender, ethnicity/race, etc.) affect human behavior, emotion, social perception and expectations, and cognition. You will examine cross-cultural experimental designs in detail and explore how cultural issues affect abnormal psychology, social behavior, and organization behavior. You will gain a critical appreciation of the relationship between culture and the individual within and across cultures as it related to behavioral outcomes and understanding the uniqueness of similarities and differences. Must be taken A–F.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite/Co-requisite: PSYC 1110.
PSYC 2285: Topics of Psychology
1.00–4.00 credits (1.00–4.00 lec)
This course will review research and principles in specific content areas. The various topics are chosen for timeliness, student interest and applied value.
Fulfills MnTC Goal Area 5.
Prerequisites: PSYC 1110, placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

PSYC 2350: Introduction to Educational Psychology
4.00 credits (4.00 lec)
In this course, you will be introduced to the core principles of learning (behavioral, social cognitive, etc.). You will use these principles to understand the learning and behavior of students, and apply these principles to classroom practice. You will explore the cognitive, linguistic, personal, social, and moral development of individuals as well as individual and group differences as it relates to learning and educational outcomes. Must be taken A–F.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: PSYC 1110 or ECED 1215.

PSYC 2998: Directed Study
Prerequisite: One course in psychology.

Reading

READ 0100: Reading 1
5.00 credits (5.00 lec)
In this course, you will learn the academic and lifelong reading strategies needed for success in technical programs and many associate of arts majors. You will learn how to master technical and academic vocabulary; learn how to understand and remember more of what you read; and learn how to follow complex directions and use reference manuals. This class includes a computer lab. Must be taken Pass/No Credit.
Prerequisites: Placement into READ 0100 or completion of ESOL 0042 and teacher recommendation into READ 0100.
Prerequisites/Co-requisites: ESOL 0043 or exemption.

READ 0200: Reading 2
3.00 credits (3.00 lec)
This course is intended for students who have adequate skills for popular reading but lack the reading skills needed for success in sophisticated technical programs or in liberal arts courses. The course teaches you strategies for maintaining concentration on long textbook assignments and maintaining comprehension when reading challenging texts and manuals that contain complex information and unfamiliar vocabulary. It also teaches you how to remember what you’ve read and to demonstrate knowledge adequately on assignments, projects and tests. Must be taken Pass/No Credit.
Prerequisite: Placement into READ 0200 or completion of READ 0100 or ESOL 0042 with faculty recommendation into READ 0200.
Prerequisite/Co-requisite: Placement into ESOL 0043 or exemption.

READ 1300: Critical Reading of Academic Texts
3.00 credits (3.00 lec)
This course focuses on applying college-level reading skills to the specialized context of reading occupational, academic and technical textbooks and supplementary materials. You will learn self-assessment techniques to monitor your comprehension, analyze the text structure of various disciplines and programs, learn strategies for reading different kinds of text, and apply various strategies for developing and expanding your vocabulary.
Fulfills MnTC Goal Area 2.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052 and ESOL 0043 or exemption and placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

READ 2200: Topics in Advanced Critical Reading
3.00 credits (3.00 lec)
This topics course develops critical skills through a program of intensive, advanced college reading, which focuses upon current social, political, scientific, ethical issues or current events. The readings explore the topic from a variety of viewpoints and disciplines. You will explore both the course topic and processes/procedures of reading critically.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
Restaurant Management

REST 1000: Restaurant Business Management
3.00 credits (3.00 lec)
This foundational course examines the hospitality industry’s foodservice segment. You will gain an understanding of this challenging field: its history, career opportunities, variety of operations, production methods, business planning and financial management skills needed to be successful.
Prerequisite: Placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

REST 1100: Food, Beverage and Labor Cost Controls
3.00 credits (3.00 lec)
This course examines the principles of cost controls and their application to food and beverage operations. You will learn about the diverse elements of sales within a food and beverage establishment and about cost controls needed to maintain a profitable operation. Topics include costs and sales relationships, forecasting sales, preparing budgets, cost control systems, controlling inventory, and computer equipment and software.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.

REST 2000: Hospitality Marketing Management
3.00 credits (3.00 lec)
This course provides the basic knowledge and practical experience needed for developing strategic and operating marketing plans for hospitality businesses. It stresses marketing orientation as a management philosophy that guides the design and delivery of guest services.
Prerequisite: REST 1000.

REST 2100: Restaurant Management Capstone
2.00 credits (2.00 lec)
This course covers operational situations and management cases from the major areas of the hospitality curriculum. You will focus on problem-solving, critical thinking, effective communication, ethical reasoning, quantitative analysis, and the use of technology.
Prerequisite: CULA 1109.

REST 2200: Restaurant Management Internship
4.00 credits (4.00 int)
This course provides an opportunity to complete a relevant internship in a specialized area of the restaurant industry. You will meet both your own learning needs as well as the needs of the hospitality operation offering the management internship. You will complete 160 hours of internship work.
Prerequisite: CULA 1109.

Sociology

SOCI 1105: Introduction to Sociology
3.00 credits (3.00 lec)
This course covers an introduction to the sociological method and perspective. The course will give you a grasp of how social scientific inquiry is conducted; how to use sociological theory and concepts; and the importance of a global perspective in understanding people, their problems, and their potentials.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCI 1106: Sociology of Deviance
3.00 credits (3.00 lec)
This course uses a sociological perspective to examine the processes of rule-making and rule-breaking. It includes a survey of theories explaining deviance, and the application of these theories to a number of issues often defined as deviance: Crime, juvenile delinquency and gangs, mental illness, and lifestyle variation, among others.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
SOCl 1107: Sociology of Aging
3.00 credits (3.00 lec)
This course is designed as a general multidisciplinary introduction to the study of aging in society. You will learn about biological, cultural, historical, political, and social factors that shape how humans age. You will examine how people age differently in different cultures and how humans have also aged differently in different time periods. You will explore the ways differences in the human lifespan are accounted for, societal attitudes toward aging and how these influence our response and perception of the needs of older persons on an individual, social, and institutional level.
Fulfills MnTC Goal Area 5.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCl 1110: Families in Contemporary Society
3.00 credits (3.00 lec)
This course is an exploration of the complexity of the family, intimacy and sexuality in a changing America. The course explores how families can provide support and strength for individuals; you will also investigate societal threats to family cohesion and strength.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCl 1160: Technology, Culture and Society
3.00 credits (3.00 lec)
The use of technology is a basic feature of all human societies—our technologies influence our relations with each other and with the natural environment. Equally important, technology itself is a product of economic, political and cultural patterns. The study of technology will tell us about the kind of society we make for ourselves.
Fulfills MnTC Goal Areas 5 and 10.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCl 1170: Women in a Global Perspective
3.00 credits (3.00 lec)
Around the world, women are engaged in struggles to address issues of survival, identity, and social change in order to make a better world for themselves, their families, and their communities. These efforts, in turn, have influenced the emergence of an international women’s movement and a new conception of human rights and global action. This course examines the development and intersection of these local and international women’s movements through case studies from selected countries in Africa, Asia, the Middle East and Latin America. You will examine issues of status, diversity and cross-cultural understanding as you explore the different types of problems and challenges women face in other parts of the world and the different kinds of strategies they are creating to make change.
Fulfills MnTC Goal Areas 5 and 8.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCl 2115: Family Violence
3.00 credits (3.00 lec)
What factors contribute to family violence? Can they be identified and changed so that future violence can be prevented? This course surveys the major patterns of child abuse, violence in relationships, elder abuse and other forms of family crisis.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: One course in SOCI, PSYC, or HSER; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

SOCl 2145: American Minority Relations
3.00 credits (3.00 lec)
This course examines the idea of “minority group” in the historical and present context of American society. Along with equality, freedom, and justice, discrimination, inequality, and racism are among our oldest values. This course seeks to confront this contradiction openly and honestly.
Fulfills MnTC Goal Areas 5 and 7.
Prerequisites: SOCI 1105; Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
**SOCI 2155: Introduction to Criminal Justice**
3.00 credits (3.00 lec)
This course is intended to give an overview of the American criminal justice system, with specific review of the roles and responsibilities of the police, courts, corrections institutions and the democratic foundations upon which the system is based. In addition, the course is appropriate for those who want to learn more about career options in the areas of criminal justice.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.

**SOCI 2998: Directed Study**
Prerequisite: One course in SOCI.

**Sound Arts**

**SNDA 1310: Sound Arts 1: The Nature and Control of Sound**
3.00 credits (3.00 lec)
This course introduces you to sound: its fundamental nature; the manner in which it is controlled in air, as well as in the worlds of electronics and computers; and ways in which it can be formed to create art. Along with the exploration of theory and concepts related to sound control, you will complete individual exercises in the sound labs, culminating in the creation, recording and final mixdown of an original artwork.
Prerequisites: Placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

**SNDA 1320: Sound Arts 2: Advanced Recording and Sync**
3.00 credits (2.00 lec/1.00 lab)
This course extends your theoretical base in sound with exploration of advanced topics in analog signal flow, gain-staging and processing, as well as the foundations of nonlinear digital recording, sampling, synthesis, editing, and time coding. Theory moves to practical lab experience in live multitrack recording and mixing. You will do individual and group recording projects in MCTC sound studios involving music, dialogue and effects; work with commercial production music; and tie sound projects to video or film.
Prerequisite: SNDA 1310.

**SNDA 1360: Sound Arts History and Literature**
3.00 credits (3.00 lec)
In this course, you will explore the relationship between technology and the sound arts by listening to, reading about, and discussing important music recordings, film soundtracks, and videos from the body of works created in these media. Using a historical perspective, a study will be made of the electronic and computer music produced in institutional and private studios through the past century, the landmark pop and rock recordings, the development of film music and sound design and the effect of technology on live performance.
Prerequisites: SNDA 1310 and MUSC 1150.

**SNDA 2330: Sound Arts 3: Advanced Digital Sound and Music**
4.00 credits (3.00 lec/1.00 lab)
This is an advanced course focusing on the operation of the digital desktop studio as a tool for practical application of the theories and concepts learned up to this point in the Sound Arts program. Recording and conversion will be reviewed prior to the exploration of advanced techniques in synthesis, sampling, editing, signal processing and mixing, both within the nonlinear environment and in the larger digital studio. Data transfer in several formats will be considered. You will become familiar with a variety of hardware and software and will complete a final project in a chosen area.
Prerequisite: SNDA 1320.
Co-requisite: SNDA 2340.

**SNDA 2340: Sound Arts 4: Form and Design**
3.00 credits (3.00 lec)
This is an advanced course focusing on the use of high-technology studios in the composition and production of a set of art works in sound design and music. Principles of form and design studied in previous courses will be amplified and made specific in several projects. You will experience the creative process from start to finish; lay the groundwork for the final, larger project to come; and provide a portfolio of finished works for the benefit of potential employers or clients.
Prerequisite: SNDA 1320.
Co-requisite: SNDA 2330.
SNDA 2350: Sound Arts 5: Final Project
3.00 credits (2.00 lec/1.00 lab)
You will complete a major final project in sound, based upon the concepts, theories and practical experience absorbed during the course of your degree program in Sound Arts. You will demonstrate technical competence by composing or designing, recording or generating, processing and mixing down to final master, a work in music or sound design grown from a personal vision. Discoveries, problems, new techniques and other experiences will be shared in a class-seminar atmosphere. 
Prerequisites: SNDA 2330 and SNDA 2340.

SNDA 2370: Project Studio Design
3.00 credits (3.00 lec)
In this course, you will learn how to design a personal, individualized studio for professional work in music or sound design as studied in the Sound Arts program. Topics include relating room design to the end-product envisioned, cost planning, acoustic treatment and control, AC and electronic interface design and ergonomics. After completing the course, you will have an actual design plan for your specific real or envisioned studio space. 
Prerequisite: SNDA 1320.

SNDA 2380: Internship
2.00 credits (2.00 int)
The internship provides second-year Sound Arts students with an opportunity to work in the industry. Internship placement will reflect your personal direction in Sound Arts. The internship is available only to degree-seeking students. You are required to notify the internship coordinator in advance of placement and registration. 
Prerequisites: SNDA 1310 and SNDA 1320.

SNDA 2390: Sound Arts as Business
3.00 credits (3.00 lec)
This course examines the prospect of developing, creating and delivering music and sound art for financial gain, as an independent artist or technician. You will learn to match industry needs to your particular talents and interests, develop a business plan for reaching your goals, perform basic bookkeeping and tax procedures, market your business, and protect and profit from your art through copyright and other means. You will leave this course with a better understanding of the business side of the music and sound industry and with practical techniques necessary for working in the area. 
Prerequisite: Acceptance into the Sound Arts program.

SNDA 2998: Directed Study
Prerequisites: One course in SNDA; placement into READ 1300 or completion of READ 0200 or ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051; placement into MATH 0070 or completion of MATH 0060; demonstration of computer literacy skills.

Spanish

SPAN 1000: Beginning Spanish 1
5.00 credits (5.00 lec)
This course provides an introduction to the language and cultures of Spain and Latin America. This course parallels beginning Spanish courses offered at other liberal arts institutions. You will develop basic listening, speaking, reading and writing skills necessary to communicate about self, family and daily life, as well as basic survival needs. You will also explore cultural aspects of the Spanish-speaking world. 
Fulfills MnTC Goal Area 8. 
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

SPAN 1100: Beginning Spanish 2
5.00 credits (5.00 lec)
This course is a continuation of SPAN 1000 and is also appropriate for the students who have completed one semester of Spanish at another liberal arts institution or have taken two years of high school Spanish. You will learn the use of past-tense structures and pronoun usage. You will continue to develop listening, speaking, reading, and writing skills necessary to communicate about self, family, and daily life, as well as on abstract concepts such as feelings and emotions. You will also explore cultural aspects of the Spanish-speaking world. This course will prepare you for intermediate-level Spanish courses. 
Fulfills MnTC Goal Area 8. 
Prerequisites: SPAN 1000 or equivalent; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
SPAN 1145: Hispanic Culture and Civilization
3.00 credits (3.00 lec)
Taught in English, this course covers aspects of the cultures and civilization of Spanish-speaking peoples. You will understand the meaning of culture and cultural heritage, develop a sense of shared humanity, and begin to distinguish between stereotypical and informed viewpoints. You will gain an awareness of the historical, political, geographical, linguistic, artistic, and religious influences and contributions of Spanish-speaking cultures in Spain, Latin America and the U.S. Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

SPAN 1300: Heritage/Intensive Spanish 1
5.00 credits (5.00 lec)
This course is for heritage speakers and those who have had previous exposure to the language, but who desire more formal instruction at an accelerated pace. You will build upon the language skills you already possess, focusing on the development of academic Spanish through reading and writing, as well as instruction in grammar and spelling. You will also examine issues of Hispanic diversity in the U.S. Fulfills MnTC Goal Area 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

SPAN 1400: Spanish for Healthcare Providers
3.00 credits (3.00 lec)
This course provides the basic tools to help healthcare providers communicate with Spanish-speaking patients in a medical setting. You will acquire medical terminology, phrases, and questions to conduct patient interviews, physical exams and take medical history. You will also learn important cultural aspects of the Hispanic community to understand their view of healthcare.
Prerequisites: SPAN 1100 or equivalent of SPAN 1300; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

SPAN 2000: Intermediate Spanish Language and Culture 1
5.00 credits (5.00 lec)
Spanish 2000 is a follow-up to the Beginning Spanish sequence. It can also be a review for students with two to four years previous high school experience. You will build upon vocabulary, review grammar and learn further subtleties of Spanish syntax and idiomatic expressions. This course may be useful for native speakers interested in learning grammatical concepts and terminology for teaching Spanish to English-speakers. You will review present-tense, past-tense and subjunctive verb conjugation, as well as develop communicative skills or techniques necessary for summarizing, paraphrasing, interpreting, and narrating. This course satisfies MnTC Global Perspective requirements by providing readings, lectures, writing exercises, discussions and other presentation media in order to give you useful cultural, historical, sociological and literary insight into the various peoples who speak Spanish throughout the world. Fulfills MnTC Goal Area 8.
Prerequisites: SPAN 1100 or equivalent; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
SPAN 2100: Intermediate Spanish Language and Culture 2
5.00 credits (5.00 lec)
Spanish 2100 is a follow-up to Spanish 2000. You will practice writing, reading, speaking and listening skills in preparation for the examination; receive skill evaluations from the final examination sequence based upon the American Council on the Teaching of Foreign Languages (ACTFL) standards; develop greater comfort and fluency if you have previously studied most of Spanish grammar and can already communicate simple ideas and narrate simple information in past, present and future tenses; practice difficult structures such as the use of object pronouns, subjunctive mood, adverbial conjunctions, hypothetical, and future structures; develop communicative skills by the expansion of vocabulary, as well as idiomatic expressions; and will learn to “talk around” unknown vocabulary, express opinions, support them, and engage in discussion and argument. This course satisfies MnTC Global Perspective requirements through readings, lectures, writing exercises, discussions, and other presentation media, giving you a useful cultural, historical, sociological, and literary insight into the various peoples who speak Spanish throughout the world. Contact the Spanish Department at 612-659-6444 for more information.
Fulfills MnTC Goal Area 8.
Prerequisites: SPAN 2000 or equivalent; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

SPAN 2998: Directed Study
Prerequisites: One course in SPAN; placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Study Skills

STSK 1150: How to Study
2.00 credits (2.00 lec)
In this course, you will learn the principles of learning and critical thinking, problem-solving, time management, styles of learning and teaching, note taking, listening, textbook reading, researching, and testing. You will develop strategies and techniques for analyzing your own learning/thinking skills and processes.
Prerequisite: Recommend placement into READ 1300 or completion of READ 0200 or ESOL 0052.

Theater Arts

THTR 1104: Introduction to Acting 1
3.00 credits (3.00 lec)
This is a performance-oriented course to help you build self-confidence on stage and within yourself and to develop a strong foundation in 21st-century acting techniques. You will perform exercises in front of an audience, including rehearsal and performance of monologues and scenes drawn from multicultural contemporary American theater. Also covered is training in relaxation and conditioning of the actor’s body, voice and mind through improvisations, games, character discussion, and analysis of acting texts. Emphasis is on using a nonthreatening, group-oriented class atmosphere to explore and develop the imagination.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

THTR 1111: Theater Arts Workshop
1.00 credit (1.00 lec)
This course is designed to give you hands-on experience in the production of a play. You will first study the different types of theater and theater production, and the different ways that sets, costumes, lights, props and sound affect dramatic interpretation. You will work on a play during the semester, either the main stage production or one of the all-student lab theater projects in one or more of the following production areas: acting, assistant directing, stage managing, costuming, lighting, scene designing and construction, box office operating, publicizing and/or promoting. You will also critique the effectiveness of the production and your work on it. This course may be repeated for a total of four credits.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
**THTR 1131: Introduction to Theater**

3.00 credits (3.00 lec)
This is a lecture-discussion course that explores the diversity of the live theater experience through reading assignments, attendance at live theatrical performances, video viewing and in-class discussions. Topics will include multicultural plays and dramatic structure; audience demographics; group response to live theater; local theater-going; and an exploration of the political, social and economic impact of theater in contemporary society. You will learn to become a more informed theater-goer and to gain individual awareness of being in the audience.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1135: Television: Forms/Analysis**

2.00 credits (2.00 lec)
This course enhances your enjoyment and aesthetic pleasure in making decisions about the nature of contemporary television viewing. The course will include topical information on television-viewing patterns and examine types of television drama and comedy. You will also explore the political and social implications of television in Western culture.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1145: Stagecraft: Scene Design and Lighting**

3.00 credits (3.00 lec)
This course provides you with a solid foundation of understanding and practical application of scene design and lighting for the theater. Coursework focuses on learning the historical background of current practice, a thorough study of contemporary design theory and practice and work on your portfolios of scene designs and lighting designs based on plays chosen for study. Local theater scene and light designers will visit the class as guest lecturers to aid you in acquiring current design techniques, as well as to share professional career advice and mentoring. Opportunities for design work on lab theater projects and main stage productions will be offered to interested students.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1150: Theater in the Twin Cities**

2.00 credits (2.00 lec)
This course is designed to help you develop an appreciation for and an understanding of the live theater experience. You will attend three to four plays at Twin Cities area theaters; analyze one of these performances in a written play review; meet theater artists; and become familiar with theater criticism, theater operations, and artistic policies of various local theater companies. A student ticket fee will cover the expense of the ticket prices for the shows attended by the class.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
**THTR 1160: Acting in Multicultural Theater**

3.00 credits (3.00 lec)
In this class, you will focus on the performance of a variety of multicultural readings (plays, short stories, poems) from global literature. While there may be extensive reading of new play scripts, prose works and poetry, the emphasis of the course will be on the spoken word and the effect of multicultural works in performance. It is assumed that you will not necessarily have training or preparation in performance. Classes will involve group warm-ups, vocal exercise, discussion of readings, and solo and group performances. The basic objective of this theater course is to experience multicultural literature in performance and to share insights into our multicultural society.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1161: Guthrie Theater**

1.00 credits (1.00 lec)
This course provides you with the opportunity to study one of the nation’s leading regional theater companies, the Guthrie Theater. You will learn about the history, operations, philosophy, mission and artistic goals, and the current season of plays at the Guthrie. You will read in class the script of a current play in production at the Guthrie, then go see that play in performance there and learn how to write a play review about what you saw.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1162: Children’s Theater Company**

1.00 credit (1.00 lec)
This course provides you with the opportunity to study one of the world’s leading theaters devoted to plays for children and teenagers, the Children’s Theater Company (CTC). You will learn about the history, operations, philosophy, mission and artistic goals, and the current season of plays at CTC. You will read in class the script of a current play in production at CTC, then go see that play in performance there and learn how to write a play review about what you saw.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1163: Mixed Blood Theater**

1.00 credit (1.00 lec)
This course provides you with the opportunity to study one of the nation’s leading theaters dedicated to racial and cultural inclusion in the selection and production of their plays, the Mixed Blood Theater Company. You will learn about the history, operations, philosophy, mission and artistic goals and the current season of plays at Mixed Blood. You will read in class the script of a current play in production at Mixed Blood, then go see that play in performance there and learn how to write a play review about what you saw.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

**THTR 1164: Theater in the Round**

1.00 credits (1.00 lec)
This course provides you with the opportunity to study the premier community theater in the Twin Cities area, the Theater in the Round (TRP). You will learn about the history, operations, philosophy, mission and artistic goals and the current season of plays at TRP. You will read in class the script of a current play in production at TRP, then go see that play in performance there and learn how to write a play review about what you saw.
Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
**THTR 1165: Lab Theater**

2.00 credits (2.00 lec)

This course gives you the opportunity for hands-on work experience in acting, directing, or designing in student productions of one-act plays, culminating in live public performances of your work near the end of the semester. You will choose to be an actor, director, designer, or producer/marketer and work through the entire process of production. You will compile a journal as you go, write short essays articulating your response to your chosen play and to your production processes, and discuss/evaluate your plans with your instructor and classmates. After the public performances you will assess with your instructor and classmates in writing and discussion the outcomes of your work.

Fulfills MnTC Goal Area 6.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

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**THTR 1166: Acting for the Camera**

3.00 credits (3.00 lec)

This course provides you with the fundamentals necessary to act in front of the camera for film, television and commercials. You will practice with the four basic camera shots in exercises as you read and respond to key acting texts focused on camera acting. You will learn how to conduct yourself on the set and how to rehearse and perform in collaboration with a director. You will practice audition fundamentals, learning how to get the part, put together a resumé, receive a photo headshot, and explore local Twin Cities on-camera work opportunities. Acting or directing experience is preferred but not required.

Fulfills MnTC Goal Area 6.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

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**THTR 1167: Acting Shakespeare**

2.00 credits (2.00 lec)

This course provides you with a sound foundation for acting in Shakespeare’s plays and learning about Shakespeare’s time: 15th–16th-century London, the language he spoke, and the stage he helped create on which his plays were originally performed. The course includes video instruction from the Royal Shakespeare Company; reading and discussion of the Bard’s scripts; writing your interpretations and personal responses in short essays; journaling; performing acting exercises using Shakespeare’s sonnets, monologues, and scenes; and viewing/responding in writing to a local Shakespeare production.

Fulfills MnTC Goal Area 6.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

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**THTR 1168: Musical Theater**

2.00 credits (2.00 lec)

This course provides you with the opportunity to learn about the American musical theater tradition, gaining knowledge, understanding, and insight into its nature, history, philosophy, structure, and its many varied forms. American Musical Theater is a vital part of the nation’s theatrical experience and continues as an ever-renewing form of innovation and delight to audiences in the national and international theater world. You will learn about musical theater through a variety of activities, including lecture, large- and small-group discussion, video, exercises, and readings of scenes and songs from American musicals. The course concludes with learning how to write a play review, the reading of the script, followed by the viewing of a local musical theater production, after which you will describe and articulate your personal response in your play review.

Fulfills MnTC Goal Area 6.

Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
THTR 1169: Stage Makeup
2.00 credits (2.00 lec)
This course gives you the knowledge to successfully apply makeup for stage performance and for other special occasions calling for dramatic-startling facial makeup. You will read and respond in writing and discussion to a classic text on the theory and application of makeup, accompanied by video viewing of makeup applications. You will also practice designing makeup on paper first, followed by applying makeup in the dressing room to your own face or to a live model that you provide. You will explore both realistic and nonrealistic/fantasy styles and other global stage makeup traditions, such as classical Japanese Kabuki Theater makeup. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

THTR 1170: Penumbra Theater
1.00 credits (1.00 lec)
This course provides you with the opportunity to study one of the great African-American theater companies still performing today, the Penumbra Theater Company. You will learn about the history, operations, philosophy, mission and artistic goals, and the current season of plays at one of the nation’s premier theaters committed to exploring the African-American experience. You will explore in class the script of a current play in production at Penumbra, then go see that play in performance there and learn how to write a play review about what you saw. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

THTR 2105: Introduction to Acting 2
3.00 credits (3.00 lec)
This is a performance course to expand your knowledge of the human condition and human cultures as they relate to acting and to help you analyze and interpret characters in a play. You will perform in several scenes and respond critically to working collaboratively with student directors. Topics covered include stage movement, problem-solving as it relates to character development, performance anxiety, analysis and interpretation of character, and interpretative performances. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

THTR 2145: Introduction to Directing
3.00 credits (3.00 lec)
This course is an introduction to the basics of play directing, which includes guiding the beginning director through the various steps involved in casting, staging, rehearsing and presenting a play. You will gain hands-on experience through directing exercises related to composition, stage business and movement for the stage. You will have the opportunity to direct student actors in several assigned scenes for the class. Fulfills MnTC Goal Area 6.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.
THTR 2150: Theater History 1
3.00 credits (3.00 lec)
This course will expand your knowledge of human cultures and the human imagination through an introductory study of theatrical history, classical dramatic literature, and theatrical eras in broad social, political, and economic context. You will read plays from a wide range of time periods, geographic areas, theatrical styles, and subjects as they relate to the human condition and a cultural history of theater. Topics covered will include theater's origins, how historians reconstruct the elements of theater, dramatic play structure, acting, productions, and the visual elements of theatrical performance from an historical perspective. Fulfills MnTC Goal Areas 6 and 8.
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

THTR 2160: Theater Capstone
2.00 credits (1.00 lec/1.00 lab)
This course completes the sequence leading to the A.F.A. in Theater Arts degree and represents your artistic and technical mastery of theater arts at the associate degree level. You will meet with theater faculty to choose and create a project. Examples of the project might include: 1) Play a leading role in an MCTC or MSU theater season production; 2) Direct and/or act in a one-person show or a one-act play for the fine Arts Festival and/or with the Student Theater Club; or 3) Design the sets, costumes and lights for a student production. You will research and analyze your script, developing that theater script as actor and/or director/or designer into a public performance, and assess the final outcomes with theater faculty.
Prerequisites: THTR 2105 and THTR 2145.

THTR 2998: Directed Study
Prerequisites: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052; placement into ENGL 1110 or completion of ENGL 0900 or ESOL 0051.

Welding and Metal Fabrication

WELD 1000: Applied Shop Mathematics and Measuring Devices
3.00 credits (2.00 lec/1.00 lab)
This course covers math commonly used in metal fabrication industries. Problem-solving skills will be developed through classroom exercises related to work done on the job. Use of various measuring devices will also be covered.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisite: WELD 1150.

WELD 1050: Oxy/Acetylene Welding, Brazing and Cutting
2.00 credits (1.00 lec/1.00 lab)
This course teaches the proper utilization of Oxy/Acetylene equipment and introduces you to brazing and cutting with compressed gasses. You will learn equipment safety and safe welding practices. Plasma arc cutting safety and applications will also be covered. Must be Taken A–F.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
Co-requisite: WELD 1100.

WELD 1100: Shielded Metal Arc Welding
4.00 credits (1.00 lec/3.00 lab)
This course introduces electric arc welding with a flux-coated electrode. You will weld in all positions with various types of electrodes. Arc welding safety, power-sources and electrode selection are also covered. Must be taken A–F.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisite: WELD 1050.

WELD 1150: Blueprint Reading and Welding Symbols
3.00 credits (2.00 lec/1.00 lab)
This course covers basic blueprint reading related to welding and fabricating industrial products. You will interpret the information found on various types of drawings and become familiar with the welding symbols.
Prerequisite: Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.
Co-requisite: WELD 1000.
WELD 2000: Layout (Volumes) and Fixtures
2.00 credits (2.00 lab)
This course enables you to develop skills needed in the layout and fabrication of metal projects, aiding you in estimating material usage, piece part accuracy and production efficiency.
Prerequisite: WELD 1000.

WELD 2050: Gas Metal Arc Welding
3.00 credits (1.00 lec/2.00 lab)
This course covers the gas metal arc welding process known commonly as wirefeed or MIG welding. You will learn GMAW theory, power supplies and machine controls. Proper welding technique will also be covered as you utilize welding equipment to complete various projects.
Prerequisite: Placement into READ 0200 or placement into ESOL 0052 or completion of READ 0100 or ESOL 0042 with faculty recommendation into ESOL 0052.
Co-requisite: WELD 2100.

WELD 2100: Flux Core Arc Welding
2.00 credits (2.00 lab)
This course covers the flux core arc welding (FCAW) process known commonly as wirefeed welding. You will learn FCAW theory, power supplies and machine controls. You will also implement proper welding techniques as you use welding equipment to complete various projects.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisite: WELD 2050.

WELD 2150: Gas Tungsten Arc Welding—DC Applications
3.00 credits (1.00 lec/2.00 lab)
This course covers the theory, power sources and machine controls utilized in gas tungsten arc welding commonly known as TIG welding. You will be welding on a variety of materials using direct current. Proper welding technique will also be covered.
Prerequisite: Placement into ENGL 0900 or ESOL 0051 or completion of ESOL 0041.
Co-requisite: WELD 2200.

WELD 2200: Gas Tungsten Arc Welding—AC Applications
2.00 credits (2.00 lab)
This course covers the theory, power sources and machine controls utilized in gas tungsten arc welding commonly known as TIG welding. You will be welding on primarily aluminum alloys using alternating current. Proper welding technique will also be covered.
Prerequisite: Placement into MATH 0070 or completion of MATH 0060.
Co-requisite: WELD 2150.

WELD 2250: Fabrication Shop/Equipment
3.00 credits (1.00 lec/2.00 lab)
This course provides the knowledge and skills necessary to operate automated shop equipment. You will learn basic CNC (computer numerical control) programming associated with the use of a press brake, automated burning table and robotic arm (for automated welding).
Prerequisite: WELD 1000.

WELD 2500: Advanced GTAW
3.00 credits (3.00 lab)
In this course, you will perform gas tungsten arc welding on a variety of materials. You will utilize GTAW to fabricate projects to blueprint specification and perform root pass welds on pipe. Must be taken A–F.
Prerequisites: WELD 1150, WELD 2150, WELD 2200.

WELD 2600: Pipe Welding
3.00 credits (1.00 lec/2.00 lab)
This course will introduce basic welding techniques on steel pile. You will prepare, fit-up and produce welds on pipe which are visually examined and destructively tested. Prior experience in arc welding theory and technique is required. Must be taken A–F.
Prerequisite: WELD 1100.

WELD 2650: Advanced GTAW
3.00 credits (3.00 lab)
In this course, you will perform gas tungsten arc welding on a variety of materials. You will utilize GTAW to fabricate projects to blueprint specification and perform root pass welds on pipe. Must be taken A–F.
Prerequisites: WELD 1150, WELD 2150, WELD 2200.

WELD 2700: Advanced Blueprint Reading and Welding Symbols
3.00 credits (1.00 lec/2.00 lab)
This course builds on basic blueprint reading and welding symbols covered in WELD 1150. You will perform basic layout and fabricate parts to blueprint specifications. You will also learn to use piping diagrams and connections and fabricate fittings. Must be taken A–F.
Prerequisite: WELD 1150.
WELD 2800: Advanced GMAW  
3.00 credits (3.00 lab)  
In this course, you will perform gas metal arc welding on a variety of materials. You will use GMAW to fabricate projects to blueprint specifications. You will also learn about welding economics. Must be taken A–F.  
Prerequisites: WELD 1150, WELD 2050, WELD 2100.

WELD 2850: Welder Qualification  
2.00 credits (2.00 lab)  
In this course, you will learn documentation related to qualification procedures to various codes and standards. You will also perform welder qualification testing. Must be taken A–F.  
Prerequisite: WELD 1000 or instructor approval.

WELD 2900: Advanced Shop Fabrication/Equipment  
2.00 credits (2.00 lab)  
This course builds on skills learned in WELD 2500. You will utilize computer controlled equipment to fabricate parts to blueprint specifications. You will also learn plasma cutting, press brake programming and robotic welding. Must be taken A–F.  
Prerequisite: WELD 2500.

WELD 2950: Inspection and Testing  
2.00 credits (1.00 lec/1.00 lab)  
In this course, you will examine destructive and nondestructive testing methods. Visual inspection, dye penetrant, magnetic particle, tensile pull, bend test, macro and micro evaluation will be covered. Must be taken A–F.  
Prerequisite: WELD 2000.

Women’s Studies

WOST 1101: Introduction to Women’s Studies  
3.00 credits (3.00 lec)  
This class uses an interdisciplinary approach to examine some of the themes, questions and findings of Women’s Studies scholarship. You will use readings, films, and class discussion to explore social, psychological, biological, and cultural aspects of women’s experiences, ranging from the personal to the public. You will consider cultural notions of women and examine how women’s lives have been shaped by gender identities and gender inequality. Finally, focusing on women as a force in social change, you will explore the profound ways in which the personal is political.  
Fulfills MnTC Goal Areas 5 and 9.  
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

WOST 1120: Introduction to Lesbian Culture  
3.00 credits (3.00 lec)  
This course explores experiences of and theories about lesbians from various cultures in the United States between the late 19th century and the present. You will explore a variety of texts and other media sources to learn about the history, meanings, and representations of relationships between women and to gain a better understanding of lesbian identities and perspectives.  
Fulfills MnTC Goal Areas 5 and 7.  
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

WOST 1140: Women’s Culture  
3.00 credits (3.00 lec)  
This course looks at women’s culture through a number of artistic and scholarly lenses. You will consider whether women share a universal culture and look at the cultural differences found in the United States among women of various ethnicities, social classes, and sexualities. You will learn how women have contributed to culture through the arts and humanities and assess women’s impact on political and social institutions. Finally, you will consider how women’s bodies affect the way they experience and create culture.  
Fulfills MnTC Goal Areas 6 and 7.  
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.
WOST 2200: Female Divine
3.00 credits (3.00 lec)
This course presents the ancient roots of our current cultural views of modern women. Drawing upon goddess traditions from around the world, as well as mythology, literature, and art, you will explore archetypal feminine symbolism in the context of matriarchal and patriarchal value systems. You will explore the symbolic and cultural significance of female divinity and the impact of its loss on all aspects of society, and examine women’s roles in contemporary religion and spirituality.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

WOST 2211: Women’s Response to Violence
3.00 credits (3.00 lec)
This course provides an overview of violence against women and of women’s creative and community-building responses to that violence. You will explore women’s ways of coping with domestic violence, war, stalking, rape, homicide, sexual assault and sexual harassment.
Fulfills MnTC Goal Areas 6 and 9.
Prerequisite: Placement into READ 1300 or completion of READ 0200 or ESOL 0052.

WOST 2212: Ecofeminism
3.00 credits (3.00 lec)
This course introduces the philosophies and viewpoints of the global ecofeminism movement and considers various approaches to address the ecological challenges that women face. You will explore the connection between the economic development of the natural world and women’s status and roles worldwide.
Fulfills MnTC Goal Areas 6 and 10.
Prerequisite: ENGL 1110 or ENGA 1110.

WOST 2213: Women and Empowerment
3.00 credits (3.00 lec)
This course uses women’s creative expressions and experiences to examine the movement from powerlessness to power, both on individual and societal levels. You will learn about a variety of empowerment experiences, from personal narrative to women’s movements from around the world, all focused on ways that women find activism, engagement, and strength.
You will consider the feminist movement in general and other activism organized by women. You will explore ways that women find their voices, tell their own stories, take control of their lives and gain a sense of their own power.
Fulfills MnTC Goal Areas 5 and 9.
Prerequisite: ENGL 1110 or ENGA 1110.

WOST 2235: Women Poets of the World
3.00 credits (3.00 lec)
This course explores the poetic themes, forms, and styles of the major women poets of the world, including English and non-English writers in translation. You will also examine the relationship between language, creative expression and power as they are experienced by women poets around the world.
Fulfills MnTC Goal Areas 6 and 8.
Prerequisite: ENGL 1110 or ENGA 1110.

WOST 2998: Directed Study
Prerequisite: One course from WOST