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# CITY COLLEGE

## City College at Montana State University Billings 2022-2023 Catalog

3803 Central Avenue  
Billings, Montana 59102  
(406) 247-3000  
[www.msubillings.edu/citycollege](http://www.msubillings.edu/citycollege) (<http://www.msubillings.edu/citycollege/>)

### Visiting City College

Individuals are encouraged to visit City College at MSU Billings to learn more about their programs of interest, the support resources/services available through City College and University campuses as well as checking out the classrooms/labs and facilities. Jacket Student Central New Student Services staff will tailor a campus visit to meet your group or individual needs.

Arrangements can be made by calling (406) 247-3007 or going online to [www.msubillings.edu/future/visit.htm](http://www.msubillings.edu/future/visit.htm) (<http://www.msubillings.edu/future/visit.htm>).

### We are here to help and serve you

We look forward to helping you make those important decisions about your future career and the programs that will provide you with the best education for that career.

Please feel free to call, stop by, or visit our website [www.msubillings.edu/citycollege](http://www.msubillings.edu/citycollege) (<http://www.msubillings.edu/citycollege/>).

### Important Notice to All Students

The City College at MSU Billings catalog is published annually by Montana State University Billings as a guide for students, faculty and others interested in the institution. Students are expected to be familiar with the University regulations and information which are set forth in this publication. Effective date of this catalog is August 2022.

The University is not responsible for cancellation of classes due to damage to campus facilities or unavailability of teaching personnel resulting from severe weather conditions, natural or man-made disasters, work stoppages, or emergency situations declared by the Governor.

Advisors assist students with selection of courses and other academically related issues, but the ultimate responsibility for meeting graduation requirements belongs to students.

City College at MSU Billings reserves the right to change the regulations and fees in this catalog at any time during the one-year period the publication is in effect. The institution, with the concurrence of the Board of Regents of Higher Education, also reserves the right to add or withdraw courses and degree programs at any time.

Effective dates of changes will be determined by the proper authorities and shall apply to prospective students and to those who are already enrolled.

For further information, write to:  
Jacket Student Central  
City College at Montana State University Billings  
3803 Central Avenue  
Billings, Montana 59102

### Student Learning Outcomes

MSU Billings understands that student success and student learning take place inside and outside the classroom. The ability to assess and measure that success is imperative. To assure that the University's programs continue to meet the needs of both the students and the community, MSU Billings engages in ongoing review and revision of its assessment processes. This regular review process has resulted in the revision of the academic programs as articulated in this catalog.

### Accreditation

Montana State University Billings is accredited by the Northwest Commission on Colleges and Universities (NWCCU). City College at MSU Billings has individual programs that are accredited and approved by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP), the National League for Nursing Commission for Nursing Education Accreditation (NLN CNEA), the Montana State Board of Nursing, and the International Fire Service Accreditation Congress (IFSAC) Degree Assembly. All programs are approved for veterans.

### City College at MSU Billings: Your Comprehensive Two-Year Community College

City College at MSU Billings is committed to providing its students with *Access and Excellence*. As a comprehensive two-year college, the City College provides students with:

1. access to career and technical programs;
2. university transfer opportunities;
3. outreach and community development programs;
4. workforce training opportunities and partnerships.

Whether it is in the classroom, a special workshop, or in the day-to-day operation of the campus, City College is committed to providing an uncommonly high level of excellence in all programs and services.

The Institution provides *Access and Excellence* to students through instruction. The emphasis at City College is on helping students acquire skills to help them find meaningful employment upon completion of their academic program or transfer to the University to pursue a four-year degree. Our faculty are experienced in their fields and utilize innovative teaching methods to serve their students' needs.

Students experience *Access and Excellence* at City College through field-based experiences such as internships, laboratory work, clinical rotations for nursing and paramedic students, and tutoring opportunities.

Additionally, *Access and Excellence* is maintained in small classes which allow students to get to know their instructors and each other as well as experience hands-on educational opportunities.

### Mission

The mission of the City College at Montana State University Billings is to be the College of first choice, dedicated to the development of workforce capacity by providing top quality learning opportunities and services to meet a variety of career choices and customer needs by being responsive, flexible, and market-driven.

### History

In 1969, the Montana State Legislature created the Billings Vocational-Technical Education Center (BVTC) to serve the postsecondary technical training needs of adults. In 1987, by order of the Legislature, governance passed from the Billings School District to the Montana University System Board of Regents, making the

BVTC one of five campuses of the Montana University System for postsecondary vocational-technical education. In 1994, the BVTC officially merged with Eastern Montana College to become the fifth College of Montana State University Billings, the College of Technology. The merger and subsequent sharing of resources brought about new and improved student services, such as cooperative education, health services, career services, fee payment options, and credit transferability. In June 2012, the Montana University System Board of Regents approved the name change to City College at Montana State University Billings.

## Advisory Boards

To achieve our vision of responsiveness, program advisory boards were created for all programs. These boards are made up of managers, business owners, technicians, supervisors of technicians, technical trainers, equipment vendors, and others concerned with the success of the respective programs they are advising. These boards help us respond to the changing needs of the workforce, maintain industry standards, and provide students with opportunities for internships in business and industry. A City College Advisory Board was created, which is integral to the long-range development of City College at MSU Billings. To achieve our vision of being market-driven, we continually upgrade existing programs and add new courses and programs to meet the needs of employers throughout the greater Billings region. We offer students an education targeted toward career preparation and access to networks for rapid employment.

## Partnerships and Collaborative Relationships

City College at MSU Billings enjoys partnerships with key organizations in the greater Billings region including: Billings Clinic, St. Vincent Healthcare, Billings Fire Department, Spectrum, Underriner Motors, The Billings Gazette, and the Montana Contractor's Association to name a few. In addition, the College offers occupationally specific and related instructional opportunities on campus as well as through distance learning to prepare or retrain individuals to meet the demands of present and future technology. The College continues to develop collaborative relationships and articulation agreements with other institutions of higher education where appropriate. Starting Spring 2021, City College has partnered with Gallatin College and Great Falls College to offer surgical technology and respiratory care associate degrees to students in a joint effort within each community/region. This collaboration is referred to as the OneMSUNetwork ([ou.montana.edu/onmsu/](http://ou.montana.edu/onmsu/) (<https://ou.montana.edu/onmsu/>)). Students in the Billings area are now able to complete all of the training locally for surgical tech and respiratory care instead of having to relocate to the Great Falls area. In the future, there is a goal to add additional programs to this list.

## Faculty

City College at MSU Billings is proud of its outstanding faculty and of their expertise in the specific areas in which they teach. Faculty are highly qualified with expertise in their specialty and current work experience in their field. A list of faculty members and their degrees and certifications are listed in the back of this catalog.

## Diversity

MSU Billings supports all members of the University community in their individual growth toward confidence, individual sense of purpose, and acceptance of civic responsibilities. MSU Billings' actions are ethical and principled to assure dignity and equity for all. MSU Billings seeks to increase staff, faculty and student awareness, understanding, and involvement in the international community. MSU Billings is committed to providing an intellectual and social environment that supports and nurtures diversity awareness and cultural consciousness.

## Location and Campus

City College at MSU Billings is located at 3803 Central Avenue, seven miles from the MSU Billings University campus in the fast-growing west-Billings "Shiloh Corridor Complex," near the intersection of Central Avenue and Shiloh Road. The campus consists of two buildings: the Tech building and Health Sciences building. The MSU Billings soccer field, used by both the women's and men's soccer teams for practice and games, is located on the City College campus.

## Academic Calendar

The academic year consists of Fall and Spring semesters. The summer term has its own calendar. Classes are also sometimes available between the fall and spring semesters in an Intersession format.

## Campus Visits

### Jacket Student Central, (406) 247-3007

Campus tours are available through Jacket Student Central. To ensure the availability of staff, please contact this office to set up a campus visit. Tours can be setup by calling (406) 247-3007; or online at [www.msubillings.edu/future/visit.htm](http://www.msubillings.edu/future/visit.htm) (<http://www.msubillings.edu/future/visit.htm>).

Physical address:

Jacket Student Central  
City College at Montana State University Billings  
3803 Central Avenue  
Billings, MT 59102

## University Policies

This catalog contains the academic regulations governing the undergraduate program. The Student Affairs Handbook contains the detailed policies and procedures governing rights and responsibilities of students in the academic community. Students are referred to that handbook for details concerning use of facilities, code of conduct, student complaint procedures, regulations for student organizations, and other useful information.

## Discrimination, Harassment, Sexual Misconduct, Dating Violence, Domestic Violence, Stalking, and Retaliation Policy and Grievance Procedures

Montana State University Billings is committed to providing an environment that emphasizes the dignity and worth of every member of its community and that is free from harassment and discrimination based upon race, color, religion, national origin, creed, service in the uniformed services (as defined in state and federal law), veteran's status, sex, age, political ideas, marital or family status, pregnancy, physical or mental disability, genetic information, gender identity, gender expression, or sexual orientation. Such an environment is necessary to a healthy learning, working, and living atmosphere, because discrimination and harassment undermine human dignity and the positive connection among all people at our University. Acts of discrimination, harassment, sexual misconduct, dating violence, domestic violence, stalking, and retaliation will be addressed by the university under its Discrimination, Harassment, and Retaliation Policy and Discrimination Grievance Procedures Accompanying the Discrimination, Harassment, and Retaliation Policy. [www.montana.edu/equity/policies/index.html](http://www.montana.edu/equity/policies/index.html) (<http://www.montana.edu/equity/policies/>)

## Title IX of the Education Amendments of 1972

Title IX and its implementing regulation, at 34 C.F.R. § 106.31 (a), provide that no person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular,

research, occupational training, or other education program or activity operated by the university.

Discrimination based upon sex can include sexual harassment or sexual violence, such as sexual intercourse without consent, sexual assault, and sexual coercion. Title IX also prohibits gender-based harassment, which may include acts of verbal, nonverbal, or physical aggression, intimidation, or hostility based on sex or sex-stereotyping, even if those acts do not involve conduct of a sexual nature.

## Reporting, Filing a Complaint or Questions

Montana State University Billings affords any student, employee, applicant for employment or admissions, or person who believes he or she was discriminated against by the University, the right to file a grievance on grounds of discrimination.

Any student, faculty or staff member with questions or concerns about discrimination based on any of the protected classes listed above or who believes that he or she has been the victim of discrimination based on any of the protected classes should contact the Director & Title IX Coordinator in Human Resources Office for assistance or to file a complaint. The Director and Title IX Coordinator is available to discuss options, explain university policies and procedures, and provide education on relevant issues. Additionally, the Discrimination Grievance Procedures Accompanying the Discrimination, Harassment, and Retaliation Policy is found at: [www.montana.edu/equity/policies/grievanceprocedures.html](http://www.montana.edu/equity/policies/grievanceprocedures.html) (<http://www.montana.edu/equity/policies/grievanceprocedures.html>)

HR Director & Title IX Coordinator  
Human Resources Office  
Tel: (406) 657-2278  
Email: [discrimination@msubillings.edu](mailto:discrimination@msubillings.edu)  
Location: McMullen Hall 310

## MSU Billings Conflict of Interest Policy

This policy is adopted pursuant to Board of Regents Policy 770, Conflict of Interest, and applies to all 0.5 FTE or greater employees (hereafter, employees) at Montana State University Billings and Montana law, Standards of Conduct Code of Ethics, Title 2, Chapter 2, Part 1, MCA. Procedures for Conflict of Interest can be found at [www.msubillings.edu/humres](http://www.msubillings.edu/humres) (<http://www.msubillings.edu/humres/>)

A consensual romantic relationship in which one party is in a position to evaluate the work of the other is a potential conflict of interest. When such a potential conflict of interest results between employees or an employee and a student, the employee shall promptly disclose the potential conflict of interest to his or her supervisor. The supervisor and the employee shall take steps to ensure that there is no conflict of interest.

The employee's failure to promptly disclose such a potential conflict of interest may require appropriate resolution, including disciplinary action.

## Consensual Relationship

A consensual romantic relationship in which one party is in a position to evaluate the work of the other is a potential conflict of interest. When such a potential conflict of interest results between employees or an employee and a student, the employee shall promptly disclose the potential conflict of interest to his or her supervisor. The supervisor and the employee shall take steps to ensure that there is no conflict of interest.

The employee's failure to promptly disclose such a potential conflict of interest may require appropriate resolution, including disciplinary action.

## University Police Department

The University Police Department serves as the primary law enforcement agency for Montana State University Billings. The University Police Department consists of a dedicated team of eight sworn police officers, one Clery Compliance Program

Assistant, two office assistants and a number of student workers that assist with parking enforcement duties. All University police officers receive their Public Safety Officer Standards and Training certification through the Montana Law Enforcement Academy. Receiving the Oath of Office through Billings Municipal Court, Montana State University Billings has a Memorandum of Understanding with the City of Billings, granting University police officers city-wide jurisdiction. The University Police Department responds to and investigates all complaints of criminal activity that occur on and around University owned or leased property.

In addition, the University Police Department provides workplace safety training and education, fire safety and fire code inspections, emergency management coordination, and building safety inspections. The University Police Department is dedicated to policing with honor, integrity, courtesy and professionalism.

## Annual Security Report

The safety and security of the entire campus community is extremely important to Montana State University Billings. The Annual Security Report (ASR) publication represents the University's information and data in compliance with the provisions of the Crime Awareness and Campus Security Act of 1990 and the Jeanne Clery Act of 1998.

Federal law mandates that this report include statistics for the previous three years concerning reported crimes that occurred on campus or on property owned or controlled by MSUB and on public property within, or immediately adjacent to and accessible from, the campus.

The ASR is available online at [www.msubillings.edu/police](http://www.msubillings.edu/police) (<http://www.msubillings.edu/police/>)

A paper copy is available at the University Police Department (lower level of the Parking Garage).

## Americans with Disabilities Act of 1990 and ADA Amendment Act of 2008

Montana State University Billings affirms its commitment to nondiscrimination on the basis of disability and its intention to comply with all laws prohibiting such discrimination including Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and the ADA Amendments Act of 2008.

In order to ensure nondiscrimination on the basis of disability, the University will provide appropriate and reasonable accommodation for members of the public, employees and students with disabilities, as defined by these laws.

All University administrators, faculty, staff and students have a responsibility to adhere to the philosophy of equal access and opportunity which is the basis for this nondiscrimination commitment.

An individual may be required to provide relevant, written documentation in order to establish that he/she is a person with a disability and entitled to a reasonable accommodation under the law.

The University's ADA coordinators are the Director of Human Resources and the Director of Disability Support Services.

Any employee or applicant with disabilities concerned about accessibility and/or accommodation issues should contact the Human Resources, McMullen Hall 310, (406) 657-2278 (Voice/TTY).

## Students

Any student with disabilities concerned about accessibility and/or accommodation issues should contact Disability Support Services, COE 135, (406) 657-2283 or City College Tech Building A016, (406) 247-3029.

Disability Support Services reviews complaints by students regarding discrimination and/or harassment on the basis of physical or mental disability relating to disability accommodations in the classroom and physical access to facilities. The full grievance policy is on the DSS website at [www.msubillings.edu/dss](http://www.msubillings.edu/dss) (<http://www.msubillings.edu/dss/>).



# University Calendar

## Fall Semester 2022

| Event  | Date   |
|--|--|
| Residence Halls Open   | Sunday, September 4                                |
| Labor Day <b>Offices Closed</b>  | Monday, September 5                                |
| Classes Begin  | Wednesday, September 7                             |
| Late Registration Fee Applies (\$40.00)  | Friday, September 9                                |
| <b>Students who have not completed fee payment or signed a fee statement before Friday, September 9 may be disenrolled from classes and required to re-register.</b> |  |
| Last Day for Registering/Adding Classes  | Thursday, September 15                             |
| Last Day for Withdrawing/Dropping Classes with a Partial Refund & no "W" on transcript   | Tuesday, September 27                              |
| Columbus Day <b>Classes in Session Offices Open</b> (Exchanged for November 25)  | Monday, October 10                                 |
| Last Day to Drop Classes Without Instructor Permission (No Refund)   | Tuesday, October 25                                |
| Registration For Spring Semester 2023 Begins   | Monday, November 7                                 |
| Election Day <b>No Classes Offices Closed</b>  | Tuesday, November 8                                |
| Veterans Day <b>No Classes Offices Closed</b>  | Friday, November 11                                |
| Last Day to Apply to Graduate Spring Semester 2023   | Friday, November 18                                |
| Last Day to Apply to Graduate Summer Semester 2023 (attending ceremony)  | Friday, November 18                                |
| Last Day to Drop a Class with Approval of Advisor and Course Instructor (No Refund)  | Wednesday, November 23                             |
| Thanksgiving Holiday <b>No Classes</b> (Offices Open November 23)  | Wednesday, November 23 through Sunday, November 27 |
| Final Exam Week  | Monday, December 12 through Thursday, December 15  |
| Final Day to Withdraw from Fall 2022 (all classes, no refund)  | Thursday, December 15                              |
| Semester Ends  | Thursday, December 15                              |
| Residence Halls Close  | Friday, December 16                                |
| Grades Due in the Registrar's Office   | 12 noon, Wednesday, December 21                    |

## Spring Semester 2023

| Event   | Date                                      |
|---|---|
| Residence Halls Open  | Sunday, January 15                        |
| Martin Luther King Day <b>No Classes Offices Closed</b>   | Monday, January 16                        |
| Classes Begin   | Wednesday, January 18                     |
| Late Registration Fee Applies (\$40.00)   | Friday, January 20                        |
| <b>Students who have not completed fee payment or signed a fee statement before Friday, January 20 may be disenrolled from classes and required to re-register.</b> |   |
| Last Day for Registering/Adding Classes   | Thursday, January 26                      |
| Last Day for Withdrawing/Dropping Classes with a Partial Refund & no "W" on transcript  | Tuesday, February 7                       |
| Presidents Day <b>No Classes Offices Closed</b>   | Monday, February 20                       |
| Registration for Summer Session 2023 Begins   | Tuesday, February 21                      |
| Spring Break <b>No Classes Offices Open</b>   | Monday, March 6 through Friday, March 10  |
| Registration for Fall Semester 2023 Begins  | Monday, March 14                          |
| Last Day to Drop Classes Without Instructor Permission (No Refund)  | Wednesday, March 15                       |
| Last Day to Apply to Graduate Fall Semester 2023  | Friday, March 24                          |
| Last Day to Apply to Graduate Summer Semester 2023 (Not attending ceremony)   | Friday, March 24                          |
| Spring Mini Break <b>No Classes Offices Open</b>  | Thursday, April 6 through Sunday, April 9 |
| Last Day to Drop a Class with Approval of Advisor and Course Instructor (No Refund)   | Thursday, April 13                        |
| University Day <b>No Classes Offices Open</b>   | Friday, April 28                          |
| Final Exam Week   | Monday, May 1 through Thursday, May 4     |
| Final Day to Withdraw from Spring 2023 (all classes, no refund)   | Thursday, May 4                           |
| Semester Ends   | Thursday, May 4                           |
| Residence Halls Close   | 12:00 noon, Friday, May 5                 |

|                                      |                            |
|--------------------------------------|----------------------------|
| Commencement                         | Saturday, May 6            |
| Grades Due in the Registrar's Office | 12 noon, Wednesday, May 10 |

**Note: Monday-only classes Spring 2023 add 10 minutes to each class session.**



# Accessibility Data

## For Individual Buildings on Campus

### General Accessibility

| Building                              | Entrance ramped on ground level | Automatic entrance doors | Number of accessible floors | Stairs non-skid | Interior ramps available | Elevators |
|---------------------------------------|---------------------------------|--------------------------|-----------------------------|-----------------|--------------------------|-----------|
| Apsaruke                              | yes                             | yes                      | 3                           | yes             | yes/F                    | P*        |
| Art Annex                             | yes                             | yes                      | 1                           |                 | no                       |           |
| Cisel Hall                            | yes                             | yes                      | 4                           | yes             | yes                      | P*        |
| College of Business (McDonald Hall)   | yes                             | yes                      | 3                           |                 | yes                      | P*        |
| College of Education                  | yes                             | yes                      | 4                           | yes             | no                       | P*        |
| City College Tech Building            | yes                             | yes                      | 2                           |                 | yes                      | P*        |
| City College Health Sciences Building | yes                             | yes                      | 2                           | yes             | no                       | P*        |
| Facility Services                     | yes                             |                          | 1                           |                 |                          |           |
| Family Housing                        | yes                             | no                       | 1                           |                 |                          |           |
| Liberal Arts                          | yes                             | yes                      | 8                           | yes             | no                       | P*        |
| Library                               | yes                             | yes                      | 3                           | yes             | yes/F                    | P*        |
| McMullen Hall                         | yes                             | yes                      | 4                           | yes             | no                       | P*        |
| Parking Garage                        | yes                             |                          |                             | yes             | yes                      | P*        |
| Petro Hall                            | yes                             | yes                      | 8                           | no              | no                       | P*        |
| Physical Education                    | yes                             | yes                      | 2                           | yes             | yes                      | P*        |
| Rimrock Hall                          | yes                             | yes                      | 6                           | no              | no                       | E/G,P*    |
| Science                               | yes                             | yes                      | 3                           | yes             | no                       | P*        |
| Security                              | yes                             |                          | 1                           |                 | yes                      |           |
| Student Union                         | yes                             | yes                      | 2                           | no              | no                       | P*        |

### Restroom Facilities

| Building   | Restroom designed for wheelchair | Entrance door width = 32" | Wall accessories below 40"/A | Access to showers and tubs |
|------------|----------------------------------|---------------------------|------------------------------|----------------------------|
| Apsaruke   | yes                              | yes                       | yes                          |                            |
| Art Annex  | yes                              | yes                       | yes                          |                            |
| Cisel Hall | yes/B                            | yes                       | yes                          |                            |

|                                      |       |     |     |     |
|--------------------------------------|-------|-----|-----|-----|
| College of Business (McDonald Hall)  | yes/F | yes | yes |     |
| College of Education                 | yes   | yes | yes |     |
| City College Tech Building           | yes   | yes | yes |     |
| City College Health Science Building | yes   | yes | no  |     |
| Facilities Services                  | yes   | yes | yes |     |
| Family Housing                       | yes   | yes | yes | yes |
| Liberal Arts                         | yes/C | yes | yes |     |
| Library                              | yes/D | yes | yes |     |
| McMullen Hall                        | yes   | yes | yes |     |
| Parking Garage                       |       |     |     |     |
| Petro Hall                           | yes/H | yes | yes | no  |
| Physical Education                   | yes   | yes | yes | yes |
| Rimrock Hall                         | yes   | yes | yes | yes |
| Science                              | yes   | no  | yes |     |
| Security                             | yes   | yes | yes |     |
| Student Union                        | yes   | yes | yes |     |

A: In most restrooms, the sinks but not the towels are below 40"

B: Off ramp between new and old building

C: 1st floor, between Liberal Arts Building and Library/2nd & 5th floor Liberal Arts Building

D: 2nd floor, between Library doors and stairs

E: Stairs to basement

F: Wheelchair lifts

G: Freight elevator does not have automatic doors

H: Lobby area

P: Passenger Elevators

\* Braille labels

# Montana State University Billings Mission & Vision

## Mission

Montana State University Billings delivers a transformative education that empowers students from diverse backgrounds to succeed.

## Vision

Educating students to impact an evolving global community.

## Core Themes

**Theme I:** Build educational programs to support student needs

**Objective 1 – Educate:** Establish educational opportunities that address student needs and meet occupational demand

**Theme II:** Progressively grow the university

**Objective 2 – Recruit/Retain:** Recruit and develop a vibrant academic community focused on students, faculty, and staff

**Theme III:** Strengthen relationships with the community to enhance partnership opportunities

**Objective 3 - Partnership:** Reciprocal partnerships with public and private entities that promote innovation as well as foster dynamic educational and occupational opportunities

**Theme IV:** Unify, invigorate, and engage MSUB's structure and culture

**Objective 4 – Infrastructure:** Modernize MSUB facilities into an attractive hub that supports the community and student success

**Objective 5 – Stewardship:** Create a culture of collaboration and responsible stewardship of resources

# Dean's Welcome

## Welcome from the Dean

It is my pleasure to welcome you to City College and Montana State University Billings. I am delighted you have selected City College to further your education.

City College provides students with the academic background and skills needed for either an associate of science degree that will transfer towards a further bachelor degree program or an associate of applied science degree or certificate that will prepare you for immediate employment in your selected occupational area. The Associate of Applied Science degree also offers the opportunity for you to transfer towards a bachelor of applied science degree at MSU Billings. While a student at City College, you will receive a high-quality education in classroom settings, laboratories, and field-based experiences where industry standards are the norm. City College and MSU Billings sits in the heart of Billings, Montana where business and industry thrive.

This allows City College to provide a great opportunity for students to experience learning and accessing the Billings community as their living and learning laboratory via internships, community outreach projects, practicums, and volunteerism, to name only a few of the options available.

City College faculty members are current and experienced in their respective fields. City College programs are directly tied with local business, industry, and prospective employers through advisory committees and the College's Advisory Board to assure the curriculum you study continues to meet or exceed current and changing industry standards. This helps ensure your preparation for immediate employment upon graduation.

I am excited to share with you our vision of enhancing the mission of City College to take on the role of a comprehensive community college. The College's primary focus is to provide two-year education in associate degrees, certificates and lifelong learning opportunities for the entire region. I am sure you will find City College to be an indispensable part of your life towards not only advancing your knowledge, skills, and experience towards your educational and career goals, but a full university experience with student life, residential housing, clubs/organizations, athletics, and being part of a college community. City College is one college of five within MSU Billings, so we provide you an opportunity to continue to advance your education and skills by further pursuing a four year bachelor's degree.

The purpose of this catalog is not only to assist you in planning your academic program, but also to provide you with additional information about Montana State University Billings and City College. If you have questions, please ask. All of us at Montana State University Billings are committed to serving you. We are very pleased and excited you have chosen City College as the next step in preparing for your future.

Sincerely,

Vicki N. Trier, Ph.D.

Dean

City College at Montana State University Billings










# Student Services Phone Numbers

## Frequently Used Phone Numbers

| Student Services and Facilities           | City College Campus | University Campus 1500 University Drive |
|---|---------------------|---|
| Admissions                                | 406-247-3012        | 406-657-2888                            |
| Academic Support Center                   | 406-247-3022        | 406-657-1641                            |
| Advising Center                           | 406-247-3019        | 406-657-2240                            |
| Athletics                                 |                     | 406-657-2369                            |
| Campus Store                              |                     | 406-657-2121                            |
| Jacket Student Central - Student Services | 406-247-3019        |   |
| Career & Employment Services              |                     | 406-657-2168                            |
| Cashier                                   | 406-247-3002        | 406-657-1709                            |
| Center for Engagement                     |                     | 406-657-2387                            |
| Disability Support Services               | 406-247-3029        | 406-657-2283                            |
| Diversity Center                          |                     | 406-896-5902                            |
| Financial Aid                             | 406-247-3004        | 406-657-2188                            |
| Health Services                           | 406-247-3027        | 406-657-2153                            |
| Job Locator (Placement Services)          |                     | 406-657-1618                            |
| Library                                   |                     | 406-657-1662                            |
| Military and Veteran Success Center       |                     | 406-657-2968                            |
| Native American Achievement Center        |                     | 406-657-2182                            |
| New Student Services                      | 406-247-3007        | 406-657-2888                            |
| Operator                                  | 406-247-3000        | 406-657-2011                            |
| Physical Education Building               |                     | 406-657-2370                            |
| Prior Learning Assessment                 |                     | 406-247-3019                            |
| Recreational Activities                   |                     | 406-657-2881                            |
| Registrar                                 |                     | 406-657-2158                            |
| Residence Life and Housing                |                     | 406-657-2333                            |
| Student Support Services - TRIO           | 406-247-3028        | 406-657-2162                            |
| University Police                         |                     | 406-657-2147                            |

## Degrees, Options, and Programs List

Moratorium = City College is not currently taking students into the program.

| Title  | Level       |
|--|-------------|
| AA/AS General Studies (Self-Designed) (p. 52)  (Offered online)   |             |
| Accounting Assistant Certificate of Applied Science *Program placed on moratorium* (p. 53)   | Certificate |
| Accounting Technology Associate of Applied Science Degree (p. 53)  (Offered online)   | Associate   |
| Associate of Science Registered Nurse (ASN) (p. 54)  | Associate   |
| Automobile Collision Repair and Refinishing Technology Associate of Applied Science Degree (p. 56)   | Associate   |
| Automobile Collision Repair Technology Certificate of Applied Science (p. 57)  | Certificate |
| Automobile Refinishing Technology Certificate of Applied Science (p. 57)   | Certificate |
| Automotive Technology Associate of Applied Science Degree (p. 58)  | Associate   |
| Automotive Technology Certificate of Applied Science (p. 59)   | Certificate |
| Business Administration Associate of Science Program of Study (p. 60)  (Offered online)   | Associate   |
| Computer Programming and Application Development Associate of Applied Science Degree (p. 61)   | Associate   |
| Computer Systems Technology Associate of Applied Science Degree (p. 62)  | Associate   |
| Construction Management Associate of Applied Science Degree (p. 63)  | Associate   |
| Construction Technology Carpentry Certificate of Applied Science (p. 64)   | Certificate |
| Craft Brewing and Fermentation Certificate of Technical Studies (p. 64)  | Certificate |
| Criminal Justice Associate of Science Program of Study (p. 65)   | Associate   |
| Cybersecurity/Network Support Associate of Applied Science (p. 66)   | Associate   |
| Cybersecurity/Network Technology Associate of Science Program of Study (p. 67)   | Associate   |
| Diesel Technology Associate of Applied Science Degree (p. 67)  | Associate   |
| Diesel Technology Certificate of Applied Science (p. 68)   | Certificate |
| Energy Technician Certificate of Applied Science *Program placed on moratorium* (p. 69)  | Certificate |
| Fire Science Associate of Science Program of Study (p. 69)   | Associate   |
| General Business Associate of Applied Science Degree (p. 70)  (Offered online)  | Associate   |
| Human Resource Management Certificate of Applied Science (p. 71)  (Offered online)  | Certificate |
| Human Resources Associate of Science Program of Study (p. 72)  (Offered online)   | Associate   |
| Human Resources General Applied Emphasis Associate of Science Program of Study *Program placed on moratorium* (p. 73)  (Offered online) | Associate   |
| Instrument and Electrical Technician Associate of Applied Science (p. 74)  | Associate   |
| Medical Certificate of Technical Study *Program placed on moratorium* (p. 74)  | Certificate |
| Medical Coding Insurance Billing Certificate of Applied Science (p. 75)  (Offered online)   | Certificate |
| Networking Technology Certificate of Applied Science *Program placed on moratorium* (p. 76)  | Certificate |
| Paramedic Associate of Applied Science Degree (p. 76)  | Associate   |
| Paramedic Certificate of Technical Study *Program placed on moratorium* (p. 78)  | Certificate |
| Practical Nursing Certificate of Applied Science (p. 78)  (Offered online)  | Certificate |
| Process Plant Technology Associate of Applied Science Degree (p. 79)   | Associate   |
| Radiologic Technology Associate of Applied Science (p. 80)   | Associate   |
| Respiratory Therapy Associate of Applied Science (p. 82)   | Associate   |
| Surgical Technology Associate of Applied Science (p. 84)   | Associate   |

|   |             |
|---|-------------|
| Trauma Certificate of Technical Study *Program placed on moratorium* (p. 85)    | Certificate |
| Ultrasound Technology Certificate of Applied Science (p. 85)                    | Certificate |
| Welding and Metal Fabrication Technology Associate of Applied Science (p. 86)   | Associate   |
| Welding and Metal Fabrication Technology Certificate of Applied Science (p. 87) | Certificate |

# Course Delivery Modes

## Descriptions of Available Course Delivery Modes

### In-person

This class is delivered synchronously and face-to-face (F2F), with regular in-person attendance necessary. Students and faculty participate in person at assigned physical locations at specific times.

*Course registration codes begin with -00*

### Online

This class is delivered asynchronously and remotely, using MSUB's Learning Management System (LMS.) Students and faculty interact regularly but there is no synchronous requirement. These courses must comply with the MSUB Core Principles of Quality for Online Courses.

*Course registration codes begin with -80*

### Blended/Hybrid

This class is delivered partially online in an asynchronous format and partially through regular F2F interaction, typically in the classroom. There may also be some synchronous remote requirement. Both online and F2F interactions are required for the course. This delivery is characterized by the expectation of reduced F2F class meeting time when compared to the equivalent credit in-person course.

*Course registration codes begin with -60*

### HyFlex

This class allows fully flexible participation for students. Students may choose to participate fully online, fully in-person or a combination of both and may change their participation mode at any time. HyFlex courses must comply with the MSUB Core Principles of Quality for Online Courses.\* There is no synchronous requirement.

*Course registration codes begin with -70*



## Adult Learners

MSU Billings has many options to support busy adults who wish to return to college.

We are pleased to be able to offer an opportunity to take college courses via the internet as a way of overcoming barriers of time and place. Our students have told us they need the ability to reach their academic goals in an environment that affords them freedom and flexibility, comfort and convenience, and more time for work and family. By combining our commitment to Access and Excellence with the technology that allows students to "Learn Online... Anywhere...Anytime," this program ensures that students can achieve personal, professional, and academic goals without sacrificing the other things that are important in life.

Through the MSU Billings Online University, students can complete General Education requirements as well as the following certificates and degrees listed below. We are continuously reviewing our programs to determine what we can offer in an online format. To get a **current** list of degrees and classes offered online, please check the online website [www.msubonline.org](http://www.msubonline.org) (<http://www.msubonline.org>).

## Online Programs Currently Offered through City College at MSU Billings:

### Associate Degree Programs

A.A.S. Accounting Technology  
 A.S. Business Administration  
 A.A. General Studies (Self-Designed)  
 A.S. General Studies (Self-Designed)  
 A.A.S. General Business  
 A.S. Human Resources-Applied Emphasis  
 A.S. Human Resources-College of Business Articulated Emphasis

### Certificates of Applied Science

Human Resources Management  
 Medical Coding & Insurance Billing  
 Practical Nursing (has some required training dates on campus each term)  
 Ultrasound (has some required training dates on campus each term)

Please refer to the program requirements for these academic programs listed alphabetically in this catalog.

**Students can also take individual online courses** for professional development, to transfer to another institution, to apply toward another MSU Billings degree program, or to supplement on-campus course schedules with an online learning experience.

Students are encouraged to work with an advisor when pursuing any of these degree programs to ensure that courses selected will successfully meet all degree requirements and also fulfill the student's academic interests and goals. For academic advising and course selection assistance, please contact the MSU Billings Online University Advisor at [inquiry@msubonline.org](mailto:inquiry@msubonline.org).

## Coordinated On Campus/Online Programs

Students can begin their degree program with some general education courses offered on campus or online. There are also various non-credit courses offered in the evening.

**City College at MSU Billings programs currently offered in Coordinated On Campus/ Online Studies mode:**

### AAS Degrees

General Business  
 Human Resources-General Applied Emphasis  
 Human Resources-College of Business Articulated Emphasis

Business Administration

**Certificate of Applied Science**  
 Human Resource Management

## Partnership with School District #2 Adult Basic Education Program

City College at MSU Billings partners with Adult Basic Education to assist students needing college preparation. Services provided include basic literacy skills for math and English and HiSET Preparation. Classes are self-paced with individualized instruction and flexible scheduling. Call 406-281-5001 for more information.

Adult Basic Education  
 415 N 30th St  
 Billings, MT 59101

# Checklists

## First Time Student Checklist

- Complete the online Application for Admission at [www.msubillings.edu/future/apply/index.htm](http://www.msubillings.edu/future/apply/index.htm) (<http://www.msubillings.edu/future/apply/>).
- If born after December 31, 1956, provide proof of 2 doses of immunization against MMR (Measles, Mumps & Rubella) that were administered on or after your first birthday and after December 31, 1967.
- Submit final high school transcript to City College Jacket Student Central after graduation
- If interested in securing financial aid, apply for financial aid by submitting the Free Application For Federal Student Aid (FAFSA) online at [www.studentaid.gov](http://www.studentaid.gov) (<https://studentaid.gov/>) by the priority date of December 1.
- To apply for scholarships, submit the online Scholarship Application. Priority is given to those that apply by February 1, but will be awarded on an on-going basis through September. Please go to this website to get started: [www.msubillings.edu/scholarships](http://www.msubillings.edu/scholarships) (<https://www.msubillings.edu/scholarships/>).
- Complete housing form and submit early. Signups begin early December with a priority deadline of May 1. Read and follow the directions outlined in the Housing guide published online at [www.msubillings.edu/reslife](http://www.msubillings.edu/reslife) (<http://www.msubillings.edu/reslife/>) to reserve housing.
- Attend new student registration and orientation sessions prior to the term you wish to attend. Contact Jacket Student Central at (406) 247-3007 for dates and processes.
- Complete registration for classes. (Registration is open to the start of classes)
- Pay tuition & fees.
- Start classes.
- Participate in student organizations.

## Checklist for Students Returning After An Absence

- Complete the Former Student Application and return it to Jacket Student Central as early as possible before the term you will enter. The application can be completed fully online through your myInfo account or a pdf, available at [www.msubillings.edu/reg/forms/ReAdmitForm.pdf](http://www.msubillings.edu/reg/forms/ReAdmitForm.pdf) (<http://www.msubillings.edu/reg/forms/ReAdmitForm.pdf>), which can be filled out and returned to the office. Also provide transcripts from any college you have attended since leaving MSU Billings or City College at MSU Billings.
- If born after December 31, 1956, provide proof of 2 immunizations against measles and rubella that were administered on or after your first birthday and after December 31, 1967.
- Submit the Free Application for Federal Student Aid (FAFSA) online at [www.studentaid.gov](http://www.studentaid.gov) (<https://studentaid.gov/>) by the priority date of December 1, if you plan to enter City College at MSU Billings the following Fall term. For other terms, submit the financial aid application as early as possible before the term you will enter.
- Apply for scholarships by completing the online Scholarship Application for Current and Returning Students by the priority deadline of February 1, with awarding in an on-going basis through September.
- Call the advising office to schedule a visit with an advisor (City College Tech Building, Jacket Student Central, First Floor, 406-247-3019) to discuss your plans and to register for classes.
- Pay tuition and fees.
- Start classes.
- Participate in student organizations.

# Admissions and Registration

## City College Tech Building, Jacket Student Central, First Floor

(406) 247-3000 or 1-800-565-MSUB ext.3000

www.citycollege.msubillings.edu (<http://www.citycollege.msubillings.edu>)

City College at Montana State University Billings believes that every student who is academically capable of successfully completing a course of study available through City College should be given the opportunity of enrolling in the University without regard to age, creed, handicap, national origin, race or sex.

City College at Montana State University Billings reaches out to encourage minority students to attend the institution. Staff representatives of the Office of New Student Services make frequent visits to middle schools, high schools, community colleges, and tribal colleges to provide guidance to students as they consider and explore their educational future.

## Admissions

### New Students: How to Apply

**NOTE: Students making application to attend City College at Montana State University Billings should be aware that the Admission Requirements may have changed since the publication of this document. Please contact the Office of Admissions (406) 247-3012, 1-800-565-MSUB; or write to:**

#### Admissions

City College at Montana State University Billings  
3803 Central Avenue  
Billings, MT 59102

**For additional information regarding admissions or to obtain an application for admissions, please:**

- Visit City College on the web at [www.msubillings.edu/citycollege](http://www.msubillings.edu/citycollege) (<http://www.msubillings.edu/citycollege/>)
- Email [ccadmissions@msubillings.edu](mailto:ccadmissions@msubillings.edu)
- Contact the Office of New Student Services at (406) 247-3007, or 1-800-565-MSUB
- Write to

Jacket Student Central

City College at Montana State University Billings  
3803 Central Avenue  
Billings, MT 59102

1. Complete and submit an application for admission. Applications can be completed online at [www.citycollege.msubillings.edu](http://www.citycollege.msubillings.edu) (<http://www.citycollege.msubillings.edu>). Applications will be processed only for the term that the applicant indicates on the application.
2. Montana residents can apply for free. Out of state students submit a \$30.00 nonrefundable application fee (credit/debit card, check or money order) with the application for admission.
  - a. If you have not previously attended an accredited college or university, request an official transcript from your high school that includes the graduation date, final class rank, and grade point average and have it sent to:

Jacket Student Central  
City College at Montana State University Billings  
3803 Central Avenue  
Billings, MT 59102

- b. Unofficial transcripts can be utilized for initial review of your application, but we will require you to send official transcripts prior to the start of your intended semester.
3. Before enrolling for an initial term, all post-secondary students must comply with immunization requirements of ARM 37.114.701-721:
  - a. Students born in 1957 or later must provide evidence that they have received two measles and two rubella immunizations, with dose one administered at 12 months of age or later and dose two administered at least 28 days after dose one. No measles vaccination before 1967 is valid. No rubella vaccination before 1969 is valid. As an alternative, a student may supply a laboratory report from a CLIA approved laboratory indicating that the student is immune to measles and/or rubella.
  - b. Under ARM 37.114.711, the prospective pupil must receive a second dose of live measles and rubella vaccine before the beginning of the succeeding school term and no earlier than 28 days after administration of the first dose of measles and rubella vaccine.
  - c. A student may be exempt from the above requirements for medical reasons (ARM 37.114.715) providing the student supplies a statement from a physician (MD or DO) holding a license to practice in the United States or Canada stating:
    - i. The specific immunization that is contraindicated;
    - ii. The time period the immunization is contraindicated; and
    - iii. The reasons for the contraindication.
  - d. A student may be exempt from the above requirements for religious reasons providing the student supplies Montana Department of Public Health and Human Services Form HES-113 that immunizations are contrary to the student's religious beliefs. This document must be submitted annually by any student claiming a religious exemption (ARM 37.114.716).

## When to Apply

Students wishing to attend City College at Montana State University Billings should apply for admission as early as possible prior to the term in which enrollment is desired.

## New First-Time Students: Admission Requirements

City College at MSU Billings requires first-time students to have earned either a high school diploma from an accredited institution, a GED, or HiSET. In an effort to meet individual needs, City College has established special admission procedures for students seeking admission to certain programs. Contact City College at MSU Billings for this information at (406) 247-3007.

## Transfer Students

### How to Apply

**NOTE: Students making application to attend City College at Montana State University Billings should be aware that Admission Requirements may have changed since the publication of this document. Please contact Jacket Student Central (406) 247-3012 or 1-800-565-MSUB ext. 3012; or email [ccadmission@msubillings.edu](mailto:ccadmission@msubillings.edu) or write to**

**Jacket Student Central  
City College at Montana State University Billings  
3803 Central Avenue  
Billings, MT 59102**

Applicants who have attempted 12 or more GPA credits at another regionally accredited (p. 41) college or university are considered transfer students. To be admitted to City College at Montana State University Billings, transfer students must do the following:

1. Complete and submit an application for admission. Applications for admission may be obtained online at [www.msubillings.edu/citycollege](http://www.msubillings.edu/citycollege) (<http://www.msubillings.edu/citycollege/>) or from Jacket Student Central Admissions City College at Montana State University Billings 3803 Central Avenue Billings, MT 59102. If you have questions please call (406) 247-3012 or 1-800-565-MSUB, ext. 3012 or email [ccadmissions@msubillings.edu](mailto:ccadmissions@msubillings.edu). Applications will be processed only for the term the applicant indicates on the application.
2. Montana residents can apply for free. Out of state students submit a \$30.00 nonrefundable application fee (credit/debit card, check or money order) with the application for admission.
3. Transfer students must request official and complete transcripts from each college attended or a transcript which indicates that a baccalaureate degree has been earned and transcripts from any colleges attended after the degree was earned. Transcripts must be sent directly to Jacket Student Central, City College at Montana State University Billings, 3803 Central Avenue, Billings, MT 59102
4. Before enrolling for an initial term, all post-secondary students must comply with immunization requirements of ARM 37.114.701-721:
  - a. Students born in 1957 or later must provide evidence that they have received two measles and two rubella immunizations, with dose one administered at 12 months of age or later and dose two administered at least 28 days after dose one. No measles vaccination before 1967 is valid. No rubella vaccination before 1969 is valid. As an alternative, a student may supply a laboratory report from a CLIA approved laboratory indicating that the student is immune to measles and/or rubella.
  - b. Under ARM 37.114.711, the prospective pupil must receive a second dose of live measles and rubella vaccine before the beginning of the succeeding school term and no earlier than 28 days after administration of the first dose of measles and rubella vaccine.
  - c. A student may be exempt from the above requirements for medical reasons (ARM 37.114.715) providing the student supplies a statement from a physician (MD or DO) holding a license to practice in the United States or Canada stating:
    - i. The specific immunization that is contraindicated;
    - ii. The time period the immunization is contraindicated; and
    - iii. The reasons for the contraindication.
  - d. A student may be exempt from the above requirements for religious reasons providing the student supplies Montana Department of Public Health and Human Services Form HES-113 that immunizations are contrary to the student's religious beliefs. This document must be submitted annually by any student claiming a religious exemption (ARM 37.114.716).

**Montana Resident Transfer Students** will be admitted upon receipt of an official and complete transcript from each college or university attended. A resident transfer student applicant must meet the criteria for "good academic standing" as defined by City College at Montana State University Billings.

**Non-Montana Resident Transfer Students** must meet the in-state student requirements and must also have a 2.00 cumulative grade point average for all college level work before his/her admission is approved.

## When to Apply

Transfer applicants should apply for admission as early as possible prior to the term in which enrollment is desired.

## Former MSU Billings Student Re-Admission

A former student of Montana State University Billings or City College at Montana State University Billings who is in good standing and who was not in attendance the preceding term will be eligible for registration after completing the following:

1. Complete and file a former student application with the City College Office of Admissions, or re-admit online at [www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu>) or via [myinfo/myMSUB](http://myinfo/myMSUB). A \$40 non-refundable fee is assessed to new graduate students.
2. Request that transcripts from institutions attended, if any, since last attending Montana State University Billings be sent to the City College Office of Admissions.

## When to Apply

Returning students should apply for re-admission as early as possible prior to the semester in which enrollment is desired.

## Special Admission Procedures

In an effort to meet individual needs, City College at MSU Billings has established special admission procedures for undergraduate students which pertain to non-high school graduates, home-schooled students, high school students, and non-degree applicants.

**Note: Students making application to attend City College at Montana State University Billings should be aware that admission requirements may change at any time. Please contact the Office of Admissions (406) 247-3012; or write to the Office of Admissions City College at Montana State University Billings 3803 Central Avenue Billings, MT 59102**

Students in these categories would also complete the process of application outlined in the "All New Students: How to Apply" section as it is appropriate to their circumstances. However, the following information also applies:

## Non-High School Graduates

Non-high school graduates may be admitted on the basis of the General Educational Development (GED) test, or High School Equivalency Test (HiSET). Various boards establish minimum scores for these tests or groups and students can visit with the Advising Center (406-657-2240/406-247-3019) for current minimums. Students in this group who wish to enroll part-time may do so without restriction.

## High School Connections

High School Connections is a program that gives high school students the opportunity to earn high school and college credits simultaneously—the same class earns credits for both. The High School Connections dual enrollment program at MSUB is part of a statewide initiative to increase the number of students pursuing post-secondary education by smoothing the transition between secondary and post-secondary education and to help reduce college debt. High school Connections is an opportunity for high school students to complete a college class within their high school schedule, with a familiar teacher, and in a familiar classroom.

Dual Enrollment students have the opportunity to earn credits at an incredibly reduced rate. Your first two classes that you take through Dual Enrollment are free to you through the statewide MT OCHE **One-Two-Free program**. After that, you pay just \$53.05 per credit

Credits earned are fully transferable in the Montana University System and transfer widely to other accredited colleges and universities, but please verify degree requirements and acceptance of credits.

### University Connections

University Connections is a dual credit program available to all high school and home school students across Montana. The University Connections program allows high school students to take college-level classes directly through MSUB & City College, both on-campus and online. Dual Enrollment students have the opportunity to earn credits at an incredibly reduced rate. Your first two classes that you take through Dual Enrollment are free to you through the statewide MT OCHE **One-Two-Free program**. After that, you pay just \$53.05 per credit. Tuition and fees are subject to change by the Montana Board of Regents of Higher Education. Additional course fees may apply. For questions regarding current tuition and fees, please contact the Business Office at (406) 657-2301. There is no limit on the number of credits enrolled for each semester. High school seniors are still eligible for the University Connection program the summer following graduation. Enroll in an Online University Connection course, and the technology fee will be waived.

### Non-Degree Applicants

An applicant who wishes to pursue studies for personal growth and who does not wish to work toward a formal degree at City College at Montana State University Billings may apply as an undergraduate non-degree student. Acceptance into this category does not constitute acceptance into a degree-granting program. All applicants should have sufficient educational background to qualify for the course or courses in which enrollment is sought and must certify on the application form that they have graduated from high school or appropriate Ability-to-Benefit test.

A maximum of 32 semester hour credits earned as a non-degree student may be applied to an undergraduate degree at City College at Montana State University Billings if the applicant applies and is accepted into a degree program. Financial aid is not available to students in this category, nor may they qualify for the WUE (Western Undergraduate Exchange) program.

This category is not open to students currently on academic suspension from City College at Montana State University Billings or on academic suspension from any other college or university.

No academic credentials or transcripts are required in support of the application; however, non-degree students who later wish to change to a degree program must furnish required supporting credentials and must meet all the regular admission requirements. Financial aid is not available to students in this category.

## Falsification of Information

Each student is responsible for knowing and for complying with all regulations regarding the admission procedures. Failure to be informed or to comply does not excuse a student from responsibility or from any penalty or difficulty which may be encountered. Misrepresentation or falsification of a student's enrollment status or application for admission will be sufficient grounds to cancel a student's current registration and to suspend the student for two semesters. It is the student's responsibility to know his/her enrollment status at his/ her former institution(s).

## Denial of Admission

Under Board of Regents' policy (301), MSU Billings "may deny or condition admission, readmission, or continuing enrollment of any individual who, in the judgment of the campus, presents an unreasonable risk to the safety and welfare of the campus and persons thereon. In making such judgment, the campus may, among other things, take into account the individual's history and experience relative

1. to violence and destructive tendencies,
2. to behavior on other educational institutions, and
3. to any rehabilitative therapy the individual may have undergone."

Based on this policy and completion of the application for admission and other application materials (which may include but not be limited to the Safety Questionnaire, counselor input, advising or other student affairs interview and input), a student may be denied admission or may be given provisional admission at part-time or full-time status under the guidance of an advisor.

Reasons for denial shall be communicated to the individual in writing. Applicants may appeal their denial to the Vice Chancellor for Student Access and Success.

## Western Undergraduate Exchange (WUE)

City College at Montana State University Billings participates in the Western Undergraduate Exchange (WUE), a program of the Western Interstate Commission for Higher Education and other western states. Through WUE, undergraduate students who are not residents of Montana may enroll at City College at Montana State University Billings and pay reduced nonresident tuition and fees. This WUE tuition rate is in-state tuition plus 50 percent of that amount. Because City College at Montana State University Billings participates, residents of Montana may enroll under the same terms in designated institutions and programs in other participating states.

Resident students from the following may participate if they meet eligibility requirements: Alaska, Arizona, Montana, California, Oregon, Colorado, Nevada, South Dakota, Hawaii, New Mexico, Utah, Idaho, North Dakota, Washington, Wyoming, and the Commonwealth of the Northern Mariana Islands (CNMI).

All degrees and programs are offered to undergraduates in WUE. This program may be subject to enrollment limits established by the Montana Board of Regents. Application forms for WUE are available at the Office of Admission (406) 657-2888 or 1-800-565-MSUB.

## International Students

International applicants must meet the out-of-state admission requirements in addition to the following:

1. Certified copies of all certificates, degrees, and diplomas with a certified translation of the records.  
If you have any post-secondary level course(s) completed outside of the U.S. or in non-English-speaking Canada to transfer to Montana State University Billings, we need a **course-by-course evaluation** completed by one of the services highlighted below:
  - SpanTran
  - ECE
 Evaluations from all other services/agencies are subject to prior approval and acceptance for transfer. Please verify with the Office of Admissions prior to requesting a credential evaluation from any other agency or service.  
Note: There is a substantial variation in grading scales used in secondary and post-secondary educational institutions in other countries. Conversion of any grading scale to the most common U.S. grading scale (A-to-F, four passing grades, and one failing grade) is to use primary grades or grade ranges only. For this reason, plus and/or minus designations will not be used when transcribing foreign transfer credits.
2. Completed MSU Billings Financial Statement and must present evidence of sufficient funds to cover the estimated cost of tuition and fees as well as living expenses for one academic year at MSUB from a reliable financial institution, bank, or U.S. citizen who will accept responsibility for the student's financial obligations.
3. Students from non-English speaking countries must provide evidence of proficiency in English. A list of approved programs and examinations for undergraduate admission can be found at [www.msubillings.edu/internationalstudies/admissions/englishproficiency](http://www.msubillings.edu/internationalstudies/admissions/englishproficiency) (<https://www.msubillings.edu/internationalstudies/admissions/englishproficiency.htm>). A minimum required score for the following tests must be achieved: TOEFL - 79, IELTS - 6.5, Duolingo - 100, iTEP - 3.5-3.9, PTE - 58



- Appropriate immunization records. These records must be submitted with an English translation.
- Proof of health insurance is required each semester. Student health insurance is available for purchase through the University. Health insurance charges will be automatically assessed to the student account if proof of personal health insurance is not provided.
- If a student is currently attending another U.S. school and wishes to have his/her I-20 transferred to MSUB, an I-20 Transfer Form must be completed by the student as well as the current international academic advisor.
- A copy of the student's passport ID page as well as copies of any current US visas.

### When to Apply

#### Application Deadlines:

Fall Semester: June 1  
 Spring Semester: October 1  
 Summer Semester: February 1

#### Deferral Deadlines:

Fall Semester: July 15  
 Spring Semester: November 15  
 Summer Semester: March 15

For more information on international student, admission call the International Studies Office at (406) 657-1705 or email [internationaladmissions@msubillings.edu](mailto:internationaladmissions@msubillings.edu)

### International Students Enrollment and Academic Progress

International students must maintain academic status according to US immigration law and MSUB policies.

- To maintain an F1 visa, a student must make normal academic progress as well as abide by state and federal laws. Normal academic progress is defined as enrolling in and passing a minimum of 12 credits and achieving a minimum semester GPA of 2.0. International students must be enrolled at all times for at least 12 credits (and at least 9 in class/not online).
- An Incomplete or Withdraw will not count towards credits passed within a semester.
- It is the student's responsibility to manage his/her enrollment and abide by the rules of his/her visa. This includes updating personal information records via the myInfo, completing the MSUB Immigration Registration Form each semester, registering for classes in a timely manner, and adhering to all deadlines on the Academic Calendar (in particular late registration, withdrawal from classes, payment of fees, and monitoring academic standing).
- Students who are deemed "out of status" for the second semester or for failure to attend class will have their I-20 form terminated immediately and must either request reinstatement with a different university or leave the United States. There is no grace period.
- Being dropped for non-payment of tuition and fees is a violation of student visa status and may result in the cancellation of a student's I-20.

### Agreements with International Institutions

MSU Billings has signed formal agreements for International Study Abroad. Please see the Office of International Studies for additional information on Study Abroad.

## Registrar's Office

City College Tech Building, Jacket Student Central, First Floor

(406) 247-3000 or 1-800-565-MSUB ext.3000

[www.msubillings.edu/citycollege](http://www.msubillings.edu/citycollege)

## Transfer of College-Level Credits

### Transfers from Montana University System Units, Montana Community Colleges and Montana Tribal Colleges

By Board of Regents policy, Montana State University Billings is committed to facilitating undergraduate transfer for students transferring from units of the Montana University System and the three publicly supported community colleges and the seven tribal colleges in Montana.

### Block Transfer

Undergraduate students who have completed, with a cumulative grade-point average of 2.0 (C) on a four-point scale, an approved general education program at one of the institutions noted above, will be deemed to have met the lower division General Education requirements of Montana State University Billings.

Special attention should be paid to Board of Regents Policy 301.5.3 on Minimum Course Grades which also applies to acceptance of transfer credit. Before Montana State University Billings will accept the courses as applicable for meeting General Education, a student will have to earn a grade of "C-" or better in each of the classes.

Depending on the major program the student selects, there may be additional lower division courses required to meet published major program prerequisites. A student may be required to take additional coursework at the upper division level that is part of the approved General Education program at Montana State University Billings.

### Associate of Arts and Associate of Science Degrees

A student who has completed an Associate of Arts or an Associate of Science degree with an approved general education component package at another unit of the Montana University System has satisfied the requirements of this policy.

**Note:** Students should be aware that Associate of Arts or Associate of Science degrees ordinarily do not have a designated field of study in their title.

Special attention should be paid to Board of Regents Policy 301.5.3 on Minimum Course Grades which also applies to acceptance of transfer credit. Before Montana State University Billings will accept the courses as applicable for meeting General Education, a student will have to earn a grade of "C-" or better in each of the classes.

## Montana University System (MUS) Core Curriculum

The Montana Transferable Core Curriculum represents an agreement among community, tribal, and publicly funded colleges and universities in the State of Montana. It ensures the transfer of up to 30 semester credits for those students enrolled in courses prescribed within each of six discipline areas at a participating host institution. The six discipline areas are:

| Code                         | Title  | Credits   |
|------------------------------|--|-----------|
|                              | Natural Sciences (at least one with a laboratory experience) | 6         |
|                              | Social Sciences/History                                      | 6         |
|                              | Mathematics  | 3         |
|                              | Communication - written & oral                               | 6         |
|                              | Humanities/Fine Arts   | 6         |
|                              | Cultural Diversity   | 3         |
| <b>Total Minimum Credits</b> |  | <b>30</b> |

Transfer students and student advisors should also be familiar with the additional guidelines that have been adopted by the Montana Board of Regents for students who use the Montana University System Core to satisfy their lower division general education requirement. Those guidelines are entitled **Operational Rules for the**

**Montana University System Core**, and can be found at [www.mus.edu/transfer/GenEd.html](http://www.mus.edu/transfer/GenEd.html) (<https://www.mus.edu/transfer/GenEd.html>). They include the following:

- In order to satisfy the MUS core, students must successfully complete at least one course that includes significant content related to the cultural heritage of American Indians. (See an academic advisor for assistance in determining which transfer courses satisfy this requirement.)
- Students must earn the minimum number of credits in each of the six (6) categories of coursework. Students can only use credit-bearing competency tests or coursework to satisfy the MUS core.
- Coursework can only be used once to satisfy the requirements of the MUS Core. It cannot be “double counted” to satisfy the requirements of more than one category.
- In order to satisfy the requirements of the Communications area, students must successfully complete a combination of courses that includes significant content in both written and oral communications.
- Students must satisfy the “minimum grade” requirements established by Board of Regents’ Policy 301.5.3, along with any exceptions to that policy that may have been established by their program of study.

The Montana University System is committed to facilitating the ease of undergraduate student transfer to its campuses. Therefore, all campuses of the Montana University System will recognize the integrity of general education programs offered by units of the Montana University System and the three publicly supported community colleges and the seven tribal colleges in Montana.

An undergraduate student who has completed courses identified as part of the Montana University System (MUS) Core courses will have general education coursework reviewed for transferability to Montana State University Billings as follows:

1. If a student has completed less than 20 general education credits, that student will be required to complete the approved General Education program at Montana State University Billings. All general education transfer credits that are part of the MUS Core will be reviewed for possible application in the approved General Education program.
2. If a student has completed 20 or more MUS core credits, but does not satisfy the block transfer policy described in the preceding section, that student may choose to complete either the MUS core or the approved General Education program at Montana State University Billings. The student should make that decision in consultation with an advisor.
3. An undergraduate student who completes postsecondary coursework in the Montana University System that does not fall within the MUS Core will have his/her classes analyzed on a course-by-course basis to determine how those classes might satisfy the General Education program requirements at Montana State University Billings.

## Course by Course Evaluation

Students who have not completed an approved general education program will have their transcript evaluated for transfer purposes using the Statewide Core Curriculum and Community College Transfer Guide. **Note: College-level courses shall be defined as those that are applicable to an associate of arts, associate of science or baccalaureate degree.** In advance of a student’s enrollment, Montana State University Billings will determine which courses within an associate of applied science degree program will be credited toward a given associates or baccalaureate degree. In all cases, such courses shall not include remedial or developmental courses.

Depending upon the major program the student selects, there may still be additional lower division courses required to meet published major program prerequisites.

## Minimum Course Grades

Effective Fall Semester 2005, Board of Regents policy 301.5.3 on minimum grades will apply to all students who enter or are re-admitted to the Montana University System or the three (3) community colleges that semester or subsequent semesters.

All students in the Montana University System and the three (3) community colleges must earn the following minimum grades in order to demonstrate their competency and preparation:

1. a “D-” or better in all classes that are used to satisfy so-called free or elective credits in an associate or baccalaureate degree program;
2. a “C-” or better in all classes that are used to satisfy a general education program;
3. a “C-” or better in all classes that are used to satisfy the pre-requisites or required courses in a major, minor, option or certificate.

Individual programs may establish grade standards that are higher than the minimums set out in paragraph A above, for some or all of the courses that are used to satisfy the pre-requisites or requirements for a major, minor, option, certificate or general education. Students will be notified of that expectation. Please refer to page 51 of this catalog for details on grade requirements for AAS, CAS, and ASN degrees.

## Interstate Passport

MSU Billings participates in the Interstate Passport Network, which provides a framework for block transfer of lower-division general education based on learning outcomes. Passport is designed to help students transfer both to and from MSUB. Students who complete MSU Billings’ passport block with a minimum grade of “C” in each course will be awarded the Passport. Students who later transfer with a Passport to another Network-member institution will not have to repeat or take additional courses to satisfy lower-division general education requirements. Information on colleges and universities within the network can be found at: [interstatepassport.wiche.edu/students-interstate-passport-nationwide-transfer/which-institutions-participate/](http://interstatepassport.wiche.edu/students-interstate-passport-nationwide-transfer/which-institutions-participate/) (<https://interstatepassport.wiche.edu/students-interstate-passport-nationwide-transfer/which-institutions-participate/>)

For more information on Passport, please contact the Registrar’s Office.

## All Transfers

**Note: By action of the Academic Senate of MSU Billings, City College at MSU Billings will accept transfer students with completed AA or AS degrees from other regionally accredited (p. 41) institutions as having fulfilled their City College at MSU Billings General Education requirements if the general education package is comparable in total credits and content. (10/7/04 memo #446 p. 1654)**

All college-level courses from regionally accredited (p. 41) institutions of higher education will be received and applied towards the free elective requirements of associate or baccalaureate degrees as applicable.

The Advisors within Jacket Student Central at City College (406-247-3019) and/or Advising Office at the University campus (406-657-2240) will do an evaluation of transcripts upon receiving all transcripts for the student. The student will be informed as to what transfer courses can be accepted toward the major and what courses must yet be completed for the degree. This evaluation will be processed only after an application, the admission fee, and official college transcripts are on file with the Office of Admissions.

Students who transfer credit from foreign institutions or from institutions that do not have regional accreditation (p. 41) will have their courses evaluated on an individual basis. Policy and procedure information may be obtained in the Office of Admissions and Records.

Students transferring from institutions with candidacy status in a regional accrediting (p. 41) association must earn at least 20 credits at MSU Billings with a



minimum 2.00 GPA before their credits from the former institution will be considered for acceptance.

Students transferring from community colleges or other two-year colleges may not use the credit transferred in lieu of upper division credits required for graduation at Montana State University Billings.

Students transferring to Montana State University Billings who have previously earned a Bachelor of Arts or Bachelor of Science degree from a regionally accredited (p. 41) institution of higher education are considered to have their General Education requirements completed. Only information pertaining to the degree, date, and institution conferring will be noted on the transcript, individual coursework is not transcribed.

Acceptance of credits from other institutions of higher learning does not preclude the necessity of meeting all curricular requirements of a specific program. Students transferring to MSU Billings may have their credits evaluated on the basis of the current catalog at the time when they first entered Montana State University Billings, or they may elect to enter under the catalog for the year in which they entered any accredited institution of higher education in the United States provided they have maintained continuous, full-time enrollment (excluding summers) in good standing.

Transfer students will begin a new grade point average at MSU Billings, but for graduation with honors all previous transfer work will be calculated into GPA.

## Course Equivalency Guides

Annually, Montana State University Billings updates equivalency agreements with regional community colleges in Wyoming, North Dakota, and Montana; Montana's tribally controlled colleges; and Montana's four-year (public and private) institutions. Students who attend any of these colleges and who plan to transfer to MSU Billings are encouraged to visit the MSUB website ([www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu>)). This information will assist students in understanding how specific courses will transfer to MSU Billings and what courses individual degree programs require.

## Articulation Agreements

MSU Billings has a number of articulation agreements with other public and private institutions. These agreements make it possible for students to plan a program of study that begins at a two-year college and leads to a four-year degree from MSU Billings. These agreements are designed to maximize the number of credits students will be able to transfer and to minimize students' time to degree. Articulation agreements are made with specific programs. Areas of concern such as admissions, financial aid, course requirements, and contact information are clearly discussed.

Each agreement specifies how coursework in the associate degree program applies to the baccalaureate degree program at MSU Billings. Each agreement outlines the appropriate and recommended courses to complete at the two-year college and also specifies courses that must be taken at MSU Billings to complete the program.

Students interested in attending MSU Billings and utilizing an articulation agreement are encouraged to indicate their interest in one of the articulation agreements to an academic advisor prior to or during their first term in attendance.

## Former MSU Billings Student Re-Admission

A former student of Montana State University Billings who is in good standing and who was not in attendance the preceding term will be eligible for registration after completing the following:

1. Complete and file a former student application with the Registrar's Office or re-admit online at [www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu>) or via [myinfo/myMSUB](mailto:myinfo@myMSUB).
2. Request that transcripts from institutions attended, if any, since last attending Montana State University Billings be sent to the Registrar's Office.

## Registration First-Time Students

1. All first-time students at City College at MSU Billings need to apply to the College and be accepted before they can register
2. After being admitted, students should check for the beginning dates for registration (see the University Calendar), after which students may register at any time.
3. If necessary, take the required placement testing, available by individual appointment. Call Jacket Student Central to confirm options and cost for testing.
4. Participate in a New Student Orientation Session prior to the term of desired attendance. **Attendance at the Registration and Orientation Sessions is expected.** Course registration, processing of student identification cards, and other information necessary for a successful first semester at City College at MSU Billings is accomplished through these sessions.
5. First-time students at City College at MSU Billings are required to visit with an academic advisor prior to registering for classes. Academic advising is provided as part of the Orientation or Registration Session. A student's course schedule must be approved by an academic advisor before actual registration can take place. The Advising Center, within Jacket Student Central, is located on first floor of the Tech Building at the City College Campus, (406) 247-3019 and McMullen Hall First Floor, (406) 657-2240 on the University campus.
6. In order to complete the 60-72 credits required to complete an associates degree, students are encouraged to enroll in 15 or more credits each semester. However, to assist students to complete their degree in a timely fashion, the tuition for students taking 12 credits or more will remain the same. Thus, whether one registers for 12, 15, or 18 credits, the same tuition applies. It is clearly to students' advantage to register for 15 credits or more a semester. Please note that The MSU Billings Financial Aid Office defines the academic year as 30 weeks and 24 credits. Therefore, the financial aid definition of fulltime enrollment is 12 credits per semester for undergraduate students.
7. Once the course schedule has been approved, the student should follow registration instructions found on the web at [www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu>) or from the advising office.
8. Some classes may be restricted or closed and need departmental approval. Student should see the department or Jacket Student Central for assistance in registering for these courses.
9. Students may add courses during the first seven instructional days of the semester before permission of the instructor or department chairperson is required. Dropping a course with a partial refund is permissible through the 15th instructional day, and a course may be dropped without a grade penalty up through the 13th week of the semester. With instructor and advisor approval, a course may be dropped up until 10 class days (not including finals) from semester's end. Once a course grade is submitted, the course may no longer be dropped without instructor and advisor approval.
10. Students who have not paid their bills by the close of business on the 3rd day of classes may be dropped from their classes.
11. If a student registers after the third day of the semester, a late fee will be added to the registration charge.

## Registration Regulations

### Late Registration

Students are expected to complete registration within the dates stated. For any delay beyond that period, unless such delay is caused by University officials, a late registration fee will be charged. Students permitted to register late must pay the full fees. Students who fail to pay or do not have their fees arranged before the final fee payment day will have their classes deleted for that semester.

### Transcript(s) from Former School(s) and College(s)

All official records (transcripts) of former college study must be filed in the Jacket Student Central by new students (and by former students if they have attended other colleges since last attending MSU Billings) before their registration is considered complete. (See Non-Degree Policy and Procedures under Admissions Section.)

Failure to file transcripts with Jacket Student Central within a reasonable time will result in the cancellation of a student's registration. Responsibility for securing transcripts rests with the student.

### Adding Courses

Students may add courses during the first seven instructional days of each semester.

Students may add courses after the seventh instructional day and through the 15th instructional day only with the instructor's and department chairperson's approvals.

### Repeated Courses

When a course which a student has previously attempted is repeated, only the most recent course credit and grade is calculated into the student's grade point average, even if the most recent grade is lower. (Note: the original course and the grade remain on the official transcript in addition to the more recent course and grade). In order to inform the Registrar's Office of a repeated course, the student must file with the Registrar's Office a Repeat Form that identifies the proper course numbers.

No prerequisite course may be repeated if the more advanced course has been completed with a grade of "C" or better. Exception may be considered upon appeal to the chairperson of the department in which the course is offered.

### Veterans' Credits (Credit for Military Service)

Credit may be granted for military service and for completed military service schools based upon the recommendations of "A Guide to the Evaluation of Educational Experiences in the Armed Forces." Application for such credits should be made at the Registrar's Office. The University accepts many forms of Professional Military Education (non-academic experience and training) that have been evaluated by the American Council on Education (ACE) as academic credit. Veterans are encouraged to get transcripts to the Advising Center for evaluation. Please refer to the following website for directions on requesting military transcripts: [www.msubillings.edu/reg/MilitaryTranscripts.htm](http://www.msubillings.edu/reg/MilitaryTranscripts.htm) (<http://www.msubillings.edu/reg/MilitaryTranscripts.htm>)

### Credit Recommended by the National Guide to Education Credit for Training Programs

Credit may be granted to students based on the recommendation of the National Guide to Education Credit for Training Programs and the National Program on Collegiate Sponsored Instruction.

## Academic Regulations

### Flat Spot

As students wishing to earn an associate's degree are expected to complete 60-72 credits over a four-semester period of time to graduate in two years, a minimum of 15 or more credits must be taken each semester. To encourage students to take a full load of 15 or more credits, a "Flat Spot" in the tuition has been created allowing students to register for 12 or more credits for the same tuition as 12 credits. Thus, whether one registers for 12, 15, or 18 credits, the same tuition applies. It is clearly

to students' advantage to register for 15 credits or more a semester. Please note that The MSU Billings Financial Aid Office defines the academic year as 30 weeks and 24 credits. Therefore, the financial aid definition of full time enrollment is 12 credits per semester for undergraduate students.

### Credit Overload

Any student not on probation may register for up to 18 credits per term. However, individual students who have a 3.00 grade point average (GPA) may register for up to 20 credits per semester without consent. Students who wish to register for a credit load in excess of 18 hours, but who have less than a 3.00 GPA must have approval of the chairperson of the department in which they are majoring. Students who have a 3.00 GPA and wish to register for a credit load in excess of 20 credits per semester must have the approval of the chairperson of the department in which they are majoring, complete a Request for Overload form, and return the form to Jacket Student Central or the Registrar's Office.

### Change of Major

A student who considers such a change is warned that the requirements of the new curriculum may make necessary the completion of additional credits if the student is to fulfill requirements for graduation. Students need to visit the Advising Center within Jacket Student Central (City College Tech Building First Floor/McMullen Hall First Floor) to obtain assistance with a change of major.

### Final Examinations

Final examinations are scheduled during the last week of each semester. A final examination schedule is available at Jacket Student Central and on the web at [www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu>).

### Accelerated Coursework

Students are encouraged to decrease the time required to complete a degree by gaining credit for knowledge they have obtained which duplicates that which is taught in specific courses. Students should initiate requests for such academic credit by consulting first with their advisor or department chairperson. The following provisions indicate ways accelerated credit may be awarded.

Applicants who have taken **Advanced Placement (AP) Exams**, and/or **International Baccalaureate (IB) Exams** should request that the official scores be sent directly to the Office of Admissions. AP scores of 3 or higher and IB Exams with scores of 4 or higher will be granted college credit with a Pass (P) grade for the equivalent courses. After students successfully complete a semester at MSU Billings, the credits will be placed on their college transcripts with the indication of AP for Advanced Placement, or IB for International Baccalaureate.

### Course Substitution

Students may request a substitution for any stated course if they have previously completed a college course in which the subject matter closely parallels that of the course for which they request the substitution. All substitutions must be approved by the academic department chairperson. In no instance will a reduction be made in the number of credits required for any academic program.

### Challenging Courses

Each department or unit determines the courses which may be challenged. A course may not be challenged when the course is a prerequisite to a more advanced course already completed. Students are advised to check with individual departments for detailed procedures to be followed.

### Procedure for Challenging a Course

The student should obtain a recommendation from the instructor of the course being challenged and the approval of the chairperson of the department in which the course is listed. The following conditions apply to the challenging of courses for college credit:

1. The student must be currently enrolled in City College at MSU Billings.
2. Approval of the challenge request must be made by the chairperson of the department in which the course is listed, who will decide whether the challenge shall be by a comprehensive examination and/or by some other evidence of competence in the subject matter of the course.
3. Challenge credit may be granted only if the grade received is "C" or higher.
4. A course previously taken as an audit course or as a credit course may not be challenged for credit.
5. By action of the University's Academic Senate, AP, CLEP and DANTES credits are awarded with a "P" grade. Departmental challenges may carry a letter or "P" grade.

The Board of Regents has authorized the **American Council on Education's Guide to Educational Credit by Examination** and **National CCRS (National College Credit Recommendation Service)** for use to establish minimum scores and credit.

6. Currently enrolled students may receive credit on their transcript for successfully completed Advanced Placement (AP) exams, DSST exams, College Level Examination Program (CLEP) exams or challenge exams prepared by the Academic Department. For the credit to be applied to an City College at MSU Billings transcript, the following procedure must be followed: Students or departments must turn in challenge documentation to the Jacket Student Central Office after the successful challenge has been completed. AP and CLEP credits are added to student transcripts after the 15th class day each term.

## Independent Study

Well-qualified students may undertake academic work in the form of independent study. The number of credits will be determined by the instructor and approved by the department chairperson. Courses listed in the Catalog as regularly offered courses may not be taken under the designation of Independent Study.

## Advanced Placement

Advanced placement in certain academic areas with sequential or prerequisite courses is available to students with a high degree of competency. Normally, advanced placement is made on the basis of standardized tests and other evidence of competency in the area. Should students demonstrate sufficient competency as determined by the appropriate department, they are placed at a level in the course sequence commensurate with their abilities. Satisfactory results of the advanced placement procedure are reported to the Registrar's Office by the responsible department with a grade report. AP for High School Students and College Level Examination (CLEP) are two types of Advance Placement examinations that the college accepts. For more information please refer to the MSU Billings General Bulletin, contact the Office of Admissions at (406) 657-2888.

## Prior Learning Assessment Policies and Procedures

At Montana State University Billings, students may earn credit when the outcome of the learning, often via the acquisition of skills and/or knowledge, can be translated into credit.

Note: Prior Learning Assessment (PLA) guidelines and policies are subject to change.

Several options are as follows:

1. Challenge tests, such as CLEP, DSST, and UExcel allow the student to study for and test out of equivalent college-level courses.
2. Students may have already earned credit through work-site training or government-sponsored workshops or military experience. If students have certificates or documentation which state that the American Council on Education (ACE) or the National CCRS (National College Credit Recommendation Service) assesses that training, credit may be available for coursework for which there are equivalencies in MSU Billings' curriculum. Military credit is

assessed from the DD214, DD295, or military transcript. Questions about this type of training or military credit may be directed to the Advising Center at (406) 657-2240.

3. Credits earned via PLA are not considered part of the institutional residency requirement.
4. Credits are applied to degree program requirements in the same manner as all other credits earned. Once credits are applied to a transcript, they will not be removed. Prior learning credits in excess of degree requirements may limit the student's eligibility for financial aid.
5. Credits will be identified as earned via prior learning assessment on transcripts in accordance with Board of Regent standards.
6. In addition to the methods listed above, the University also offers students the opportunity to earn credit through Prior Learning Assessment. This assessment will take into account work experience or other learning experiences, which do not fall into the categories described above, but which can be assessed through alternative documentation. The department chair of the discipline in which prior learning credit is desired will designate the appropriate faculty member, program director or chair to develop criteria for portfolio, challenge exam, or other faculty-determined assessment methods.
7. Up to 15 credits can be earned through Prior Learning Assessment, and this type of credit will be graded with "P" if credit is earned (Pass/No Pass credit guidelines can be found on page 50). For more information on Prior Learning Assessment, please contact the Registrar's Office.
8. Implementation of these policies needs to be consistent with existing departmental policies and consistent with accreditation policies and practices already in place in the various colleges (AACSB, CAEP, etc.).

## Auditing Coursework

(No credit awarded)

Any person enrolled for audit will be certified as such by the Registrar's Office and will not receive credit for the course nor be required to take examinations. An audit must be declared during the first seven instructional days of a semester. A student who registers to audit a class will not be permitted in any City College at MSU Billings class which requires any laboratory or clinical work. Any exceptions to this policy must be approved by the appropriate department chair and dean.

Currently enrolled students who elect to audit a class pay the normal credit hour fee as outlined in the student fee schedule. Any person not otherwise enrolled or registered in a course for college credit may, with instructor approval, audit the course. The fee to audit is \$30. These fees are nonrefundable.

An audit is at the discretion of the course instructor. In order to audit, the student must obtain instructor's permission and instructor's signature on an audit card. This card is available from Jacket Student Central (Tech Building First Floor). When the student has completed the audit card with the faculty signature and cashier payment, the card is returned Jacket Student Central.

A student may not later establish credit in a course that was taken under the audit option by taking a special examination. In all cases, students who register for regular credit and pay regular fees will have priority for enrollment in a class over those students who audit the class.

## Class Attendance and Student Absences

Members of the faculty determine the attendance policy for their classes. Absences for official University activities are permissible providing the instructor is notified in advance of such an absence. An official University activity is an activity where a student officially represents the University through an academic department, sponsored University program, or an officially registered student organization. In all absences, the student is responsible for all requirements of the course.

Requests for absence for special events shall be submitted to the Vice Chancellor for Student Access and Success on the Student Travel Authorization form. This form should be obtained from the Office of the Vice Chancellor, room 201, McMullen Hall, at least one week in advance of the expected absence. This procedure will ensure students the opportunity to make up examinations given when official University activities are scheduled.

### Class Enrollment Lists

Faculty may obtain class lists each term online. Only students who are regularly registered for a course may attend class. No grade or credit will be given to students for any course in which they are not properly registered.

### Extent of Official Absence

When issued, an official absence is an excuse for time only and does not mean that a student is excused from the study assignment for that period. Each student is responsible for making up all work missed, as required by the instructor.

## Drops and Withdrawals

### Dropping a Course

Dropping a course is permitted through the seventh week, 35th day of the semester.

There is no penalty for failing work through the drop period. Dropping a course is also permitted through the 13th week and up until 10 class days from the official end of the semester (not including final) with the approval of the student's academic advisor and course instructor. Once a course grade is submitted, the course may no longer be dropped without instructor and advisor approval. After the 13th week, students may not drop courses, and the instructor will assign a letter grade. The mark "W" is assigned to any course dropped after the 15th day of class.

After the 15th class day and before the 13th week, all drops must be formal and must be recorded by the student with the Registrar's Office.

In all courses in which a student fails to complete all requirements and for which no formal withdrawal has been filed in the Registrar's Office, the final grade for the course shall be an "F."

### Withdrawal from College

Students who withdraw from City College at MSU Billings during a semester are required to fill out a withdrawal form and complete an exit interview with an advisor in the Advising Center located in Jacket Student Central on the first floor of City College Tech Building.

Students who officially withdraw during the first fifteen days of an academic term will not have the coursework reflected on the transcript. Students who withdraw after the third week will receive a grade of "W" (Withdrawn) in all classes.

**Students who do not officially withdraw from classes will receive a letter grade (i.e., other than a "W" grade) to be determined by the instructor of each class.**

**"W" grades, while having no GPA impact, still count as attempted credits for academic, billing, and financial aid purposes. No grades, including those of "W" are subject to removal from the academic transcript.**

### No Show Reporting

In order to be eligible to receive federal financial aid, a student must have attended a minimum of one class meeting or the equivalent in the case of a distance learning course, have documented academic engagement. In a distance learning course, initial student attendance is determined by course participation as measured by accessing and using course materials, completion of a class assignment, participation in a course discussion, or other evidence of participation. **If for any reason you cannot attend or participate online with your classes, please notify the Registrar's Office immediately.**

Per federal regulations, we are required to confirm participation in courses covered by federal financial aid. If you cease to attend or participate in coursework, this can have a significant impact on you financially, meaning you could have a substantial balance due back to the university. Once the Office of Financial Aid receives notification on non-attendance, this is reported through a no-show process and students may owe a refund of all or a part of previously disbursed financial aid awards.

### Return of Title IV Funds (Federal Financial Aid)

Students who have received or may be receiving federal financial aid must be attending classes to remain eligible for the federal financial aid they have received or could be eligible to receive. A post-withdrawal disbursement will be made if a student shows eligibility for Title IV aid. If a student drops courses, stops attending classes (Unofficial Withdrawal), never starts attending a class, or officially withdraws from the MSUB by completing and submitting the Official Withdrawal form, the University and/or the student may be required to return federal funds awarded to the student. **It is very important for students receiving federal financial aid to contact the Financial Aid Office at (406) 657-2188 PRIOR to completing the official withdrawal process.** If a student officially withdraws during the first fifteen days of class, the tuition and fees will be re-assessed for the semester based upon the official date of withdrawal and the University's refund policy. If a student does not complete the Official Withdrawal form and ceases attending and receives no passing grades for the semester the student is an Unofficial Withdrawal. A student's official or unofficial withdrawal date is determined by:

- the date the student began the institution's withdrawal process or officially notified the institution of intent to withdraw;
- the midpoint of the period for a student who leaves without notifying the institution (unofficial);
- or the last date of attendance by the student with documented academic engagement.

The federal formula requires a return of Title IV aid if the student received federal financial assistance in the form of a Federal Pell Grant, TEACH Grant, Iraq/Afghanistan Service Grant, Federal Supplemental Educational Opportunity Grant (SEOG), Federal Direct Loan (subsidized or unsubsidized), or Federal Parent or Graduate PLUS loans for students who officially or unofficially withdraw. The amount of financial aid that must be returned to the Department of Education is based on a federal formula that takes into consideration the date of the withdrawal or last date of attendance, the amount of federal financial aid received for the term, and the amount of institutional charges for the term.

If you officially or unofficially withdraw from MSUB, you may have to repay any unearned financial aid funds that were already disbursed to you and returned to the U.S. Department of Education. A post-withdrawal disbursement will be made if a student shows eligibility for Title IV aid and the student requests the disbursement.

## Veterans Certifying Official Military and Veteran Student Success Center

College of Education Room 106, (406) 657-2968

To activate your VA Educational Benefits contact:

VA Certifying Official  
College of Education 106  
(406) 657-2968

MSU Billings recommends all service members speak with their Educational Services Officer (ESO) or counselor prior to enrolling. Many ESOs can assist with obtaining the Notice of Basic Eligibility (NOBE).

For assistance on the posting of your VA Educational benefits please contact the Business Services Office in McMullen Hall.

Renee Haefer  
(406) 657-1707  
renee.haefer@msubillings.edu  
McMullen Ground Level West

For more detailed information about your benefits, please refer to [www.va.gov](http://www.va.gov)  
(<https://www.va.gov/>).



# Student Tuition and Fees

The student fee information provided in this Catalog is based upon policies of the Board of Regents of Higher Education in effect at the date of publication. **The Board of Regents of Higher Education reserves the right to change the fees at any time without notice.**

Additional information concerning fees may be obtained by contacting:

Business Office  
City College Tech Building  
3803 Central Avenue  
Billings, MT 59102  
(406) 247-3002

or McMullen Hall ground floor west  
Montana State University Billings  
1500 University Drive  
Billings, Montana 59101-0298  
(406) 657-2140.

Check us out at [www.msubillings.edu/boffice](http://www.msubillings.edu/boffice) (<http://www.msubillings.edu/boffice/>).

Students are required to have adequate funds on deposit in a local bank in order to be able to write checks for the payment of tuition, room and board, books, supplies and other fees. Foreign checks are not accepted. Student enrollment is not complete until all fees have been paid or satisfactory arrangements have been made with the business office.

All undergraduate and graduate students enrolling at City College at Montana State University Billings must pay the required fees in the fee schedule for each semester.

## Semester Tuition and Fee Schedule Effective Fall Semester, 2022

**Tuition and fees are subject to change by authorization of the Board of Regents of Higher Education.** Questions on the current fees should be directed to the City College at MSU Billings Business Office at (406) 247-3002 or in City College Tech building First floor. Comprehensive fee and extra fee tables are available through the MSU Billings website at [www.msubillings.edu/boffice](http://www.msubillings.edu/boffice) (<http://www.msubillings.edu/boffice/>) under Tuition & Fees.

A student paying for 12 credits in a semester may take any additional credits for no additional tuition. This is referred to as the "flat spot" in the Tuition and Fee Schedule.

Tuition and fees for graduate studies, extended studies, summer session, workshops, and conferences may be in addition to or in lieu of the required fees. Please consult the publications pertaining to the special session, course, workshop or conference to determine those fees.

## Fee Schedule Explanation

### Required Tuition and Fees Per Semester

#### Registration Fee

A \$30.00 nonrefundable fee is assessed each enrolled student per semester.

#### Tuition Fee

Students are charged tuition each semester to pay for the delivery of the education they are receiving. Resident students are subsidized by the State of Montana and pay a reduced tuition rate.

#### Associated Students Activity Fee & Recreational Activity Fee

Students enrolled for seven credit hours or more each semester are required to pay for activities sponsored by the Associated Students of Montana State University

Billings. Students enrolled for less than six credit hours pay a reduced activities fee each semester. Online only students outside of the following counties **do not** pay this fee: Yellowstone, Carbon, Treasure, Musselshell, Golden Valley, Stillwater, and Big Horn.

#### Academic Building Fee

The Academic Building fee varies based on the number of credit hours taken. The funds generated from this fee are used to pay a portion of the costs of repair, maintenance, and operation of the state owned buildings on campus.

#### Resident and Nonresident Building Renewal and Replacement Fee

All students are charged a building fee for the building and replacement of campus structures. A reduced rate is charged to students taking less than 7 credits. In addition, a nonresident building fee is collected from all students who are not residents of the State of Montana.

#### Equipment Renewal and Replacement Fee

Enrolled students are assessed an Equipment Renewal and Replacement Fee each semester. This fee is used to replace obsolete equipment with new equipment and cover costs of equipment repairs.

#### Student Union Fee

Each semester students are assessed a fee pledged for the operation of the Student Union.

#### Computer Fee

Students are assessed a computer fee to cover the expense of student used computer equipment and labs.

#### Athletic Fee

Students enrolled at City College at MSU Billings are assessed a fee to subsidize the University's athletic department and associated activities. Students enrolled for seven credits or less pay a reduced athletic fee. Online only students outside of the following counties **do not** pay this fee: Yellowstone, Carbon, Treasure, Musselshell, Golden Valley, Stillwater, and Big Horn.

#### Library/Assessment Fee

All students are assessed a Library/Assessment fee. Funds generated from this fee are used for the purchase of electronic resources, new and replacement books, periodicals, and other materials for the Library. This fee is also used for assessment and accreditation tools for the university as a whole.

#### Academic Support Center Fee

All students are assessed a per credit Academic Support Center fee.

#### Technology Replacement Fee

All students are assessed a tech replacement fee. This fee is used to support the information technology infrastructure. All students accessing email or the web are utilizing and benefiting from the tech replacement fee.

#### Comprehensive Health Plan

Student health coverage consists of two parts:

##### Health Service

All students are entitled to services provided by the Student Health Service. Students enrolled in 7 or more credits are charged a mandatory fee. Students enrolled for 6 credit hours or less may have the benefits of the Student Health Service by paying the semester fee. Online only students outside of the following counties **do not** pay this fee: Yellowstone, Carbon, Treasure, Musselshell, Golden Valley, Stillwater, and Big Horn.

##### Health Insurance

All Montana State University Billings students enrolled in 6 or more credits are required to have some form of health insurance. Before registering, students will be asked to elect or waive the student health insurance. A student health insurance

policy is available to MSU Billings students. All students are eligible for health insurance if enrolled for 6 or more credits. The waiver or election process must be completed by the 15th day of fall and spring semesters. The premiums are paid on a semester basis along with tuition and fees. Each semester the premium is for a period of 6 months, therefore, they will be covered whether or not they are taking summer semester classes. Online-only students should contact Student Health Services regarding insurance availability.

## Additional Information Regarding Fees Withdrawing from All Classes and Refunds

The following refund schedule applies to the standard semester format. For courses taught in nonstandard format such as Intersession, and special workshops, there are no refunds after the first day the class meets. See the Business Office ([www.msubillings.edu/booffice](http://www.msubillings.edu/booffice) (<https://www.msubillings.edu/booffice/>)) for information regarding the refund policy during summer.

1. Registration fee is nonrefundable.
2. 90 percent of all remaining mandatory fees will be refunded to the end of the fifth classroom day.
3. 75 percent of all remaining mandatory fees will be refunded to the end of the 10th classroom day.
4. 50 percent of all remaining mandatory fees will be refunded to the end of the 15th classroom day.
5. Refunds will not be made after the 15th day of classes. Exceptions to this may occur in the case of financial aid students subject to the federal pro rata refund policy.
6. Refunds are determined as of the day the student officially withdraws from college and not from the date of last class attendance.
7. Classroom days are determined by the college calendar—not by the student's class schedule.

City College at MSU Billings students receiving Title IV funds and who officially or unofficially withdraw or are expelled, up to the 60% point of the semester, may be required to return federal funds. Students may also be entitled to a post withdrawal refund up to the 60% point of the semester. Copies of the Federal Title IV policy may be obtained at the MSU Billings Financial Aid Office.

Financial aid recipients will not receive refunds until their financial aid is repaid (Pell Grant, SEOG Grant, SSIG Grant, Perkins Loan, FFEL Loans, fee waivers, and some scholarships). If the refund is insufficient to repay the financial aid programs, students will be billed for the over-awards.

Students who owe over-award repayments to any federal aid programs cannot receive future financial aid until repayment is made in full.

## Changes in Credit Load after Payment of Fees

Students adding classes after payment of fees are required to pay additional fees created by the change in credit load. Payment for these charges is due immediately.

Students dropping classes (but not withdrawing) will receive a 100 percent refund on classes dropped before the end of the 15th classroom day. Refunds will not be made after the 15th classroom day. Students will be assessed a \$5.00 drop fee for each class dropped.

## Payment of Fees

Financial Aid students must pay for fees prior to the first day of classes. The student's financial aid will be applied to the student's account with any refund being direct deposited or mailed to the student prior to the first day of classes. Call the Business Office at (406) 247-3002 for details, or visit us at [www.msubillings.edu/booffice](http://www.msubillings.edu/booffice) (<http://www.msubillings.edu/booffice/>).

Payment may be made by credit card (VISA, MasterCard, and Discover) in person, by mail, or via the internet by accessing the student secure website and selecting the student online payment option.

Fees may be paid after courses are selected. To avoid a \$40.00 late registration charge, fees must be paid by the date posted for each semester as indicated in the calendar. Fees may be paid online or by mail. To request that a fee statement be mailed to you, call (406) 247-3002.

Students may elect to pay their fees in installments. The installment payment for Fall/Spring requires approximately 1/4 down, 1/4 within 30 days, 1/4 within 60 days, and 1/4 within 90 days. Summer session installments will require 1/3 down, 1/3 on June 1, and 1/3 on July 1. A \$30.00 administrative charge is assessed to students using the installment method. Students not paying in accordance with the terms of the deferred fee contract will be charged a \$15.00 late payment fee per installment, and may have their enrollment canceled.

If the student withdraws from the University and the installment contract is not paid in full, any refund due the student is applied first to the unpaid balance of the contract. Withdrawal from the University does not void the contract and the University refund policy will be followed.

## Non-Payment of Fees

No person who owes Montana State University any fees, fines, or other charges will be permitted to

1. receive academic credit or grades;
2. register;
3. secure a transcript, diploma, or other record; or,
4. access any MSU Billings facilities or services, regardless of the relationship there of to the amount owed, until the full amount due has been paid or satisfactorily adjusted with Business Services.

All legal means will be used to collect any unpaid loans. Collection fees may be based on a percentage at a maximum of 33% of the debt, and all other expenses, including reasonable attorneys' fees the University incur in such collection efforts.

MSU Billings shall have the right to apply any portion of any amount it may owe such individual for any reason, including wages, to payment of the balance owed MSU Billings.

## Other Fees

### Late Registration Fee

A nonrefundable fee of \$40.00 is payable by all students who do not pay during the designated fee payment period unless their late payment was due to the fault of Montana State University Billings. If a bank declines payment on a check and returns it to Montana State University Billings, a late registration fee shall be charged to the student offering the check in payment of fees. The late registration fee applies to students enrolled for six credit hours or less beginning the second week of classes.

### Audit Fee

Students who elect to audit a course must pay the normal per credit hour fee as outlined in the student fee schedule.

### Listening Fee

Any person not otherwise enrolled, and who does not want to register in a course for college credit, may with instructor approval enroll upon payment of a per credit hour fee as outlined in the Inventory of Fees. Listening fees are nonrefundable.

### Application Fee

A \$30.00 nonrefundable application fee is assessed to each person applying for admission for the first time as an undergraduate student. Normally, this fee



applies only to the period for which the person is making initial application at the undergraduate level. If the applicant is accepted and does not register, admission to City College is cancelled. The applicant has one calendar year from the semester of initial application to apply for readmission without paying an additional application fee. After one year, the \$30.00 application fee is assessed again.

### Course-Related Fees

Several City College at Montana State University Billings courses require additional fees. Examples of these are art classes, science labs, or field trips. Some practicum and internship classes require an extra fee for professional liability insurance. A complete schedule of course related fees are available from the Business Office web site: [www.msubillings.edu/boffice](http://www.msubillings.edu/boffice) (<http://www.msubillings.edu/boffice/>)

### Electronically Mediated Course Fees

Interactive television courses and online courses are assessed additional fees per credit hour. Electronic mediated fees are non-returnable after the 5th classroom day.

### Graduation Fee

A nonrefundable fee is assessed per degree for each application to graduate. Late graduation applications will be assessed a late fee of \$25.00. Please call (406) 247-3000 for details.

### Transcript Fee

Students may receive one free official transcript. Each official transcript thereafter costs a minimal fee. Call (406-247-3000).

### Returned Check Fee

An administrative service fee is assessed each time a check is returned by a bank.

Any check tendered in payment of fees and returned by a bank may result in the postponement of a student's registration and a late registration charge. Student registration is not complete until all fees have been paid or arrangements made for payments. Tuition and fees are paid per semester.

### Parking Fees

#### Parking

University Police, (406) 697-1403/657-2147

[www.msubillings.edu/police/parkinginfo.htm](http://www.msubillings.edu/police/parkinginfo.htm) (<http://www.msubillings.edu/police/parkinginfo.htm>)

City College at MSU Billings provides parking for students for a fee. All vehicles parked on University property must display a current MSU Billings parking permit on weekdays when the University is in session during the hours specified in the "MSU Billings Traffic and Parking Regulations" brochure. Students may purchase parking permits online and have the permit mailed to them or they can go to the University Police Office on the University campus, which is located on the southwest side of the ground floor of the parking garage, to purchase and pick up the parking permits. University Police is open Monday through Friday, 7:30 a.m. to 5:00 p.m.

### Residence Halls Meal Plan

All students living on campus are required to purchase a meal plan each semester. Check online at [msubillingsdining.sodexomyway.com](https://msubillingsdining.sodexomyway.com) (<https://msubillingsdining.sodexomyway.com/>) for meal plans, benefits of the plan, and services.

## Western Undergraduate Exchange (WUE)

City College at Montana State University Billings participates in the Western Undergraduate Exchange (WUE), a program of the Western Interstate Commission for Higher Education and other western states. Through WUE, students from Alaska, Oregon, California, Colorado, Nevada, South Dakota, Hawaii, New Mexico, Utah, Idaho, North Dakota, Washington, and Wyoming may enroll in degree programs paying resident tuition plus 50 percent of that amount (plus other fees that are paid by all

students). Students should be aware that the Montana Board of Regents may change regulations concerning Montana's participation in the WUE Program. Students may contact the Office of Admissions at City College, (406) 247-3000 or 1-800-565-MSUB for more information.

## Determination of Resident Fee Status

The Montana University System classifies all applicants for admission and students as either in-state or out-of-state. The basic rules for making the classification are found in Board of Regent's policy. It is each student's responsibility to secure and review a copy of the policy. Failure to be aware of the rules will not be cause for granting exceptions to them. A copy of the policy is available from the Office of Admissions at City College at Montana State University Billings. Each residency determination is based on the unique set of facts found in each individual's case.

If students have questions regarding their case, they should contact the Office of Admissions.

## Financial Aid and Scholarships

City College Tech Building, Jacket Student Central, First Floor  
McMullen First Floor, (406) 657-2188

[www.msubillings.edu/finaid/index.htm](http://www.msubillings.edu/finaid/index.htm) (<http://www.msubillings.edu/finaid/>)

The Office of Financial Aid and Scholarships at Montana State University Billings provides advice and financial assistance to students. Although families and students are expected to make a maximum effort to meet the costs of education, financial aid is available to fill the gap between family resources and educational expenses.

Financial aid consists of grants, scholarships, loans, and employment opportunities. Individual awards are based on the calculated financial need of the student and the availability of funds. The estimated financial need is the difference between the cost of attending MSU Billings and the ability of the student and/or family to contribute to those education costs as determined by the results of the Free Application for Federal Student Aid (FAFSA).

All students are encouraged to complete the Free Application for Federal Student Aid (FAFSA). This form can be completed on the web at [fafsa.ed.gov](http://fafsa.ed.gov) (<http://www.fafsa.ed.gov>). Early application is essential as some funds are limited and awarded on a first come, first serve basis until the funding has been exhausted. Priority awarding will be given to those students who have a complete FAFSA and have submitted the required documentation to the Financial Aid Office by December 1st. Students should allow up to two weeks for the office to receive the FAFSA. We will then begin communications with the student regarding any additional information that needs to be submitted before we can evaluate aid eligibility. After all requested documentation has been submitted, it can take four to six weeks before an award offer is generated. The FAFSA must be filed annually, and becomes available for the upcoming academic year (Fall/Spring) on October 1st of every year.

## What Does College Cost?

To help students make an evaluation of their financial needs, each year the Office of Financial Aid & Scholarships develops a financial aid budget, called the Cost of Attendance (COA). The COA is the ESTIMATED cost of completing a full year at MSU Billings. It is important to note that the COA is a tool used by the Office of Financial Aid & Scholarships to determine student eligibility for financial aid and does not reflect the actual bill that will be paid to MSU Billings. To review the COA, visit: [www.msubillings.edu/finaid/CostOfAttendance.htm](http://www.msubillings.edu/finaid/CostOfAttendance.htm) (<http://www.msubillings.edu/finaid/CostOfAttendance.htm>)

## General Eligibility Requirements

All financial aid recipients must meet the following eligibility requirements:

- Be enrolled/accepted for enrollment in a degree or certificate program.
- Cannot be enrolled in an elementary or secondary school.
- Have a high school diploma or GED.
- Be a citizen or eligible non-citizen.
- Maintain Satisfactory Academic Progress (see section below).
- Cannot be in default on Perkins Loans, Stafford/Direct Loans, or PLUS Loans at any institution.
- Cannot owe an overpayment of Pell or SEOG.
- If required, must register with the Selective Service.
- Cannot have borrowed in excess of loan limits.
- Have need, as defined by individual program requirements (except for unsubsidized Stafford Loans and PLUS Loans).
- Meet any other program-specific criteria.

## Aid Types

Students who apply for financial aid are considered for all aid programs for which they are eligible. The most common types of financial aid are listed below.

### Grants

#### Federal Pell Grant

Federal Pell Grants are awarded to undergraduate students who have not earned their first bachelor's degree and have not reached the Pell Grant Lifetime Eligibility limit.

Pell eligibility is determined by a formula developed by the U.S. Congress and is applied consistently to all applicants using the information reported in the FAFSA.

#### Federal Supplemental Education Opportunity Grant (FSEOG)

This grant is awarded to undergraduate students who have not earned their first bachelor's degree and have financial need. Priority is given to students who receive Pell Grants. Eligible students may receive \$500 to \$1500 per year depending on need and number of terms attended in an academic year.

#### State & Institutional Grants

To qualify for one of the state or institutional grants, a student must be a Montana resident, be eligible for financial aid, and be enrolled or accepted for enrollment as an undergraduate student. Enrollment in at least six credits is required for most state grants.

### Scholarships

Montana State University Billings has many scholarships available to students. Any prospective or currently enrolled student may apply for a scholarship by completing a General Scholarship Application Form available online at [www.msubillings.edu/scholarships/](http://www.msubillings.edu/scholarships/). Since the requirements and criteria are different for each scholarship, it is advisable for students to use the general application to be considered for all scholarships. **The scholarship application priority date is February 1.**

### Employment

#### Federal, State, and Institutional Work-Study Programs

The federal and state work-study programs at MSU Billings are need-based and funded with federal and state dollars to provide students with part-time employment on and off campus. Institutional and some state work-study is non-need-based and can be requested in writing to the Financial Aid Office. However, the request must be reviewed and there is no guarantee the request will be approved. Off campus work-study jobs are limited to community service employment. Hourly rates of pay comply with minimum wage laws and vary with the type of work and the student's experience and responsibilities. Student employees are paid every other week, according to State of Montana payroll schedules. To view a list of available jobs, students who are approved to receive work-study funding may login to their CareerLink account at [www.msubillings.edu/careers/](http://www.msubillings.edu/careers/) (<http://www.msubillings.edu/careers/>)

#### Student Employment

The Job Locator and Developer (JLD) assists MSU Billings students in obtaining part-time employment in the community. Area businesses list job opportunities with the Job Locator. The Job Locator Service is free to all MSU Billings students and is not based on financial need. Students who are interested in obtaining employment should refer to the Career Link ([www.msubillings.edu/careers/](http://www.msubillings.edu/careers/) (<http://www.msubillings.edu/careers/>)) for available job listings.

### Loans

Loans are a major source of financial aid for students. Student loans must be repaid after the student graduates, withdraws from school, or drops below half time enrollment. Interest rates, grace periods, and repayment requirements vary depending on the type of loan. For more information visit: [www.msubillings.edu/finaid/Loans.htm](http://www.msubillings.edu/finaid/Loans.htm) (<http://www.msubillings.edu/finaid/Loans.htm>)

## Tuition Waivers

MSU Billings has tuition waivers for veterans, senior citizens, American Indians, faculty and staff, advanced honor students, athletes, graduate students, war orphans, dependents of firemen and policemen killed in the line of duty, and students with certain majors. Eligibility and selection criteria vary. Certain waivers require a separate application form and in some cases additional documentation in order to qualify. To be eligible for Department waivers students must complete the General Scholarship Application by the February 1 priority date. Inquire at the Office of Financial Aid and Scholarships for specific information regarding tuition waivers. For more information visit: [mus.edu/prepare/](https://mus.edu/prepare/) (<https://mus.edu/prepare/>)

## Other Programs Available

### State Vocational Rehabilitation Service

Students with disabilities may qualify for educational assistance through the Montana Department of Social and Rehabilitation Service. In Billings they can be contacted at 406-248-4801.

### Veterans' Benefits

Students may apply for veterans' educational benefits through the Veterans Administration. Information can be obtained from the campus Veteran's and Military Success Center, 406-657-2968, located on the University Campus COE 106 or the student's local office of the Veterans Administration.

### Tribal Grants

Assistance is available to many American Indian students through Tribal Higher Education Offices. The award limits are based on the student's need and the availability of funds. Further information may be obtained by contacting the student's tribe or the tribal higher education office.

## More Financial Aid Information

### Academic Year Definition

The MSU Billings Financial Aid Office defines the academic year as 30 weeks and 24 credits. Therefore, the definition of fulltime enrollment is 12 credits per semester for undergraduate students.

### Financial Aid Satisfactory Academic Progress Standards

Students are expected to maintain certain academic standards and make satisfactory progress toward a degree in order to receive federal and state financial aid.

In accordance with Federal and State laws and regulations, MSU Billings has established a policy to define and administer standards of academic progress for all students. Detailed information explaining the financial aid satisfactory progress standards, including the appeal and reinstatement process, is available on line at [www.msubillings.edu/finaid/SAP.htm](http://www.msubillings.edu/finaid/SAP.htm) (<http://www.msubillings.edu/finaid/SAP.htm>).

### Verification Process

Some students' FAFSA information will be selected by the Department of Education for a process called verification. The Financial Aid Office may complete the verification. We have also established a partnership with Inceptia to expedite the federal verification process for Montana State University Billings. Verification Gateway (VG) from Inceptia is an online portal to guide students and parents through verification. If your FAFSA application is selected for verification by the U.S Department of Education, you will receive an email from [VGCS@inceptia.org](mailto:VGCS@inceptia.org), or postcard from Inceptia, containing Montana State University Billings' unique website link to start the verification process. After these documents have been reviewed and the student has been determined to be eligible, a financial aid package will be offered.

### Professional Judgement

The Higher Education Act of 1992 allows financial aid administrators to make professional judgement decisions for special or unusual family or student

circumstances. These circumstances must be documented and must be analyzed on a case-by-case basis. The Financial Aid Officer can exercise professional judgement in different ways. Some examples are listed below.

- If the student or student's family (if dependent) has experienced a hardship where the income will be significantly less than the prior-prior year income that was reported on the FAFSA
- Dependency override (also known as an Appeal for Independent Status)

Detailed information explaining the appeal for professional judgment process is available online at [www.msubillings.edu/finaid/Definitions.htm](http://www.msubillings.edu/finaid/Definitions.htm) (<http://www.msubillings.edu/finaid/Definitions.htm>)

### Tuition and Fee Refund Policy

The institution's refund policy for students who withdraw from college ranges from a 90 percent refund for class days one through five; 75 percent for class days six through 10; 50 percent refund for class days 11 through 15; there are no refunds after the 15th day of classes. Students with financial aid may have to return some or all of the financial aid they received if they withdraw or if they do not begin attending classes.

### Financial Aid Disbursement & Credit Balance Refund Policy

Most types of financial aid (grants, waivers, loans, and scholarships) are applied directly toward the student's university bill to assist in covering those charges. If there is money left over after the bill has been paid, the remaining amount will be sent as a "refund." Students can elect how they would like to receive their refund, either as a Direct Deposit or as a physical check (detailed instructions are available). Financial aid disburses on student accounts and refunds begin to be generated the week before the start of the semester and are generated daily thereafter. If the student elected to receive the refund as a physical check, but the check was not received, please verify that the mailing address on file with the University is correct. Otherwise, contact Student Accounts at 406-657-2140. Please keep in mind checks can take 5-7 business days for delivery, depending on the postal service.

Students who are offered work study must obtain employment and complete additional paperwork at the Enrollment Services-Financial Aid Office. Students who work are paid bi-weekly based on the timecard submitted by students and their supervisors.

### Return of Title IV Funds Policy

If a student withdraws from college, officially or unofficially, he or she may be required to REPAY all or part of the financial aid that was received. Any refund will be used to repay the financial aid before any refund will be made to the student. (Refer to Refund Policy, above.) The amount of financial aid that must be returned to the Department of Education is based on a federal formula that takes into consideration the date of the withdrawal or last date of attendance, the amount of federal financial aid received for the term, and the amount of institutional charges for the term. For a complete review of Return of Title IV requirements, visit: [www.msubillings.edu/finaid/pdf/Return\\_of\\_Title\\_IV.pdf](http://www.msubillings.edu/finaid/pdf/Return_of_Title_IV.pdf) ([http://www.msubillings.edu/finaid/pdf/Return\\_of\\_Title\\_IV.pdf](http://www.msubillings.edu/finaid/pdf/Return_of_Title_IV.pdf))

### Financial Aid – Summer Session

Summer financial aid is based on the FAFSA information used to determine eligibility for the previous fall and spring semesters. Those students who are Pell eligible should also complete the upcoming FAFSA to ensure they receive their maximum Pell grant eligibility. To determine aid eligibility for summer, students must complete and submit the Summer Award Acceptance form to the Office of Financial Aid and Scholarships. For specific information please visit: [www.msubillings.edu/finaid/SummerFinAid.htm](http://www.msubillings.edu/finaid/SummerFinAid.htm) (<http://www.msubillings.edu/finaid/SummerFinAid.htm>)

## Financial Aid - Study Abroad

The Financial Aid Director will review requests for funding "Study Abroad" coursework after receiving the following information and documentation:

1. Document acceptance into the study abroad program
2. A list of all necessary direct education expenses such as: tuition and fees, books, class supplies, room and board
3. A copy of the airline ticket or a letter from a travel agency listing the cost if the student is to incur airfare or travel expenses

The above information must be submitted to the Financial Aid Office **at least six weeks prior to departure**. Any adjustments to a student's award will be based upon eligibility and available funds. Most grant and loan programs have yearly limits which cannot be exceeded. These limits could affect a student's funding level, even if allowable expenses are documented.

## Consumer Information

In accordance with federal regulations set forth by the Higher Education Act of 1965, as amended, a summary of consumer information must be made available to all current and prospective students of Montana State University Billings. The information that must be disclosed can be obtained at: [www.msubillings.edu/finaid/Consumer\\_Information.htm](http://www.msubillings.edu/finaid/Consumer_Information.htm) ([http://www.msubillings.edu/finaid/Consumer\\_Information.htm](http://www.msubillings.edu/finaid/Consumer_Information.htm))

## Questions? Contact Us

Visit the Financial Aid Office on the University Campus (located on the 1st floor of McMullen Hall), or at City College Jacket Student Central, or by calling (406) 657-2188, sending an email to [finaid@msubillings.edu](mailto:finaid@msubillings.edu) or visiting [www.msubillings.edu/finaid](http://www.msubillings.edu/finaid) (<http://www.msubillings.edu/finaid/>)

## Student Affairs & Student Support Services

City College at Montana State University Billings provides academic and student support programs and extracurricular activities that enhance and enrich the total student life of the University. A wide range of services and opportunities are available for every student including programs delivered through the Division of Student Access and Success and other departments that affect student life from admission through graduation.

City College at Montana State University Billings also provides a number of support facilities and services on campus to help students succeed in your academic efforts.

Facilities and services include Academic Support Services (ASC), TRIO/SSS, Disability Student Services, computer lab space, study areas, Military and Veterans Student Lounge, Native American Student Lounge, Yellowjacket Food Pantry and Jacket Student Central.

## MSU Billings Division of Student Access and Success Mission Statement

The Division of Student Access and Success provides exceptional service and cultivates an inclusive social and educational environment that enhances active student learning, engagement, development and success.

## Student Rights, Responsibilities and Conduct

Montana State University Billings statement regarding students' rights and responsibilities is as follows:

"Montana State University Billings is a community of scholars and members of such University communities have traditionally recognized their individual responsibilities in the development of a mature and sophisticated society. By enrolling in the University, the student neither loses the rights nor escapes the duties of a citizen. Each student should conduct his/her personal life in the context of mutual regard for the rights, property, and privileges of others. Therefore, it is expected that students will demonstrate respect for the law and for the necessity of orderly conduct in the affairs of the local and campus community. In certain circumstances where this preferred conduct fails, the University will rely upon the rules and procedures described in its **Code of Student Conduct** to hold students accountable for maintaining the responsibilities that follow.

### Student Rights

One of the concerns of Montana State University Billings is to provide each student the opportunity to learn. Therefore, some personal freedoms and rights of students include, but are not limited to:

1. Freedom of inquiry, speech, and assembly.
2. Freedom from threats.
3. Freedom from acts of violence.
4. Freedom from unfair or obscene treatment from others.
5. Freedom from interference from others in an unreasonable and unauthorized manner while in class, activities, and public events.
6. Freedom from theft and willful destruction of personal property.
7. Right to study and learn in an atmosphere of academic freedom.
8. Right to procedural due process in University misconduct action.
9. Right to be governed by justifiable academic regulations.
10. To be informed in writing of the academic requirements determined by individual instructors.

11. Right to be informed of the regulations for academic and social conduct, and graduation requirements of the University.
12. Right to petition for redress of grievances, academic and non-academic

## Student Responsibilities

Each student has the responsibility:

1. To respect the rights and property of others.
2. To be fully acquainted and comply with the published rules and regulations of the University.
3. To comply with all local, state, and federal laws.
4. To recognize that student activities reflect upon the individuals involved as well as upon the entire University community.
5. To recognize the University's obligation to provide a safe environment conducive for learning and academic inquiry.
6. To adhere to the academic requirements determined by individual instructors.
7. To abide by the reasonable direction of a University official acting within the legitimate scope of his or her duties.

## Student Access and Success & Related Phone Numbers

| Student Affairs  | Phone Number |
|--|--------------|
| Academic Support Center - City College                 | 406-247-3022 |
| Academic Support Center                                | 406-657-1641 |
| Admissions   | 406-657-2888 |
| Advising - City College                                | 406-247-3019 |
| Advising Center  | 406-657-2240 |
| Associated Students of MSUB                            | 406-657-2365 |
| Athletics/Yellowjacket Sports                          | 406-657-2369 |
| Business Service/Cashier - City College                | 406-247-3002 |
| Business Services/Cashier                              | 406-657-2140 |
| Campus Activities/Engagement                           | 406-657-2387 |
| Campus Police/Parking                                  | 406-657-2147 |
| Campus Store   | 406-657-2121 |
| Career & Employment Services                           | 406-657-2168 |
| City College Student Services (Jacket Student Central) | 406-247-3012 |
| D2L Support (Online Learning)                          | 406-247-5755 |
| Dean of Student Engagement                             | 406-657-1696 |
| Disability Support Services - City College             | 406-247-3029 |
| Disability Support Services                            | 406-657-2283 |
| Diversity Center                                       | 406-896-5902 |
| Educational Talent Search                              | 406-657-2116 |
| Financial Aid and Scholarship                          | 406-657-2188 |
| Housing & Residence Life                               | 406-657-2333 |
| Information Technology (Help Desk)                     | 406-247-5755 |
| Library  | 406-657-1662 |
| Military & Veterans Success Center                     | 406-657-2968 |
| Native American Achievement Center                     | 406-657-2182 |
| New Student Services - City College                    | 406-247-3007 |
| New Student Services                                   | 406-657-2888 |
| Registrar/Transcripts                                  | 406-657-2158 |
| ROTC/Military Science                                  | 406-247-5733 |
| Student Health Services - City College                 | 406-247-3027 |



|   |              |
|---|--------------|
| Student Health Services                       | 406-657-2153 |
| Student Support Services/TRIO at City College | 406-247-3051 |
| Student Support Services/TRIO at MSUB         | 406-657-2162 |
| Ucard/ID card - City College                  | 406-247-3007 |
| U-Card/ID Cards                               | 406-657-2023 |
| Upward Bound                                  | 406-657-2180 |
| Vice Chancellor for Student Access & Success  | 406-657-2307 |

## Advising Center

### City College Tech Building, Jacket Student Central

First Floor, (406) 247-3019

University Campus, McMullen First Floor West, (406) 657-2240

[www.msubillings.edu/citycollege/Advising.htm](http://www.msubillings.edu/citycollege/Advising.htm) (<http://www.msubillings.edu/citycollege/Advising.htm>) or [www.msubillings.edu/advise](http://www.msubillings.edu/advise) (<http://www.msubillings.edu/advise>)

The Advising Center offers advising services to all new admitted, transfer, and re-admit students for the first few semesters. The Advising Center assists students with understanding the coursework and requirements for their major, registration, and academic planning. Upon completion of the first few semester(s) in good academic standing, the student is transferred to a faculty advisor in his or her major. Students should call or visit Jacket Student Central for an appointment to begin the process of choosing coursework and determining an academic plan of study.

### Mandatory Advising

All first-time freshmen students entering City College at MSU Billings are required to see an academic advisor before registering for classes. During the initial advising session, students will receive information regarding requirements and worksheets for their academic program.

Advisors assist students with selection of courses and academically-related issues, but the ultimate responsibility for meeting graduation requirements belongs to the student.

### General Studies Students

Students who have not selected a major are registered as General Studies majors.

In an effort to assist students in completing degree requirements as efficiently as possible, General Studies students are encouraged to focus on General Education requirements their first semester. Students are also encouraged to visit an Advising Center member in Jacket Student Central to explore career interests and to clarify how their academic program may support their career goals.

### Transfer Students

Students transferring to City College at MSU Billings should apply for admissions prior to arranging a visit with an advisor in the Jacket Student Central Advising Center to complete a transcript evaluation and begin developing a plan of study. However, if you are still exploring college options, you should talk with a New Student Specialist about the Transfer Evaluation Request form. In order to give an accurate transcript evaluation, transfer students should provide copies of transcripts of all previous college level work. Although we maintain course equivalency guides for all Montana colleges and universities, it is helpful if transfer students can provide catalogs with course descriptions for coursework completed at out-of-state institutions.

### Declaring a Major

Students are encouraged to select and declare a major during their freshman year.

Upon declaring a major with an advisor at Jacket Student Central, the student's advising electronic and/or paper file will be updated to the new requirements for the

major, and a plan of study will be developed. Students who have declared a major will be assigned a faculty advisor from their major department for the remainder of their academic career.

### Changing a Major

Students who change their major are encouraged to visit with an advisor in Jacket Student Central. The academic advisor will clarify new program requirements, update the student's electronic and/or paper advising file with new program worksheets, and forward the student's advising file to the new faculty advisor. The changing of an academic major may have significant impact on a student's long-range academic plan and can have impacts on their financial aid eligibility. All students are encouraged to keep in close contact with their advisor through the process of changing majors.

### Assessment Testing

All entering students and transfer students who have not completed their general education requirements in English or mathematics may need to take the ACCUPLACER Placement test. Results of the ACCUPLACER Placement tests along with ACT/SAT scores, high school or previous college GPAs are used to advise students into the most appropriate math and English courses. The ACCUPLACER Placement tests are administered prior to student registration sessions or Orientation. For further information, contact Advising at Jacket Student Central or the University Advising Center office: 406-247-3019 or 406-657-2240 or [ccadvising@msubillings.edu](mailto:ccadvising@msubillings.edu)

## Career & Employment Services

### City College Tech Building, Jacket Student Central

City College Tech Building, (406) 657-2168

University campus, Library 100, (406) 657-2168

[www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>)

A full range of career services is available to help students gain experience and skills that will clarify career goals and facilitate entry into the job market. Services include Career Workshops, career counseling and assessment, career resource library, campus interviewing, part-time and workstudy jobs in CareerLink, and career/job fairs. See [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for additional information.

Internships create educational partnerships among City College at Montana State University Billings, the business community, and students. This unique academic experience allows students to earn academic credit while combining classroom learning with practical work experience. Learn more at [www.msubillings.edu/careers/cooped/students.htm](http://www.msubillings.edu/careers/cooped/students.htm) (<http://www.msubillings.edu/careers/cooped/students.htm>)

### Career Services/Job Locator

City College Tech Building, Jacket Student Central

First Floor, (406) 657-2168

University Campus, Library 100, (406) 657-2168

The Job Locator coordinates part-time positions for currently enrolled students.

Available jobs can be accessed in CareerLink, ranging from the service industry to technical positions, and are designed to accommodate students' academic schedules.

Financial aid-eligible work study students can access Community Service positions where students work in non-profit agencies in the local area as well as on campus work study positions.

## Academic Support Center

City College Learning Commons, Tech Building

**First Floor, A038, (406) 247-3022**

**University Campus, SUB, (406) 657-1641**

[www.msubillings.edu/asc](http://www.msubillings.edu/asc) (<http://www.msubillings.edu/asc/>)

The Academic Support Center provides academic support and learning assistance in order to promote the academic success of students at City College at MSU Billings.

Programs and services include drop-in and appointment tutoring for a variety of general education subjects, supplemental instruction, and peer mentoring. The Academic Support Center at City College is open Monday-Thursday between 9 a.m. and 3 p.m. and Friday between 9 a.m. and 12 p.m. with extended evening and weekend tutoring hours online.

In addition, computer work stations and areas for small group study sessions are available to students. The Center also provides support materials such as handouts, texts, and electronic resources for students' academic use. Special educational delivery requirements that need to be addressed by persons with disabilities should be directed to Disability Support Services.

## Associated Students of Montana State University Billings

**SUB 213, (406) 657-2365**

[www.msubillings.edu/asmsub](http://www.msubillings.edu/asmsub) (<http://www.msubillings.edu/asmsub/>)

The Associated Students of Montana State University Billings (ASMSU Billings) are governed by a Student Senate, the functions of which are to administer and to distribute student activity fees, to act as liaison among students, faculty, and administration, to protect the privileges and the rights of students, and to act as a central agent for student opinion. City College students are welcome to attend a Student Senate meeting or join the Student Senate as a Senator!

## Intercollegiate Athletics

**Physical Education Building, (406) 657-2369**

[msubsports.com](https://msubsports.com) (<https://msubsports.com/>)

Athletics is an integral part of the college life at MSU Billings for both men and women. All teams are members of NCAA Division II and the Great Northwest Athletic Conference. Men's and women's teams compete on a varsity level in basketball, cross country, golf, soccer, indoor track and field, and outdoor track and field; additionally, women compete in volleyball and softball, triathlon, and men compete in baseball. MSU Billings Athletics also sponsors a coed varsity cheer team. All MSU Billings students are admitted free to Yellowjacket Athletics events with a valid student ID. Schedules, news, and stats are available on the Yellowjacket Athletics website at [www.msubsports.com](http://www.msubsports.com) (<http://www.msubsports.com/>).

## Carl Perkins Funding

City College at MSU Billings receives funding from a grant provided by the Carl Perkins Act of 1998. The Perkins Act is designed to improve educational programs leading to academic and occupational skill competencies needed by all segments of the population to work in a technologically advanced society. Emphasis is placed on improving vocational education services for individuals who are disabled, academically or economically disadvantaged, preparing for nontraditional training and employment, or who are otherwise at an educational disadvantage, such as single parents, displaced homemakers, or those with limited English proficiency. In order to receive continued funding under the Perkins Act, institutions are expected to show constant improvement in its students' rates of academic attainment, degree completion, job placement and retention, and participation and success in nontraditional fields.

## Dining Services

**City College Tech Building, First Floor**

**(406) 247-3000**

[msubillingsdining.sodexomyway.com](https://msubillingsdining.sodexomyway.com) (<https://msubillingsdining.sodexomyway.com/>)

Montana State University Billings Dining Services offers a dining program for students, faculty, and staff. Students living in the residence halls participate in the campus dining program by purchasing one of six meal plans consisting of dining dollars and board meals. Board meals are used for an all-you-care-to-eat meals in Rimrock Café. Dining dollars can be used in any of the dining venues including Rimrock Café, Stingers Bistro, Jazzman's, SUB Connection, and City College Café.

City College at MSU Billings has a café available for student, faculty, and staff dining.

City College Café provides a variety of choices including Starbucks drinks, grill, subs on fresh baked bread, pizza, house made soup, fresh salad bar, assorted beverages including Starbucks coffee, and snack items. Café purchases can be made with the U-Card, cash, or credit/debit card. Residence hall students can use their meal plans at City College Café for breakfast and lunch.

## Student Support Services (SSS/TRIO) at City College

**City College Tech Building A022**

**(406) 247-3051**

[www.msubillings.edu/citycollege/sss/](http://www.msubillings.edu/citycollege/sss/)

This federally funded program is located in Room A022 of the TECH building. SSS/TRIO assists 140 eligible students by helping them successfully remain in school and graduate. To be eligible, students must be working on a certificate or Associate's degree at City College, be a U.S. citizen or U.S. permanent residents with a Form I-551, I-151, or I-551C and meet one of the following: be from a low-income background (such as Pell grant eligible), first-generation college student (neither parent has earned a Bachelor's degree), or have a documented physical, emotional, or learning disability. SSS/TRIO offers the following free of charge to qualifying students:

- Mentoring and advising
- Tutoring and study groups
- Skills building workshops
- Assistance completing FAFSA and scholarship applications
- Letters of recommendation
- Financial literacy and budgeting assistance
- Referrals to community organizations (to assist with food, housing, transportation, etc.)
- Midterm evaluations
- Assistance in graduation preparation
- Help transferring to a four-year or graduate institution
- Academic boot camp summer bridge program
- Textbook lending library
- Laptop loaner program
- Equipment rental (SmartPens, calculators, etc.)
- And much more!

## Disability Support Services

**City College Tech Building A016**

**(406) 247-3029**

**(406) 545-1026 (VP)**

**University campus, COE 135, (406) 545-2518 (VP)**

[www.msubillings.edu/dss/](http://www.msubillings.edu/dss/) (<http://www.msubillings.edu/dss/>)

Disability Support Services (DSS) provides direct assistance to students with documented disabilities by encouraging their independence, creating and maintaining



an accessible physical and program environment, providing a supportive emotional atmosphere, and serving as a liaison and advocate.

Students with disabilities have the responsibility to identify themselves and request appropriate accommodations. Students are encouraged to contact the DSS office in the City College Tech Building or University Campus College of Education, or visit our website at [www.msubillings.edu/dss](http://www.msubillings.edu/dss) (<http://www.msubillings.edu/dss/>), or call the numbers listed above.

## Housing & Residence Life

SUB 225, (406) 657-2333

[www.msubillings.edu/reslife](http://www.msubillings.edu/reslife) (<http://www.msubillings.edu/reslife/>)

### Residence Halls

Montana State University Billings provides on-campus living facilities for students who are pursuing an educational mission. The residence halls offer an environment which is desirable for those who choose to engage in the on campus living experience. Participation in hall programming and group processes is part of the complete experience the residence hall provides.

The residence halls offer a safe and fun-filled environment where students can live well, work well, and be well during their college experience. The residence hall experience includes some amazing benefits like wireless technology throughout the halls, in room sink, cable television in the floor lobby areas, laundry services (u-card and quarter accepted), and more. Visit [www.msubillings.edu/reslife](http://www.msubillings.edu/reslife) (<http://www.msubillings.edu/reslife/>) for more information about the residence hall experience.

Students with disabilities are encouraged to make arrangements for any specific needs with the Office of Housing & Residence Life and Disability Support Services prior to moving on campus.

Residence hall living is available during Fall, Spring, and Summer sessions and during break periods to those students meeting the necessary requirements.

To apply for on-campus housing, call (406) 657-2333 or visit [www.msubillings.edu/reslife](http://www.msubillings.edu/reslife) (<http://www.msubillings.edu/reslife/>) to apply for housing.

### Family Housing

MSU Billings offers 10 family housing apartments for students currently enrolled at MSU Billings. Family housing eligibility includes: married students, single parent with children, or married students with children. Family housing apartments include 6 three-bedroom apartments and 4 two-bedroom apartments. There is an application and \$25.00 application fee to place your name on the waiting list for an available apartment.

To obtain more information about family housing apartments, contact Housing & Residence Life at (406) 657-2333 or visit [www.msubillings.edu/reslife/familyhsing.htm](http://www.msubillings.edu/reslife/familyhsing.htm) (<http://www.msubillings.edu/reslife/familyhsing.htm>)

### Housing Application

Residents who complete their online Housing Applications and pay their \$125 Non-Refundable Application Fee to reserve a room have entered into a legally binding agreement with Montana State University Billings for the purchase of housing for the academic year. Once a student has moved into the residence halls and accepted or signed for a room key and has signed a contract, he/she is financially obligated by the contract for the entire year, and may only be released for the following reasons:

1. Withdrawal from Montana State University Billings
2. Graduation from Montana State University Billings
3. Internship or student teaching assignment out of the area
4. Medical related condition

5. Financial hardship
6. Documented disability
7. Marriage
8. Living with family/legal guardian in Yellowstone County
9. Academic or disciplinary suspension

Any student wishing to cancel a Housing Contract for an upcoming term must complete the online Contract Release Request form at least two weeks prior to the first day of classes in order to receive a full refund of fees for the semester. Room and board rates, programs, and rules and regulations governing the residence halls are subject to change without notice. An optional installment plan is available for payment of room and board through the office of Business Services. Students may pay room and board in full at the beginning of each term or select the installment plan. This selection is made in conjunction with regular fee payment.

### On-Campus Requirement

**Required to live on campus:** Students who are 20 years or younger, less than 3 years out of high school, and under 30 credits at the start of the fall semester. This includes City College students.

#### Automatically exempt from housing (no form is required):

- Students over 21 years of age, as verified through MSUB student information systems
- Students who have completed 30+ college credits by the start of the fall semester

#### Exemptions to the live on requirement (form/documentation required):

- Living with family member/guardian (legal guardian, parent, or grandparent) within Yellowstone County
- Active military/veteran
- Enrolled in 5 or fewer credits
- Online student - must be enrolled in all online classes
- Non-Degree seeking student
- Marriage
- Physical custody of a dependent child
- Financial hardship
- Medical related condition
- Documented disability
- Completed one full academic year at a college or university while living in a residence hall
- Unusual circumstances

**Note:** City College students are not exempt from the live on requirement and must sign up for housing accordingly or complete an exemption request that meets any other exemption area.

## Office of Information Technology

Student Lounge, City College Tech Building, A017

University campus Information Commons, Library 1st Floor, (406) 247-5700

Information Technology provides computer and technology services to students, faculty, and staff. The department supports nearly 800 student computers across both campuses. Students may go to the Information Commons located on the first floor of the Library to receive assistance with using computer issues, software applications, and questions about their student login accounts. Assistance is also available by calling (406) 247-5700.

## Student Computing Resources

City College Information Commons  
Health Sciences Building Commons

Computer access is available with standard campus software and internet connectivity for all current MSU Billings students during City College campus hours in the student lounge, 1st floor of the Technology and Health Sciences buildings.

### Wireless Internet Access

Both campuses have wireless internet access available to students in common study areas, academic buildings, residence halls, dining facilities, and most indoor areas. Students may bring their computers to the Information Commons or to the Information Technology staff at City College for assistance with connecting to the MSUB wireless network. The network to connect to is **MSUB-mobile**, logging in with a NetID and password. This provides a secure, fast connection to the internet.

## MSU Billings Library Services for City College

1500 University Drive  
(406) 657-1662

[www.msubillings.edu/library/](http://www.msubillings.edu/library/) (<http://www.msubillings.edu/library/>)

The MSU Billings Library is located on the University campus. The collection supports the wide variety of programs at City College, providing books, journals, multi-media, and digital resources.

The MSU Billings Library resources are searchable through the MSU Billings Library website (<http://www.msubillings.edu/library/>). The library website includes access to research databases, a plethora of digital resources, and the library catalog. For research help, call us at (406) 657-1662, email us at [library@msubillings.edu](mailto:library@msubillings.edu) or chat (<http://www.msubillings.edu/library/>) with us.

Study areas and computers are available for student use in the Library. Library resources can be obtained from the University campus Library, from other libraries listed in the library's catalog, or through Interlibrary loan. Interlibrary loan services are free for all currently enrolled University students.

### Copyright Warning

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or reproduction. One of these conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship or research." If a user exceeds "fair use," that user may be liable for copyright infringement.

Software licensing agreements are very specific, and may prohibit making copies for use by those who have not purchased the software.

Montana State University Billings reserves the right to refuse to accept a copying request, if, in its judgment, fulfillment of the request would involve violation of copyright law, licensing agreements or fair use.

## Native American Achievement Center

2630 Normal Avenue  
(406) 657-2144, (406) 657-2182

[www.msubillings.edu/naac/](http://www.msubillings.edu/naac/) (<http://www.msubillings.edu/naac/>)

Sunny Day Real Bird, Director

The Native American Achievement Center assists American Indian students in making academic, cultural, and social adjustments to Montana State University

Billings. Services include individualized assistance with relocation to Billings, advocacy and referral with campus-based services and off campus services, study skills coaching, and scholarship applications. The staff help students create internships that are relevant to the American Indian community. The Native American Achievement Center on the university campus has a small classroom for some of the Native American Studies classes, or meetings. At City College there is a Native Student Lounge on the second floor of the Tech Building for any Native student to use.

The center hosts the annual American Indian Heritage Day, Veterans Medicine Wheel, and the MSUB Powwow. The Director serves as a liaison with tribal educational representatives and other community organizations. These relationships foster collaboration with the surrounding communities to host events and many other social gatherings that help our students feel connected to their culture and other Native people in the Billings region. The Native American Achievement Center is a home away from home for Native students.

The establishment of the Native American Achievement Center demonstrates that MSUB recognizes and commits to cultural diversity. The center provides students a familiar setting in an effort to ensure continuing collegiate success.

**All Nations Club** is open to all interested students. The All Nations Club is a student organization, established to assist Native American students in their adjustment to university life, to promote scholastic ability, and to foster pride in the cultural heritage of the Native American. The club is involved with the planning and sponsorship of an annual Pow Wow, the largest student-sponsored campus event. Other activities include social events that are culturally appropriate to share in a campus environment such as dances, Native games, documentary films, and Native cuisine.

## Diversity Center

SUB 212 (406) 657-2387

[www.msubillings.edu/engagement/diversity.htm](http://www.msubillings.edu/engagement/diversity.htm) (<http://www.msubillings.edu/engagement/diversity.htm>)

The Diversity Center located on the university campus is committed to providing a welcoming campus environment for all students, faculty, staff, and guests.

The Diversity Center fosters social and professional opportunities, as well as advocacy for all diverse students. The mission of this office is to ensure we are meeting the various needs of diversity and diverse population through fair and equal representation as well as increased opportunity for learning and understanding about diverse issues.

The Diversity Center offers leadership opportunities for students through clubs or organized meeting groups. Each group is student focused and student driven with opportunities to engage in campus and community programs, events and socials. For more information or to inquire about starting a new Diversity Center Student club, please contact the office number above.

## New Student Registration and Orientation Sessions

City College Tech Building

Jacket Student Central, First Floor, (406) 247-3007

New Student Services and the Advising Center at Montana State University Billings coordinates the Orientation & First Year Transition Program. This program is designed to provide first year students with an Orientation Peer Leader who is available to guide them through their first year transition into college. New students can choose either a face to face or virtual New Student Orientation experience for summer 2022. Adult Learners and Transfer students are highly encouraged to attend Adult Learner or Transfer Learner Orientation prior to the fall semester.

Students starting at MSUB in a spring or summer term should contact the New

Student Services at 657-2888 or Jacket Student Central (406) 247-3019 to visit about orientation and registration options.

## Placement Testing

City College Tech Building

Jacket Student Central, First Floor, (406) 247-3019

Next-Generation ACCUPLACER tests for reading level and for English and math placement are offered through Jacket Student Central for placement purposes. Fees for the test range from \$7.50 to \$15.00. Students who will not be attending City College at MSU Billings may take the Next-Generation ACCUPLACER exam for a \$15.00 fee. New students will have the opportunity to take the placement exams in an individual appointment. For questions about available testing times and locations if you live a distance from Billings, please contact Jacket Student Central at (406) 247-3019.

## Student Success

City College Tech building

Jacket Student Central, First Floor, (406) 247-3017

Jacket Student Central is available to offer support for student success. Students who would like extra assistance can work with a member of the Jacket Student Central staff to develop an individual success plan or to seek information about all of the student support services available to City College at MSU Billings students.

## Parking

University Police, (406) 657-2147

[www.msubillings.edu/police/parkinginfo.htm](http://www.msubillings.edu/police/parkinginfo.htm) (<http://www.msubillings.edu/police/parkinginfo.htm>)

MSU Billings parking regulations are a necessary component in providing convenient and safe parking, in addition to efficient and effective traffic control, for all students, faculty, staff and visitors to the university campuses. They are part of the terms and conditions pertaining to students who are enrolled at MSU Billings, to faculty and staff who are employed by the University, and are applicable to all vehicle owners/drivers on campus, including guests and visitors. Parking on MSUB campuses is a privilege, not a right.

All vehicles parked on University property must display a current MSUB parking permit. Parking permits may be purchased online at [www.msubillings.edu/police/parkinginfo.htm](http://www.msubillings.edu/police/parkinginfo.htm) (<http://www.msubillings.edu/police/parkinginfo.htm>) and also at the University Police & Parking Services office, in the southwest corner of the parking garage on Poly Drive. Parking regulations/maps are also posted online.

## Physical Education Building

The Physical Education Building, located on the University campus, includes two gymnasiums, a fitness center, swimming pool, climbing wall, racquetball courts, a running track and other recreational and health facilities. During set hours each semester, the facilities may be used by students and their families for swimming, workouts, etc. Student use is paid for with tuition and fees while family members pay a nominal charge for access.

## Recreational Activities

PE 016, (406) 657-2881

[www.msubillings.edu/recreativities/](http://www.msubillings.edu/recreativities/)

The Recreational Activities Program offers a wide range of activities. It provides all students, faculty, and staff with recreational opportunities in competitive and noncompetitive events as well as organized and informal activities as regularly as their time and interest permit. Activities include but are not limited to: fitness

center, intramural sports (flag football, basketball, softball, volleyball), swimming, racquetball, indoor jogging, and tennis.

## Student Health Services

City College Tech B002, (406) 247-3027

Petro Hall, (406) 657-2153

[www.msubillings.edu/studenthealth](https://www.msubillings.edu/studenthealth/) (<https://www.msubillings.edu/studenthealth/>)

The Student Health Services is an ambulatory health care facility, which provides high quality, cost-effective health care and mental health counseling with an emphasis on health education and wellness initiatives to promote and enhance student success.

With a staff of advanced practice professionals (with some contracted through SCL Health), a Registered Nurse, mental health counselors, and a wellness specialist, we provide health care, immunizations, COVID-19 testing, mental health counseling, and health education. SHS strives to encourage students to become responsible and knowledgeable consumers of health care. All students enrolled for seven or more credits are charged the Student Health Service fee. It is an optional fee for students taking six or fewer credits.

The Student Health Services is located on the 2nd floor of the Tech Building, B002, and is open Tuesday through Thursday approximately 4 hours a day varying hours.

It is also available Monday through Friday, 8:00 a.m. to 5:00 p.m., on the University campus.

## Student Health Insurance

All City College at MSU Billings students enrolled in six or more credits are required to have some form of health insurance. A student health insurance policy is available to City College at MSU Billings students. Before registering, students will be asked to elect or waive this insurance. **Students must elect or waive the health insurance before the 15th class day of fall and spring semesters.** Each semester the premium is for 6 months, therefore, opting to enroll in coverage for both semesters ensures twelve (12) months of coverage.

**Note: All students are eligible to use the Student Health Services whether or not they enroll in the student health insurance.**

Insurance policy brochures are available at fee payment and at the Student Health Services office on the 2nd floor of Petro Hall and the City College SHS on the 2nd floor of the Tech Building.

Full information about the Student Health Insurance program provided by Montana University Insurance Consortium is available at the following web site: [www.bcbsmt.com](https://www.bcbsmt.com/) (<https://www.bcbsmt.com/>)

## Center for Engagement

SUB 219, (406) 657-2387

[www.msubillings.edu/engagement/engage-sub/index.htm](http://www.msubillings.edu/engagement/engage-sub/index.htm) (<http://www.msubillings.edu/engagement/engage-sub/>)

The Center for Engagement office is a hub for coordinating and promoting co-curricular activities within the Student Union Building on the University Campus and at City College. The Student Union is centrally located on the campus with easy access to University services and facilities. Unless noted, activities are open to City College and University Campus students.

## Offices and Programs Housed in the Student Union

In addition to the Center for Engagement, the Student Union provides space for The Campus Store, Campus Dining Services, Stingers Bistro, ASMSU Billings, Housing and Residence Life, Diversity Center, Academic Support Center, Petro Theater, The Retort (campus podcast), Student Activities Board, and student organization offices.

## Center for Community and Civic Engagement

MSU Billings strives to connect students to the community through meaningful service and educational opportunities. We believe community involvement strengthens a sense of responsible and productive citizenship, which creates a lifelong commitment to service and leadership.

The Community Engagement Office will assist students in connecting to volunteer opportunities both on campus and in the community. Students can utilize volunteerism to enhance their academic experience, to help in meeting other students, to get involved as a student and to help prepare to become a civic leader within the community following graduation. The Community Engagement Office coordinates monthly Service Saturday projects, MSUB Night on the Van in partnership with the Salvation Army, Campus Blood Drives, and many more opportunities. Students can also utilize the Center for Engagement to connect to volunteer opportunities on an individual basis or students can access a community volunteer database at [www.youcanvolunteer.org](http://www.youcanvolunteer.org) (<http://www.youcanvolunteer.org>).

## Student Activities Board

SUB 219, (406) 657-2257

The Student Activities Board coordinates a balanced program of cultural, social and entertainment events appropriate to the educational goals and needs of the campus community. The Board consists of 13 selected student members and two advisors. Selection of board members occurs during fall and spring. City College students are welcome to join SAB and participate in student activities.

## Student Activities, Student Organizations, & Leadership Development

[www.msubitillings.edu/studentlife](http://www.msubitillings.edu/studentlife) (<http://www.msubitillings.edu/studentlife/>)

The Center for Engagement supports the programs, initiatives and activities of all student organizations. The office provides organizations with support, consultation services, resources, and leadership development and recognition programs. The Office is also the University contact for students seeking assistance to charter and organize new student organizations on campus.

The University encourages a variety of student activities and organizations, insofar as they promote both positive activity and the objectives of the University. The nonacademic aspects of student life can prove to be immensely valuable in the balanced development of the human personality. Many co-curricular activities are related to coursework and thus provide opportunities for applying knowledge and skills learned in the college classroom, in the studio, or in the laboratory.

## Veterans' Upward Bound

Cisel 109, (406) 657-2075

[www.vubmt.com/locations/billings.php](http://www.vubmt.com/locations/billings.php)

The Veterans' Upward Bound Program of Montana State University-Northern maintains a program at MSU Billings to assist veterans to learn the skills that will enable them to be successful in college. Both day and evening courses are offered in areas such as English, math and computers. Call (406) 657-2075 or toll free at 877-356-8387 for assistance.

## Military and Veterans Success Center

COE 106 (406)657-2968

Shane Grantham, Interim Director

City College and University Campus students are welcome to access the Military and Veteran Success Center on the university campus located in the College of Education

first floor room 106. The Military and Veteran Lounge on the City College campus is located on the 1st floor of the Tech Building. It is open weekdays from 8:00 a.m. to 5:00 p.m. for military affiliated students to use to relax, watch TV, play x-box, eat, meet, study, etc.

The Director and Certifying Official work individually with students and families in order to maximize the eligible military education benefits, connect students with other support services and acclimate to college life. Veterans and other military affiliated students are advised to check with the Director of Military and Veterans Success Center at least 30 days before registering. To ensure no disruption of benefits, military affiliated students should notify this office of any changes in address, enrollment, or additional dependents.

## Montana State University Billings Foundation

2615 Virginia Lane, (406) 657-2244

[msubfoundation.com](https://msubfoundation.com/) (<https://msubfoundation.com/>)

### About Us

The Montana State University Billings Foundation is an independent, non-profit organization under Internal Revenue Service code 501(c)(3). A volunteer board of trustees, composed of community leaders, guides the foundation in achieving its mission. Our staff is dedicated to achieving the goals of the foundation and to serving and assisting donors, supporters, students, and faculty of Montana State University Billings.

### Mission

The Montana State University Billings Foundation was founded in 1968 to advance the goals of Montana State University Billings by:

- Establishing lifelong relationships with university students, parents, faculty, alumni, friends, and community partners.
- Creating pathways to success and sustaining them through philanthropy, stewardship, and community engagement.
- Seeking and nurturing innovative partnerships to support the realization of current and emerging university priorities.
- Fostering a culture of inclusivity that celebrates diversity on campus and beyond.

### Vision

The Montana State University Billings Foundation will reduce financial barriers to a quality education, enhance the campus experience, and encourage the growth of Montana State University Billings.

## MSU Billings Alumni Association

2712 Normal Avenue, (406) 247-5781 or (406) 657-2244

[msubfoundation.com/alumni/alumni/](https://msubfoundation.com/alumni/alumni/) (<https://msubfoundation.com/alumni/alumni/>)

The Montana State University Billings Alumni Association spans the globe, with more than 31,000 alumni living and working worldwide. This dynamic group of leaders works to build affinity to the university through programming and events. Working with the MSUB Foundation, the MSUB Alumni Association serves to promote the university, build philanthropic outreach, and engage alumni wherever they may be.



## Academic Affairs

### Accreditation Statement

MSU Billings is institutionally accredited by the Northwest Commission on Colleges and Universities. As such, all college-level coursework from institutions accredited by the following list of agencies will be received and applied toward associate or baccalaureate degrees as applicable to general education, major, minor, and elective requirements.

- Higher Learning Commission
- Middle States Commission on Higher Education
- New England Commission of Higher Education
- Northwest Commission on Colleges and Universities
- Southern Association of Colleges and Schools Commission on Colleges
- WASC Senior College and University Commission

Students who transfer credit from institutions not accredited by the agencies in the above list (excluding foreign institutions) will not be accepted for transfer. Policy and procedure information may be obtained from the Registrar's Office.

Students transferring from institutions in pre-approval status must earn at least 20 credits at MSU Billings with a minimum 2.0 institutional GPA before their credits from the former institution will be considered for acceptance.

International coursework (except from institutions where English is the language of instruction) may require evaluation by a foreign credential evaluation company.

## Scholastic Requirements

### Grading System

| Letter Grade | Description   |
|--------------|---|
| A            | Excellent   |
| B            | Good  |
| C            | Average   |
| D            | Minimally Passing   |
| I            | Incomplete Work (not included in GPA). Work must be completed within one calendar year or the "I" grade will be converted to an "F" grade. The faculty who awards the "I" will assign all necessary academic work to convert the "I" to a letter grade. The student does NOT re-register and pay for the class. Access to D2L to finish incomplete work is arranged through the Registrar's Office. |
| F            | Failure, grade below passing (included in GPA).   |
| W            | Withdrawal from class without penalty (not included in GPA).  |
| N            | No credit/Audit   |
| P            | Passing (not included in GPA but credits count toward graduation).  |
| X            | No Pass   |

### Incomplete "I" Grade

An Incomplete is given only when a student has been in attendance for at least three-fourths of the semester but has been prevented by circumstances beyond his/her control from completing all of the requirements of the course. A student must provide adequate evidence to the instructor as to the reason why he/she was unable

to complete the requirements for the course. If a grade of "I" Incomplete has been given, the instructor shall advise the Registrar's Office in writing what the student must do to remove the deficiency.

An Incomplete must be made up within one calendar year. An "I" grade is not included in the computation of the GPA. An "I" grade not made up in the prescribed length of time automatically becomes an "F" grade. Once the "I" grade has been converted to an "F" grade, the course must be repeated in order for the grade to be changed.

Access to D2L to finish incomplete work is arranged through the Registrar's Office.

### Change of Grade

A change of grade may be made for error only. A change of grade may not be made to allow additional time or for additional work once the semester is completed.

A change of grade is not meant to substitute for an Incomplete grade when an Incomplete cannot be justified. No grade may be changed after one full year unless approved by the instructor's Academic Dean. Once a grade has been submitted to the Registrar's Office, it may not be changed to a lower grade without the written approval of the Dean of the respective college.

### Pass/No Pass Grading Mode

Pass/No Pass is offered as an opportunity for undergraduate students to explore courses outside their major, minor, or option curricula and outside the Professional Core Requirements for Teacher Education or Pre-Admission Requirements for Business.

Under the grading mode, the grade of "P" is given if the students' work is judged to be the equivalent of "A," "B," or "C." The grade of "No Pass" (symbolized by "X") is awarded if the work is equivalent to "D" or "F." The students' Pass/No Pass grades do not affect overall GPA. However, "P" grades may be counted as credits earned toward a degree. Other policies concerning Pass/No Pass are as follows:

1. Courses designated by the departments are available Pass/No Pass. Certain courses are taught only with this grading mode; other courses may be excluded from Pass/No Pass grading. Therefore, students should check with their advisor for details.
2. Students may enroll in courses as Pass/No Pass up to a limit of 20 semester credit hours to be counted towards graduation. Credits earned by challenge, experiential learning assessment such as military credits, student teaching, cooperative education, or internships do not count toward this 20-credit limit.
3. Students declare this grading mode at the time of registration. Students may change their grading mode to Pass/No Pass up through the last day to add at the beginning of each semester or term. After the last day to add, any request to change grading mode (Pass/No Pass to letter grade or vice versa) must be petitioned by the student to the Academic Standards and Scholastic Standing Committee.
4. Courses taken under Pass/No Pass may be repeated for a letter grade. A course taken for a letter grade may not be repeated as Pass/No Pass.

### Credit Hour Policy

At Montana State University Billings the credit hour is used as a unit of instruction to quantify student learning. The credit hour is typically related to seat time, as a minimum of three class work hours (60 minutes of classroom instruction and an additional two hours of out-of-class student work) each week during a 15-week (minimum) semester. Using a seat-time approach, one credit of instruction should be approximated by 45 hours of combined direct instruction (counting a 60-minute class as 1 hour of instruction) and student work.

If the learning experience is offered in a different time frame (e.g., eight-week summer session), the student time required to complete the course should

reasonably approximate 45 hours of combined direct instruction and student work per credit.

If direct instruction is not the principal mode of learning for an academic experience (e.g., laboratory courses, internships, studio work, some on-line courses), the student time required to complete the course should reasonably approximate 45 hours of student work per credit.

## Grade Points (Grade Point Average)

All classes required for Certificates of Applied Science and AAS degrees must be completed with a grade of "C" or better for the class to satisfy the requirement for the awarding of a degree or certificate. All required courses in which a student received a "C-", "D" or "F" must be retaken. (Please review program summaries and plans of study for any additional grade requirements.)

**A grade of "C" or better in core program courses for defined plans of study in Associate of Science and Associate of Arts degrees is required. To review grade requirements for AA or AS degrees please refer to page 52.**

Repeated classes earn the second or subsequent grade and credit replacing the former course grade and credit in the calculation of the cumulative grade point average; however, all courses taken and grades received remain listed on the transcript, which is a complete and unabridged permanent school record. **The student must file a repeat card with the Registrar's Office in order for the process to proceed. Students may wish to visit with an academic advisor in Student Services for assistance.**

## Grade Reports

Students' grades are available on the web at [www.msbillings.edu](http://www.msbillings.edu) (<http://www.msbillings.edu>). Students who wish to have their grades mailed may request a transcript.

## How to Calculate the Grade Point Average

Each grade is worth a predetermined number of grade points as indicated below. Total grade points are established by multiplying the number of credits of a course times the number of grade points of the grade received.

The grade point average is determined by dividing the number of grade points earned by the number of course credits attempted. In computing the number of grade points earned, each letter grade is assigned a certain grade point value per credit hour as follows:

| Letter Grade          | GPA      |
|-----------------------|----------|
| Each credit hour of A | 4 points |
| Each credit hour of B | 3 points |
| Each credit hour of C | 2 points |
| Each credit hour of D | 1 point  |
| Each credit hour of F | 0 points |

Effective Fall 2005 for all transfer, re-admitted, and continuing students, in accordance with Board of Regents policy, all campuses of the Montana University System will use the following values when determining grade point averages. Faculty may choose to use plain letter grades (no plus/minus).

| Letter Grade | GPA |
|--------------|-----|
| A            | 4.0 |
| A-           | 3.7 |
| B+           | 3.3 |
| B            | 3.0 |
| B-           | 2.7 |

|    |     |
|----|-----|
| C+ | 2.3 |
| C  | 2.0 |
| C- | 1.7 |
| D+ | 1.3 |
| D  | 1.0 |
| D- | 0.7 |
| F  | 0.0 |

Grade point averages calculated before Fall Semester 2005, using the values noted above, will not be recalculated, using the new weights or values.

The new values should not be applied retroactively to grade point averages already calculated for students in the Montana University System. Decisions about those students' academic performance, including satisfactory progress, admission to limited enrollment programs, graduation and financial aid eligibility, have been made, using the grading scale in place at the time of those decisions. The decisions should not be invalidated because of a subsequent change in grade point average calculations.

### Examples

WRIT 122 is a 3 credit course. If a grade of "B" was received, multiply 3 credits times 3 grade points for a total of 9 grade points (3 credits x 3 grade points = 9 grade points).

COMX 106 is a 3 credit course. If a grade of "C" was received, it would produce an additional 6 grade points (3 credits x 2 grade points = 6 grade points).

Add the 9 grade points from WRIT 122 and the 6 grade points from COMX 106 for a total of 15 grade points. Then, divide the total grade points (15) by the total number of credits (6) to determine the grade point average for the two courses. In this case, the grade point average is 2.50 (15/6 = 2.50). Remember, the total grade points divided by the total credits attempted equals the grade point average (GPA).

## Academic Honors

In recognition of scholastic achievement, the University makes public at the close of each semester an honor roll of undergraduate students who earn 12 or more credits which are not of a Pass/No Pass nature and who earn a grade point average of 3.50 or better.

## Minimal Academic Progress

Students are in good standing at City College at Montana State University Billings as long as they have a 2.00 grade point average (GPA) although additional requirements may have to be met in specific fields.

## Academic Probation

### Full-Time Students (12 or more credits attempted)

Students are placed on academic probation the first time their cumulative institutional GPA falls below the required 2.00. If they later meet the required 2.00 cumulative institutional GPA, they are removed from academic probation. Students who are on academic probation and fail to earn at least a 2.00 GPA during the next semester or have a 2.00 cumulative institutional GPA are suspended for one semester, excluding the Summer Session. However, students on academic probation or continued probation who do not meet the required 2.00 cumulative institutional GPA are allowed to continue in college as long as they have a 2.00 GPA for each succeeding semester. Students on probation should not carry more than 16 credits in the probationary period. All students on academic probation should meet with their academic advisors to review their respective course schedules.

## Part-Time Students (Less than 12 credits attempted)

Part-time students are placed on academic probation whenever they have attempted a total of 10 overall (transfer and institutional) cumulative semester credits and do not have a 2.00 cumulative institutional GPA or a 2.0 institutional term GPA. Part-time students are suspended whenever they have attempted a total of 30 overall (transfer and institutional) cumulative semester credits and do not have a 2.00 cumulative institutional GPA or a 2.00 institutional term GPA. Part-time students on academic probation are allowed to continue in college as long as they earn a 2.00 GPA in each succeeding semester.

## Academic Suspension

Any full-time student who has been on academic probation one semester and who did not make a 2.00 GPA during the last semester is suspended for one semester, excluding the Summer Session. A student who is suspended may, however, attend Montana State University Billings during the Summer Session by meeting the requirements stated below.

Students suspended from Montana State University Billings may register for no more than a total of 16 semester credits during the Summer Session without reinstatement. Students must register for a minimum of nine semester credits after consultation with their advisors, for either one or all three Summer Sessions. Students who at the end of Summer Session have earned at least a 2.00 GPA in nine or more semester credits are re-admitted Fall Semester on continued probation. However, students who attend the Summer Session and fail to earn the 2.00 GPA will be suspended for an additional two semesters.

Students who are reinstated after a period of suspension must submit an application for re-admission to the Registrar's Office. Upon re-admission, students are placed on continued probation and must maintain a 2.00 GPA for each successive semester of work and meet any other pertinent conditions imposed by the Academic and Scholastic Standing Committee. Students who do not meet the stipulations set by the Committee incur automatic suspension. Upon action by the Administration, a student may also be suspended for nonacademic reasons. Such a notation will be placed in the student's file.

A student who has been suspended from Montana State University Billings may apply for re-admission after one semester has elapsed. A student who has two or more suspensions is suspended for two semesters excluding summer term. The student may, however, petition the Academic Standards and Scholastic Standing Committee for reinstatement after one semester.

Exceptions to this regulation may be made for students who provide evidence to the Academic Standards and Scholastic Standing Committee that their reinstatement can be justified. Only extreme cases of extenuating circumstances may be considered by the Committee for re-admitting a student who has been suspended, or if there is evidence that the student has taken some reasonable action to correct the cause(s) for suspension. The student must have approval from his/her major department chairperson before the Academic Standards and Scholastic Committee will consider the student for reinstatement.

## Veterans Receiving Educational Benefits

Veterans or other individuals who receive educational benefits from the Veterans' Administration remain eligible for those benefits as long as they remain in good academic standing at City College at Montana State University Billings and are permitted to continue in college. All veterans eligible to receive benefits should report to the coordinator of Veterans' Affairs prior to each term of enrollment to re-certify.

## Academic Dishonesty

Students at City College at Montana State University Billings are expected to do their own work in their own words and with their own ideas. If they quote or

paraphrase the words of others, they are expected to indicate whom it is they are quoting or paraphrasing. An instructor who believes that a student has claimed the work of someone else as his or her own may take what steps he or she wishes up to failing the student and referring the student to others on campus for further discipline. Please refer to Academic Conduct Guidelines and Grievance Procedures for Students: [www.msubitings.edu/provost/pdf/academic-affairs-policies-and-procedures.pdf](http://www.msubitings.edu/provost/pdf/academic-affairs-policies-and-procedures.pdf)

## Fresh Start Option (Academic Bankruptcy)

The Fresh Start option is available to undergraduate students. It is a one-time opportunity for MSU Billings students and those who transfer to MSU Billings.

Students may bankrupt up to two consecutive semesters of previous coursework in which they received poor grades. Students must not have been enrolled in any institution for a minimum of three calendar years. To be eligible for the Fresh Start option students must have completed 15 semester credits (30 semester credits for students seeking a bachelor's degree) in residence since entering or returning to MSU Billings earning a 2.65 grade point average (GPA) or higher. The bankrupted coursework will remain on the student's academic record. The student has the option to save "A" and "B" grades or bankrupt all courses. Bankrupted credits and grades will not be carried forward into the student's cumulative GPA.

## Eligibility for Intercollegiate Athletics and Other Activities

To be eligible for intercollegiate athletics, students must meet the specific requirements of the National Collegiate Athletic Association (NCAA) Division II. Prospective student-athletes should consult with the appropriate Athletic Department Administrator regarding these requirements. Students are eligible during a semester to represent MSU Billings in an University sponsored activity off-campus or to participate in co-curricular activities as long as the students are officially enrolled (this applies only to the activities that are not sanctioned by the NCAA Division II). Intercollegiate athletics and certain activities may have additional eligibility requirements that students must meet.

## Student Records

### Academic Records

Official academic records of each student's scholastic achievement are kept on file in the Registrar's Office, and include the following:

1. A signed "Official Class Roll and Final Grade Report" from the instructor of each class in which the student is enrolled each semester.
2. An "Official Academic Record" for each student officially enrolled.
3. Directory information of a student currently enrolled. (See the Family Educational Rights and Privacy Act Revised.)

### Transcripts

A transcript is a copy of the complete, unabridged educational record of a student who has been or is currently enrolled. It is issued only to the student upon the student's written request. An official transcript is distinguished from an unofficial copy of the student's record in that the official transcript carries the signature of the Registrar and bears the seal of Montana State University Billings.

As often as possible, transcripts are issued within five days following receipt of the transcript request and payment of the fee. During periods of registration, changes in registration, grading periods, and Commencement, the Registrar's staff has to devote full time to such activities. The records are necessarily incomplete, and the status

of students is pending; consequently, a longer time than usual is required for the issuance of transcripts.

All current and former City College at MSU Billings students are entitled to one free official transcript; thereafter, each official transcript request is processed only upon the receipt of the transcript fee. The student's signature and/or personal request is required for the release of any transcript except when the transcript is released to those individuals who are considered to have a legitimate educational reason to have access to the student's transcript.

## Misuse of Electronic Devices

Cellular phones, pagers, and other electronic devices shall not be used in a manner that causes disruption in the classroom, library, or within any college-owned or college-operated facility. Abuse of cellular devices with photographic capabilities, use of devices for purposes of photographing test questions or other notes and materials is prohibited. Photographing individuals in secured areas such as bathrooms, locker rooms, or other areas where there is a reasonable expectation of privacy, and/or taking photographs of any person without expressed permission is strictly prohibited.

## Appeals and Petitions for Exceptions to University Regulations

### Appeal by a Student on Academic Matters

The student should confer with the faculty member against whom the alleged problem exists. The student must confer with the department chairperson or, in the event the problem involves a department chairperson, with the appropriate dean before resorting to the formal grievance process. The student should consult the Student Resolution Officer for proper procedures.

### Petition for Exception to University Regulations

Certain problems encountered by a student may result in a request to have an exception considered to an academic standard or to an academic regulation of the University. A student may request an exception to an City College at MSU Billings regulation by filing a special petition with the Academic Standards and Scholastic Standing Committee. The petition form may be obtained from the Registrar's Office and it is to be returned there after the student has completed the form. The Registrar's Office will present the petition to the committee. The student is encouraged to appear before the committee to respond to questions about the student's petition. The student will be notified in writing of the decision as soon as it is determined.

### Academic Conduct Guidelines and Grievance Procedures

Please refer to Academic Conduct Guidelines and Grievance Procedures for Students: [www.msubitillings.edu/provost/pdf/academic-affairs-policies-and-procedures.pdf](http://www.msubitillings.edu/provost/pdf/academic-affairs-policies-and-procedures.pdf) (<https://www.msubitillings.edu/provost/pdf/academic-affairs-policies-and-procedures.pdf>)

## City College Graduation Requirements Catalog Time Limit

Students have four years to fulfill the curricular requirements stated in the catalog in effect when they enter. If students do not complete the requirements in four years, they must select a subsequent catalog. If students have a break in enrollment of a semester or more, they must switch to the catalog in effect at the time of re-admission.

Students can request an exception to this policy under extenuating circumstances.

Requests for extensions of time must be approved in writing by the appropriate Director, Department Chair, and Dean. If not approved, students may appeal to the Academic Standards and Scholastic Standing Committee.

## Degree Offerings

### Certificate of Technical Study

- Requires 16 to 29 credits
- Certifies the holder in a specific knowledge or talent
- Requires no general education credits

### Certificate of Applied Science (CAS)

- Requires 30 to 45 credits
- Can be completed in one year as a full-time student
- Requires 12 credits of general education (see Related Instruction Requirements (p. 44))

### Associate of Applied Science (AAS)

- Requires 30 to 45 credits
- Requires 60 to 72 credits
- Can be completed in two years as a full-time student
- Requires 12 credits of general education (see Related Instruction Requirements (p. 44))

### Associate of Science or Associate of Arts (AS or AA)

- Can be completed in two years as a full-time student
- Requires 31 credits of general education (see General Education Requirements (p. 47))

### Bachelor of Science or Bachelor of Arts (BS or BA)

- Can be completed in four years as a full-time student
- Requires 31 credits of general education (see General Education Requirements (p. 47))

## Associate of Applied Science and Certificate of Applied Science Requirements

Students who have earned a "C" (2.0) or better in all required courses and electives for an AAS degree or Certificate of Applied Science program of study in which they are enrolled are eligible for graduation. Fifty-one percent of core program requirements must be completed at City College at MSU Billings in order to graduate from MSU Billings. **Associate of Science in Nursing students are required to complete at least 21 credits of core program requirements at City College to graduate from MSU Billings and must also earn a "C" or better in all courses.**

**Please note that a single course may not be used to meet more than one certificate or degree requirement.** Petitions for exceptions to this policy should be addressed to the Registrar to be reviewed by an academic review board.

## Related Instruction Requirements for Associate of Applied Science Degrees and Certificates of Applied Science

Related instruction credits are required to graduate with an Associate of Applied Science (AAS) degree or Certificate of Applied Science (CAS). According to the Northwest Commission on Colleges and Universities (NWCCU), related instruction is a body of knowledge which supports programs of study for which applied or specialized associate degrees are granted or programs for which certificates are granted. This body of knowledge must contain instruction in program-related areas of communication, computation, and human relations.

The objectives of related instruction include the following:



- Apply writing strategies to produce original work.
- Analyze workplace situations and select appropriate communication strategies.
- Demonstrate professional verbal and nonverbal communication skills.
- Solve problems quantitatively in specific disciplines.

**Please note that the Certificate of Applied Science in Practical Nursing follows an approved statewide plan that differs from the traditional related instruction menu. Please also note that some related instruction courses are also part of the General Education coursework.**

The following list outlines the courses that fulfill related instruction requirements for CAS and AAS degrees:

| Code                   | Title                          | Credits  |
|------------------------|--------------------------------|----------|
| <b>Human Relations</b> |                                | <b>3</b> |
| COMX 106               | Comm in a Dynamic Workplace    |          |
| COMX 111               | Intro to Public Speaking       |          |
| <b>Writing</b>         |                                | <b>3</b> |
| WRIT 104               | Workplace Communications *     |          |
| WRIT 121               | Intro to Technical Writing     |          |
| WRIT 122               | Intro to Business Writing      |          |
| <b>Computation</b>     |                                | <b>3</b> |
| M 105                  | Contemporary Mathematics       |          |
| M 108                  | Business Mathematics *         |          |
| M 111                  | Technical Mathematics *        |          |
| M 114                  | Extended Technical Mathematics |          |
| M 121                  | College Algebra                |          |
| M 143                  | Finite Mathematics             |          |
| <b>Technology</b>      |                                | <b>3</b> |
| CAPP 120               | Introduction to Computers      |          |

CAS and AAS students must see an advisor to determine which related instruction courses are required for graduation in their program. Students planning to earn a bachelor's degree should immediately consult their academic advisor to develop a plan of study.

Some related instruction courses also fulfill general education requirements. Some, but not all, related instruction courses for the AAS degrees and CAS programs will transfer to other colleges or universities.

\*

Courses marked with an asterisk are math and writing courses that fulfill requirements for CAS programs and may be prerequisites for AAS or AS coursework.

## Second Associate of Applied Science Degree

Students may earn a second AAS degree at City College by taking a minimum of 15 additional credits beyond the total required for the first AAS degree. Once the first AAS degree is awarded, students must earn 15 additional credits regardless of the number of credits earned for the first degree. Students must meet all other requirements for the second degree. For AAS degrees that require electives, degree requirements from one degree may not be used to satisfy electives for the other degree. Electives from one degree may not be used to satisfy electives for the second degree.

## Certificate of Applied Science and Associate of Applied Science Degree in the Same Subject

Students may earn a certificate and an AAS degree in the same subject. However, a certificate and an AAS degree in the same subject cannot be earned concurrently. Students may complete a certificate and an AAS degree in the same subject provided

the application for graduation for the CAS is a minimum of one semester prior to the completion of the AAS degree. A certificate can be an exit point and is not required to earn an AAS degree.

## Associate of Arts or Associate of Science Degree Requirements

In addition to AAS degrees, City College also awards Associate of Arts (AA) and Associate of Science (AS) degrees.

AA and AS degrees can have a special focus or no particular disciplinary affiliation.

These degrees require that students meet general education requirements as specified below. Students earning an associate degree with no disciplinary affiliation should work with their advisor on a plan of study but are not subject to any additional requirements other than those listed next.

1. Students must earn a minimum of 60 semester credits must be earned with a minimum grade point average of 2.00 for all coursework.
2. Students must earn a minimum of 20 semester credits with 40 grade points (2.0 grade point average) must be earned at Montana State University Billings.
3. Students must earn a minimum grade point average of 2.00 in (a) all college work to be applied toward the degree for which credits and grades have been received, and in (b) all courses completed with credits and grades at Montana State University Billings and applied toward the degree.
4. Students may elect a maximum of 16 semester credits on the Pass/No Pass option in lieu of regular course grades.
5. Students seeking an associate degree must satisfy the following general education requirements:

## General Education Category

| Code  | Title | Credits   |
|---|-------|-----------|
| <b>I. Global Academic Skills</b>                            |       |           |
| A. Mathematics  |       | 3         |
| B. English  |       | 3         |
| C. Communication & Information Literacy                     |       | 3         |
| <b>II. Natural Sciences (7 credits total)</b>               |       |           |
| A. Life Sciences  |       | 3         |
| B. Physical Sciences  |       | 3         |
| Laboratory experience in Life Sciences or Physical Sciences |       | 1         |
| <b>III. Social Sciences and History</b>                     |       |           |
| A. Social Sciences  |       | 3         |
| B. History  |       | 3         |
| <b>IV. Cultural Diversity</b>                               |       |           |
| <b>V. Arts &amp; Humanities</b>                             |       |           |
| A. Fine Arts  |       | 3         |
| B. Humanities   |       | 3         |
| <b>Electives</b>  |       |           |
| Selected in consultation with advisor                       |       | 29        |
| <b>Total Minimum Credits</b>                                |       | <b>60</b> |

## Early College (Dual Enrollment) Student Graduation

In accordance with Board of Regents Admission Policy 301, students must have graduated from a high school accredited by the state accrediting agency, or have a high school equivalency completion assessment designated by the Montana Board of Public Education, to be admitted to any campus of the Montana University System. Early college/dual enrollment students to MSU Billings and City College at MSU

Billings are not fully admitted in accordance with this policy until these credentials are presented.

Students who are earning credits while still in high school are encouraged to submit a graduation application and participate in ceremonies if they have earned enough college level credits to do so. However, conferral of a certificate of technical studies, certificate of applied science, associate of applied science, associate, or bachelor's degree(s) will only be posted to a student's transcript after receipt of these official credentials required for full admission.

## Graduating with Honors

The designation of honors and high honors is awarded to associate degree or certificate recipients. Honors recognizes students with a total academic grade point average of 3.50 to 3.74; high honors recognizes students with a total academic grade point average of 3.75 to 4.00. Again, this designation is for associate degree or certificate recipients and based on their total cumulative grade point average which includes transfer work as well as academic work done at MSU Billings.

Graduation with honors will apply to students who earn their first and/or second bachelor's degree at MSU Billings. Students who earn a second bachelor's degree at MSU Billings will have all of the grades earned in their first degree included in the determination of the recognition of academic honors. In all cases and for all degrees or certificates, transfer credits earned elsewhere to this University must be calculated with the credits earned at MSU Billings in order to qualify for academic honors.

## Commencement

Commencement is held once each year at the end of the Spring term. The date of graduation and the degree a student is to receive will be posted on the student's Official Academic Record at the end of the semester in which the student meets all requirements. The academic transcript is the official record of degree conferral. Diplomas are ordered after all degrees are awarded. Printing and preparation of the diplomas takes several months. Students will be notified when they are available for pick up. Diplomas not picked up will be mailed. Students should acquaint themselves with their specific majors' academic requirements. An advisor is assigned to every student; however, it is the student's responsibility to know and meet the requirements for graduation.

A student who intends to graduate with a master's degree, bachelor's degree, associate degree or certificate will be permitted to participate in the Spring semester commencement ceremony only if the student complies with the following procedure:

Students are to file their Application for Graduation the semester before the semester of graduation. Application forms are available from Jacket Student Central, City College Tech Building, first floor, or online at [www.msubillings.edu](http://www.msubillings.edu) (<https://www.msubillings.edu/>). All applications for graduation must be on file with the Registrar the semester **prior** to the semester of completion. Refer to the academic calendar for due dates. The fee should be paid at the Cashier's Window or online after calling the Cashier at 406-247-3002 to have charge put on account. Then the application needs to be filed with Jacket Student Central, City College Tech Building, first floor. This application is good for one year from the date of information supplied by the student on the Application for Graduation in the blank labeled "Semester/Year Graduating." After one calendar year from that date, the Application will be destroyed and the student will need to re-apply and the fee again.

- The Application for Graduation is required in order to prepare and forward the final evaluation for graduation to the necessary offices for approval. A student who submits an Application for Graduation after the designated due date will be assessed a late graduation application fee and may have the final evaluation for graduation processed the following semester and will graduate at the end of that particular semester.
- The final evaluation will be circulated during the student's final semester. The final evaluation must be completed, must have all the required signatures,

and must be returned to the Office of the Registrar before notification of the student's graduation is posted on the student's official academic record.

- Student must meet, by the end of the Summer Session, all of the graded requirements for graduation or be enrolled in Pass/No Pass coursework the following Fall semester and meet all the requirements for graduation by the end of that Fall semester.

Diplomas are generally mailed near the end of the next academic term (i.e., Fall graduates will receive diplomas in early June, Spring graduates in January).

**Please note:** Certain departments may have additional academic requirements that must be met before students will be permitted to graduate and/or participate in the commencement ceremony. Students should check with their major department for any additional departmental requirements.

The determination for honors for students who will graduate at the end of the Spring semester or Summer Session will be calculated on the most recent semester completed. Should a student's cumulative grade point average (including any transfer work) at the end of the Spring semester or Summer Session entitle the student to an honors designation, this recognition will be recorded on the student's Montana State University Billings academic record.

## Release of Information

In accordance with the Family Educational Rights and Privacy Act (FERPA), the Office of Admissions and Records at City College at Montana State University Billings may disclose directory information from the educational records of a student who is in attendance at the University. If the student wishes to have all directory information excluded as public information, the student must notify Jacket Student Central, City College Tech Building first floor, within the first two weeks of the current academic year. This notice is good until revoked in writing.

A complete copy of the MSU Billings' FERPA policy is available upon request at the Registrar's Office or online at [www.msubillings.edu](http://www.msubillings.edu) (<http://www.msubillings.edu/>).

## General Education Program

General Education provides a foundation for study across many areas of knowledge. All students are required to complete the General Education program as an essential component of the baccalaureate degree.

### The Purpose of General Education

General education at MSU Billings is designed to advance students as participants in the ongoing accumulation of human knowledge and understanding. General education courses promote the development of respect for diversity, along with skills in problem solving, critical thinking, and communication necessary for students to be productive and responsible members of their communities.

### General Education Minimum Satisfactory Course Grade

By action of the University's Academic Senate, the minimum satisfactory grade students must earn in a General Education course is "C-" or better. However, students must earn an overall GPA of 2.0 in the General Education core. (11/10/05 memo #473 p. 1770)

### General Education Programmatic Learning Outcomes

Upon completion of the General Education Program at MSUB, students will successfully be able to:

| Respect Diversity   | Problem Solve  | Think Critically   | Communicate Effectively  |
|---|--|--|--|
| 1. Express the impact of inequity on the human experience                   | 3. Use statistical or mathematical methods to solve problems   | 6. Locate and evaluate information from multiple sources | 8. Apply effective communication strategies for specific purposes and audiences                |
| 2. Synthesize multiple perspectives in contemporary and historical contexts | 4. Use scientific methods to solve problems  | 7. Synthesize evidence to construct logical arguments    | 9. Produce scholarly projects or creative works conforming to appropriate disciplinary methods |
|   | 5. Use quantitative and qualitative information to provide solutions to social and/or ethical problems |  |  |

### Categorization

Students will complete 31 credits of General Education, distributed in the following categories.

| Code                             | Title                                | Credits |
|----------------------------------|--------------------------------------|---------|
| <b>I. Global Academic Skills</b> |                                      |         |
| A.                               | Mathematics                          | 3       |
| B.                               | English                              | 3       |
| C.                               | Communication & Information Literacy | 3       |
| <b>II. Natural Sciences</b>      |                                      |         |
| A.                               | Life Sciences                        | 3       |
| B.                               | Physical Science                     | 3       |

|   |           |
|---|-----------|
| *Lab taken with either Life Sciences or Physical Sciences | 1         |
| <b>III. Social Sciences and History</b>                   |           |
| A. Social Sciences  | 3         |
| B. History  | 3         |
| <b>IV. Cultural Diversity</b>                             |           |
| <b>V. Arts and Humanities</b>                             |           |
| A. Fine Arts  | 3         |
| B. Humanities   | 3         |
| <b>Total Minimum Credits</b>                              | <b>31</b> |

### Category Descriptions

#### Global Academic Skills

Global Academic Skills include assessing sources of information, reading, writing, and calculating.

#### Natural Sciences

Natural science is devoted to discovering the principles that rule the physical universe.

#### Social Sciences and History

Social sciences represent those disciplines that apply scientific methods to study the network of human relationships and organizations. History involves the interpretation of diverse sources to understand past societies and events.

#### Cultural Diversity

Courses in the cultural diversity category facilitate understanding of and interaction between distinct human communities.

#### Arts and Humanities

The expressive arts include visual, performing, and language-based activities. The humanities include the study of philosophy, literature, and art history.

## General Education Category Learning Objectives

### 1. Global Academic Skills

#### a. Mathematics

- Demonstrate ability to solve problems with quantitative information using mathematical and/or statistical methods.
- Think critically, analytically and independently about mathematical situations.
- Communicate using mathematical terminology and symbols in support of an argument or solution method.

#### b. English

- Exhibit competency in the use of formal writing conventions, including mechanics, syntax, style, cohesion, and organization.
- Select and apply effective writing strategies for specific purposes and audiences.
- Integrate primary and secondary source material in original work with appropriate documentation.

#### c. Communication & Information Literacy

- Engage in research to gather, evaluate, and synthesize information from multiple sources to express ideas.
- Access and use information ethically, with appropriate citation, in oral and written communication.
- Design audience-centered informative or persuasive messages.

### 2. Natural Sciences

**a. Life Science**

- i. Demonstrate an understanding of living systems by describing their nature, organization, and evolution.
- ii. Demonstrate an understanding of the scientific method and how it is used to increase our knowledge of living things.
- iii. Make logical connections between key concepts in the life sciences and describe the interaction between human lives and other living things in order to understand the ways the environment impacts humanity and how human actions affect the environment.

**b. Physical Science**

- i. Demonstrate an understanding of the physical universe and planet earth, including its origin and physical processes.
- ii. Demonstrate an understanding of the scientific method and how it is used to solve problems and increase our knowledge of the physical world.
- iii. Make logical connections between key concepts in the physical sciences and human life, including the interactions between the two and their impacts on one another.

**3. Social Sciences and History****a. Social Sciences**

- i. Analyze historical and cultural significance in human behavior, ideas, and institutions.
- ii. Synthesize multiple perspectives to understand human behavior.
- iii. Contextualize information from multiple points in time and place to understand society.

**b. History**

- i. Explain historical events and ideas in appropriate context.
- ii. Analyze and organize a variety of sources to construct historical knowledge.
- iii. Express a historical argument in written form.

**4. Cultural Diversity**

- a. Articulate an understanding of differences across ethnicities, genders, generations, and other groups of people.
- b. Analyze how cultural differences impact interactions in society.
- c. Describe effective methods to communicate across cultures.

**5. Arts and Humanities****a. Fine Arts**

- i. Demonstrate an understanding of the diverse roles the fine arts play in human culture.
- ii. Identify and analyze artistic techniques used in aesthetic expression.
- iii. Demonstrate an appreciation of the ways in which the arts enrich life.

**b. Humanities**

- i. Explain the interrelationship between the humanities and other disciplines.
- ii. Describe the ways in which the humanities influence culture and society.
- iii. Analyze issues surrounding life, death, ethics, and morality.

**A. Mathematics**

Select three credits from the following: 3

|          |                                |
|----------|--------------------------------|
| M 105    | Contemporary Mathematics       |
| M 114    | Extended Technical Mathematics |
| M 121    | College Algebra                |
| M 122    | College Trigonometry           |
| M 130    | Math for Elementary Teachers I |
| M 140    | College Math for Healthcare    |
| M 143    | Finite Mathematics             |
| M 161    | Survey of Calculus             |
| M 171    | Calculus I                     |
| STAT 141 | Intro to Statistical Concepts  |
| STAT 216 | Introduction to Statistics     |

**B. English**

Select three credits from the following: 3

|          |                            |
|----------|----------------------------|
| WRIT 101 | College Writing I          |
| WRIT 121 | Intro to Technical Writing |
| WRIT 122 | Intro to Business Writing  |

**C. Communication & Information Literacy**

Select three credits from the following: 3

|          |                                |
|----------|--------------------------------|
| BMIS 150 | Cyber Security & Electronic Co |
| COMX 111 | Intro to Public Speaking       |
| COMX 115 | Intro to Interpersonal Comm    |
| COMX 210 | Communication in Small Groups  |
| HONR 205 | Honors Inquiry and Research    |
| LSCI 125 | Research in the Info Age       |

**II. Natural Sciences**

Regarding Natural Sciences, students are required to take one course from Life Sciences and one course from Physical Sciences. **At least one course must include a corresponding laboratory.**<sup>1</sup>

**A. Life Sciences**

Select three credits from the following with a corresponding laboratory course if 3-4 not taken in Physical Sciences:

|          |                               |
|----------|-------------------------------|
| BIOB 101 | Discover Biology              |
| BIOB 102 | Discover Biology Lab          |
| BIOB 121 | Fund of Bio for Allied Health |
| BIOB 123 | Fund Bio: Nature of Nutrition |
| BIOB 160 | Principles of Living Systems  |
| BIOB 161 | Principles Living Systems Lab |

**B. Physical Sciences**

Select three credits from the following with a corresponding laboratory course if 3-4 not taken in Life Sciences:

|          |                                |
|----------|--------------------------------|
| ASTR 110 | Introduction to Astronomy      |
| ASTR 111 | Introduction to Astronomy Lab  |
| CHMY 121 | Intro to General Chemistry     |
| CHMY 122 | Intro to Gen Chem Lab          |
| CHMY 141 | College Chemistry I            |
| CHMY 142 | College Chemistry I Lab        |
| GEO 101  | Intro to Physical Geology      |
| GEO 102  | Intro to Physical Geology Lab  |
| GPHY 262 | Spatial Sciences Tech and Appl |
| GPHY 263 | Spatial Sciences & Tech Lab    |
| PHSX 103 | Our Physical World             |

## General Education Courses

City College at MSU Billings students who wish to pursue a baccalaureate degree must also be aware of the requirements below.

| Code                             | Title | Credits |
|----------------------------------|-------|---------|
| <b>I. Global Academic Skills</b> |       |         |

Regarding Global Academic Skills, students are required to take 1 course from Mathematics, 1 course from English, and 1 course from Communication & Information Literacy.

|          |                        |
|----------|------------------------|
| PHSX 104 | Our Physical World Lab |
| PHSX 205 | College Physics I      |
| PHSX 206 | College Physics I Lab  |

#### A. and B. Integrated Sciences

|          |                           |
|----------|---------------------------|
| SCIN 101 | Integrated Sciences I     |
| SCIN 102 | Integrated Sciences Lab   |
| SCIN 103 | Integrated Sciences II    |
| SCIN 104 | Integrated Science Lab II |

### III. Social Sciences and History

Regarding Social Sciences and History, students are required to take one course from Social Sciences and one course from History.

#### A. Social Sciences

Select three credits from the following: 3

|           |                              |
|-----------|------------------------------|
| BGEN 105B | Introduction to Business     |
| COMX 106  | Comm in a Dynamic Workplace  |
| ECNS 201  | Principles of Microeconomics |
| ECNS 202  | Principles of Macroeconomics |
| EDU 105   | Education and Democracy      |
| HTH 110   | Personal Health and Wellness |
| PSCI 210  | Intro to American Government |
| PSCI 220  | Intro to Comparative Govt    |
| PSYX 100  | Intro to Psychology          |
| SOCI 101  | Introduction to Sociology    |
| SOCI 201  | Social Problems              |

#### B. History

Select three credits from the following: 3

|          |                            |
|----------|----------------------------|
| HSTA 101 | American History I         |
| HSTA 102 | American History II        |
| HSTR 159 | World History to 1500 CE   |
| HSTR 160 | Modern World History       |
| PSCI 230 | Intro to International Rel |

### IV. Cultural Diversity

Regarding Cultural Diversity, students are required to take one course from the following: 3

|          |                                |
|----------|--------------------------------|
| ANTY 220 | Culture & Society              |
| ARTH 160 | Global Visual Culture          |
| COMX 212 | Intro to Intercultural Comm    |
| GPHY 121 | Human Geography                |
| HTH 270  | Global Health Issues           |
| LIT 230  | World Lit Survey               |
| MUSI 207 | World Music                    |
| NASX 105 | Intro Native American Studies  |
| NASX 205 | Native Americans in Contmp Soc |
| REHA 201 | Intro to Diversity in Counslng |
| RLST 170 | The Religious Quest            |
| SPNS 150 | The Hispanic Tradition         |
| WGSS 274 | Women, Culture & Society       |

### V. Arts and Humanities

Regarding Arts and Humanities, students are required to take one course from Fine Arts and one course from Humanities.

#### A. Fine Arts

Select three credits from the following: 3

|          |                  |
|----------|------------------|
| ARTZ 101 | Art Fundamentals |
|----------|------------------|

|          |                               |
|----------|-------------------------------|
| ARTZ 105 | Visual Language-Drawing       |
| ARTZ 106 | Visual Language-2-D Fndtns    |
| ARTZ 108 | Visual Language-3-D Fndtns    |
| ARTZ 131 | Ceramics for Non-Majors       |
| CRWR 240 | Intro Creative Writing Wrkshp |
| FILM 160 | Introduction to World Cinema  |
| LIT 270  | Film & Lit                    |
| MUSI 101 | Enjoyment of Music            |
| MUSI 114 | Band: MSUB Symphonic          |
| MUSI 131 | Jazz Ensemble I: MSUB         |
| MUSI 147 | Choral Ensemble: Univ Chorus  |
| PHOT 154 | Exploring Digital Photography |
| THTR 101 | Introduction to Theatre       |

#### B. Humanities

Select three credits from the following: 3

|          |                                |
|----------|--------------------------------|
| ARTH 150 | Introduction to Art History    |
| HONR 111 | Perspectives and Understanding |
| LIT 110  | Intro to Literature            |
| LIT 213  | Montana Literature             |
| PHL 110  | Introduction to Ethics         |
| PHL 111  | Philosophies of Life           |
| PHL 254  | People and Politics            |

**Total Minimum credits 31**

1

Students can satisfy Natural Sciences by taking SCIN 101, SCIN 102, and either SCIN 103 or SCIN 104.

### City College at MSU Billings students who wish to pursue a baccalaureate degree must also be aware of the requirements below.

Students should consult with their advisors, major departments, or faculty in their programs for guidance in selecting appropriate writing, technology intensive, and experiential learning courses.

## Experiential Learning Requirement

Students who intend to graduate with a baccalaureate degree are required to take and pass at least one course of experiential learning. Examples are student teaching, internships, undergraduate research, cooperative education experiences, practica, experiences abroad, and senior projects.

## Bachelor of Applied Science Degree

The Bachelor of Applied Science (BAS) degree is available to students with an Associate of Applied Science (AAS) degree. If a student has earned an AAS degree from a regionally accredited (p. 41) institution, he or she may enroll on the University campus of MSU Billings (or the other four units within the Montana University System to complete General Education requirements) and take upper division credits in existing areas of study which will complement the student's AAS credits already earned. The transferability of the AAS courses will be determined course by course.

Students anticipating transferring are encouraged to consult with their advisor and check the requirement of the institution into which they plan to transfer. Contact the Advising Center located in McMullen Hall First Floor, (406) 657-2240.



# Articulation Agreements and Transfer Opportunities

## Articulation Agreements

MSU Billings has a number of articulation agreements with other public and private institutions. These agreements make it possible for students to plan a program of study that begins at a two-year college and leads to a four-year degree from MSU Billings. These agreements are designed to maximize the number of credits students will be able to transfer and to minimize students' time to degree. Articulation agreements are made with specific programs. Areas of concern such as admissions, financial aid, course requirements, and contact information are clearly discussed.

Each agreement specifies how coursework in the associate degree program applies to the baccalaureate degree program at MSU Billings. Each agreement outlines the appropriate and recommended courses to complete at the two-year college and also specifies courses that must be taken at MSU Billings to complete the program.

Students interested in attending MSU Billings and utilizing an articulation agreement are encouraged to indicate their interest in one of the articulation agreements to an academic advisor prior to or during their first term in attendance.

## Bachelor of Applied Science Degree

The Bachelor of Applied Science (BAS) degree is available to students with an Associate of Applied Science (AAS) degree. If a student has earned an AAS degree from a regionally accredited (p. 41) institution, he or she may enroll on the main campus of MSU Billings (or the other four units within the Montana University System to complete general education requirements) and complete General Education courses and upper division credits in existing areas of study which will complement the student's AAS credits already earned. At MSU Billings, there are many different plans of study including Communications, Business, Health Administration, and others. The transferability of the AAS courses will be determined course by course.

Students anticipating transferring are encouraged to consult with their advisor and check the requirement of the institution into which they plan to transfer. Contact the Advising Center located in McMullen Hall First Floor, (406) 657-2240.

## Pathways to other Bachelor degrees

Students who complete an Associate of Science degree through the City College at MSU Billings have many options available to complete a Bachelor's degree and beyond. The Associate of Science degrees with plans of study in Human Resources Business Articulated Emphasis and Business Administration are designed for students to complete their Associate of Science degree at City College at MSU Billings and attend the University campus for two more years to complete a Bachelor of Science in Business Administration. City College at MSU Billings has an articulation agreement with MSU-Northern for students who complete an Associate of Science Degree at City College and wish to complete a Bachelor's degree in Nursing.

In addition to the examples above, there is also an Associate of Science or Associate of Arts Degree in General Studies (Self-Design Option). Students complete all of the general studies requirements and choose 23 credits of electives in consultation with a faculty advisor. This provides an excellent foundation for transfer in many areas. Students should contact an academic advisor to discuss the pathway that is right for them.



## Academic Programs and Departments

Academic programs at City College at MSU Billings are organized into five departments, as noted below. However, for students' convenience, the academic program plans of study are listed alphabetically.

### Computer Technology

**Craig McKenzie, Department Chair**  
(406) 247-3080  
CMcKenzie@msubillings.edu

Computer Programs:

- Computer Systems Technology
- Computer Programming and Application Development
- Cybersecurity/Network Technology & Support

### Transportation and Welding

**Katherine Pfau, Department Chair**  
(406) 247-3044  
kpfau@msubillings.edu

Transportation Programs:

- Automotive Technology
- Autobody Repair and Refinishing Technology
- Diesel Technology

Welding Program:

- Welding and Metal Fabrication

### Business, Construction, and Energy Technology

**Heather Thompson-Bahm, Department Chair**  
(406) 247-3065  
heather.thompson14@msubillings.edu

Business Programs:

- Accounting Technology
- Business Administration
- Craft Brewing and Fermentation
- General Business
- Human Resources

Trades Programs:

- Construction Management
- Construction-Carpentry

Industry Program:

- Process Plant Technology

Electrical Technology Program:

- Instrument and Electrical Technician

## Nursing, Health, and Public Safety

**Vern Gagnon, Department Chair**  
(406) 247-3043  
vgagnon@msubillings.edu

Public Safety Programs:

- Criminal Justice
- Fire Science
- Paramedic

Healthcare Programs:

- Radiologic Technology
- Surgical Technology
- Ultrasound Technology
- Medical Coding and Insurance Billing

**Susan Floyd, Director of Nursing**  
(406) 247-3071  
sfloyd@msubillings.edu

- Nursing—Registered Nurse
- Nursing—Practical Nurse

## General Education, Transfer, and Learner Support

**Lance Mouser, Department Chair**  
(406) 247-3066  
lmouser@msubillings.edu

AS option in General Studies-Self Design (Transfer Degree)  
AA option in General Studies-Self Design (Transfer Degree)  
Developmental Education curriculum and courses

# AA/AS General Studies (Self-Designed)

## ☐ Offered Online

The AA/AS in General Studies degree is designed for students who would like to earn a foundation of general education and transfer to a baccalaureate program. Students complete 31 credits of General Education and can choose courses from each category in the menu below. In consultation with an advisor, students choose 29 credits of elective courses that will help them to prepare for the bachelor's degree of their choice.

## General Education Courses

More information on General Education Requirements (p. 47).

| Code  | Title                          | Credits |
|---|--------------------------------|---------|
| <b>1. Global Academic Skills</b>  |                                |         |
| <i>A. Mathematics</i>   |                                |         |
| Select three credits from the following:  |                                | 3       |
| M 105   | Contemporary Mathematics       |         |
| M 114   | Extended Technical Mathematics |         |
| M 121   | College Algebra                |         |
| M 122   | College Trigonometry           |         |
| M 130   | Math for Elementary Teachers I |         |
| M 140   | College Math for Healthcare    |         |
| M 143   | Finite Mathematics             |         |
| M 161   | Survey of Calculus             |         |
| M 171   | Calculus I                     |         |
| STAT 141  | Intro to Statistical Concepts  |         |
| STAT 216  | Introduction to Statistics     |         |
| <i>B. English</i>   |                                |         |
| Select three credits from the following:  |                                | 3       |
| WRIT 101  | College Writing I              |         |
| WRIT 121  | Intro to Technical Writing     |         |
| WRIT 122  | Intro to Business Writing      |         |
| <i>C. Information Literacy</i>  |                                |         |
| Select three credits from the following:  |                                | 3       |
| BMS 150   | Cyber Security & Electronic Co |         |
| COMX 111  | Intro to Public Speaking       |         |
| COMX 115  | Intro to Interpersonal Comm    |         |
| COMX 210  | Communication in Small Groups  |         |
| HONR 205  | Honors Inquiry and Research    |         |
| LSCI 125  | Research in the Info Age       |         |
| <b>2. Natural Sciences</b>  |                                |         |
| Regarding Natural Sciences, students are required to take one course from Life Sciences and one course from Physical Sciences. At least one course must include a corresponding laboratory. |                                | 7       |
| Select three credits from the following with a corresponding laboratory courses if not taken in Physical Sciences:  |                                |         |
| BIOB 101  | Discover Biology               |         |
| BIOB 102  | Discover Biology Lab           |         |
| BIOB 121  | Fund of Bio for Allied Health  |         |
| BIOB 123  | Fund Bio: Nature of Nutrition  |         |
| BIOB 160  | Principles of Living Systems   |         |

|  |                                |   |
|--|--------------------------------|---|
| BIOB 161   | Principles Living Systems Lab  |   |
| Select three credits from the following with a corresponding laboratory courses if not taken in Life Sciences: |                                |   |
| ASTR 110   | Introduction to Astronomy      |   |
| ASTR 111   | Introduction to Astronomy Lab  |   |
| CHMY 121   | Intro to General Chemistry     |   |
| CHMY 122   | Intro to Gen Chem Lab          |   |
| CHMY 141   | College Chemistry I            |   |
| CHMY 142   | College Chemistry I Lab        |   |
| GEO 101  | Intro to Physical Geology      |   |
| GEO 102  | Intro to Physical Geology Lab  |   |
| GPHY 262   | Spatial Sciences Tech and Appl |   |
| GPHY 263   | Spatial Sciences & Tech Lab    |   |
| PHSX 103   | Our Physical World             |   |
| PHSX 104   | Our Physical World Lab         |   |
| PHSX 205   | College Physics I              |   |
| PHSX 206   | College Physics I Lab          |   |
| Students can satisfy Natural Sciences by taking the following:   |                                |   |
| SCIN 101   | Integrated Sciences I          |   |
| SCIN 103   | Integrated Sciences II         |   |
| SCIN 102   | Integrated Sciences Lab        |   |
| or SCIN 104  | Integrated Science Lab II      |   |
| <b>Social Sciences and History</b>   |                                |   |
| <i>Social Sciences</i>   |                                |   |
| Select three credits from the following:   |                                | 3 |
| BGEN 105B  | Introduction to Business       |   |
| COMX 106   | Comm in a Dynamic Workplace    |   |
| ECNS 201   | Principles of Microeconomics   |   |
| ECNS 202   | Principles of Macroeconomics   |   |
| EDU 105  | Education and Democracy        |   |
| HTH 110  | Personal Health and Wellness   |   |
| PSCI 210   | Intro to American Government   |   |
| PSCI 220   | Intro to Comparative Govt      |   |
| PSYX 100   | Intro to Psychology            |   |
| SOCI 101   | Introduction to Sociology      |   |
| SOCI 201   | Social Problems                |   |
| <i>History</i>   |                                |   |
| Select three credits from the following:   |                                | 3 |
| HSTA 101   | American History I             |   |
| HSTA 102   | American History II            |   |
| HSTR 159   | World History to 1500 CE       |   |
| HSTR 160   | Modern World History           |   |
| PSCI 230   | Intro to International Rel     |   |
| <b>Cultural Diversity</b>  |                                |   |
| Select three credits from the following:   |                                | 3 |
| ANTY 220   | Culture & Society              |   |
| ARTH 160   | Global Visual Culture          |   |
| COMX 212   | Intro to Intercultural Comm    |   |
| GPHY 121   | Human Geography                |   |
| HTH 270  | Global Health Issues           |   |
| LIT 230  | World Lit Survey               |   |
| MUSI 207   | World Music                    |   |

|          |                                |
|----------|--------------------------------|
| NASX 105 | Intro Native American Studies  |
| NASX 205 | Native Americans in Contmp Soc |
| REHA 201 | Intro to Diversity in Counslng |
| RLST 170 | The Religious Quest            |
| SPNS 150 | The Hispanic Tradition         |
| WGSS 274 | Women, Culture & Society       |

#### Arts and Humanities

##### Fine Arts

|  |                               |
|--|-------------------------------|
| Select three credits from the following: | 3                             |
| ARTZ 101                                 | Art Fundamentals              |
| ARTZ 105                                 | Visual Language-Drawing       |
| ARTZ 106                                 | Visual Language-2-D Fndtns    |
| ARTZ 108                                 | Visual Language-3-D Fndtns    |
| ARTZ 131                                 | Ceramics for Non-Majors       |
| CRWR 240                                 | Intro Creative Writing Wrkshp |
| FILM 160                                 | Introduction to World Cinema  |
| LIT 270                                  | Film & Lit                    |
| MUSI 101                                 | Enjoyment of Music            |
| MUSI 114                                 | Band: MSUB Symphonic          |
| MUSI 131                                 | Jazz Ensemble I: MSUB         |
| MUSI 147                                 | Choral Ensemble: Univ Chorus  |
| PHOT 154                                 | Exploring Digital Photography |
| THTR 101                                 | Introduction to Theatre       |

##### Humanities

|  |                                |
|--|--------------------------------|
| Select three credits from the following: | 3                              |
| ARTH 150                                 | Introduction to Art History    |
| HONR 111                                 | Perspectives and Understanding |
| LIT 110                                  | Intro to Literature            |
| LIT 213                                  | Montana Literature             |
| PHL 110                                  | Introduction to Ethics         |
| PHL 111                                  | Philosophies of Life           |

#### Requirements

|                              |           |
|------------------------------|-----------|
| Electives                    | 29        |
| <b>Total Minimum Credits</b> | <b>60</b> |

- Earn a minimum of 60 semester credits with a cumulative grade point average of 2.0 or better
- Satisfy the General Education requirements of MSU Billings
- Earn a C- or better in all General Education requirements
- A minimum of 20 semester credits with 40 grade points must be earned at MSU Billings

## Accounting Assistant Certificate of Applied Science \*Program placed on moratorium\*

The Accounting Assistant program is designed to prepare students for entry-level employment in accounts receivable, accounts payable, payroll, and general accounting. A Certificate of Applied Science is awarded upon successful completion of the required Accounting Assistant courses. All credits earned in completion of the Certificate may be applied toward the Accounting Technology Associate of Applied Science Degree. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform basic accounting functions relative to appropriate program of accounting e.g. recording daily transactions, planning and recording adjusting and closing entries, and preparing basic financial statements using common practices and GAAP (Generally Accepted Accounting Principles).
- Identify and apply appropriate accounting procedures and methods pertaining to service, professional, or merchandising enterprises.
- Recognize and use appropriate accounting terminology.
- Recognize and synthesize business or workplace practices, procedures and laws.

## Required Courses

| Code      | Title                       | Credits |
|-----------|-----------------------------|---------|
| ACTG 101  | Accounting Procedures I     | 3       |
| ACTG 102  | Accounting Procedures II    | 3       |
| ACTG 125  | QuickBooks                  | 3       |
| ACTG 205  | Computerized Accounting     | 3       |
| BGEN 105B | Introduction to Business    | 3       |
| CAPP 120  | Introduction to Computers   | 3       |
| CAPP 156  | MS Excel                    | 3       |
| COMX 106  | Comm in a Dynamic Workplace | 3       |
| COMX 111  | Intro to Public Speaking    | 3       |
| M 108     | Business Mathematics        | 3       |
| WRIT 122  | Intro to Business Writing   | 3       |

**Total Minimum Credits** **33**

*Students should check course descriptions for required prerequisites. Math and communication requirements are usually determined by performance on placement tests or transfer credits.*

## Suggested Plan of Study

| Code                   | Title                       | Credits |
|------------------------|-----------------------------|---------|
| <b>First Semester</b>  |                             |         |
| ACTG 101               | Accounting Procedures I     | 3       |
| BGEN 105B              | Introduction to Business    | 3       |
| CAPP 120               | Introduction to Computers   | 3       |
| COMX 106               | Comm in a Dynamic Workplace | 3       |
| M 108                  | Business Mathematics        | 3       |
| WRIT 122               | Intro to Business Writing   | 3       |
| <b>Second Semester</b> |                             |         |
| ACTG 102               | Accounting Procedures II    | 3       |
| ACTG 125               | QuickBooks                  | 3       |
| ACTG 205               | Computerized Accounting     | 3       |
| CAPP 156               | MS Excel                    | 3       |
| COMX 111               | Intro to Public Speaking    | 3       |

## Accounting Technology Associate of Applied Science Degree

#### Offered Online

The technical skills of a qualified accounting professional are needed by every business in America, large or small. The Accounting Technology program provides students with the basic knowledge of accounting processes necessary for

employment. After completing the program, students will be able to record day-to-day financial transactions and prepare summary statements of business conditions.

Computers are implemented in performing accounting functions and preparing reports. As a capstone training experience, it is highly recommended that students complete a one-semester internship in an accounting technician trainee position.

This internship allows students to apply learned competencies to on-the-job situations.

This program prepares students for entry-level accounting positions as an accounting clerk, payroll clerk, bookkeeper, accounting technician, or accounting associate. Accounting clerks and bookkeepers are hired by public accounting firms, private and public organizations, and large and small businesses. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform basic accounting functions relative to appropriate program of accounting e.g. recording daily transactions, planning and recording adjusting and closing entries, and preparing basic financial statements using common practices and GAAP (Generally Accepted Accounting Principles).
- Identify and apply appropriate accounting procedures and methods pertaining to service, professional, or merchandising enterprises.
- Recognize and use appropriate accounting terminology.
- Recognize and synthesize business or workplace practices, procedures and laws.

## Required Courses

| Code                                      | Title                                 | Credits   |
|---|---------------------------------------|-----------|
| ACTG 101                                  | Accounting Procedures I               | 3         |
| ACTG 102                                  | Accounting Procedures II              | 3         |
| ACTG 125                                  | QuickBooks                            | 3         |
| ACTG 180                                  | Payroll Accounting                    | 3         |
| ACTG 201                                  | Principles of Fin Acct                | 3         |
| ACTG 205                                  | Computerized Accounting               | 3         |
| ACTG 211                                  | Income Tax Fundamentals               | 3         |
| BGEN 105B                                 | Introduction to Business              | 3         |
| BGEN 220                                  | Bus Ethics & Soc Responsibility       | 3         |
| BGEN 235                                  | Business Law                          | 3         |
| BFIN 305                                  | Financial Planning                    | 3         |
| CAPP 110                                  | Short Courses: MS Outlook             | 1         |
| CAPP 120                                  | Introduction to Computers             | 3         |
| CAPP 154                                  | MS Word                               | 3         |
| CAPP 156                                  | MS Excel                              | 3         |
| COMX 106                                  | Comm in a Dynamic Workplace           | 3         |
| COMX 111                                  | Intro to Public Speaking              | 3         |
| ECNS 201                                  | Principles of Microeconomics          | 3         |
| M 108                                     | Business Mathematics                  | 3         |
| Select one of the following: <sup>1</sup> |                                       | 3-4       |
| M 105                                     | Contemporary Mathematics              |           |
| M 121                                     | College Algebra                       |           |
| M 143                                     | Finite Mathematics                    |           |
| WRIT 122                                  | Intro to Business Writing             | 3         |
| ACTG 298                                  | Internship (or a Restricted Elective) | 3         |
| <b>Total Minimum Credits</b>              |                                       | <b>64</b> |

1

Students should check with their academic advisor to determine the specific math course that is appropriate for their plan of study.

*Students should check course descriptions for required prerequisites. Math and communication requirements are usually determined by performance on placement tests or transfer credits.*

## Suggested Plan of Study

| Code                         | Title                           | Credits |
|------------------------------|---------------------------------|---------|
| <b>First Semester</b>        |                                 |         |
| ACTG 101                     | Accounting Procedures I         | 3       |
| BGEN 105B                    | Introduction to Business        | 3       |
| CAPP 120                     | Introduction to Computers       | 3       |
| CAPP 154                     | MS Word                         | 3       |
| WRIT 122                     | Intro to Business Writing       | 3       |
| <b>Second Semester</b>       |                                 |         |
| ACTG 102                     | Accounting Procedures II        | 3       |
| ACTG 205                     | Computerized Accounting         | 3       |
| BGEN 235                     | Business Law                    | 3       |
| CAPP 156                     | MS Excel                        | 3       |
| COMX 106                     | Comm in a Dynamic Workplace     | 3       |
| Select one of the following: |                                 | 3-4     |
| M 105                        | Contemporary Mathematics        |         |
| M 121                        | College Algebra                 |         |
| M 143                        | Finite Mathematics              |         |
| <b>Third Semester</b>        |                                 |         |
| ACTG 201                     | Principles of Fin Acct          | 3       |
| ACTG 125                     | QuickBooks                      | 3       |
| M 108                        | Business Mathematics            | 3       |
| BGEN 220                     | Bus Ethics & Soc Responsibility | 3       |
| ECNS 201                     | Principles of Microeconomics    | 3       |
| CAPP 110                     | Short Courses: MS Outlook       | 1       |
| <b>Fourth Semester</b>       |                                 |         |
| ACTG 180                     | Payroll Accounting              | 3       |
| ACTG 298                     | Internship (or Res. Elective)   | 3       |
| ACTG 211                     | Income Tax Fundamentals         | 3       |
| COMX 111                     | Intro to Public Speaking        | 3       |
| BFIN 305                     | Financial Planning              | 3       |

## Associate of Science Registered Nurse (ASN)

City College offers a CAS in Practical Nursing and an ASN in Registered Nursing. The College of Health Professions and Science also offers a 2+1 Option BSN Pathway (<https://catalog.msubillings.edu/undergraduate/college-health-professions-science/department-health-care-services/nursing2-1bsn/>).

Students apply to the nursing programs after completing the required prerequisites.

All prerequisite courses have to be completed with a "C" or better.

See [msubillings.edu/citycollege/programs/ProgLPN.htm](http://msubillings.edu/citycollege/programs/ProgLPN.htm) (<http://msubillings.edu/citycollege/programs/ProgLPN.htm>) for the most recent practical nursing information and [msubillings.edu/citycollege/programs/ProgRN.htm](http://msubillings.edu/citycollege/programs/ProgRN.htm) ([http://](http://msubillings.edu/citycollege/programs/ProgRN.htm)

msbillings.edu/citycollege/programs/ProgRN.htm) for the most recent registered nursing information.

Nursing students are held to the same standards as nurses. Students are required to pass a criminal background check and a urine drug screening at a site designated by the program before admission to clinical sites.

The Montana Board of Regents may alter information contained in this portion of the catalog. Please contact the Director of Nursing for the most current information.

The role of the associate degree nurse (ASN) is to provide direct care to clients, individuals, or groups, in a variety of settings. The ASN is prepared to prioritize care by assessing the evolving needs of the individuals, groups, or families. The ASN utilizes critical thinking to modify the nursing plan of care. They manage, delegate, and supervise other health care team members, forming collaborative relationships with a therapeutic goal.

## Special Considerations

If any physical limitations exist which might impair the ability of a student to fully perform required activities, a letter written by the physician attending the student should be sent to City College at MSU Billings. The letter must state that no risk to the student or potential patient exists, should the student be required to provide medical services to the patient.

It should be noted that completion of the registered nursing program does not guarantee state licensing to practice as an RN. Graduates must pass the NCLEX-RN to practice as an RN.

Students will be admitted to the registered nursing program in fall and spring semesters. The program is a five semester program with one semester of prerequisite courses. The application process includes: filling out an application form and points criteria, having a selective GPA of 2.75 from the pre-requisite courses, passing an entrance exam, and an in person interview. See the nursing website for specific application directions.

See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

Students should consult with an academic advisor before registering for General Education courses.

## Required Courses

| Code     | Title                            | Credits |
|----------|----------------------------------|---------|
| BIOH 201 | Human Anatomy & Physiology I     | 3       |
| BIOH 202 | Human Anatomy & Phys I Lab       | 1       |
| BIOH 211 | Human Anatomy & Physiology II †  | 3       |
| BIOH 212 | Human Anatomy & Phys II Lab †    | 1       |
| BIOM 250 | Microbiology for Hlth Sciences † | 3       |
| BIOM 251 | Microbiology Hlth Sciences Lab † | 1       |
| CHMY 121 | Intro to General Chemistry       | 3       |
| CHMY 122 | Intro to Gen Chem Lab            | 1       |
| M 140    | College Math for Healthcare      | 3       |
| NRSG 230 | Nursing Pharmacology             | 3       |
| NRSG 231 | Nursing Pharmacology Lab         | 2       |
| NRSG 232 | Foundations for Nursing          | 3       |
| NRSG 233 | Foundations of Nursing Lab       | 3       |
| NRSG 234 | Adult Nursing I                  | 3       |
| NRSG 235 | Adult Nursing I Cl               | 2       |
| NRSG 236 | Health/III Maternity Nsg         | 2       |

|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| NRSG 237                     | Health/III Maternal Nsg Cl     | 1         |
| NRSG 244                     | Adult Nursing II               | 3         |
| NRSG 245                     | Adult Nursing II Cl            | 2         |
| NRSG 246                     | Hlth/Illness Child/Fmly Nursng | 2         |
| NRSG 247                     | Hlth/Illness Child/Fam Nrs Cln | 1         |
| NRSG 254                     | Mental Health Concepts         | 3         |
| NRSG 255                     | Mental Health Concepts Cl      | 1         |
| NRSG 256                     | Pathophysiology                | 3         |
| NRSG 259                     | Adult Nursing III              | 3         |
| NRSG 260                     | Adult Nursing III Lab          | 1         |
| NRSG 261                     | Adult Nursing III Cl           | 2         |
| NRSG 266                     | Managing Client Care RN        | 2         |
| NRSG 267                     | Managing Client Care RN Cl     | 2         |
| PSYX 100                     | Intro to Psychology †          | 3         |
| SOCI 101                     | Introduction to Sociology †    | 3         |
| WRIT 101                     | College Writing I              | 3         |
| <b>Total Minimum Credits</b> |                                | <b>72</b> |

†

Course can be taken in advance of being accepted into the core nursing program. Students may earn additional points in the competitive process by completing this course.

## Suggested Plan of Study

| Code           | Title                        | Credits   |
|----------------|------------------------------|-----------|
| First Semester |                              |           |
| BIOH 201       | Human Anatomy & Physiology I | 3         |
| BIOH 202       | Human Anatomy & Phys I Lab   | 1         |
| CHMY 121       | Intro to General Chemistry   | 3         |
| CHMY 122       | Intro to Gen Chem Lab        | 1         |
| WRIT 101       | College Writing I            | 3         |
| M 140          | College Math for Healthcare  | 3         |
| <b>Total</b>   |                              | <b>14</b> |

Admission to the Nursing Program is required prior to taking second semester coursework.

|                 |                                 |           |
|-----------------|---------------------------------|-----------|
| Second Semester |                                 |           |
| BIOH 211        | Human Anatomy & Physiology II † | 3         |
| BIOH 212        | Human Anatomy & Phys II Lab †   | 1         |
| NRSG 230        | Nursing Pharmacology            | 3         |
| NRSG 231        | Nursing Pharmacology Lab        | 2         |
| NRSG 232        | Foundations for Nursing         | 3         |
| NRSG 233        | Foundations of Nursing Lab      | 3         |
| <b>Total</b>    |                                 | <b>15</b> |

|                 |                            |           |
|-----------------|----------------------------|-----------|
| Third Semester  |                            |           |
| NRSG 256        | Pathophysiology            | 3         |
| NRSG 234        | Adult Nursing I            | 3         |
| NRSG 235        | Adult Nursing I Cl         | 2         |
| NRSG 236        | Health/III Maternity Nsg   | 2         |
| NRSG 237        | Health/III Maternal Nsg Cl | 1         |
| PSYX 100        | Intro to Psychology †      | 3         |
| <b>Total</b>    |                            | <b>14</b> |
| Fourth Semester |                            |           |
| NRSG 244        | Adult Nursing II           | 3         |

|                |                                  |    |
|----------------|----------------------------------|----|
| NRSG 245       | Adult Nursing II Cl              | 2  |
| NRSG 254       | Mental Health Concepts           | 3  |
| NRSG 255       | Mental Health Concepts Cl        | 1  |
| NRSG 246       | Hlth/Illness Child/Fmly Nursng   | 2  |
| NRSG 247       | Hlth/Illness Child/Fam Nrs Cln   | 1  |
| SOCI 101       | Introduction to Sociology †      | 3  |
| Total          |                                  | 15 |
| Fifth Semester |                                  |    |
| NRSG 259       | Adult Nursing III                | 3  |
| NRSG 260       | Adult Nursing III Lab            | 1  |
| NRSG 261       | Adult Nursing III Cl             | 2  |
| NRSG 266       | Managing Client Care RN          | 2  |
| NRSG 267       | Managing Client Care RN Cl       | 2  |
| BIOM 250       | Microbiology for Hlth Sciences † | 3  |
| BIOM 251       | Microbiology Hlth Sciences Lab † | 1  |
| Total          |                                  | 14 |

†

Course can be taken in advance of being accepted into the core nursing program. Students may earn additional points in the competitive process by completing this course.

## Automobile Collision Repair and Refinishing Technology Associate of Applied Science Degree

The ever-increasing numbers of vehicles on the highways, coupled with the high cost of original purchase and replacement, have created a demand for trained collision repair technicians. This demand is currently exceeding the supply, and future indications are that this trend will continue. A student may exit this program after completing two semesters and receive an Automobile Collision Repair Technician or Automobile Refinishing Technician Certificate of Applied Science. Graduates in our Automobile Repair and Refinishing program may find career opportunities with auto repair shops, auto parts stores, windshield repair shops and other automotive related businesses. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<https://catalog.msubillings.edu/HTTP://www.msubillings.edu/careers/>) for graduate data.

**Automobile Collision Repair Technicians** perform structural and cosmetic repairs on automobiles with unitized body construction in preparation for refinishing. Responsibilities include minor sheet metal repair, welding of mild and high-strength steels, panel replacement, and measuring with laser and mechanical measuring systems.

**Automobile Refinishing Technicians** prepare and refinish vehicles. Students perform panel and overall refinishing using the latest techniques and equipment. Basic knowledge and skills in refinishing are developed with hands-on practice of current techniques.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform demonstrations with basic tools in body damage repair situations, according to lectures and demonstrations shown.
- Perform welding operations using resistance and metal inert gas equipment.
- Disassemble multiple vehicle panels including hood, fenders, doors and bumpers, reassemble and align according to manufacturers' recommendations.

- Identify and diagnose door hardware malfunctions, including latches, lock assemblies and window regulators.
- Apply gasket and adhesive methods to remove and replace stationary automobile glass
- Select and use proper safety equipment for personal and environmental protection against hazards from the refinish industry.
- Use appropriate application skills and correct maintenance procedures in refinishing equipment according to the manufacturer's specifications.
- Apply automotive undercoat products per manufacturer's specifications through proper application techniques.
- Select and apply correct automotive basecoat/clearcoat products per manufacturer's specifications.
- Using the proper techniques and products, prepare a substrate by correctly cleaning and abrading the surface before the application of automotive undercoats.

## Required Courses

| Code                         | Title                           | Credits   |
|------------------------------|---------------------------------|-----------|
| ABDY 101                     | Introduction to Estimating      | 2         |
| ABDY 110                     | Intro to Collision Repair       | 4         |
| ABDY 120                     | Non-Structural Collision Repair | 6         |
| ABDY 150                     | Refinish Safety                 | 2         |
| ABDY 160                     | Automotive Undercoats           | 4         |
| ABDY 170                     | Automotive Topcoats             | 6         |
| ABDY 201                     | Advanced Estimating             | 1         |
| ABDY 220                     | Structural Collision Repair     | 6         |
| ABDY 240                     | Aluminum Repair                 | 4         |
| ABDY 270                     | Advanced Refinishing            | 6         |
| ABDY 275                     | Waterborne Paint Systems        | 3         |
| ABDY 280                     | Custom Painting                 | 5         |
| or ABDY 298                  | Internship/Cooperative Educ     |           |
| AST 285                      | ASE Exam Prep: Section One      | 1         |
| CAPP 120                     | Introduction to Computers       | 3         |
| COMX 106                     | Comm in a Dynamic Workplace     | 3         |
| M 114                        | Extended Technical Mathematics  | 3         |
| TRID 140                     | Auto Sheet Mtl Strct MIG Wldng  | 2         |
| TRID 181                     | Transport Elect Systems Lec     | 2         |
| TRID 182                     | Transport Elect Systems Lab     | 2         |
| TRID 152                     | Vehicle Htg, Vent & AC          | 3         |
| WRIT 121                     | Intro to Technical Writing      | 3         |
| or WRIT 122                  | Intro to Business Writing       |           |
| <b>Total Minimum Credits</b> |                                 | <b>71</b> |

Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

| Code            | Title                           | Credits |
|-----------------|---------------------------------|---------|
| Fall Even Years |                                 |         |
| ABDY 101        | Introduction to Estimating      | 2       |
| ABDY 110        | Intro to Collision Repair       | 4       |
| ABDY 120        | Non-Structural Collision Repair | 6       |
| TRID 140        | Auto Sheet Mtl Strct MIG Wldng  | 2       |



|                   |                                |    |
|-------------------|--------------------------------|----|
| M 114             | Extended Technical Mathematics | 3  |
| Total             |                                | 17 |
| Spring Odd Years  |                                |    |
| ABDY 201          | Advanced Estimating            | 1  |
| ABDY 220          | Structural Collision Repair    | 6  |
| ABDY 240          | Aluminum Repair                | 4  |
| CAPP 120          | Introduction to Computers      | 3  |
| TRID 181          | Transport Elect Systems Lec    | 2  |
| TRID 182          | Transport Elect Systems Lab    | 2  |
| Total             |                                | 18 |
| Fall Odd Years    |                                |    |
| ABDY 150          | Refinish Safety                | 2  |
| ABDY 160          | Automotive Undercoats          | 4  |
| ABDY 170          | Automotive Topcoats            | 6  |
| TRID 152          | Vehicle Htg, Vent & AC         | 3  |
| WRIT 121          | Intro to Technical Writing     | 3  |
| or WRIT 122       | Intro to Business Writing      |    |
| Total             |                                | 18 |
| Spring Even Years |                                |    |
| ABDY 270          | Advanced Refinishing           | 6  |
| ABDY 275          | Waterborne Paint Systems       | 3  |
| ABDY 280          | Custom Painting                | 5  |
| or ABDY 298       | Internship/Cooperative Educ    |    |
| AST 285           | ASE Exam Prep: Section One     | 1  |
| COMX 106          | Comm in a Dynamic Workplace    | 3  |
| Total             |                                | 18 |

## Automobile Collision Repair Technology Certificate of Applied Science

The ever-increasing numbers of vehicles on the highways, coupled with the high cost of original purchase and replacement, have created a demand for trained collision repair technicians. This demand is currently exceeding the supply, and future indications are that this trend will continue. A student may exit this program after completing two semesters and receive an Automobile Collision Repair Technician or Automobile Refinishing Technician Certificate of Applied Science. Graduates in our Automobile Repair and Refinishing program may find career opportunities with auto repair shops, auto parts stores, windshield repair shops and other automotive related businesses. See our website at [www.msubillings.edu/careers/](http://www.msubillings.edu/careers/) for graduate data.

**Automobile Collision Repair Technicians** perform structural and cosmetic repairs on automobiles with unitized body construction in preparation for refinishing. Responsibilities include minor sheet metal repair, welding of mild and high-strength steels, panel replacement, and measuring with laser and mechanical measuring systems.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform demonstrations with basic tools in body damage repair situations, according to lectures and demonstrations shown.
- Perform welding operations using resistance and metal inert gas equipment.

- Disassemble multiple vehicle panels including hood, fenders, doors and bumpers, reassemble and align according to manufacturers' recommendations.
- Identify and diagnose door hardware malfunctions, including latches, lock assemblies and window regulators.
- Apply gasket and adhesive methods to remove and replace stationary automobile glass

## Required Courses

| Code     | Title                          | Credits |
|----------|--------------------------------|---------|
| ABDY 101 | Introduction to Estimating     | 2       |
| ABDY 110 | Intro to Collision Repair      | 4       |
| ABDY 120 | Non-Structral Collision Repair | 6       |
| ABDY 201 | Advanced Estimating            | 1       |
| ABDY 220 | Structural Collision Repair    | 6       |
| COMX 106 | Comm in a Dynamic Workplace    | 3       |
| M 111    | Technical Mathematics          | 3       |
| TRID 140 | Auto Sheet Mtl Strct MIG Wldng | 2       |
| TRID 152 | Vehicle Htg, Vent & AC         | 3       |
| WRIT 104 | Workplace Communications       | 3       |

**Total Minimum Credits** **33**

*Students should check the course descriptions for required prerequisites.*

## Suggested Plan of Study

| Code                      | Title                          | Credits |
|---------------------------|--------------------------------|---------|
| Fall Semester-Even Years  |                                |         |
| ABDY 101                  | Introduction to Estimating     | 2       |
| ABDY 110                  | Intro to Collision Repair      | 4       |
| ABDY 120                  | Non-Structral Collision Repair | 6       |
| TRID 140                  | Auto Sheet Mtl Strct MIG Wldng | 2       |
| M 111                     | Technical Mathematics          | 3       |
| Total                     |                                | 17      |
| Spring Semester-Odd Years |                                |         |
| ABDY 201                  | Advanced Estimating            | 1       |
| ABDY 220                  | Structural Collision Repair    | 6       |
| COMX 106                  | Comm in a Dynamic Workplace    | 3       |
| TRID 152                  | Vehicle Htg, Vent & AC         | 3       |
| WRIT 104                  | Workplace Communications       | 3       |
| Total                     |                                | 16      |

## Automobile Refinishing Technology Certificate of Applied Science

The ever-increasing numbers of vehicles on the highways, coupled with the high cost of original purchase and replacement, have created a demand for trained collision repair technicians. This demand is currently exceeding the supply, and future indications are that this trend will continue. A student may exit this program after completing two semesters and receive an Automobile Collision Repair Technician or Automobile Refinishing Technician Certificate of Applied Science. Graduates in our Automobile Repair and Refinishing program may find career opportunities with auto repair shops, auto parts stores, windshield repair shops and other automotive related businesses. See our website at [www.msubillings.edu/careers/](http://www.msubillings.edu/careers/) for graduate data.

**Automobile Refinishing Technicians** prepare and refinish vehicles. Students perform panel and overall refinishing using the latest techniques and equipment. Basic knowledge and skills in refinishing are developed with hands-on practice of current techniques.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Select and use proper safety equipment for personal and environmental protection against hazards from the refinish industry.
- Use appropriate application skills and correct maintenance procedures in refinishing equipment according to the manufacturer's specifications.
- Apply automotive undercoat products per manufacturer's specifications through proper application techniques.
- Select and apply correct automotive basecoat/clearcoat products per manufacturer's specifications.
- Using the proper techniques and products, prepare a substrate by correctly cleaning and abrading the surface before the application of automotive undercoats.

## Required Courses

| Code                         | Title                       | Credits   |
|------------------------------|-----------------------------|-----------|
| ABDY 150                     | Refinish Safety             | 2         |
| ABDY 160                     | Automotive Undercoats       | 4         |
| ABDY 170                     | Automotive Topcoats         | 6         |
| ABDY 270                     | Advanced Refinishing        | 6         |
| ABDY 275                     | Waterborne Paint Systems    | 3         |
| AST 285                      | ASE Exam Prep: Section One  | 1         |
| COMX 106                     | Comm in a Dynamic Workplace | 3         |
| M 111                        | Technical Mathematics       | 3         |
| TRID 152                     | Vehicle Htg, Vent & AC      | 3         |
| WRIT 104                     | Workplace Communications    | 3         |
| <b>Total Minimum Credits</b> |                             | <b>34</b> |

Students should check the course descriptions for required prerequisites.

## Suggested Plan of Study

| Code         | Title                       | Credits   |
|--------------|-----------------------------|-----------|
| Spring       |                             |           |
| ABDY 150     | Refinish Safety             | 2         |
| ABDY 160     | Automotive Undercoats       | 4         |
| ABDY 170     | Automotive Topcoats         | 6         |
| TRID 152     | Vehicle Htg, Vent & AC      | 3         |
| WRIT 104     | Workplace Communications    | 3         |
| <b>Total</b> |                             | <b>18</b> |
| Fall         |                             |           |
| ABDY 270     | Advanced Refinishing        | 6         |
| ABDY 275     | Waterborne Paint Systems    | 3         |
| M 111        | Technical Mathematics       | 3         |
| AST 285      | ASE Exam Prep: Section One  | 1         |
| COMX 106     | Comm in a Dynamic Workplace | 3         |
| <b>Total</b> |                             | <b>16</b> |

# Automotive Technology Associate of Applied Science Degree

The Transportation and Welding Department offers both an Associate of Applied Science degree and a Certificate of Applied Science in Automotive Technology. The Associate of Applied Science degree is usually completed in four semesters.

The Certificate of Applied Science can be completed in two semesters. The automotive curriculum emphasizes the fundamentals of all mechanical, fuel, and electronic systems found on modern vehicles and prepares students for service and management positions in the automotive industry.

The program is Master NATEF accredited and ASE certified in the following areas of instruction: A1-Engine Repair, A2-Automatic Transmission/Transaxle, A3-Manual Drive Train & Axles, A4-Suspension & Steering, A5-Brakes, A6-Electrical/Electronic Systems, A7-Heating & Air Conditioning, A8-Engine Performance. Graduates find employment in new car dealerships, independent and specialty shops, government motor pools, and fleet maintenance organizations. Other graduates find positions in management as service managers, shop foremen, factory representatives, or diagnostic specialists. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

The program has pathway agreements with the Billings Career Center in School District #2 and into the Bachelor of Applied Science program at Montana State University-Northern to provide unique training and educational opportunities for those students who are interested and qualified.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Diagnose problems throughout the eight ASE areas in modern automobiles.
- Repair complex systems throughout the eight ASE areas in modern automobiles.
- Perform diagnosis techniques and proper repair procedures relative to the flat rate time standard.
- Identify health and safety hazards and demonstrate proper techniques and practices associated with the automotive industry.

## Required Courses

| Code                  | Title   | Credits |
|-----------------------|---|---------|
| AST 106               | Auto Manual Drive Train/Axles                               | 2       |
| AST 107               | Auto Man Drive Train/Axles Lab                              | 2       |
| AST 114               | Automotive Brakes   | 2       |
| AST 115               | Automotive Brakes Lab                                       | 2       |
| AST 162               | Automotive Engine Diagnostics                               | 3       |
| AST 163               | Auto Engine Diagnostics Lab                                 | 3       |
| AST 175               | Engine Rebuild Lab  | 5       |
| AST 220               | Auto Steering and Suspension                                | 2       |
| AST 221               | Auto Steering/Suspension Lab                                | 2       |
| AST 230               | Elec/Electrncs Sys II                                       | 2       |
| AST 231               | Elec/Electrncs Sys II Lab                                   | 2       |
| AST 260               | Advanced Auto Diagnostics                                   | 3       |
| AST 261               | Advanced Auto Diagnostics Lab                               | 3       |
| AST 270               | Auto Transmissions/Transaxles                               | 3       |
| AST 271               | Auto Transmissns/Transxls Lab                               | 3       |
| AST 285               | ASE Exam Prep: Section One                                  | 1       |
| AST 280<br>or AST 298 | Applied Lab Exp/Light Repair<br>Internship/Cooperative Educ | 4       |

|             |                                |   |
|-------------|--------------------------------|---|
| CAPP 120    | Introduction to Computers      | 3 |
| COMX 106    | Comm in a Dynamic Workplace    | 3 |
| M 114       | Extended Technical Mathematics | 3 |
| TRID 150    | Environ/Shop Practices         | 2 |
| TRID 151    | Welding                        | 2 |
| TRID 152    | Vehicle Htg, Vent & AC         | 3 |
| TRID 170    | Engine Theory                  | 4 |
| TRID 181    | Transport Elect Systems Lec    | 2 |
| TRID 182    | Transport Elect Systems Lab    | 2 |
| WRIT 122    | Intro to Business Writing      | 3 |
| or WRIT 121 | Intro to Technical Writing     |   |

**Total Minimum Credits** 71

*Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.*

## Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| AST 106         | Auto Manual Drive Train/Axles  | 2       |
| AST 107         | Auto Man Drive Train/Axles Lab | 2       |
| M 114           | Extended Technical Mathematics | 3       |
| TRID 150        | Environ/Shop Practices         | 2       |
| TRID 170        | Engine Theory                  | 4       |
| TRID 181        | Transport Elect Systems Lec    | 2       |
| TRID 182        | Transport Elect Systems Lab    | 2       |
| Total           |                                | 17      |
| Second Semester |                                |         |
| AST 114         | Automotive Brakes              | 2       |
| AST 115         | Automotive Brakes Lab          | 2       |
| AST 175         | Engine Rebuild Lab             | 5       |
| AST 162         | Automotive Engine Diagnostics  | 3       |
| AST 163         | Auto Engine Diagnostics Lab    | 3       |
| WRIT 121        | Intro to Technical Writing     | 3       |
| or WRIT 122     | Intro to Business Writing      |         |
| Total           |                                | 18      |
| Third Semester  |                                |         |
| AST 285         | ASE Exam Prep: Section One     | 1       |
| AST 220         | Auto Steering and Suspension   | 2       |
| AST 221         | Auto Steering/Suspension Lab   | 2       |
| AST 230         | Elec/Elctrncs Sys II           | 2       |
| AST 231         | Elec/Elctrncs Sys II Lab       | 2       |
| TRID 152        | Vehicle Htg, Vent & AC         | 3       |
| COMX 106        | Comm in a Dynamic Workplace    | 3       |
| CAPP 120        | Introduction to Computers      | 3       |
| Total           |                                | 18      |
| Fourth Semester |                                |         |
| AST 260         | Advanced Auto Diagnostics      | 3       |
| AST 261         | Advanced Auto Diagnostics Lab  | 3       |
| AST 280         | Applied Lab Exp/Light Repair   | 4       |
| or AST 298      | Internship/Cooperative Educ    |         |
| AST 270         | Auto Transmissions/Transaxles  | 3       |

|          |                               |    |
|----------|-------------------------------|----|
| AST 271  | Auto Transmissns/TransxIs Lab | 3  |
| TRID 151 | Welding                       | 2  |
| Total    |                               | 18 |

## Automotive Technology Certificate of Applied Science

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Diagnose problems in the ASE areas of Manual Drive Train and Axles, Brakes, Engine Repair, and Electrical/Electronic Systems used in modern automobiles.
- Repair complex systems in the ASE areas of Manual Drive Train and Axles, Brakes, Engine Repair, and Electrical/Electronic Systems used in modern automobiles.
- Perform diagnosis techniques and proper repair procedures relative to the flat rate time standard.
- Identify health and safety hazards and demonstrate proper techniques and practices associated with the automotive industry.

### Required Courses

| Code                    | Title                          | Credits |
|-------------------------|--------------------------------|---------|
| AST 106                 | Auto Manual Drive Train/Axles  | 2       |
| AST 107                 | Auto Man Drive Train/Axles Lab | 2       |
| AST 114                 | Automotive Brakes              | 2       |
| AST 115                 | Automotive Brakes Lab          | 2       |
| AST 162                 | Automotive Engine Diagnostics  | 3       |
| AST 163                 | Auto Engine Diagnostics Lab    | 3       |
| AST 175                 | Engine Rebuild Lab             | 5       |
| COMX 106                | Comm in a Dynamic Workplace    | 3       |
| M 111                   | Technical Mathematics          | 3       |
| TRID 170                | Engine Theory                  | 4       |
| TRID 181                | Transport Elect Systems Lec    | 2       |
| TRID 182                | Transport Elect Systems Lab    | 2       |
| WRIT 104                | Workplace Communications       | 3       |
| <b>Optional Courses</b> |                                |         |
| CAPP 120                | Introduction to Computers      |         |
| TRID 150                | Environ/Shop Practices         |         |

**Total Minimum Credits** 36

*Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.*

### Suggested Plan of Study

| Code           | Title                          | Credits |
|----------------|--------------------------------|---------|
| First Semester |                                |         |
| AST 106        | Auto Manual Drive Train/Axles  | 2       |
| AST 107        | Auto Man Drive Train/Axles Lab | 2       |
| COMX 106       | Comm in a Dynamic Workplace    | 3       |
| TRID 170       | Engine Theory                  | 4       |
| TRID 181       | Transport Elect Systems Lec    | 2       |
| TRID 182       | Transport Elect Systems Lab    | 2       |
| M 111          | Technical Mathematics          | 3       |

|                        |                               |    |
|------------------------|-------------------------------|----|
| Total                  |                               | 18 |
| <b>Second Semester</b> |                               |    |
| AST 114                | Automotive Brakes             | 2  |
| AST 115                | Automotive Brakes Lab         | 2  |
| AST 175                | Engine Rebuild Lab            | 5  |
| AST 162                | Automotive Engine Diagnostics | 3  |
| AST 163                | Auto Engine Diagnostics Lab   | 3  |
| WRIT 104               | Workplace Communications      | 3  |
| Total                  |                               | 18 |

## Business Administration Associate of Science Program of Study

### ☐ Offered Online

This program is designed to provide an entry point for students interested in pursuing business-related careers. It focuses on a broad business core in a flexible and practical way that is ideal for adults seeking career changes or those who desire advancement in their current position as well as the traditional students seeking a career in business. The program covers key areas dealing with economics; management, marketing, accounting, and business law that prepare students for an active and successful career. Classes are offered at flexible times with evening, hybrid, and online offerings making it ideal for adult learners or students who work during the day.

The Associate of Science Plan of Study in Business Administration offers a unique point of access for anyone interested in careers in management, marketing, finance or information systems because the program articulates directly into the College of Business Bachelor of Science degree in Business Administration. Those who enter the program can get the up-to-date skills and knowledge they need to improve their current career path or move on to the MSU Billings College of Business and complete a four-year degree with options in Management, Marketing, Finance or Information Systems. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and define the major marketing concepts and principles including the 4 P's of marketing; Product, Place, Price and Promotion.
- Design a fundamental marketing plan including the 4 P's of marketing; Product, Place, Price and Promotion.
- Identify and define the major management concepts and principles including the four functions of management; planning, leading, organizing controlling.
- Apply the four functions of management; planning, organizing, leading controlling to the workplace.
- Evaluate standards of professional performance in the workplace.

## Required Courses

| Code                                   | Title | Credits |
|--|-------|---------|
| General Education Requirements (p. 47) |       | 31      |

The following General Education courses are required. Students should select General Education courses in consultation with their advisors.

### Mathematics

|       |                    |  |
|-------|--------------------|--|
| M 143 | Finite Mathematics |  |
|-------|--------------------|--|

### English

|          |                   |  |
|----------|-------------------|--|
| WRIT 101 | College Writing I |  |
|----------|-------------------|--|

### Communication & Information Literacy

|             |                                |  |
|-------------|--------------------------------|--|
| BMIS 150    | Cyber Security & Electronic Co |  |
| or COMX 115 | Intro to Interpersonal Comm    |  |
| or LSCI 125 | Research in the Info Age       |  |

### Natural Sciences

Select from list (<https://catalog.msubillings.edu/undergraduate/general-education-requirements/>)

### Social Sciences

|          |                              |  |
|----------|------------------------------|--|
| ECNS 201 | Principles of Microeconomics |  |
|----------|------------------------------|--|

### History

Select from list (<https://catalog.msubillings.edu/undergraduate/general-education-requirements/>)

### Cultural Diversity

Select from list (<https://catalog.msubillings.edu/undergraduate/general-education-requirements/>)

### Fine Arts

Select from list (<https://catalog.msubillings.edu/undergraduate/general-education-requirements/>)

### Humanities

Select from list (<https://catalog.msubillings.edu/undergraduate/general-education-requirements/>)

### Core Courses

|                              |                                       |   |
|------------------------------|---------------------------------------|---|
| ACTG 201                     | Principles of Fin Acct <sup>2</sup>   | 3 |
| BGEN 105B                    | Introduction to Business <sup>2</sup> | 3 |
| BGEN 235                     | Business Law <sup>3</sup>             | 3 |
| BGEN 280                     | Business Planning <sup>2</sup>        | 3 |
| BMGT 235                     | Management <sup>2</sup>               | 3 |
| BMKT 225                     | Marketing <sup>2</sup>                | 3 |
| Select one of the following: |                                       | 3 |

|             |                                 |    |
|-------------|---------------------------------|----|
| CAPP 120    | Introduction to Computers       |    |
| or CAPP 156 | MS Excel                        |    |
| or BGEN 240 | Intro Business Data Analysis    |    |
| BGEN 294    | Seminar/Workshop <sup>2,4</sup> | 2  |
| or BMGT 298 | Internship/Cooperative Educ     |    |
| or BGEN 498 | Internship/Cooperative Educ     |    |
| Subtotal    |                                 | 23 |

### Restricted Electives

Select Restricted Electives in consultation with an advisor.

|          |  |  |
|----------|--|--|
| BGEN 220 | Bus Ethics & Soc Respnsbility <sup>2</sup> |  |
| BMGT 250 | Employment & Comp Strategies <sup>2</sup>  |  |
| BMKT 325 | Principles of Marketing <sup>3</sup>       |  |
| ECNS 202 | Principles of Macroeconomics               |  |
| STAT 216 | Introduction to Statistics                 |  |
| WRIT 220 | Business & Prof Writing                    |  |
| HTH 270  | Global Health Issues <sup>1</sup>          |  |
| AHMS 144 | Medical Terminology <sup>1</sup>           |  |

**Total Minimum Credits** **60**

1

Course transfers to the BSHA 2+2 pathway.

2

Course transfers to the College of Business as a general elective.

3

Course transfers to the College of Business core.

4

Students are required to complete two credits, but may earn up to three.

## Suggested Plan of Study

| Code              | Title                        | Credits |
|-------------------|------------------------------|---------|
| First Semester    |                              |         |
| BGEN 105B         | Introduction to Business     | 3       |
| CAPP 120          | Introduction to Computers    | 3       |
| or CAPP 156       | MS Excel                     |         |
| or BGEN 240       | Intro Business Data Analysis |         |
| General Education |                              |         |
| 9                 |                              |         |
| Second Semester   |                              |         |
| ACTG 201          | Principles of Fin Acct       | 3       |
| BMGT 235          | Management                   | 3       |
| General Education |                              |         |
| 9                 |                              |         |
| Third Semester    |                              |         |
| ECNS 201          | Principles of Microeconomics | 3       |
| BMKT 225          | Marketing                    | 3       |
| General Education |                              |         |
| 9                 |                              |         |
| Fourth Semester   |                              |         |
| BGEN 235          | Business Law                 | 3       |
| BGEN 280          | Business Planning            | 3       |
| BGEN 294          | Seminar/Workshop             | 2       |
| General Education |                              |         |
| 7                 |                              |         |

## Computer Programming and Application Development Associate of Applied Science Degree

Computer Programming and Application Development is a fall start program. Please see an advisor for more information.

The Computer Programming and Application Development degree prepares students to enter industry as entry-level software and web application developers. Students gain hands-on experience and skills in C#, Java, Perl, Visual Basic.NET, and web development technologies such as HTML5, CSS3, JavaScript, and PHP. Graduates will also gain experience working on Linux and Windows Operating System platforms, as well as the basics of Cisco networking. This combination of programming skills, web development skills, and computer system knowledge combine to create a powerful mix of skills valuable to a variety of business, industrial, and professional fields. At graduation, each student will have a portfolio of applications created for demonstration at job interviews. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

Before a student can be accepted into the Computer Programming and Application Development degree program, competency in mathematics and computers must be demonstrated. This may be done by:

- transferring of appropriate credits
- completing the computer literacy challenge test
- obtaining permission of CST faculty
- taking prerequisite course (CAPP 120)
- possessing current ACT/SAT scores in the required range

- taking the necessary prerequisite English, math and/or computer classes identified in the catalog

Check with an academic advisor to determine how you can meet these requirements. Students should check the course descriptions for required prerequisites.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Design, create, edit, deploy and administer dynamic web sites.
- Design, create, edit, deploy and administer databases.
- Analyze, design and document from conception to development of a final application.
- Test computer applications and systems solutions.

## Required Courses

| Code                         | Title                          | Credits   |
|------------------------------|--------------------------------|-----------|
| CAPP 156                     | MS Excel                       | 3         |
| CAPP 158                     | MS Access                      | 3         |
| COMX 106                     | Comm in a Dynamic Workplace    | 3         |
| CSCI 100                     | Intro to Programming           | 3         |
| CSCI 111B                    | Programming with Java I        | 3         |
| CSCI 114                     | Programming with C#            | 3         |
| CSCI 116                     | Python Programming             | 3         |
| CSCI 121                     | Programming with Java II       | 3         |
| CSCI 124                     | Advanced C#/.NET               | 3         |
| CSCI 181                     | Web Design & Programming       | 3         |
| CSCI 211                     | Client Side Programming        | 3         |
| CSCI 214                     | Server-Side Web Prog & Admin   | 3         |
| CSCI 223                     | Software Development           | 3         |
| CSCI 240                     | Databases and SQL              | 3         |
| CSCI 258                     | Web Application Development    | 3         |
| CSCI 299                     | Thesis/Capstone                | 4         |
| ITS 166                      | Configuring MS Windows 10      | 3         |
| ITS 212                      | Network Operating Sys-Server A | 3         |
| ITS 224                      | Introduction to Linux          | 3         |
| M 143                        | Finite Mathematics             | 4         |
| NTS 104                      | CCNA 1: Intro to Networks      | 4         |
| WRIT 121                     | Intro to Technical Writing     | 3         |
| <b>Total Minimum Credits</b> |                                | <b>69</b> |

## Suggested Plan of Study

| Code            | Title                      | Credits   |
|-----------------|----------------------------|-----------|
| First Semester  |                            |           |
| CAPP 156        | MS Excel                   | 3         |
| CSCI 240        | Databases and SQL          | 3         |
| CSCI 100        | Intro to Programming       | 3         |
| CSCI 181        | Web Design & Programming   | 3         |
| ITS 166         | Configuring MS Windows 10  | 3         |
| WRIT 121        | Intro to Technical Writing | 3         |
| <b>Total</b>    |                            | <b>18</b> |
| Second Semester |                            |           |
| CSCI 114        | Programming with C#        | 3         |
| CSCI 116        | Python Programming         | 3         |



|                 |                                |    |
|-----------------|--------------------------------|----|
| CSCI 211        | Client Side Programming        | 3  |
| ITS 212         | Network Operating Sys-Server A | 3  |
| ITS 224         | Introduction to Linux          | 3  |
| COMX 106        | Comm in a Dynamic Workplace    | 3  |
| Total           |                                | 18 |
| Third Semester  |                                |    |
| CSCI 111B       | Programming with Java I        | 3  |
| CSCI 124        | Advanced C#/.NET               | 3  |
| CSCI 214        | Server-Side Web Prog & Admin   | 3  |
| CSCI 223        | Software Development           | 3  |
| M 143           | Finite Mathematics             | 4  |
| Total           |                                | 16 |
| Fourth Semester |                                |    |
| CAPP 158        | MS Access                      | 3  |
| NTS 104         | CCNA 1: Intro to Networks      | 4  |
| CSCI 121        | Programming with Java II       | 3  |
| CSCI 258        | Web Application Development    | 3  |
| CSCI 299        | Thesis/Capstone                | 4  |
| Total           |                                | 17 |

## Computer Systems Technology Associate of Applied Science Degree

CST is a fall start program. Please see an advisor for more information.

The Computer Systems Technology program prepares students for an exciting career in the computer industry. Technicians provide assistance and training to system users as well as administer the computer network. Graduates can find career opportunities in universities, public and private school systems, hospitals, financial institutions, retail stores, or any other organization that provides technical support to employees. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

Students learn techniques to investigate and resolve computer problems, both on a client computer and across an entire network and to answer clients' inquiries concerning the use of computer hardware and software. This includes solving problems related to network access, operating systems, and trouble-shooting communication issues.

Students will gain knowledge and skills in Cisco networking, Microsoft Windows networking and management, and other related computer areas. They will receive hands-on experience via the lab component of this program. Advanced computer and networking equipment is provided for use in the labs. Approximately 40% of the classroom time contains hands-on training to provide the student with real world experience. Students who are successful in the program will be prepared to take industry certification tests such as A+, Net+, Server+, CCNA, CCNP, MCP, and MCSE.

Before a student can be accepted into the Computer Systems Technology program, competency in mathematics and computers must be demonstrated. This may be done by:

- transferring of appropriate credits
- completing the computer literacy challenge test
- obtaining permission of CST faculty
- taking prerequisite course (CAPP 120)
- possessing current ACT/SAT scores in the required range

- taking the necessary prerequisite English, math and/or computer classes identified in the catalog

Check with an academic advisor to determine how you can meet these requirements. Students should check the course descriptions for required prerequisites.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Troubleshoot and repair computer hardware.
- Set up operating systems and troubleshoot software.
- Set up and document LAN networks using troubleshooting skills.
- Set up and document WAN networks using troubleshooting skills.
- Set up and document secure networks.

## Required Courses

| Code                           | Title                                   | Credits |
|--------------------------------|---|---------|
| CAPP 156                       | MS Excel                                | 3       |
| COMX 106                       | Comm in a Dynamic Workplace             | 3       |
| CSCI 100                       | Intro to Programming                    | 3       |
| CSCI 240                       | Databases and SQL                       | 3       |
| ITS 166                        | Configuring MS Windows 10               | 3       |
| ITS 212                        | Network Operating Sys-Server A          | 3       |
| ITS 217                        | Network OS - Server Admin/Apps          | 3       |
| ITS 224                        | Introduction to Linux                   | 3       |
| ITS 226                        | Advanced Linux                          | 3       |
| ITS 245                        | Computer Forensics                      | 3       |
| ITS 246                        | Cybersecurity Operations                | 3       |
| ITS 256                        | CCNA Security                           | 3       |
| ITS 257                        | Intro to Comp Virtualization            | 3       |
| ITS 280                        | Computer Repair & Maintenance           | 3       |
| ITS 283                        | Health Information Networking           | 3       |
| ITS 299                        | Capstone                                | 3       |
| M 114                          | Extended Technical Mathematics          | 3       |
| NTS 104                        | CCNA 1: Intro to Networks               | 4       |
| NTS 105                        | CCNA 2: Routing & Switching Es          | 4       |
| NTS 204                        | CCNA 3: Scaling Networks                | 3       |
| WRIT 121                       | Intro to Technical Writing              | 3       |
| <b>Restricted Electives</b>    |   |         |
| Select one from the following: |   | 3       |
| CSCI 116                       | Python Programming                      |         |
| CSCI 211                       | Client Side Programming                 |         |
| CSCI 214                       | Server-Side Web Prog & Admin            |         |
| ITS 289                        | Professional Certification <sup>1</sup> |         |
| ITS 291                        | Special Topics                          |         |
| ITS 298                        | Cooperative Educ/Internship             |         |

**Total Minimum Credits**

**68**

<sup>1</sup>

Recommended



## Suggested Plan of Study

| Code                | Title                          | Credits |
|---------------------|--------------------------------|---------|
| First Semester      |                                |         |
| COMX 106            | Comm in a Dynamic Workplace    | 3       |
| CSCI 100            | Intro to Programming           | 3       |
| CSCI 240            | Databases and SQL              | 3       |
| ITS 166             | Configuring MS Windows 10      | 3       |
| ITS 280             | Computer Repair & Maintenance  | 3       |
| M 114               | Extended Technical Mathematics | 3       |
| Total               |                                | 18      |
| Second Semester     |                                |         |
| CAPP 156            | MS Excel                       | 3       |
| ITS 212             | Network Operating Sys-Server A | 3       |
| ITS 224             | Introduction to Linux          | 3       |
| NTS 104             | CCNA 1: Intro to Networks      | 4       |
| WRIT 121            | Intro to Technical Writing     | 3       |
| Total               |                                | 16      |
| Third Semester      |                                |         |
| ITS 217             | Network OS - Server Admin/Apps | 3       |
| ITS 246             | Cybersecurity Operations       | 3       |
| ITS 226             | Advanced Linux                 | 3       |
| NTS 105             | CCNA 2: Routing & Switching Es | 4       |
| Restricted Elective |                                | 3       |
| Total               |                                | 16      |
| Fourth Semester     |                                |         |
| ITS 245             | Computer Forensics             | 3       |
| ITS 256             | CCNA Security                  | 3       |
| ITS 257             | Intro to Comp Virtualization   | 3       |
| ITS 283             | Health Information Networking  | 3       |
| ITS 299             | Capstone                       | 3       |
| NTS 204             | CCNA 3: Scaling Networks       | 3       |
| Total               |                                | 18      |

## Construction Management Associate of Applied Science Degree

This degree will provide students with the foundation necessary to obtain employment in the construction industry, with skills in residential and commercial construction and project management. Students will learn the basics of home construction, including framing, roofing, siding, drywall, painting, and trim carpentry through hands-on instruction in our construction lab, completing a variety of projects. This technical training will be combined with classroom instruction in essential business management and project planning skills, including bookkeeping and accounting, business leadership and entrepreneurship, blueprint reading, estimating, scheduling, and other aspects of construction project management. Students will apply and demonstrate attainment of these skills through completion of a capstone project.

See our website at [www.msucollings.edu/careers](http://www.msucollings.edu/careers) (<http://www.msucollings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Utilize worksite safety practices.
- Select and utilize tools and materials to complete tasks in multiple phases of construction to industry performance standards.
- Use construction project documents to create project planning and management tools.
- Demonstrate effective written and oral communication with multiple project stakeholders.
- Employ project management tools and techniques to achieve successful completion of construction projects. \ \

## Required Courses

| Code                         | Title                           | Credits   |
|------------------------------|---------------------------------|-----------|
| BGEN 105B                    | Introduction to Business        | 3         |
| BGEN 110                     | Applied Business Leadership     | 3         |
| BMGT 222                     | Princ of Project Management     | 3         |
| BMGT 235                     | Management                      | 3         |
| BMGT 281                     | Risk Mgmt, Safety & Security    | 3         |
| CAPP 103                     | Quickbooks Fundamentals         | 2         |
| CAPP 120                     | Introduction to Computers       | 3         |
| COMX 106                     | Comm in a Dynamic Workplace     | 3         |
| CSTN 120                     | Carpentry Bscs & Rough-In Frmg  | 4         |
| CSTN 142                     | Int - Ext Finish Carpentry      | 4         |
| CSTN 148                     | Blueprint Codes and Est.        | 3         |
| CSTN 160                     | Constructn Cncpts & Bldg Lab    | 3         |
| CSTN 161                     | Constructn Cncpts & Bldg Lb II  | 4         |
| CSTN 250                     | Construction Estimating         | 3         |
| CSTN 260                     | Constructn Cncpts & Bldg Lb III | 3         |
| or CSTN 298                  | Internship                      |           |
| CSTN 271                     | Construction Project Mgmt       | 3         |
| CSTN 280                     | Const Proj Schedule & Control   | 3         |
| CSTN 281                     | Construction Project Mgmt II    | 3         |
| CSTN 299                     | Capstone: Construction          | 4         |
| M 114                        | Extended Technical Mathematics  | 3         |
| WRIT 121                     | Intro to Technical Writing      | 3         |
| <b>Total Minimum Credits</b> |                                 | <b>66</b> |

## Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| CAPP 120        | Introduction to Computers      | 3       |
| CAPP 103        | Quickbooks Fundamentals        | 2       |
| CSTN 120        | Carpentry Bscs & Rough-In Frmg | 4       |
| CSTN 148        | Blueprint Codes and Est.       | 3       |
| CSTN 160        | Constructn Cncpts & Bldg Lab   | 3       |
| M 114           | Extended Technical Mathematics | 3       |
| Total           |                                | 18      |
| Second Semester |                                |         |
| COMX 106        | Comm in a Dynamic Workplace    | 3       |
| WRIT 121        | Intro to Technical Writing     | 3       |
| CSTN 142        | Int - Ext Finish Carpentry     | 4       |
| CSTN 250        | Construction Estimating        | 3       |
| BGEN 105B       | Introduction to Business       | 3       |
| Total           |                                | 16      |

| Third Semester          |   |           |
|-------------------------|---|-----------|
| CSTN 271                | Construction Project Mgmt                     | 3         |
| CSTN 161                | Constructn Cncpts & Bldg Lb II                | 4         |
| BMGT 235                | Management                                    | 3         |
| BGEN 110                | Applied Business Leadership                   | 3         |
| BMGT 281                | Risk Mgmt, Safety & Security                  | 3         |
| <b>Total</b>            |   | <b>16</b> |
| Fourth Semester         |   |           |
| CSTN 260<br>or CSTN 298 | Constructn Cncpts & Bldg Lb III<br>Internship | 3         |
| CSTN 280                | Const Proj Schedule & Control                 | 3         |
| CSTN 281                | Construction Project Mgmt II                  | 3         |
| CSTN 299                | Capstone: Construction                        | 4         |
| BMGT 222                | Princ of Project Management                   | 3         |
| <b>Total</b>            |   | <b>16</b> |

## Construction Technology Carpentry Certificate of Applied Science

Through this one-year certificate program in construction technology, students will learn the basics of home construction.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Utilize worksite safety practices.
- Select and utilize tools and materials to complete tasks in multiple phases of construction to industry performance standards.
- Use construction project documents to create project planning and management tools.
- Demonstrate effective written and oral communication with multiple project stakeholders.

### Required Courses

| Code                         | Title  | Credits   |
|------------------------------|--|-----------|
| BGEN 105B                    | Introduction to Business                               | 3         |
| CAPP 103                     | Quickbooks Fundamentals                                | 2         |
| CAPP 120                     | Introduction to Computers                              | 3         |
| COMX 106                     | Comm in a Dynamic Workplace                            | 3         |
| CSTN 120                     | Carpentry Bscs & Rough-In Frmng                        | 4         |
| CSTN 142                     | Int - Ext Finish Carpentry                             | 4         |
| CSTN 148                     | Blueprint Codes and Est.                               | 3         |
| CSTN 160                     | Constructn Cncpts & Bldg Lab                           | 3         |
| CSTN 250                     | Construction Estimating                                | 3         |
| Select one math course:      |  | 3         |
| M 114                        | Extended Technical Mathematics                         |           |
| M 111                        | Technical Mathematics                                  |           |
| M 108                        | Business Mathematics                                   |           |
| WRIT 121<br>or WRIT 104      | Intro to Technical Writing<br>Workplace Communications | 3         |
| <b>Total Minimum Credits</b> |  | <b>34</b> |

### Suggested Plan of Study

| Code                    | Title  | Credits   |
|-------------------------|--|-----------|
| First Semester          |  |           |
| CAPP 120                | Introduction to Computers                              | 3         |
| CAPP 103                | Quickbooks Fundamentals                                | 2         |
| CSTN 120                | Carpentry Bscs & Rough-In Frmng                        | 4         |
| CSTN 148                | Blueprint Codes and Est.                               | 3         |
| CSTN 160                | Constructn Cncpts & Bldg Lab                           | 3         |
| Selected math course    |  | 3         |
| <b>Total</b>            |  | <b>18</b> |
| Second Semester         |  |           |
| COMX 106                | Comm in a Dynamic Workplace                            | 3         |
| WRIT 104<br>or WRIT 121 | Workplace Communications<br>Intro to Technical Writing | 3         |
| CSTN 142                | Int - Ext Finish Carpentry                             | 4         |
| CSTN 250                | Construction Estimating                                | 3         |
| BGEN 105B               | Introduction to Business                               | 3         |
| <b>Total</b>            |  | <b>16</b> |

## Craft Brewing and Fermentation Certificate of Technical Studies

The Craft Brewing and Fermentation certificate program is a 16-credit undergraduate program that provides an overview of biochemistry, microbiology, technology, and business of craft brewing industries (beer, spirits, and wine). The program was developed with input of industry professionals and is aimed at developing a skilled workforce for the burgeoning craft brewing industries in Montana. Courses include lab work, hands-on brewing, industry speakers, and an opportunity to gain experience with a local craft brewing business through an internship or special project.

Since this program is offered on a self-support basis, federal and state financial aid (including tuition waivers) is not available for most participants.

However, you may qualify for a private loan. To find out more about this option, please see The SmartStudent Guide to Financial Aid ([www.finaid.org/loans/privatestudentloans.phtml](http://www.finaid.org/loans/privatestudentloans.phtml)) (<https://catalog.msibillings.eduHTTP://www.finaid.org/loans/privatestudentloans.phtml/>). Current MSUB students seeking degrees offered by the Biological and Physical Sciences Department should consult with the MSUB Office of Financial Aid and their program advisor.

Interested individuals must apply for admission separately for this program. Please contact Extended Campus for more information.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Gain fundamental knowledge and demonstrate understanding of biological and chemical components of fermentation.
- Gain fundamental knowledge and demonstrate understanding of the craft brewing and fermentation business and industry, including the aspects of licensing and compliance.
- Evaluate quality of malt and hops brewing materials.
- Evaluate quality of final fermentation products.
- Develop a comprehensive business plan for a start-up brewery, winery, or distillery.
- Demonstrate the understanding of craft brewing and fermentation processes through a specialized project or internship.

## Required Courses

| Code                         | Title                         | Credits   |
|------------------------------|-------------------------------|-----------|
| BGEN 105B                    | Introduction to Business      | 3         |
| BGEN 299                     | Capst: Brewing & Fermentation | 2         |
| BIOM 208                     | Applied Brewing Microbiology  | 3         |
| BMGT 102                     | Bus Basics Brewing/Distillery | 3         |
| CHMY 170                     | Applied Brewing Chemistry     | 3         |
| PPT 140                      | Brewing Process Technology    | 2         |
| <b>Total Minimum Credits</b> |                               | <b>16</b> |

## Suggested Plan of Study

| Code                                | Title                         | Credits |
|-------------------------------------|-------------------------------|---------|
| Fall Semester                       |                               |         |
| BGEN 105B                           | Introduction to Business      | 3       |
| CHMY 170                            | Applied Brewing Chemistry     | 3       |
| Spring Semester                     |                               |         |
| BMGT 102                            | Bus Basics Brewing/Distillery | 3       |
| BIOM 208                            | Applied Brewing Microbiology  | 3       |
| PPT 140                             | Brewing Process Technology    | 2       |
| Summer Semester (or by arrangement) |                               |         |
| BGEN 299                            | Capst: Brewing & Fermentation | 2       |

## Criminal Justice Associate of Science Program of Study

This program is designed for students who would like to earn an associate degree with a concentration in criminal justice and have the ability to transfer to a baccalaureate criminal justice program. Students complete general education, criminal justice, and elective courses in the plan of study to help prepare for careers in law enforcement, corrections, probation, or private security.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify effective written and oral communication skills and express oneself in a clear and professional manner.
- Summarize the basic knowledge of policing, courts, and corrections of crime and criminal justice.
- Discuss the diverse and multicultural nature of society and identify standards of ethical behavior.
- Demonstrate the ability to critically think and problem solve, and the ability to conceptualize ideas in the professional criminal justice environment.

## Required Courses

| Code   | Title                                    | Credits |
|--|--|---------|
| <b>Required Courses (Includes General Education)</b> |  |         |
| ARTZ 101   | Art Fundamentals                         | 3       |
| BIOB 101   | Discover Biology                         | 3       |
| CJUS 226   | Introduction to Probation <sup>1,2</sup> | 3       |
| CJUS 227   | Introduction to Policing <sup>1,2</sup>  | 3       |
| COMX 111   | Intro to Public Speaking <sup>*</sup>    | 3       |
| COMX 115   | Intro to Interpersonal Comm <sup>*</sup> | 3       |
| ECP 291  | Special Topics                           | 3       |

|           |  |   |
|-----------|--|---|
| HSTA 101  | American History I                       | 3 |
| M 121     | College Algebra                          | 3 |
| PHL 110   | Introduction to Ethics <sup>*</sup>      | 3 |
| PHSX 103  | Our Physical World                       | 3 |
| PHSX 104  | Our Physical World Lab                   | 1 |
| REHA 201  | Intro to Diversity in Counslng           | 3 |
| SOCI 101  | Introduction to Sociology <sup>3,*</sup> | 3 |
| SOCI 201  | Social Problems <sup>3</sup>             | 3 |
| SOCI 221  | Criminal Justice System <sup>3</sup>     | 3 |
| WRIT 101  | College Writing I <sup>*</sup>           | 3 |
| WRIT 121  | Intro to Technical Writing               | 3 |
| Electives |  | 8 |

**Total Minimum Credits 60**

1

Prerequisites are SOCI 101 and SOCI 221

2

Can also be used as a restricted elective for BS in Criminal Justice

3

Also required for BS in Criminal Justice

\*

Required general education course

## Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| WRIT 101        | College Writing I              | 3       |
| HSTA 101        | American History I             | 3       |
| BIOB 101        | Discover Biology               | 3       |
| ARTZ 101        | Art Fundamentals               | 3       |
| M 121           | College Algebra                | 3       |
| Total           |                                | 15      |
| Second Semester |                                |         |
| SOCI 101        | Introduction to Sociology      | 3       |
| PHSX 103        | Our Physical World             | 3       |
| PHSX 104        | Our Physical World Lab         | 1       |
| WRIT 121        | Intro to Technical Writing     | 3       |
| SOCI 201        | Social Problems                | 3       |
| SOCI 221        | Criminal Justice System        | 3       |
| Total           |                                | 16      |
| Third Semester  |                                |         |
| PHL 110         | Introduction to Ethics         | 3       |
| COMX 115        | Intro to Interpersonal Comm    | 3       |
| COMX 111        | Intro to Public Speaking       | 3       |
| CJUS 226        | Introduction to Probation      | 3       |
| CJUS 227        | Introduction to Policing       | 3       |
| Total           |                                | 15      |
| Fourth Semester |                                |         |
| REHA 201        | Intro to Diversity in Counslng | 3       |
| ECP 291         | Special Topics                 | 3       |
| Electives       |                                | 8       |
| Total           |                                | 14      |

# Cybersecurity/Network Support Associate of Applied Science

This is a fall start program. Please see an advisor for more information.

A Cybersecurity/Network Support specialist provides technical solutions to customer-critical problems related to software applications and associated hardware.

This is accomplished through problem analysis using online training, phone service support, and a variety of electronic means to achieve high-level customer satisfaction and to accomplish the goals of the organization. Students who are successful in the program will be prepared to take industry exams such as A+, Net+, MCP, and MCDST. Students who graduate with this degree can work as support specialists in business, industry, education, and government. See our website at [www.msbillings.edu/](http://www.msbillings.edu/) careers (<http://www.msbillings.edu/careers/>) for graduate data.

Before a student can be accepted into the Cybersecurity/Network Support program, competency in mathematics and computers must be demonstrated. This may be done by:

- transferring of appropriate credits
- completing the computer literacy challenge test
- obtaining permission of CST faculty
- taking prerequisite course (CAPP 120)
- possessing current ACT/SAT scores in the required range
- taking the necessary prerequisite English, math and/or computer classes identified in the catalog

Check with an academic advisor to determine how you can meet these requirements. Students should check the course descriptions for required prerequisites.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Create and present a helpdesk environment from conception to development.
- Troubleshoot and repair computer hardware.
- Set up operating systems and troubleshoot software.
- Set up and document small and home networks using troubleshooting skills.
- Use business-oriented computer software programs such as Microsoft Word, Excel, Access and PowerPoint.
- Use appropriate tools to administer and troubleshoot computers.

## Required Courses

| Code     | Title                          | Credits |
|----------|--------------------------------|---------|
| CAPP 110 | Short Courses: MS Outlook      | 1       |
| CAPP 154 | MS Word                        | 3       |
| CAPP 156 | MS Excel                       | 3       |
| CAPP 158 | MS Access                      | 3       |
| COMX 106 | Comm in a Dynamic Workplace    | 3       |
| COMX 111 | Intro to Public Speaking       | 3       |
| CSCI 100 | Intro to Programming           | 3       |
| CSCI 181 | Web Design & Programming       | 3       |
| ITS 166  | Configuring MS Windows 10      | 3       |
| ITS 212  | Network Operating Sys-Server A | 3       |
| ITS 224  | Introduction to Linux          | 3       |
| ITS 246  | Cybersecurity Operations       | 3       |
| ITS 256  | CCNA Security                  | 3       |
| ITS 257  | Intro to Comp Virtualization   | 3       |

|                              |   |           |
|------------------------------|---|-----------|
| ITS 274                      | Adv Hrdwr/Sftwr Trbl & Spprt              | 3         |
| ITS 280                      | Computer Repair & Maintenance             | 3         |
| ITS 283                      | Health Information Networking             | 3         |
| M 114                        | Extended Technical Mathematics            | 3         |
| NTS 104                      | CCNA 1: Intro to Networks                 | 4         |
| NTS 105                      | CCNA 2: Routing & Switching Es            | 4         |
| NTS 204                      | CCNA 3: Scaling Networks                  | 3         |
| WRIT 121                     | Intro to Technical Writing                | 3         |
| CST 298                      | Internship/Cooperative Educ (or Elective) | 3         |
| <b>Total Minimum Credits</b> |   | <b>69</b> |

Students should check course descriptions for required prerequisites. Math and communication requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

| Code                   | Title                          | Credits |
|------------------------|--------------------------------|---------|
| <i>First Semester</i>  |                                |         |
| CAPP 154               | MS Word                        | 3       |
| COMX 106               | Comm in a Dynamic Workplace    | 3       |
| CSCI 100               | Intro to Programming           | 3       |
| ITS 166                | Configuring MS Windows 10      | 3       |
| ITS 280                | Computer Repair & Maintenance  | 3       |
| M 114                  | Extended Technical Mathematics | 3       |
| Total                  |                                | 18      |
| <i>Second Semester</i> |                                |         |
| CAPP 156               | MS Excel                       | 3       |
| CSCI 181               | Web Design & Programming       | 3       |
| ITS 212                | Network Operating Sys-Server A | 3       |
| NTS 104                | CCNA 1: Intro to Networks      | 4       |
| WRIT 121               | Intro to Technical Writing     | 3       |
| Total                  |                                | 16      |
| <i>Third Semester</i>  |                                |         |
| CAPP 110               | Short Courses: MS Outlook      | 1       |
| CAPP 158               | MS Access                      | 3       |
| ITS 224                | Introduction to Linux          | 3       |
| ITS 256                | CCNA Security                  | 3       |
| ITS 257                | Intro to Comp Virtualization   | 3       |
| NTS 105                | CCNA 2: Routing & Switching Es | 4       |
| Total                  |                                | 17      |
| <i>Fourth Semester</i> |                                |         |
| COMX 111               | Intro to Public Speaking       | 3       |
| ITS 246                | Cybersecurity Operations       | 3       |
| ITS 274                | Adv Hrdwr/Sftwr Trbl & Spprt   | 3       |
| ITS 283                | Health Information Networking  | 3       |
| NTS 204                | CCNA 3: Scaling Networks       | 3       |
| Elective/Internship    |                                | 3       |
| Total                  |                                | 18      |

## Cybersecurity/Network Technology Associate of Science Program of Study

This program is the combination of technical networking technology courses and General Education requirements for an Associate of Science degree. This will allow students with previous General Education credits, or who have strong experience, to gain a more diversified degree. The mixture of the courses gives students the ability to transition smoothly into a four-year degree, or to enter employment with a well-rounded degree. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data.

Students should consult with an academic advisor before registering for General Education courses.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Troubleshoot and repair computer hardware.
- Set up operating systems and troubleshoot software.
- Set up and document LAN networks using troubleshooting skills.
- Set up and document WAN networks using troubleshooting skills.
- Set up and document secure networks.

### Required Courses

| Code   | Title                          | Credits   |
|--|--------------------------------|-----------|
| General Education Requirements (p. 47)   |                                | 31        |
| Students should consult with an academic advisor before registering for General Education courses. |                                |           |
| <b>Required Technical Courses</b>  |                                |           |
| CAPP 156   | MS Excel                       | 3         |
| CSCI 100   | Intro to Programming           | 3         |
| ITS 166  | Configuring MS Windows 10      | 3         |
| ITS 212  | Network Operating Sys-Server A | 3         |
| ITS 246  | Cybersecurity Operations       | 3         |
| ITS 256  | CCNA Security                  | 3         |
| NTS 104  | CCNA 1: Intro to Networks      | 4         |
| NTS 105  | CCNA 2: Routing & Switching Es | 4         |
| NTS 204  | CCNA 3: Scaling Networks       | 3         |
| Subtotal   |                                | 29        |
| <b>Total Minimum Credits</b>   |                                | <b>60</b> |

### Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| CAPP 156        | MS Excel                       | 3       |
| CSCI 100        | Intro to Programming           | 3       |
| ITS 166         | Configuring MS Windows 10      | 3       |
| Gen Ed Courses  |                                | 7       |
| Total           |                                | 16      |
| Second Semester |                                |         |
| ITS 212         | Network Operating Sys-Server A | 3       |
| NTS 104         | CCNA 1: Intro to Networks      | 4       |
| Gen Ed Courses  |                                | 9       |

|                 |                                |    |
|-----------------|--------------------------------|----|
| Total           |                                | 16 |
| Third Semester  |                                |    |
| ITS 256         | CCNA Security                  | 3  |
| NTS 105         | CCNA 2: Routing & Switching Es | 4  |
| Gen Ed Courses  |                                | 9  |
| Total           |                                | 16 |
| Fourth Semester |                                |    |
| ITS 246         | Cybersecurity Operations       | 3  |
| NTS 204         | CCNA 3: Scaling Networks       | 3  |
| Gen Ed Courses  |                                | 6  |
| Total           |                                | 12 |

## Diesel Technology Associate of Applied Science Degree

The advent of computer-controlled machines in industry provides the City College at MSU Billings Diesel program with the challenge and opportunity to instruct students in the latest technologies available. Cooperation from industry has given this training program the advantage of having new and/or used equipment to study, adjust settings, scan readings and repair.

The program is certified in both ASE and NATEF. Current diesel employers include major truck, tractor, and auto dealerships; specialty shops; and independent garages.

Diesel Technology graduates are in demand by heavy-duty construction, mining, logging, and agricultural businesses. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data. Articulation agreements with MSU-Northern, MSU Billings, and the Billings Career Center provide additional education for qualifying students.

Associate of Applied Science degrees are awarded to students who successfully pass the required courses.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Inspect, diagnose, and repair diesel engines
- Inspect, diagnose, and repair heavy duty drive train
- Inspect, diagnose, and repair heavy duty brakes
- Inspect, diagnose, and repair heavy duty suspension and steering
- Inspect, diagnose, and repair electrical and electronic systems
- Inspect, diagnose, and repair heating, ventilation and air conditioning systems
- Perform basic preventive vehicle maintenance
- Inspect, diagnose, and repair hydraulic/hydrostatic/pneumatic systems
- Demonstrate appropriate work place communication skills
- Maintain a safe working environment

### Required Courses

| Code     | Title                        | Credits |
|----------|------------------------------|---------|
| CAPP 120 | Introduction to Computers    | 3       |
| COMX 106 | Comm in a Dynamic Workplace  | 3       |
| DST 101  | Power Trains                 | 2       |
| DST 117  | Intro to Diesel Fuel Systems | 4       |
| DST 132  | Diesel Engine Overhaul       | 6       |
| DST 140  | Intro to Hydraulics          | 2       |
| DST 141  | Intro to Hydraulics Lab      | 2       |
| DST 155  | Adv Hydraulics & Pneumatics  | 4       |



|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| DST 202                      | Advanced Power Trains          | 2         |
| DST 250                      | Heavy Duty Chassis             | 6         |
| DST 256                      | Applied Diesel Service Oper I  | 2         |
| or DST 298                   | Internship/Cooperative Educ    |           |
| DST 257                      | Applied Diesel Service Oper II | 2         |
| or DST 298                   | Internship/Cooperative Educ    |           |
| DST 260                      | Diesel Eng Diag & Troubleshoot | 5         |
| DST 277                      | Adv Fuel Systems & Diesel Eng  | 6         |
| M 114                        | Extended Technical Mathematics | 3         |
| TRID 150                     | Environ/Shop Practices         | 2         |
| TRID 151                     | Welding                        | 2         |
| TRID 152                     | Vehicle Htg, Vent & AC         | 3         |
| TRID 170                     | Engine Theory                  | 4         |
| TRID 181                     | Transport Elect Systems Lec    | 2         |
| TRID 182                     | Transport Elect Systems Lab    | 2         |
| WRIT 122                     | Intro to Business Writing      | 3         |
| or WRIT 121                  | Intro to Technical Writing     |           |
| <b>Total Minimum Credits</b> |                                | <b>70</b> |

Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

| Code            | Title                          | Credits   |
|-----------------|--------------------------------|-----------|
| First Semester  |                                |           |
| COMX 106        | Comm in a Dynamic Workplace    | 3         |
| DST 140         | Intro to Hydraulics            | 2         |
| DST 141         | Intro to Hydraulics Lab        | 2         |
| TRID 150        | Environ/Shop Practices         | 2         |
| TRID 170        | Engine Theory                  | 4         |
| TRID 181        | Transport Elect Systems Lec    | 2         |
| TRID 182        | Transport Elect Systems Lab    | 2         |
| <b>Total</b>    |                                | <b>17</b> |
| Second Semester |                                |           |
| DST 117         | Intro to Diesel Fuel Systems   | 4         |
| DST 250         | Heavy Duty Chassis             | 6         |
| DST 101         | Power Trains                   | 2         |
| WRIT 121        | Intro to Technical Writing     | 3         |
| or WRIT 122     | Intro to Business Writing      |           |
| M 114           | Extended Technical Mathematics | 3         |
| <b>Total</b>    |                                | <b>18</b> |
| Third Semester  |                                |           |
| CAPP 120        | Introduction to Computers      | 3         |
| DST 202         | Advanced Power Trains          | 2         |
| DST 132         | Diesel Engine Overhaul         | 6         |
| DST 260         | Diesel Eng Diag & Troubleshoot | 5         |
| DST 256         | Applied Diesel Service Oper I  | 2         |
| or DST 298      | Internship/Cooperative Educ    |           |
| <b>Total</b>    |                                | <b>18</b> |
| Fourth Semester |                                |           |
| DST 257         | Applied Diesel Service Oper II | 2         |
| or DST 298      | Internship/Cooperative Educ    |           |

|              |                               |           |
|--------------|-------------------------------|-----------|
| DST 277      | Adv Fuel Systems & Diesel Eng | 6         |
| DST 155      | Adv Hydraulics & Pneumatics   | 4         |
| TRID 151     | Welding                       | 2         |
| TRID 152     | Vehicle Htg, Vent & AC        | 3         |
| <b>Total</b> |                               | <b>17</b> |

## Diesel Technology Certificate of Applied Science

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Inspect, diagnose, and repair mobile hydraulic systems
- Inspect, diagnose, and repair diesel fuel systems
- Inspect, diagnose, and repair diesel engines
- Inspect, diagnose, and repair heavy duty power trains
- Inspect, diagnose, and repair heavy duty chassis systems

## Required Courses

| Code                         | Title                        | Credits   |
|------------------------------|------------------------------|-----------|
| COMX 106                     | Comm in a Dynamic Workplace  | 3         |
| DST 101                      | Power Trains                 | 2         |
| DST 117                      | Intro to Diesel Fuel Systems | 4         |
| DST 140                      | Intro to Hydraulics          | 2         |
| DST 141                      | Intro to Hydraulics Lab      | 2         |
| DST 250                      | Heavy Duty Chassis           | 6         |
| M 111                        | Technical Mathematics        | 3         |
| TRID 150                     | Environ/Shop Practices       | 2         |
| TRID 170                     | Engine Theory                | 4         |
| TRID 181                     | Transport Elect Systems Lec  | 2         |
| TRID 182                     | Transport Elect Systems Lab  | 2         |
| WRIT 104                     | Workplace Communications     | 3         |
| <b>Total Minimum Credits</b> |                              | <b>35</b> |

Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

| Code            | Title                        | Credits   |
|-----------------|------------------------------|-----------|
| First Semester  |                              |           |
| DST 140         | Intro to Hydraulics          | 2         |
| DST 141         | Intro to Hydraulics Lab      | 2         |
| COMX 106        | Comm in a Dynamic Workplace  | 3         |
| TRID 150        | Environ/Shop Practices       | 2         |
| TRID 170        | Engine Theory                | 4         |
| TRID 181        | Transport Elect Systems Lec  | 2         |
| TRID 182        | Transport Elect Systems Lab  | 2         |
| <b>Total</b>    |                              | <b>17</b> |
| Second Semester |                              |           |
| DST 117         | Intro to Diesel Fuel Systems | 4         |
| DST 250         | Heavy Duty Chassis           | 6         |
| DST 101         | Power Trains                 | 2         |



|          |                          |    |
|----------|--------------------------|----|
| M 111    | Technical Mathematics    | 3  |
| WRIT 104 | Workplace Communications | 3  |
| Total    |                          | 18 |

## Energy Technician Certificate of Applied Science \*Program placed on moratorium\*

The Energy Technician CAS will provide completers the entry-level skill needed to gain enrollment as an apprentice electrician in the residential wiremen track. According to Bureau of Labor Statistics, employment of electricians is projected to grow 20% from 2012 to 2022, faster than the average for all occupations. The total number of electrician jobs that will be added over the next 10 years is 114,700.

Apprentice electricians are responsible for assisting journeyman electricians with installing and maintaining electrical and power systems in homes and businesses. They work at construction sites, factories, businesses, and residences. Energy Technician CAS students are introduced to and taught the skills required to be an apprentice electrician. The Energy Technician program admits new cohorts in the fall of odd numbered years. Some courses are offered only every other year.

**Please note:** Students must test into M 114 or WRIT 121 through the COMPASS placement test or take the appropriate prerequisite course work in order to start this program.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Install wiring systems.
- Upgrade existing wiring.
- Use State and National Electrical Codes during installation and inspection.
- Repair electrical equipment.
- Trace out short circuits in wiring using test meter.
- Read and interpret blueprints.
- Examine diagrams of circuits, outlets, load centers, and panel boards.
- Determine where wires and components will be situated.
- Install and connect wires to circuit breakers, outlets, and transformers.
- Use tools such as conduit benders, screwdrivers, pliers, knives, hacksaws, and wire strippers.
- Install circuit breakers, fuses, switches, electrical and electronic components, or wire.
- Calculate Service Entrance requirements and install Load Centers.
- Calculate lighting loads and branch circuit requirements.
- Calculate special purpose branch circuits requirements for appliances.
- Install new lighting and ceiling fans.
- Study motors, transformers, generators, and electronic controllers.
- Bend offsets, kicks, saddles, segmented and parallel bends.

## Required Courses

| Code     | Title                          | Credits |
|----------|--------------------------------|---------|
| CAPP 120 | Introduction to Computers      | 3       |
| COMX 106 | Comm in a Dynamic Workplace    | 3       |
| ETEC 103 | AC/DC Electronics II           | 3       |
| ETEC 192 | Fund Electrical Technicians I  | 3       |
| ETEC 193 | Fund Electrical Technicians II | 3       |
| ETEC 284 | Digital Electronics            | 4       |

|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| M 114                        | Extended Technical Mathematics | 3         |
| TRID 150                     | Environ/Shop Practices         | 2         |
| or PPT 151                   | Process Plant Safety I         |           |
| TRID 185                     | Intro Industrial Power Systems | 2         |
| TRID 186                     | Intro Indstrl Pwr Systms Lab   | 1         |
| WRIT 121                     | Intro to Technical Writing     | 3         |
| <b>Total Minimum Credits</b> |                                | <b>30</b> |

## Suggested Plan of Study

| Code              | Title                          | Credits |
|-------------------|--------------------------------|---------|
| Semester 1 Fall   |                                |         |
| CAPP 120          | Introduction to Computers      | 3       |
| COMX 106          | Comm in a Dynamic Workplace    | 3       |
| ETEC 192          | Fund Electrical Technicians I  | 3       |
| TRID 150          | Environ/Shop Practices         | 2       |
| TRID 185          | Intro Industrial Power Systems | 2       |
| TRID 186          | Intro Indstrl Pwr Systms Lab   | 1       |
| Total             |                                | 14      |
| Semester 2 Spring |                                |         |
| ETEC 103          | AC/DC Electronics II           | 3       |
| ETEC 193          | Fund Electrical Technicians II | 3       |
| ETEC 284          | Digital Electronics            | 4       |
| M 114             | Extended Technical Mathematics | 3       |
| WRIT 121          | Intro to Technical Writing     | 3       |
| Total             |                                | 16      |

## Fire Science Associate of Science Program of Study

### Program Statement

The mission of the Fire Science program is to provide safe, progressive, and standards-based firefighting education and training to future and current fire and emergency services personnel.

The Fire Science program values diversity, including diversity of thought, understanding that populations are best served when fire and emergency services organizations reflect the diversity of the community.

The Fire Science program is concerned with developing leadership and followership skill and ability, providing students with principles to lead positive change in fire and emergency services.

Nationally, fire and emergency service organizations are facing unprecedented challenges. As such, Fire Science students will be encouraged to think critically and creatively about solving problems. Students will be challenged to think from divergent and contrarian perspectives.

Healthy fire and emergency services personnel are essential to community safety. A strong emphasis on firefighter resilience and community resilience are benchmarks of the Fire Science program.

Ultimately, students in the Fire Science program will gain a broad educational background in fire and emergency services, preparing them for several points of entry in the fire and emergency services fields. Current fire and emergency services personnel will enhance their knowledge, skill, and ability and will be prepared for promotional opportunities and leading crews safely.

## Student Expectations

- Honest with themselves, their team, and the public
- Compassionate and kind in caring for those they serve
- Mentally, emotionally, and physically healthy and balanced
- Strong team players who enjoying working as members of a crew
- Hands-on doers who are comfortable and happy being outdoors
- Stress tolerant and able to work in dangerous and changing situations
- Willing to risk their lives, in a highly calculated manner, to save “savable” lives

See our website at [www.msubillings.edu/citycollege/programs/ProgFireScience.htm](http://www.msubillings.edu/citycollege/programs/ProgFireScience.htm) (<http://www.msubillings.edu/citycollege/programs/ProgFireScience.htm>)

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate safe, standards-based, entry-level firefighting skills.
- Demonstrate leadership and influence to promote the mission of fire and emergency services and lead change in the fire service.
- Create a personal firefighter resilience portfolio for fire and emergency services work.
- Demonstrate application of National Incident Management System (NIMS) and Blue Card Incident Command to various emergency incidents.
- Analyze modern, research-based fire behavior studies in structural firefighting operations.
- Apply principles of firefighter safety, air management and crew-resource management to fire and emergency services.
- Apply risk assessment techniques to hazardous materials incidents and safely control, contain, and confine hazardous materials while wearing chemical protective equipment.
- Apply human factors principles and National standards to Wildland firefighting incidents.
- Develop a proactive and mission-based fire prevention, inspection, and public education mindset.
- Apply instructional technique and learning theory to training environments in fire and emergency services.

## Required Courses

| Code   | Title                          | Credits   |
|--|--------------------------------|-----------|
| General Education Requirements (p. 47)   |                                | 31        |
| Students should consult with an academic advisor before registering for General Education courses. |                                |           |
| <b>Required Technical Courses</b>  |                                |           |
| FIRE 106   | Wildland Firefighting          | 3         |
| FIRE 115   | Firefighter I Foundations      | 3         |
| FIRE 119   | Fire Service Ethics            | 2         |
| FIRE 130   | Firefighter Ldrshp & Influence | 3         |
| FIRE 131   | Fire Apparatus and Hydraulics  | 3         |
| FIRE 180   | Incident Command               | 3         |
| FIRE 201   | Firefighter Resilience         | 3         |
| FIRE 270   | Fire Prevention                | 3         |
| FIRE 275   | Fire Service Instructor        | 3         |
| TRID 160   | Hazrdz Mtrl Tech Gen Trng      | 3         |
| Subtotal   |                                | 29        |
| <b>Total Minimum Credits</b>   |                                | <b>60</b> |

*It is highly recommended that all students take Emergency Medical Technician (EMT) training before graduation.*

## Suggested Plan of Study

| Code                   | Title                          | Credits |
|------------------------|--------------------------------|---------|
| <b>First Semester</b>  |                                |         |
| FIRE 115               | Firefighter I Foundations      | 3       |
| FIRE 130               | Firefighter Ldrshp & Influence | 3       |
| Gen Ed Courses         |                                | 9       |
| Total                  |                                | 15      |
| <b>Second Semester</b> |                                |         |
| FIRE 275               | Fire Service Instructor        | 3       |
| FIRE 106               | Wildland Firefighting          | 3       |
| FIRE 119               | Fire Service Ethics            | 2       |
| Gen Ed Courses         |                                | 7       |
| Total                  |                                | 15      |
| <b>Third Semester</b>  |                                |         |
| FIRE 131               | Fire Apparatus and Hydraulics  | 3       |
| FIRE 270               | Fire Prevention                | 3       |
| Gen Ed Courses         |                                | 9       |
| Total                  |                                | 15      |
| <b>Fourth Semester</b> |                                |         |
| FIRE 201               | Firefighter Resilience         | 3       |
| FIRE 180               | Incident Command               | 3       |
| TRID 160               | Hazrdz Mtrl Tech Gen Trng      | 3       |
| Gen Ed Courses         |                                | 6       |
| Total                  |                                | 15      |

## General Business Associate of Applied Science Degree

### Offered Online

The AAS in General Business establishes a successful foundation of core business concepts while allowing students to explore a wide variety of business topics. Coursework is designed to enhance business skills and student employability in the work place. This program equips future and current business owners with the practical skills and hands-on ability to start, and run, a small business.

See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and demonstrate the understanding of management concepts and principles, including the four functions of management.
- Identify and negotiate the sales process and deliver exceptional customer service.
- Identify and demonstrate the important role of business leadership and business ethics.
- Write a business plan.
- Write a marketing plan.
- Show detailed computer literacy and ability

## Required Courses

| Code                                      | Title                           | Credits   |
|---|---------------------------------|-----------|
| ACTG 101                                  | Accounting Procedures I         | 3         |
| ACTG 102                                  | Accounting Procedures II        | 3         |
| BGEN 105B                                 | Introduction to Business        | 3         |
| BGEN 110                                  | Applied Business Leadership     | 3         |
| BGEN 220                                  | Bus Ethics & Soc Responsibility | 3         |
| BGEN 235                                  | Business Law                    | 3         |
| BGEN 280                                  | Business Planning               | 3         |
| BMGT 210                                  | Small Business Entrepreneurship | 3         |
| BMGT 230                                  | Business Logistics              | 3         |
| BMGT 235                                  | Management                      | 3         |
| BMGT 237                                  | Human Relations in Business     | 3         |
| BMGT 245                                  | Customer Service Management     | 3         |
| BMGT 282                                  | Organizational Training & Dev   | 3         |
| BMKT 112                                  | Applied Sales                   | 3         |
| BMKT 225                                  | Marketing                       | 3         |
| CAPP 120                                  | Introduction to Computers       | 3         |
| CAPP 156                                  | MS Excel                        | 3         |
| CAPP 158                                  | MS Access                       | 3         |
| COMX 106                                  | Comm in a Dynamic Workplace     | 3         |
| Select one of the following: <sup>1</sup> |                                 | 3-4       |
| M 121                                     | College Algebra                 |           |
| M 143                                     | Finite Mathematics              |           |
| M 105                                     | Contemporary Mathematics        |           |
| WRIT 122                                  | Intro to Business Writing       | 3         |
| <b>Restricted Elective</b>                |                                 |           |
| Select one of the following:              |                                 | 3         |
| BGEN 294                                  | Seminar/Workshop                |           |
| BMGT 222                                  | Princ of Project Management     |           |
| ECNS 201                                  | Principles of Microeconomics    |           |
| WRIT 220                                  | Business & Prof Writing         |           |
| <b>Total Minimum Credits</b>              |                                 | <b>66</b> |

1

Students should check with their academic advisor to determine the specific math course that is appropriate for their plan of study.

Students should check course descriptions for required prerequisites. Math and communication requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

| Code              | Title                       | Credits |
|-------------------|-----------------------------|---------|
| <b>First Year</b> |                             |         |
| CAPP 120          | Introduction to Computers   | 3       |
| CAPP 156          | MS Excel                    | 3       |
| ACTG 101          | Accounting Procedures I     | 3       |
| ACTG 102          | Accounting Procedures II    | 3       |
| BGEN 105B         | Introduction to Business    | 3       |
| BGEN 110          | Applied Business Leadership | 3       |
| BGEN 235          | Business Law                | 3       |
| BMKT 225          | Marketing                   | 3       |

|                      |                                 |   |
|----------------------|---------------------------------|---|
| COMX 106             | Comm in a Dynamic Workplace     | 3 |
| WRIT 122             | Intro to Business Writing       | 3 |
| College Math         |                                 | 3 |
| <b>Second Year</b>   |                                 |   |
| CAPP 158             | MS Access                       | 3 |
| BGEN 280             | Business Planning               | 3 |
| BGEN 220             | Bus Ethics & Soc Responsibility | 3 |
| BMGT 210             | Small Business Entrepreneurship | 3 |
| BMGT 230             | Business Logistics              | 3 |
| BMGT 235             | Management                      | 3 |
| BMGT 237             | Human Relations in Business     | 3 |
| BMGT 245             | Customer Service Management     | 3 |
| BMGT 282             | Organizational Training & Dev   | 3 |
| BMKT 112             | Applied Sales                   | 3 |
| Restrictive Elective |                                 | 3 |

## Human Resource Management Certificate of Applied Science

 Offered Online

This option is available for individuals who are in the workforce or seeking quick training in basic human resources. All graduating students will be prepared for employment opportunities in human resource management. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and define the major federal, state, and local employment laws, regulations, and penalties for non-compliance.
- Design and develop recruitment and selection procedures.
- Identify and define major risk management, safety, and security laws, regulations, and penalties for non-compliance.
- Design a custom training program.
- Demonstrate effective business teamwork skills and communication skills.

## Required Courses

| Code  | Title                        | Credits |
|---|------------------------------|---------|
| <b>General Education</b>  |                              |         |
| WRIT 122  | Intro to Business Writing    | 3       |
| COMX 106  | Comm in a Dynamic Workplace  | 3       |
| M 121   | College Algebra              | 3       |
| Subtotal  |                              | 9       |
| Students should consult with an academic advisor before registering for General Education courses in order to maximize the number of elective credits allowed in the degree. A list of General Education courses is available in the General Bulletin and City College at MSU Billings catalog. |                              |         |
| <b>Required Courses</b>   |                              |         |
| ACTG 101  | Accounting Procedures I      | 3       |
| ACTG 180  | Payroll Accounting           | 3       |
| BMGT 180  | Employment Law and Practices | 3       |
| BMGT 250  | Employment & Comp Strategies | 3       |
| BMGT 281  | Risk Mgmt, Safety & Security | 3       |

|                              |                               |           |
|------------------------------|-------------------------------|-----------|
| BMGT 282                     | Organizational Training & Dev | 3         |
| CAPP 120                     | Introduction to Computers     | 3         |
| BGEN 294                     | Seminar/Workshop <sup>1</sup> | 2-3       |
| or BMGT 298                  | Internship/Cooperative Educ   |           |
| Subtotal                     |                               | 23-24     |
| <b>Total Minimum Credits</b> |                               | <b>32</b> |

1

Students are required to complete two credits, but may earn up to three.

## Suggested Plan of Study

| Code            | Title                         | Credits |
|-----------------|-------------------------------|---------|
| First Semester  |                               |         |
| ACTG 101        | Accounting Procedures I       | 3       |
| CAPP 120        | Introduction to Computers     | 3       |
| BMGT 180        | Employment Law and Practices  | 3       |
| BMGT 282        | Organizational Training & Dev | 3       |
| Gen Ed Courses  |                               | 3       |
| Total           |                               | 15      |
| Second Semester |                               |         |
| ACTG 180        | Payroll Accounting            | 3       |
| BMGT 250        | Employment & Comp Strategies  | 3       |
| BMGT 281        | Risk Mgmt, Safety & Security  | 3       |
| BGEN 294        | Seminar/Workshop              | 2       |
| or BMGT 298     | Internship/Cooperative Educ   |         |
| Gen Ed Courses  |                               | 6       |
| Total           |                               | 17      |

## Human Resources Associate of Science Program of Study

### Offered Online

Graduates of the AS in Human Resources will have a foundation of human resources management with an overview of laws, regulations, and course decision that determine the legal framework of Equal Employment Opportunity (EEO). This program is articulated with the Bachelor of Science in Business Administration degree through the MSU Billings College of Business. Students will be prepared to further their education or to secure an entry level position in human resource management. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

Students should consult with an academic advisor before registering for General Education courses in order to maximize the number of elective credits allowed in the degree.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and define the major federal, state local employment laws as well as the penalties for non-compliance (tests, projects).
- Design and develop recruitment process and selection procedures (tests, project).
- Identify and define the major risk management, safety and security laws as well as the penalties for non-compliance (tests, projects).

- Design a training program utilizing the ADDIE Model (project).
- Evaluate standards of professional performance in the workplace.

## Required Courses

| Code                                   | Title | Credits   |
|--|-------|-----------|
| General Education Requirements (p. 47) |       | <b>31</b> |

The following General Education courses are required. Students should select General Education courses in consultation with their advisors.

### Mathematics

|          |                          |
|----------|--------------------------|
| M 143    | Finite Mathematics       |
| or M 121 | College Algebra          |
| or M 105 | Contemporary Mathematics |

### English

|          |                   |
|----------|-------------------|
| WRIT 101 | College Writing I |
|----------|-------------------|

### Communication & Information Literacy

|             |                                |
|-------------|--------------------------------|
| BMIS 150    | Cyber Security & Electronic Co |
| or COMX 115 | Intro to Interpersonal Comm    |
| or LSCI 125 | Research in the Info Age       |

### Natural Sciences

Select from list (p. 47)

### Social Sciences

|          |                              |
|----------|------------------------------|
| ECNS 201 | Principles of Microeconomics |
|----------|------------------------------|

### History

Select from list (p. 47)

### Cultural Diversity

Select from list (p. 47)

### Fine Arts

Select from list (p. 47)

### Humanities

Select from list (p. 47)

### Technical Courses

|             |                               |    |
|-------------|-------------------------------|----|
| ACTG 180    | Payroll Accounting            | 3  |
| ACTG 201    | Principles of Fin Acct        | 3  |
| BMGT 180    | Employment Law and Practices  | 3  |
| BMGT 250    | Employment & Comp Strategies  | 3  |
| BMGT 281    | Risk Mgmt, Safety & Security  | 3  |
| BMGT 282    | Organizational Training & Dev | 3  |
| CAPP 120    | Introduction to Computers     | 3  |
| or CAPP 156 | MS Excel                      |    |
| or BGEN 240 | Intro Business Data Analysis  |    |
| BGEN 294    | Seminar/Workshop <sup>1</sup> | 2  |
| or BMGT 298 | Internship/Cooperative Educ   |    |
| or BGEN 498 | Internship/Cooperative Educ   |    |
| Subtotal    |                               | 23 |

**Restricted Electives** **6**

Select Restricted Electives in consultation with an advisor.

|          |                                |
|----------|--------------------------------|
| AHMS 144 | Medical Terminology            |
| BGEN 220 | Bus Ethics & Soc Respnsibility |
| BMGT 235 | Management                     |
| BMKT 225 | Marketing                      |
| BMKT 325 | Principles of Marketing        |
| COMX 300 | Exploring Comm Studies         |

|                              |                              |           |
|------------------------------|------------------------------|-----------|
| COMX 320                     | Prin of Organizational Comm  |           |
| ECNS 202                     | Principles of Macroeconomics |           |
| HTH 270                      | Global Health Issues         |           |
| STAT 216                     | Introduction to Statistics   |           |
| WRIT 220                     | Business & Prof Writing      |           |
| WRIT 321                     | Advanced Technical Writing   |           |
| <b>Total Minimum Credits</b> |                              | <b>60</b> |

1

Students are required to complete two credits, but may earn up to three.

## Suggested Plan of Study

| Code                | Title                         | Credits |
|---------------------|-------------------------------|---------|
| First Semester      |                               |         |
| ACTG 201            | Principles of Fin Acct        | 3       |
| CAPP 120            | Introduction to Computers     | 3       |
| BMGT 180            | Employment Law and Practices  | 3       |
| Gen Ed Courses      |                               | 6       |
| Total               |                               | 15      |
| Second Semester     |                               |         |
| ACTG 180            | Payroll Accounting            | 3       |
| BMGT 250            | Employment & Comp Strategies  | 3       |
| Gen Ed Courses      |                               | 9       |
| Total               |                               | 15      |
| Third Semester      |                               |         |
| BMGT 281            | Risk Mgmt, Safety & Security  | 3       |
| Gen Ed Courses      |                               | 9       |
| Restricted Elective |                               | 3       |
| Total               |                               | 15      |
| Fourth Semester     |                               |         |
| BGEN 294            | Seminar/Workshop              | 3       |
| or BMGT 298         | Internship/Cooperative Educ   |         |
| or BGEN 498         | Internship/Cooperative Educ   |         |
| BMGT 282            | Organizational Training & Dev | 3       |
| Restricted Elective |                               | 3       |
| Gen Ed Courses      |                               | 6       |
| Total               |                               | 15      |

## Human Resources General Applied Emphasis Associate of Science Program of Study \*Program placed on moratorium\*

 Offered Online

The Human Resource curriculum is broad-based and designed to meet the demands of business and service organizations. Graduates of this program will have a foundation in human resource management, an overview of various laws, regulations and court decisions that determine the legal framework of EEO and a sound base for lifelong learning. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and define the major federal, state local employment laws as well as the penalties for non-compliance (tests, projects).
- Design and develop recruitment process and selection procedures (tests, project).
- Identify and define the major risk management, safety and security laws as well as the penalties for non-compliance (tests, projects).
- Design a training program utilizing the ADDIE Model (project).
- Evaluate standards of professional performance in the workplace.

## Required Courses

| Code   | Title                         | Credits   |
|--|-------------------------------|-----------|
| General Education Requirements (p. 47) <sup>1</sup>        |                               | <b>31</b> |
| <b>Required Technical Courses</b>                          |                               |           |
| ACTG 101   | Accounting Procedures I       | 3         |
| ACTG 180   | Payroll Accounting            | 3         |
| BMGT 180   | Employment Law and Practices  | 3         |
| BMGT 250   | Employment & Comp Strategies  | 3         |
| BMGT 281   | Risk Mgmt, Safety & Security  | 3         |
| BMGT 282   | Organizational Training & Dev | 3         |
| CAPP 120   | Introduction to Computers     | 3         |
| BGEN 294   | Seminar/Workshop <sup>2</sup> | 2-3       |
| or BMGT 298  | Internship/Cooperative Educ   |           |
| Subtotal   |                               | 23-24     |
| <b>Restricted electives selected with advisor approval</b> |                               | <b>6</b>  |
| Total Minimum Credits                                      |                               | <b>60</b> |

1

The following General Education courses are required: WRIT 101 OR WRIT 220 in Category I subcategory B; COMX 111 OR BMIS 150 in Category I subcategory C; and ECNS 201 OR ECNS 202 in Category III.

2

Students are required to complete two credits, but may earn up to three.

## Suggested Plan of Study

| Code            | Title                        | Credits |
|-----------------|------------------------------|---------|
| First Semester  |                              |         |
| ACTG 101        | Accounting Procedures I      | 3       |
| CAPP 120        | Introduction to Computers    | 3       |
| BMGT 180        | Employment Law and Practices | 3       |
| Gen Ed Courses  |                              | 6       |
| Total           |                              | 15      |
| Second Semester |                              |         |
| ACTG 180        | Payroll Accounting           | 3       |
| BMGT 250        | Employment & Comp Strategies | 3       |
| Gen Ed Courses  |                              | 9       |
| Total           |                              | 15      |
| Third Semester  |                              |         |
| BMGT 281        | Risk Mgmt, Safety & Security | 3       |
| Gen Ed Courses  |                              | 12      |
| Total           |                              | 15      |

| Fourth Semester |                               |    |
|-----------------|-------------------------------|----|
| BMGT 282        | Organizational Training & Dev | 3  |
| BGEN 294        | Seminar/Workshop              | 2  |
| or BMGT 298     | Internship/Cooperative Educ   |    |
| Gen Ed Courses  |                               | 10 |
| Total           |                               | 15 |

## Instrument and Electrical Technician Associate of Applied Science

Instrument and electrical technicians install, maintain, repair, and calibrate electrical equipment, control systems, and measuring devices that are the foundation of modern manufacturing processes. Graduates are prepared for careers as instrument and electrical (I&E) technicians in high-tech industries including oil refineries, natural gas processing, power plants, water treatment, food processing, and sustainable energy. The I&E program admits new cohorts in the fall of odd numbered years. Some courses are offered every other year.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Program and operate programmable logic controllers.
- Troubleshoot a basic electrical system.
- Construct, install, and troubleshoot motor control relay logic circuits.
- Utilize basic mechanical tools while installing, inspecting, operating and repairing mechanical systems.
- Maintain safe working habits while performing previously referenced procedures.

### Required Courses

| Code                                  | Title                          | Credits |
|---------------------------------------|--------------------------------|---------|
| <b>General Education Requirements</b> |                                |         |
| CAPP 120                              | Introduction to Computers      | 3       |
| COMX 106                              | Comm in a Dynamic Workplace    | 3       |
| M 114                                 | Extended Technical Mathematics | 3       |
| WRIT 121                              | Intro to Technical Writing     | 3       |
| or WRIT 122                           | Intro to Business Writing      |         |
| Subtotal                              |                                | 12      |
| <b>Required Courses</b>               |                                |         |
| DST 140                               | Intro to Hydraulics            | 2       |
| DST 141                               | Intro to Hydraulics Lab        | 2       |
| ELCT 241                              | Electric Motor Controls        | 3       |
| ELCT 250                              | Programmable Logic Controllers | 3       |
| ETEC 103                              | AC/DC Electronics II           | 3       |
| ETEC 192                              | Fund Electrical Technicians I  | 3       |
| ETEC 193                              | Fund Electrical Technicians II | 3       |
| ETEC 231                              | Electronic Drive Systems       | 3       |
| ETEC 284                              | Digital Electronics            | 4       |
| NTS 104                               | CCNA 1: Intro to Networks      | 4       |
| PPT 101                               | Fund of Process Technology     | 4       |
| PPT 102                               | Fund of Process Technology Lab | 1       |
| PPT 130                               | Process Diagrams for Proc Tech | 2       |
| PPT 135                               | Instrument & Control Systems   | 4       |
| PPT 136                               | Instrument & Controls Lab      | 1       |
| PPT 161                               | Process Plant Safety II        | 2       |

|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| TRID 150                     | Environ/Shop Practices         | 2         |
| or PPT 151                   | Process Plant Safety I         |           |
| TRID 185                     | Intro Industrial Power Systems | 2         |
| TRID 186                     | Intro Indstrl Pwr Systms Lab   | 1         |
| <b>Total Minimum Credits</b> |                                | <b>61</b> |

### Suggested Plan of Study

| Code                     | Title                          | Credits |
|--------------------------|--------------------------------|---------|
| <b>Semester 1 Fall</b>   |                                |         |
| CAPP 120                 | Introduction to Computers      | 3       |
| ETEC 192                 | Fund Electrical Technicians I  | 3       |
| PPT 101                  | Fund of Process Technology     | 4       |
| PPT 102                  | Fund of Process Technology Lab | 1       |
| PPT 130                  | Process Diagrams for Proc Tech | 2       |
| TRID 185                 | Intro Industrial Power Systems | 2       |
| TRID 186                 | Intro Indstrl Pwr Systms Lab   | 1       |
| Total                    |                                | 16      |
| <b>Semester 2 Spring</b> |                                |         |
| ETEC 103                 | AC/DC Electronics II           | 3       |
| ETEC 193                 | Fund Electrical Technicians II | 3       |
| M 114                    | Extended Technical Mathematics | 3       |
| PPT 135                  | Instrument & Control Systems   | 4       |
| PPT 136                  | Instrument & Controls Lab      | 1       |
| Total                    |                                | 14      |
| <b>Semester 3 Fall</b>   |                                |         |
| DST 140                  | Intro to Hydraulics            | 2       |
| DST 141                  | Intro to Hydraulics Lab        | 2       |
| ELCT 241                 | Electric Motor Controls        | 3       |
| ETEC 231                 | Electronic Drive Systems       | 3       |
| TRID 150                 | Environ/Shop Practices         | 2       |
| WRIT 121                 | Intro to Technical Writing     | 3       |
| or WRIT 122              | Intro to Business Writing      |         |
| Total                    |                                | 15      |
| <b>Semester 4 Spring</b> |                                |         |
| COMX 106                 | Comm in a Dynamic Workplace    | 3       |
| ELCT 250                 | Programmable Logic Controllers | 3       |
| ETEC 284                 | Digital Electronics            | 4       |
| NTS 104                  | CCNA 1: Intro to Networks      | 4       |
| PPT 161                  | Process Plant Safety II        | 2       |
| Total                    |                                | 16      |

## Medical Certificate of Technical Study \*Program placed on moratorium\*

#### Special Considerations:

Students must submit their NREMT certification as well as complete a competitive application process in order to enter the paramedic program.

#### Prerequisites:

Demonstrate proficiency in English and math.



BIOH 104 (available online)

## Required Courses

| Code    | Title                         | Credits |
|---------|-------------------------------|---------|
| ECP 207 | Cardiology                    | 4       |
| ECP 208 | Cardiology Lab and ACLS       | 1       |
| ECP 220 | Special Considerations        | 1       |
| ECP 221 | OB/Neonate/Pediatrics         | 2       |
| ECP 222 | OB/Neonate/Ped Lab, NRP, PALS | 1       |
| ECP 242 | Medical                       | 2       |
| ECP 243 | Medical Lab                   | 1       |
| ECP 246 | Hospital Clinical II          | 6       |

**Total Minimum Credits** 18

## Suggested Plan of Study

| Code            | Title                         | Credits   |
|-----------------|-------------------------------|-----------|
| Spring Semester |                               |           |
| ECP 207         | Cardiology                    | 4         |
| ECP 208         | Cardiology Lab and ACLS       | 1         |
| ECP 220         | Special Considerations        | 1         |
| ECP 221         | OB/Neonate/Pediatrics         | 2         |
| ECP 222         | OB/Neonate/Ped Lab, NRP, PALS | 1         |
| ECP 242         | Medical                       | 2         |
| ECP 243         | Medical Lab                   | 1         |
| ECP 246         | Hospital Clinical II          | 6         |
| <b>Total</b>    |                               | <b>18</b> |

## Medical Coding & Insurance Billing Certificate of Applied Science

 Offered Online

### Mission Statement

The Medical Coding and Insurance Billing program provides excellence in academic programs and access to qualified students. The Medical Coding and Insurance Billing program provides instruction in the knowledge and skills needed to deliver entry level medical coding skills. The knowledge and skills acquired will enable success and achievement for students competing in an ever changing, technologically diverse environment and will provide preparation for regional, national, and global markets. We strive, by example, to instill in each student our philosophy, civic leadership skills, an interest in life-long learning, and a commitment to service. Serving a unique blend of urban and rural health educational needs in the Southeastern Yellowstone region of Montana, we will work with the community to promote intellectual and educational excellence.

### Vision Statement

The Medical Coding and Insurance Billing program envisions creating an inviting environment that serves students by being responsive, adaptive, and innovative through a proactive approach to present and future needs. The program foresees increased enrollment, expanded programs, use of advanced technology, and expanded alliance with our various customer bases as a bridge to becoming a leader in post-secondary two-year education.

The Medical Coding and Insurance Billing program is designed to provide a recommended curriculum through which students may earn a two semester

Certificate of Applied Science. This Certificate will educate students in the areas of medical procedure and diagnosis coding. In addition, the Certificate will prepare the student for employment in either the inpatient or outpatient medical setting to work as an integral part of the healthcare team in a medical office, dental office, hospital, clinic, or independent billing company.

Medical coding is the transformation of handwritten or verbal descriptions of diseases, injuries and medical procedures into a numbered procedure code and/or numbered diagnosis code. The Medical Coding and Insurance Billing program prepares entry-level employees with the skills to analyze health records and assign the appropriate code to each diagnosis and procedure according to national and international guidelines. They perform research and rely on their knowledge of medical terminology, anatomy and disease processes to determine the correct codes and sequences.

The program consists of class lecture, practical application of codes, auditing of records and experience with computerized medical and insurance billing software. Students will learn to prepare various health claim forms required by the insurance industry using medical billing software. This involves practicing accurate interpretation of medical records, correctly documenting and coding information, and submission of forms to the insurance company for reimbursement. The emphasis is on the high level of responsibility required and the attention to detail and accuracy needed to be a competent medical biller. Instruction will include theory and practice to meet the competencies identified as necessary for entry-level employment.

Upon completion of the program the students will be able to sit for the American Academy of Professional Coders (AAPC) or American Health Information Management Association (AHIMA) coding exam. Graduates will fill a growing need in healthcare, now and in the future.

See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Code medical documentation, written and verbal, for billing purposes utilizing the published Current Procedural Terminology 4th Edition (CPT-4) book.
- Code medical documentation, written and verbal, for billing purposes utilizing the published International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) book. (The program will transition to ICD-10-CM spring semester 2013).
- Use a computerized medical billing program to create a patient record, statement and claim form.
- Code from actual medical cases.
- Audit the medical record.
- Create a resume and cover letter, collection letters, brochures, pamphlets, and community agency lists specific to a medical specialty.
- Produce a healthcare provider fee schedule using Excel.

## Required Courses

| Code     | Title                       | Credits |
|----------|-----------------------------|---------|
| AHMS 144 | Medical Terminology         | 3       |
| AHMS 160 | Beginning Procedural Coding | 3       |
| AHMS 162 | Beginning Diagnosis Coding  | 3       |
| AHMS 220 | Medical Office Procedures   | 3       |
| AHMS 250 | Advanced Medical Coding     | 3       |
| AHMS 299 | Capstone Project            | 1       |
| BIOH 104 | Basic Human Biology         | 3       |

|                              |                             |           |
|------------------------------|-----------------------------|-----------|
| CAPP 120                     | Introduction to Computers   | 3         |
| COMX 106                     | Comm in a Dynamic Workplace | 3         |
| M 108                        | Business Mathematics        | 3         |
| WRIT 122                     | Intro to Business Writing   | 3         |
| <b>Total Minimum Credits</b> |                             | <b>31</b> |

Students should check the course descriptions for required prerequisites. Math and English requirements are usually determined by performance on placement tests or transfer credits.

## Suggested Plan of Study

### Online

| Code            | Title                       | Credits |
|-----------------|-----------------------------|---------|
| Spring Semester |                             |         |
| CAPP 120        | Introduction to Computers   | 3       |
| AHMS 160        | Beginning Procedural Coding | 3       |
| AHMS 162        | Beginning Diagnosis Coding  | 3       |
| AHMS 144        | Medical Terminology         | 3       |
| BIOH 104        | Basic Human Biology         | 3       |
| Total           |                             | 15      |
| Fall Semester   |                             |         |
| AHMS 220        | Medical Office Procedures   | 3       |
| AHMS 250        | Advanced Medical Coding     | 3       |
| M 108           | Business Mathematics        | 3       |
| WRIT 122        | Intro to Business Writing   | 3       |
| COMX 106        | Comm in a Dynamic Workplace | 3       |
| AHMS 299        | Capstone Project            | 1       |
| Total           |                             | 16      |

## Networking Technology Certificate of Applied Science \*Program placed on moratorium\*

The Networking Technology Certificate of Applied Science is earned upon successful completion of the one year of courses listed below. Students may choose to sit for the Microsoft Certified Professional and the Cisco Certified Networking Associate examinations after completion of this Certificate. Technical support employees work in organizations to maintain an in-house Management Information System (MIS) function or technical support department. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) for graduate data.

Before a student can be accepted into the Computer Systems Technology program, competency in computers must be demonstrated. This may be done by:

- transferring of appropriate credits
- completing the computer literacy challenge test
- obtaining permission of CST faculty
- taking prerequisite course (CAPP 120)
- possessing current ACT/SAT scores in the required range
- taking the necessary prerequisite English, math and/or computer classes identified in the catalog

Check with an academic advisor to determine how you can meet these requirements.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Troubleshoot and repair computer hardware.
- Set up operating systems and troubleshoot software.
- Set up and document LAN networks using troubleshooting skills.
- Set up and document WAN networks using troubleshooting skills.
- Set up and document secure networks.

## Required Courses

| Code                         | Title                          | Credits   |
|------------------------------|--------------------------------|-----------|
| CAPP 156                     | MS Excel                       | 3         |
| COMX 106                     | Comm in a Dynamic Workplace    | 3         |
| ITS 166                      | Configuring MS Windows 10      | 3         |
| ITS 212                      | Network Operating Sys-Server A | 3         |
| ITS 256                      | CCNA Security                  | 3         |
| M 111                        | Technical Mathematics          | 3         |
| NTS 104                      | CCNA 1: Intro to Networks      | 4         |
| NTS 105                      | CCNA 2: Routing & Switching Es | 4         |
| NTS 204                      | CCNA 3: Scaling Networks       | 3         |
| WRIT 104                     | Workplace Communications       | 3         |
| <b>Total Minimum Credits</b> |                                | <b>32</b> |

**Note:** Students are encouraged to take the industry certifications tests for Cisco and MCSE. Please contact our testing center for more information on cost and scheduling.

## Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| ITS 166         | Configuring MS Windows 10      | 3       |
| NTS 104         | CCNA 1: Intro to Networks      | 4       |
| NTS 105         | CCNA 2: Routing & Switching Es | 4       |
| M 111           | Technical Mathematics          | 3       |
| WRIT 104        | Workplace Communications       | 3       |
| Total           |                                | 17      |
| Second Semester |                                |         |
| CAPP 156        | MS Excel                       | 3       |
| COMX 106        | Comm in a Dynamic Workplace    | 3       |
| ITS 212         | Network Operating Sys-Server A | 3       |
| NTS 204         | CCNA 3: Scaling Networks       | 3       |
| ITS 256         | CCNA Security                  | 3       |
| Total           |                                | 15      |

## Paramedic Associate of Applied Science Degree

This curriculum has been arranged so students may complete the Pre-Paramedic Core semester and Final Summer Session from a distance through online courses. With the exception of ECP 200, the other Pre-Paramedic courses are also offered on campus. The core classes for the Paramedic program will start every fall semester.

**Competitive entrance is required for this program. Go to [www.citycollege.msubillings.edu](http://www.citycollege.msubillings.edu) (<http://www.citycollege.msubillings.edu>) for application requirements.**

## Mission Statement

The Paramedic program provides excellence in academic programs and access to qualified students. The Paramedic program provides instruction in the knowledge and skills needed to deliver advanced pre-hospital care. The knowledge and skills acquired will enable success and achievement for students competing in an ever changing, technologically diverse environment and will provide preparation for regional, national, and global markets. We strive, by example, to instill in each student our philosophy, civic leadership skills, an interest in life-long learning, and a commitment to service. Serving a unique blend of urban and rural health educational needs in the Southeastern Yellowstone region of Montana, we will work with the community to promote intellectual and educational excellence.

## Vision Statement

The Paramedic program envisions creating an inviting environment that serves students by being responsive, adaptive, and innovative through a proactive approach to present and future needs. The program foresees increased enrollment, expanded programs, use of advanced technology, and expanded alliance with our various customer bases as a bridge to becoming a leader in post-secondary two-year education.

City College at MSU Billings' Paramedic program is the only regional college program that is nationally accredited by the Committee on Accreditation of Educational Programs for EMS Professions (CoAEMSP) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Paramedics are recognized as allied healthcare providers who respond and provide immediate patient evaluation and treatment intervention to victims of illness or injury. Paramedics rely on their advanced knowledge of normal human physiology and pathophysiology of acute and chronic disease to develop a working field impression order to provide advanced life support care to patients in needs. Airway management, vascular access, electrical therapy, and pharmacological management are all examples of the invasive and life-saving practices a paramedic is permitted to provide in conjunction with medical oversight. Paramedics are typically employed by fire services, hospitals, flight programs, or ambulance companies.

The curriculum consists of classroom instruction with a skills laboratory, in-hospital clinical practice, and a supervised field internship to prepare students for the National Registry EMT-Paramedic Exam and entry-level paramedic practice.

See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Special Considerations

Students must submit their NREMT certification as well as complete a competitive application process in order to enter the paramedic program.

For the complete application, go to [citycollege.msubillings.edu/Programs/ProgParamedic.htm](http://citycollege.msubillings.edu/Programs/ProgParamedic.htm) (<http://citycollege.msubillings.edu/Programs/ProgParamedic.htm>)

Students will be evaluated on their cognitive ability, psychomotor skills and behavioral characteristics throughout the program. Students must be successful in all three domains of learning to be eligible for graduation. It should be noted that completion of the paramedic program does not guarantee state and national licensing to practice as a paramedic. Paramedics must pass appropriate licensing boards to practice as a paramedic.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify, integrate and apply cognitive knowledge essential to function as an entry-level paramedic.
- Perform patient assessment and employ therapeutic procedures in specific patient scenarios.
- Conduct oneself in an ethical and professional manner consistent with peer and employer expectations.
- Utilize technical and psychomotor skills required to function as an entry-level paramedic.

## Required Courses

| Code                         | Title                          | Credits   |
|------------------------------|--------------------------------|-----------|
| AHMS 144                     | Medical Terminology            | 3         |
| BIOH 104                     | Basic Human Biology            | 3         |
| CAPP 120                     | Introduction to Computers      | 3         |
| COMX 106                     | Comm in a Dynamic Workplace    | 3         |
| ECP 200                      | Transition to Paramedic Care   | 3         |
| ECP 201                      | Paramedic Fundamentals         | 3         |
| ECP 202                      | Paramedic Fundamentals Lab     | 1         |
| ECP 206                      | EMS Case Studies               | 4         |
| ECP 207                      | Cardiology                     | 4         |
| ECP 208                      | Cardiology Lab and ACLS        | 1         |
| ECP 216                      | Hospital Clinical I            | 5         |
| ECP 220                      | Special Considerations         | 1         |
| ECP 221                      | OB/Neonate/Pediatrics          | 2         |
| ECP 222                      | OB/Neonate/Ped Lab, NRP, PALS  | 1         |
| ECP 230                      | Trauma                         | 2         |
| ECP 232                      | Pulmonary                      | 2         |
| ECP 233                      | Trauma/Pulmonary Lab and PHTLS | 1         |
| ECP 242                      | Medical                        | 2         |
| ECP 243                      | Medical Lab                    | 1         |
| ECP 246                      | Hospital Clinical II           | 6         |
| ECP 250                      | NREMT Exam Preparation         | 3         |
| ECP 251                      | NREMT Exam Prep Lab            | 1         |
| ECP 295                      | Field Internship               | 8         |
| Select one of the following: |                                | 3         |
| M 105                        | Contemporary Mathematics       |           |
| STAT 141                     | Intro to Statistical Concepts  |           |
| M 121                        | College Algebra                |           |
| M 114                        | Extended Technical Mathematics |           |
| WRIT 122                     | Intro to Business Writing      | 3         |
| or WRIT 121                  | Intro to Technical Writing     |           |
| Restricted Elective          |                                | 3         |
| <b>Total Minimum Credits</b> |                                | <b>72</b> |

*Students should check course descriptions for required prerequisites.*

## Suggested Plan of Study

| Code                        | Title                            | Credits |
|-----------------------------|----------------------------------|---------|
| Pre-Paramedic Core Semester |                                  |         |
| BIOH 104                    | Basic Human Biology <sup>1</sup> | 3       |

|                              |   |    |
|------------------------------|---|----|
| AHMS 144                     | Medical Terminology <sup>1</sup>            | 3  |
| Select one of the following: |   | 3  |
| WRIT 121                     | Intro to Technical Writing                  |    |
| WRIT 122                     | Intro to Business Writing <sup>1</sup>      |    |
| CAPP 120                     | Introduction to Computers <sup>1</sup>      | 3  |
| Select one of the following: |   | 3  |
| M 105                        | Contemporary Mathematics <sup>1</sup>       |    |
| STAT 141                     | Intro to Statistical Concepts <sup>1</sup>  |    |
| M 121                        | College Algebra <sup>1</sup>                |    |
| M 114                        | Extended Technical Mathematics <sup>1</sup> |    |
| ECP 200                      | Transition to Paramedic Care <sup>2</sup>   | 3  |
| Total                        |   | 18 |
| Fall Semester                |   |    |
| ECP 206                      | EMS Case Studies <sup>2</sup>               | 4  |
| ECP 201                      | Paramedic Fundamentals                      | 3  |
| ECP 202                      | Paramedic Fundamentals Lab                  | 1  |
| ECP 230                      | Trauma                                      | 2  |
| ECP 232                      | Pulmonary                                   | 2  |
| ECP 233                      | Trauma/Pulmonary Lab and PHTLS              | 1  |
| ECP 216                      | Hospital Clinical I                         | 5  |
| Total                        |   | 18 |
| Spring Semester              |   |    |
| ECP 207                      | Cardiology                                  | 4  |
| ECP 208                      | Cardiology Lab and ACLS                     | 1  |
| ECP 242                      | Medical                                     | 2  |
| ECP 243                      | Medical Lab                                 | 1  |
| ECP 220                      | Special Considerations                      | 1  |
| ECP 221                      | OB/Neonate/Pediatrics                       | 2  |
| ECP 222                      | OB/Neonate/Ped Lab, NRP, PALS               | 1  |
| ECP 246                      | Hospital Clinical II                        | 6  |
| Total                        |   | 18 |
| Summer Semester              |   |    |
| ECP 250                      | NREMT Exam Preparation                      | 3  |
| ECP 251                      | NREMT Exam Prep Lab                         | 1  |
| ECP 295                      | Field Internship                            | 8  |
| COMX 106                     | Comm in a Dynamic Workplace <sup>1</sup>    | 3  |
| Restricted Elective          |   | 3  |
| Total                        |   | 18 |

1

Available online

2

Offered only online

## Paramedic Certificate of Technical Study \*Program placed on moratorium\*

### Special Considerations:

Students must submit their NREMT certification as well as complete a competitive application process in order to enter the paramedic program.

### Prerequisites:

Demonstrate proficiency in English and math.

BIOH 104 (available online)

## Required Courses

| Code                         | Title               | Credits   |
|------------------------------|---------------------|-----------|
| ECP 251                      | NREMT Exam Prep Lab | 1         |
| ECP 291                      | Special Topics      | 3         |
| ECP 295                      | Field Internship    | 8         |
| Restricted Elective          |                     | 3         |
| <b>Total Minimum Credits</b> |                     | <b>15</b> |

## Suggested Plan of Study

| Code           | Title               | Credits |
|----------------|---------------------|---------|
| First Semester |                     |         |
| ECP 251        | NREMT Exam Prep Lab | 1       |
| ECP 295        | Field Internship    | 8       |
| ECP 291        | Special Topics      | 3       |
| Elective       |                     | 3       |
| Total          |                     | 15      |

## Practical Nursing Certificate of Applied Science

### ☐ Offered Online

City College offers a CAS in Practical Nursing and an ASN in Registered Nursing. The College of Health Professions and Science also offers a 2+1 Option BSN Pathway (<https://catalog.msbillings.edu/undergraduate/college-health-professions-science/departments-health-care-services/nursing2-1bsn/>).

Students apply to the nursing programs after completing the required prerequisites.

All prerequisite courses have to be completed with a "C" or better.

See [msbillings.edu/citycollege/programs/ProgLPN.htm](http://msbillings.edu/citycollege/programs/ProgLPN.htm) (<http://msbillings.edu/citycollege/programs/ProgLPN.htm>) for the most recent practical nursing information and [msbillings.edu/citycollege/programs/ProgRN.htm](http://msbillings.edu/citycollege/programs/ProgRN.htm) (<http://msbillings.edu/citycollege/programs/ProgRN.htm>) for the most recent registered nursing information.

Nursing students are held to the same standards as nurses. Students are required to pass a criminal background check and a urine drug screening at a site designated by the program before admission to clinical sites.

The Montana Board of Regents may alter information contained in this portion of the catalog. Please contact the Director of Nursing for the most current information.

The faculty believe practical nurses are an integral part of the nursing workforce. Licensed Practical Nurses function within the ethical and legal framework of the Nurse Practice Act. Licensed Practical Nurses provide nursing care for clients in structured health care settings who are experiencing common, well-defined health problems. In their roles as members of the discipline of nursing, practical nurses actively participate in and subscribe to the legal and ethical tenets of the discipline. Licensed Practical Nurses provide care under the supervision of registered nurses, physicians, osteopaths, podiatrists, and dentists. They participate in data collection, communicate information within the chain of command, and implement nursing

interventions based on established plans of care. Licensed Practical Nurses work in doctor's offices, community sites, and long term care facilities.

## Special Considerations

If any physical limitations exist which might impair the ability of a student to fully perform required activities, a letter written by the physician attending the student should be sent to City College at MSU Billings. The letter must state that no risk to the student or potential patient exists, should the student be required to provide medical services to the patient.

It should be noted that completion of the practical nursing program does not guarantee state licensing to practice as an LPN. Graduates must pass the NCLEX-PN to practice as an LPN.

The practical nursing program is provided in a hybrid distance learning format. The lecture courses will be online and the clinical and lab courses will be in a hybrid format where some content is online and some is on campus or at assigned clinical sites. Students will be required to come to the City College campus for some labs and clinical experiences. Students will be liable for their own transportation and lodging. When students are admitted into the program they will be given a schedule of dates and times for required attendance on campus. Whenever possible, the dates and times will be lumped together so students will only be coming to campus once or twice a month for two to four days, which may include weekends.

Students will be admitted to the Practical Nursing Program in spring semester.

The application process includes: filling out an application and points criteria form, having a selective GPA of 2.5 based on the grades for the prerequisite courses, an interview in person or via Skype, and having a reference letter submitted to the nursing department. See website for specific application directions ([www.msubitillings.edu/citycollege/programs/ProgLPN.htm](http://www.msubitillings.edu/citycollege/programs/ProgLPN.htm) (<http://www.msubitillings.edu/citycollege/programs/ProgLPN.htm>))

**PN Graduates who wish to take the registered nursing program will be required to take 11 additional credits of general education courses (see first semester of RN program).**

## Required Courses

| Code                         | Title                         | Credits   |
|------------------------------|-------------------------------|-----------|
| BIOH 104                     | Basic Human Biology           | 3         |
| BIOH 105                     | Basic Human Biology Lab       | 1         |
| M 120                        | Math Health Care Applications | 3         |
| NRSRG 130                    | Fundamentals of Nursing       | 3         |
| NRSRG 131                    | Fundamentals of Nursing Lab   | 3         |
| NRSRG 135                    | Pharmacology for PN           | 3         |
| NRSRG 136                    | Pharmacology for PN Lab       | 1         |
| NRSRG 140                    | Adult Health Nursing          | 4         |
| NRSRG 141                    | Adult Health Nursing Clinical | 2         |
| NRSRG 142                    | Nsg Care Women & Children     | 3         |
| NRSRG 143                    | Nsg Care Women & Children Cl  | 1         |
| NRSRG 148                    | Leadership Issues for PN      | 2         |
| NRSRG 149                    | Leadership Issues for PN Cl   | 1         |
| NRSRG 152                    | Gerontology and Comm Nsg      | 2         |
| NRSRG 153                    | Gerontology and Comm Nsg Cl   | 2         |
| PSYX 100                     | Intro to Psychology           | 3         |
| WRIT 101                     | College Writing I             | 3         |
| <b>Total Minimum Credits</b> |                               | <b>40</b> |

## Suggested Plan of Study

| Code   | Title                         | Credits   |
|--|-------------------------------|-----------|
| First Semester - Prerequisites   |                               |           |
| BIOH 104   | Basic Human Biology           | 3         |
| BIOH 105   | Basic Human Biology Lab       | 1         |
| PSYX 100   | Intro to Psychology           | 3         |
| WRIT 101   | College Writing I             | 3         |
| M 120  | Math Health Care Applications | 3         |
| <b>Total</b>   |                               | <b>13</b> |
| Admission to the Nursing Program is required prior to taking second semester coursework. |                               |           |
| Second Semester  |                               |           |
| NRSRG 130  | Fundamentals of Nursing       | 3         |
| NRSRG 131  | Fundamentals of Nursing Lab   | 3         |
| NRSRG 135  | Pharmacology for PN           | 3         |
| NRSRG 136  | Pharmacology for PN Lab       | 1         |
| NRSRG 152  | Gerontology and Comm Nsg      | 2         |
| NRSRG 153  | Gerontology and Comm Nsg Cl   | 2         |
| <b>Total</b>   |                               | <b>14</b> |
| Third Semester   |                               |           |
| NRSRG 140  | Adult Health Nursing          | 4         |
| NRSRG 141  | Adult Health Nursing Clinical | 2         |
| NRSRG 142  | Nsg Care Women & Children     | 3         |
| NRSRG 143  | Nsg Care Women & Children Cl  | 1         |
| NRSRG 148  | Leadership Issues for PN      | 2         |
| NRSRG 149  | Leadership Issues for PN Cl   | 1         |
| <b>Total</b>   |                               | <b>13</b> |

## Process Plant Technology Associate of Applied Science Degree

A degree in Process Plant Technology provides opportunities for a rewarding and high paying career in the chemical processing industries. Rapid expansion in the energy industry, both in the Rocky Mountain area and across the country, has created high demand for skilled workers. Careers in this field are highly sought-after due to their challenging and rewarding nature, high pay, and opportunities for advancement. See our website at [www.msubitillings.edu/careers](http://www.msubitillings.edu/careers) (<http://www.msubitillings.edu/careers/>) for graduate placement data.

Process Plant Technology graduates will find career opportunities in a variety of industries including petroleum refining, natural gas processing, oil and gas production, biofuels, food processing, chemical manufacturing, power generation, water treatment, and paper manufacturing.

Process Plant Technicians monitor and control chemical processes that upgrade raw materials into higher-value finished products. Finished products include a wide range of materials such as gasoline, diesel, natural gas, crude oil, ethanol, biodiesel, sugar, plastics, electricity, drinking water, and paper.

Process Plant Technology students learn technical, mechanical, and safety details of process plant operations during this four semester program. Topics covered in detail include equipment function and operation; process plant safety; communications, including reading and creating process diagrams; electrical and power systems; process control; environmental protection; chemical principles; boiler operation; advance process operations; troubleshooting; and quality control. Students receive hazardous materials training at the technician level as part of the safety training.



A significant part of the program is dedicated to hands-on training in the Process Plant lab where students operate pilot plant scale processes. Plant simulators give students a realistic understanding of industrial control room activities. The program is complemented with an internship where students experience process plant manufacturing large scale and first hand.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform mathematical calculations applicable to process operations.
- Use appropriate verbal and written communication skills in process environment.
- Identify process equipment and state the purpose of the equipment.
- Analyze process conditions / scenarios using process technology concepts and theories.
- Apply knowledge of advanced process operations to specific areas of refineries and chemical plants.

## Required Courses

| Code        | Title                          | Credits |
|-------------|--------------------------------|---------|
| BGEN 105B   | Introduction to Business       | 3       |
| CAPP 120    | Introduction to Computers      | 3       |
| COMX 106    | Comm in a Dynamic Workplace    | 3       |
| M 114       | Extended Technical Mathematics | 3       |
| PPT 101     | Fund of Process Technology     | 4       |
| PPT 102     | Fund of Process Technology Lab | 1       |
| PPT 120     | Environ Awareness              | 2       |
| PPT 130     | Process Diagrams for Proc Tech | 2       |
| PPT 135     | Instrument & Control Systems   | 4       |
| PPT 136     | Instrument & Controls Lab      | 1       |
| PPT 151     | Process Plant Safety I         | 2       |
| PPT 161     | Process Plant Safety II        | 2       |
| PPT 175     | Process Plant Sciences         | 4       |
| PPT 176     | Process Plant Sciences Lab     | 1       |
| PPT 207     | Boilers, Access & Basic Oprtns | 3       |
| PPT 208     | Equipment and Operations Lab   | 2       |
| PPT 210     | Equipment and Operations       | 4       |
| PPT 211     | Advanced Operations            | 2       |
| PPT 212     | Advanced Operations Lab        | 1       |
| PPT 220     | Quality Control Practices      | 2       |
| PPT 225     | Plant Investigation            | 2       |
| PPT 298     | Cooperative Educ/Internship    | 1       |
| TRID 160    | Hazrdz Mtrl Tech Gen Trng      | 3       |
| TRID 185    | Intro Industrial Power Systems | 2       |
| TRID 186    | Intro Indstrl Pwr Systms Lab   | 1       |
| WRIT 122    | Intro to Business Writing      | 3       |
| or WRIT 121 | Intro to Technical Writing     |         |

**Total Minimum Credits** 61

*Students should check the course descriptions for required prerequisites.*

## Suggested Plan of Study

| Code           | Title                     | Credits |
|----------------|---------------------------|---------|
| First Semester |                           |         |
| CAPP 120       | Introduction to Computers | 3       |

|                 |                                |    |
|-----------------|--------------------------------|----|
| PPT 101         | Fund of Process Technology     | 4  |
| PPT 102         | Fund of Process Technology Lab | 1  |
| PPT 130         | Process Diagrams for Proc Tech | 2  |
| PPT 151         | Process Plant Safety I         | 2  |
| TRID 185        | Intro Industrial Power Systems | 2  |
| TRID 186        | Intro Indstrl Pwr Systms Lab   | 1  |
| Total           |                                | 15 |
| Second Semester |                                |    |
| M 114           | Extended Technical Mathematics | 3  |
| PPT 120         | Environ Awareness              | 2  |
| PPT 135         | Instrument & Control Systems   | 4  |
| PPT 136         | Instrument & Controls Lab      | 1  |
| PPT 161         | Process Plant Safety II        | 2  |
| PPT 175         | Process Plant Sciences         | 4  |
| PPT 176         | Process Plant Sciences Lab     | 1  |
| Total           |                                | 17 |
| Third Semester  |                                |    |
| BGEN 105B       | Introduction to Business       | 3  |
| PPT 207         | Boilers, Access & Basic Oprtns | 3  |
| PPT 208         | Equipment and Operations Lab   | 2  |
| PPT 210         | Equipment and Operations       | 4  |
| WRIT 121        | Intro to Technical Writing     | 3  |
| or WRIT 122     | Intro to Business Writing      |    |
| Total           |                                | 15 |
| Fourth Semester |                                |    |
| COMX 106        | Comm in a Dynamic Workplace    | 3  |
| PPT 211         | Advanced Operations            | 2  |
| PPT 212         | Advanced Operations Lab        | 1  |
| PPT 220         | Quality Control Practices      | 2  |
| PPT 225         | Plant Investigation            | 2  |
| PPT 298         | Cooperative Educ/Internship    | 1  |
| TRID 160        | Hazrdz Mtrl Tech Gen Trng      | 3  |
| Total           |                                | 14 |

## Radiologic Technology Associate of Applied Science

This is a fall start program. Students must have all prerequisite course requirements completed in order to apply for the fall semester clinical part of the program.

Applications for the clinical part of the program are due in May, interviews occur in June, and students accepted to start the following fall semester.

## Mission Statement

The Radiologic Technology program provides excellence in academic programs and access to qualified students. The Radiologic Technology program provides instruction in the knowledge and skills needed to deliver entry level medical imaging. The knowledge and skills acquired will enable success and achievement for students competing in an ever changing, technologically diverse environment and will provide preparation for regional, national, and global markets. We strive, by example, to instill in each student our philosophy, civic leadership skills, an interest in life-long learning, and a commitment to service. Serving a unique blend of urban and rural health educational needs in the southeastern Yellowstone region of Montana, we will work with the community to promote intellectual and educational excellence.

## Vision Statement

The Radiologic Technology program envisions creating an inviting environment that serves students by being responsive, adaptive, and innovative through a proactive approach to present and future needs. The program's use of advanced technologies and our close affiliation with local hospitals and clinics provide a strong base for excellence in education and becoming a leader in post-secondary education.

Radiology is the art and science of using radiation to produce images of the body for use in diagnosing medical problems. This program will train students to apply modern principles of radiation exposure, radiation protection, and human anatomy and physiology to produce radiographic images. Students will learn how to manipulate x-ray equipment and to position patients to produce high quality diagnostic images. They will also learn how to assist and educate patients before, during, and after radiographic procedures.

Students will study clinical radiographic applications in a hospital radiology department. Computer skills applicable to radiographic requirements will be examined in detail. Students will also learn proper care and maintenance of patient records in accordance with applicable regulations.

Upon graduation, students will be prepared to take the certification examination administered by the American Registry of Radiologic Technologists (ARRT).

Graduates can find career positions in clinics, hospitals, physician's offices, and mobile units, as well as in research, public health, industry, and in sales of radiographic equipment. See our website at [www.msbillings.edu/careers](http://www.msbillings.edu/careers) (<http://www.msbillings.edu/careers/>) for graduate data.

## Technical Standards

Students must possess the following:

- Ability to communicate with a diverse population and the ability to be easily understood. Reading, writing, and documenting patient information accurately is required.
- Analytical skills sufficient to process information, to transfer knowledge from one situation to another, and to prioritize tasks.
- Critical thinking ability sufficient for safe, clinical judgment.
- Auditory abilities sufficient to monitor and assess patient needs; to detect and respond to alarms, emergency signals, and calls for help.
- Visual ability sufficient for observation and assessment necessary for the care of patients, processing of medical images, and operation of imaging and medical equipment.
- Tactile ability sufficient to assess patients, perform procedures, and operate equipment.
- Physical ability, flexibility, strength, and stamina sufficient to provide safe and effective care.
- Fine motor abilities sufficient to provide safe and effective care.
- Emotional and mental stability sufficient to establish therapeutic boundaries, to perform multiple tasks concurrently, and to react calmly and effectively in a stressful environment.

## Special Admission Procedures

All individuals applying for admission to the Radiologic Technology program must complete the prerequisite semester. **However, due to limited clinical space, only 12 to 16 students per year will be selected to continue in the clinical portion of the program which begins each fall semester.**

The following criteria will be used to select those Radiologic Technology students who will continue into the clinical portion of the program. The selection process is

divided into two phases. Phase I will be applied to all applicants. Only the top 20-22 applicants will move to Phase II of the selection process.

### Phase I Point System

Points will be awarded for categories from the completed Radiologic Technology application form such as:

1. Grade point average in prerequisite semester courses
2. Hospital site visit and answers to site visit questions
3. Prior medical and work experience
4. Degrees and education
5. Written essay
6. Letters of reference

### Phase II Personal interviews

The personal interview portion of the selection process will involve answering a series of questions from a radiologic technology selection committee. All applicants will be asked the same questions. Follow-up questions may be asked. Only those students selected by the committee will continue in the clinical portion of the Radiologic Technology Program. The decision of the selection committee is final.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Perform radiographic examinations with the knowledge and skill of an entry level radiologic technologist.
- Demonstrate application and understanding of the basic theories of radiation physics, radiation protection, patient care, and radiographic anatomy and procedures.
- Assess the patient's physical and mental status and formulate the appropriate x-ray technique and positioning requirements to produce optimal radiographic images.
- Manipulate x-ray equipment and computer equipment to produce diagnostic x-ray images.
- Implement radiation protection measures to insure the protection of the patient, co-workers, medical staff, and the public.
- Communicate professionally with coworkers, medical staff, patients, and patient families.

## Required Courses

| Code      | Title                             | Credits |
|-----------|-----------------------------------|---------|
| AHXR 101  | Patient Care in Radiology         | 3       |
| AHXR 108  | Intro to Radiologic Physics       | 3       |
| AHXR 150  | Radiological Technology I         | 3       |
| AHXR 151  | Radiology I Positioning Lab       | 1       |
| AHXR 160  | Radiological Technology II        | 4       |
| AHXR 161  | Radiology II Positioning Lab      | 1       |
| AHXR 181  | Radiology III Positioning Lab     | 1       |
| AHXR 195  | Clinical Radiology Intersession   | 1       |
| AHXR 195A | Radiographic Clinical I           | 5       |
| AHXR 195B | Radiographic Clinical II          | 6       |
| AHXR 195C | Radiographic Clinical III         | 9       |
| AHXR 225  | Radiobiology/Radiation Protection | 3       |
| AHXR 250  | Radiological Technology III       | 4       |
| AHXR 260  | Radiological Technology IV        | 2       |
| AHXR 270  | Radiographic Registry Review      | 2       |

|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| AHXR 295A                    | Radiographic Clinical IV       | 8         |
| AHXR 295B                    | Radiographic Clinical V        | 8         |
| BIOH 201                     | Human Anatomy & Physiology I   | 3         |
| BIOH 202                     | Human Anatomy & Phys I Lab     | 1         |
| CAPP 120                     | Introduction to Computers      | 3         |
| COMX 106                     | Comm in a Dynamic Workplace    | 3         |
| M 114                        | Extended Technical Mathematics | 3         |
| or M 105                     | Contemporary Mathematics       |           |
| WRIT 122                     | Intro to Business Writing      | 3         |
| or WRIT 121                  | Intro to Technical Writing     |           |
| <b>Total Minimum Credits</b> |                                | <b>80</b> |

Students should check the course descriptions for required prerequisites.

#### Recommended Prerequisite Courses

| Code     | Title                         | Credits |
|----------|-------------------------------|---------|
| BIOH 211 | Human Anatomy & Physiology II | 3       |
| PHSX 103 | Our Physical World            | 3       |

## Suggested Plan of Study

| Code                     | Title                           | Credits   |
|--------------------------|---------------------------------|-----------|
| Prerequisite Semester    |                                 |           |
| BIOH 201                 | Human Anatomy & Physiology I    | 3         |
| BIOH 202                 | Human Anatomy & Phys I Lab      | 1         |
| WRIT 121                 | Intro to Technical Writing      | 3         |
| or WRIT 122              | Intro to Business Writing       |           |
| CAPP 120                 | Introduction to Computers       | 3         |
| M 114                    | Extended Technical Mathematics  | 3         |
| or M 105                 | Contemporary Mathematics        |           |
| <b>Total</b>             |                                 | <b>13</b> |
| First Semester (Fall)    |                                 |           |
| AHXR 101                 | Patient Care in Radiology       | 3         |
| AHXR 108                 | Intro to Radiologic Physics     | 3         |
| AHXR 150                 | Radiological Technology I       | 3         |
| AHXR 151                 | Radiology I Positioning Lab     | 1         |
| AHXR 195A                | Radiographic Clinical I         | 5         |
| <b>Total</b>             |                                 | <b>15</b> |
| Intersession             |                                 |           |
| AHXR 195                 | Clinical Radiology Intersession | 1         |
| Second Semester (Spring) |                                 |           |
| AHXR 160                 | Radiological Technology II      | 4         |
| AHXR 161                 | Radiology II Positioning Lab    | 1         |
| AHXR 195B                | Radiographic Clinical II        | 6         |
| AHXR 225                 | Radiobiology/Radiation Ptrctn   | 3         |
| <b>Total</b>             |                                 | <b>15</b> |
| Summer Session           |                                 |           |
| AHXR 181                 | Radiology III Positioning Lab   | 1         |
| AHXR 195C                | Radiographic Clinical III       | 9         |
| <b>Total</b>             |                                 | <b>10</b> |
| Third Semester (Fall)    |                                 |           |
| AHXR 250                 | Radiological Technology III     | 4         |
| AHXR 295A                | Radiographic Clinical IV        | 8         |

|                          |                              |           |
|--------------------------|------------------------------|-----------|
| COMX 106                 | Comm in a Dynamic Workplace  | 3         |
| <b>Total</b>             |                              | <b>15</b> |
| Fourth Semester (Spring) |                              |           |
| AHXR 260                 | Radiological Technology IV   | 2         |
| AHXR 270                 | Radiographic Registry Review | 2         |
| AHXR 295B                | Radiographic Clinical V      | 8         |
| <b>Total</b>             |                              | <b>12</b> |

## Respiratory Therapy Associate of Applied Science

### OneMSU's Distance Learning Solution

The OneMSU Network is a partnership between Gallatin College MSU in Bozeman, City College at MSU Billings, and Great Falls College MSU. Thanks to the OneMSU Network, you can get a two-year, career-oriented degree, regardless of whether you live in a rural community or major city. From enrolling in prerequisites to earning your degree, the OneMSU Network lets you stay connected to your family, your friends, and your community while you get an education to launch your career.

Thanks to the OneMSU Network, you can now get a two-year AAS degree in Respiratory Therapy from Great Falls College MSU and experience everything distance-learning education has to offer. Through the OneMSU Network you can:

- Take prerequisites for the respiratory therapy program through City College.
- Once prerequisites are complete, apply to the Great Falls College Respiratory Therapy Program and, if accepted, take labs and clinicals locally or with minimal travel.

## Respiratory Therapy Career

Similar to nurses, respiratory therapists attend to patients' bedside care, but these healthcare professionals will likely tell you their work is much more specialized.

As experts in the cardiopulmonary system, respiratory therapists often serve on critical care teams, supporting critically ill patients whenever breathing problems occur. They might also work with anesthesiologists to monitor patients' breathing after surgery, operate life-saving mechanical ventilators, attend high-risk births, or help diagnose sleep disorders like sleep apnea, among many other job functions.

Most people take breathing for granted, but for the thousands of people who suffer from breathing problems, each breath is a major achievement. Those people include heart-attack and trauma victims; patients with chronic lung problems such as bronchitis, asthma, and emphysema; premature infants; and people with lung cancer, AIDS, and cystic fibrosis. In each instance, patients will likely work with a respiratory therapist under the direction of a physician.

Jobs in the respiratory therapy field are expected to grow much faster than average, and respiratory therapists in Montana earn a median annual wage of \$58,420! (<https://www.careeronestop.org/Toolkit/Careers/Occupations/occupation-profile.aspx?keyword=Respiratory%20Therapists&onetcode=29112600&location=Montana>)

## Respiratory Therapy Program Overview

Accredited by the Commission on Accreditation of Respiratory Care, the Great Falls College Respiratory Therapy Program is designed to help you develop the skills required for a successful career as a respiratory therapist. Upon completion of the AAS degree in respiratory therapy, graduates will be prepared for a career as a respiratory therapist. Graduates are eligible to take the National Board for Respiratory Care (NBRC) Certification and Registry practitioner examinations.

## Prerequisite Course Work Completed at City College

Individuals can initially apply to attend City College and work with an Academic Advisor to create a plan to complete the prerequisite courses required for this program. The Academic Advisor will also assist students in applying to Great Falls College and directing them to the competitive application process for this program.

If you have any questions as to college work taken outside of the MUS system, the Academic Advisor will collaborate with the Great Falls Program Director to verify if that work can be utilized to fulfill prerequisite courses or other general education.

## Core Respiratory Therapy Program Delivery

In this delivery method, there is a combination of online learning activities where one or more types of technologies are used to deliver instruction to students who are separated from the instructor in space and time.

- **Academic** course content such as lectures, quizzes, and exams will be available online asynchronously, meaning students are required to work through this material according to the course schedule, but the content is available 24/7.
- **Clinical and laboratory** attendance is required according to the schedule designed by faculty and the local clinical sites. The days, hours, and locations of these sessions will vary but an advance schedule will be provided to allow students to plan accordingly. Full details of clinical and lab sessions will be provided once students are in the program. In general, students should expect to be in a lab session at a local clinic around 3 hours per week and in a clinical session 2-3 days a week with varying times. Labs begin the first semester and clinical the second semester.

The local (clinical) and online (classwork) components of this program allow students to become a Respiratory Therapist where they live and offers flexibility in learning times to accommodate busy lives. However, this type of learning requires a great level of self-control, motivation and dedication to studies and schedule. Make no mistake, this is a **full-time** commitment, and students should expect to spend a minimum of 40 hours per week working on coursework and clinical sessions, usually more.

In addition to the amount of time students are investing in their education, participating in this distance program means they also have to take the initiative to establish connections with the community for their clinical locations. They must be resilient in an environment that requires them to self-advocate, be vocal about their needs, and be self-motivated to arrange what they need in order to succeed.

The **face-to-face** component of the program is utilized for the lab and clinical where the students must be in a clinical facility with an identified preceptor. Additionally, due to the distance nature of the program, reliable and high-quality technology and computer competency are necessary. Students in this program must have:

- a reliable computer
- easily accessible and reliable high-speed internet
- quick adaptability to technology
- a wireless mobile device with network and GPS functionality.

## Selecting a Clinical Site

Great Falls College has existing agreements with regional clinical facilities that you may work with in the following communities:

- Great Falls
- Billings
- Bozeman
- Kalispell/Whitefish

In addition, students may attend labs and clinical in other communities, either in part or full, depending on that facility's ability to provide the level of competency required by the program. For example, a student living in Butte, Lewistown, Helena, Anaconda,

Sidney, Wolf Point, Glendive, Cody or any other community may be able to complete portions of their clinical courses locally but will require travel and lodging to attend a regional medical facility to complete adult and neonatal critical care training and specialty care rotations.

For more detailed information on the Local & Online aspects of the program, contact Brian Cayko at [brian.cayko@gfcmu.edu](mailto:brian.cayko@gfcmu.edu) or go to Great Falls College Respiratory Therapy homepage: [www.gfcmu.edu/webs/respiratorycare/](http://www.gfcmu.edu/webs/respiratorycare/) (<http://www.gfcmu.edu/webs/respiratorycare/>)

## Required Courses

| Code   | Title  | Credits |
|--|--|---------|
| <b>Prerequisite Courses and Skills</b>   |  |         |
| Background in basic science and math is essential to prepare applicants to succeed in the RT program. The following courses are recommended, not required.   |  |         |
| AHMS 144   | Medical Terminology  | 3       |
| BIOM 250 & BIOM 251  | Microbiology for Hlth Sciences and Microbiology Hlth Sciences Lab <sup>1</sup> | 4       |
| CHMY 121 & CHMY 122  | Intro to General Chemistry and Intro to Gen Chem Lab <sup>2</sup>              | 4       |
| The Great Falls College MSU RT program is a limited enrollment program, accepting a restricted number of students each year. Interested students are urged to contact the RT Program Director or an Advisor for student advising specific to admission requirements and criteria for program acceptance. |  |         |
| <b>Required Prerequisite Courses</b>   |  |         |
| Prior to formal program acceptance, the applicant must successfully complete all of the program prerequisites with a minimum grade of "C-" or better.  |  |         |
| BIOH 201 & BIOH 202  | Human Anatomy & Physiology I and Human Anatomy & Phys I Lab <sup>2</sup>       | 4       |
| BIOH 211 & BIOH 212  | Human Anatomy & Physiology II and Human Anatomy & Phys II Lab <sup>1</sup>     | 4       |
| WRIT 101   | College Writing I <sup>2</sup>   | 3       |
| Select one course from: <sup>3</sup>   |  | 3-4     |
| M 121  | College Algebra <sup>2</sup>   |         |
| M 140  | College Math for Healthcare <sup>2</sup>                                       |         |
| M 151  | Precalculus <sup>2</sup>   |         |
| M 171  | Calculus I <sup>2</sup>  |         |
| STAT 216   | Introduction to Statistics <sup>2</sup>  |         |
| Subtotal   |  | 14-15   |

1

Prerequisites needed

2

Placement in course is determined by placement assessment

3

For transfer students, M 115 Probability and Linear Math will be accepted.

| Code  | Title | Credits |
|---|-------|---------|
| <b>Program Requirements after Formal Acceptance</b> |       |         |

A grade of "C-" or better must be earned in all required courses to continue in and graduate from the program.

The courses below are to be taken in the order that they are listed.

Admission into the RT Program and completion of the previous semester are required. CPR certification is a prerequisite for entrance into clinical courses. Each student is required to sign a clinical contract defining their professional responsibilities and behavior.



*First Year - Fall*

|          |                             |    |
|----------|-----------------------------|----|
| AHRC 150 | Respiratory Care Lab I      | 1  |
| AHRC 152 | Respiratory Care            | 3  |
| AHRC 155 | Respiratory Physiology      | 3  |
| AHRC 170 | Respir Care Tech & Proced I | 5  |
| AHRC 254 | Pulmonary Assessment        | 3  |
| Subtotal |                             | 15 |

*First Year - Spring*

|          |                                |    |
|----------|--------------------------------|----|
| AHRC 140 | Respiratory Care Clinic I      | 4  |
| AHRC 160 | Pharmacology for Resp Diseases | 2  |
| AHRC 171 | Resp Care Tech & Proced II     | 5  |
| AHRC 180 | Ventilator Management          | 3  |
| AHRC 250 | Respiratory Care Lab II        | 1  |
| Subtotal |                                | 15 |

*Second Year - Fall*

|          |                               |    |
|----------|-------------------------------|----|
| AHRC 240 | Respiratory Care Clinic III   | 5  |
| AHRC 245 | Resp Care Clinical Seminar I  | 1  |
| AHRC 251 | Hemodynamic Monitoring        | 4  |
| AHRC 262 | Neonatal Respiratory Care     | 3  |
| ECP 212  | Advanced Cardiac Life Support | 1  |
| Subtotal |                               | 14 |

*Second Year - Spring*

|                         |                                |    |
|-------------------------|--------------------------------|----|
| AHRC 241                | Respiratory Care Clinic IV     | 5  |
| AHRC 246                | Resp Care Clinical Seminar II  | 1  |
| AHRC 264                | Respiratory Care in Alt Sites  | 2  |
| ECP 241                 | Pediatric Advanced Life Supprt | 1  |
| HTH 120                 | IV Therapy for HC Providers    | 1  |
| Select one course from: |                                | 3  |
| COMX 115                | Intro to Interpersonal Comm    |    |
| PSYX 100                | Intro to Psychology            |    |
| PSYX 230                | Developmental Psychology       |    |
| Subtotal                |                                | 13 |

**Total Minimum Credits****72**

## Surgical Technology Associate of Applied Science

Great Falls College Montana State University (Great Falls MSU) is proud to partner with City College at Montana State University Billings to offer the Associate of Applied Science Degree in Surgical Technology in Billings.

Students will take classes on the City College and Montana State University Billings (MSU Billings) campuses, and webex online through Great Falls College MSU. Students now have access to a surgical tech classroom/lab on the City College campus. The clinical components of the curriculum are primarily offered at St. Vincent Healthcare and Billings Clinic but some travel may be required for additional required clinicals. All coursework can be completed in Billings. However, outreach students are required to go to Great Falls for commencement and to take the national Certification exam.

Students admitted to City College enter as General Studies majors and should indicate Surgical Technology as their desired program. After meeting with an advisor, specific prerequisite courses are selected. Students applying to the Great Falls College MSU Surgical Technology program must successfully complete (or be in the process of completing) the prerequisite courses. The competitive application through Great Falls is usually in mid-October. Students need to keep checking the

Great Falls College MSU website to confirm deadline. Acceptance to the program is determined after fall semester grades are finalized and applications have been evaluated.

**ALL** prerequisite courses require a grade of "C-" or higher. Once in the Surgical Technology Program, if a student obtains less than a grade of "Satisfactory" (**80%**) in any portion, the entire Surgical Technology Program will have to be repeated. This is a very intense program.

The Surgical Technology-specific courses begin each spring semester. Lecture classes will be taught through WebEx from the Great Falls campus and students must attend classes at one designated classroom on the City College campus. Lab classes will also be taught by a Great Falls instructor at the City College campus in the surgical lab space. Clinical and Internship spots will be assigned to students by a lab instructor and may require travel out of a student's designated area to fulfill the minimal requirement of 120 surgical cases.

Students in the program are educated to be Surgical Technologists (ST), part of the surgical team, to ensure the operative procedure is conducted under optimal conditions. The ST is responsible for three phases (preoperative, intraoperative, and postoperative) of patient care with minimal direction. All surgical team members must adhere to the principles of asepsis and the practice of sterile technique. The ST normally functions in a sterile capacity by passing instruments, equipment and supplies to the surgeon during the surgical procedure but may also perform many non-sterile duties throughout the workday.

As an allied health professional, a Surgical Technologist (ST) works closely with surgeons, anesthesiologists, registered nurses, and other surgical personnel delivering patient care and assuming appropriate responsibilities before, during and after surgery. As part of the surgical team, the ST must be able to work quickly and accurately with a commitment to detail. A number of activities must be integrated according to priority when under pressure in stressful and emergency situations. Therefore, a stable temperament and a strong sense of responsibility are qualities essential to the Surgical Technologist. Considerable patience and concern for order are required. Manual dexterity, good vision and hearing and physical stamina are vital. Sensitivity to the needs of the patient as well as other members of the surgical team must be demonstrated. Individuals who practice this profession have a strong desire to help others and make a valuable contribution to society. Honesty and moral integrity are essential in upholding standards and providing safe patient care.

Technical skills will be important, as advances in medical technology will be central to the profession, and students will need to learn to incorporate computers, lasers, fiber optics, electronics and robotics for patient care.

Great Falls College Montana State University does not require background checks. However, to promote patient safety and decrease institutional liability, most clinical agencies require students to have cleared a background check and/or drug screening before they will permit the students in the clinical setting. To meet these requirements, the College provides this service and requires that the check/screening be done prior to placement in any clinical agency. Background checks/drug screenings are done at the student's expense. Students with background checks/drug screenings that reveal a finding will be evaluated individually to determine whether they will be eligible for clinical placement for the respective degree program.

Prospective students may contact Great Falls College MSU Outreach Office at 406-771-4355 for more information regarding the Surgical Technology program or Program Director, Daisy Gibson, at 406-771-4355 or [daisy.gibson@gfcmu.edu](mailto:daisy.gibson@gfcmu.edu).

### Program Accreditation

Commission on Accreditation of Allied Health Education Programs (CAAHEP) at 9355 113th Street North #7709, Seminole, FL 33775 or [mail@caahep.org](mailto:mail@caahep.org)



Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARCSTSA) at 19751 East Mainstreet Suite 339, Parker, CO 80138 or info@arcstsa.org

## Required Courses

**Code**                      **Title**    **Credits**

A grade of C- or above is required in all courses.

### Prerequisites

These courses are to be successfully completed, or in the process of completion, at the time of application to the program. All are available at City College.

|                            |  |    |
|----------------------------|--|----|
| AHMS 144                   | Medical Terminology <sup>2</sup>   | 3  |
| BIOH 201 & BIOH 202        | Human Anatomy & Physiology I and Human Anatomy & Phys I Lab <sup>2</sup>       | 4  |
| BIOH 211 & BIOH 212        | Human Anatomy & Physiology II and Human Anatomy & Phys II Lab <sup>2</sup>     | 4  |
| BIOM 250 & BIOM 251        | Microbiology for Hlth Sciences and Microbiology Hlth Sciences Lab <sup>2</sup> | 4  |
| M 105                      | Contemporary Mathematics <sup>2</sup>  | 3  |
| PSYX 100                   | Intro to Psychology <sup>2</sup>   | 3  |
| Select one writing course: |  | 3  |
| WRIT 101                   | College Writing I <sup>2</sup>   |    |
| WRIT 121                   | Intro to Technical Writing <sup>2</sup>  |    |
| WRIT 122                   | Intro to Business Writing <sup>2</sup>   |    |
| Subtotal                   |  | 24 |

### Surgical Technology Required Courses

#### First Year – Spring

|          |   |    |
|----------|---|----|
| AHST 101 | Introduction to Surgical Technology <sup>4</sup>                | 3  |
| AHST 115 | Surgical Lab I <sup>5</sup>                                     | 3  |
| AHST 154 | Surgical Pharmacology <sup>3</sup>                              | 3  |
| COMX 115 | Intro to Interpersonal Comm <sup>2</sup>                        | 3  |
| PHL 221  | Introduction to Philosophy and Biomedical Ethics <sup>1,3</sup> | 3  |
| Subtotal |   | 15 |

#### Second Year – Fall

|          |  |    |
|----------|--|----|
| AHST 200 | Operating Room Techniques <sup>4</sup> | 5  |
| AHST 201 | Surgical Procedures I <sup>4</sup>     | 4  |
| AHST 215 | Surgical Lab II <sup>5,7</sup>         | 3  |
| AHST 250 | Surgical Clinical I <sup>6,8</sup>     | 4  |
| Subtotal |  | 16 |

#### Second Year – Spring

|                                     |                                       |           |
|-------------------------------------|---------------------------------------|-----------|
| AHST 202                            | Surgical Procedures II <sup>4,7</sup> | 5         |
| AHST 251                            | Surgical Clinical II <sup>6,7</sup>   | 5         |
| AHST 295                            | Surgical Practicum <sup>6,8</sup>     | 5         |
| Subtotal                            |                                       | 15        |
| Sit for the CST Exam in Great Falls |                                       |           |
| <b>Total Minimum Credits</b>        |                                       | <b>70</b> |

1

Students are encouraged to take this course before entering the program.

2

Available at City College

3

Great Falls College MSU Online

4

Great Falls College MSU Webex

5

Taken in hospital/lab

6

Taken in hospital

7

First 8 weeks of semester

8

Second 8 weeks of semester

## Trauma Certificate of Technical Study \*Program placed on moratorium\*

### Special Considerations:

Students must submit their NREMT certification as well as complete a competitive application process in order to enter the paramedic program.

### Prerequisites:

Demonstrate proficiency in English and math.

BIOH 104 (available online)

## Required Courses

| Code                         | Title                          | Credits   |
|------------------------------|--------------------------------|-----------|
| ECP 201                      | Paramedic Fundamentals         | 3         |
| ECP 202                      | Paramedic Fundamentals Lab     | 1         |
| ECP 206                      | EMS Case Studies               | 4         |
| ECP 216                      | Hospital Clinical I            | 5         |
| ECP 230                      | Trauma                         | 2         |
| ECP 232                      | Pulmonary                      | 2         |
| ECP 233                      | Trauma/Pulmonary Lab and PHTLS | 1         |
| <b>Total Minimum Credits</b> |                                | <b>18</b> |

## Suggested Plan of Study

| Code          | Title                          | Credits   |
|---------------|--------------------------------|-----------|
| Fall Semester |                                |           |
| ECP 201       | Paramedic Fundamentals         | 3         |
| ECP 202       | Paramedic Fundamentals Lab     | 1         |
| ECP 206       | EMS Case Studies               | 4         |
| ECP 216       | Hospital Clinical I            | 5         |
| ECP 230       | Trauma                         | 2         |
| ECP 232       | Pulmonary                      | 2         |
| ECP 233       | Trauma/Pulmonary Lab and PHTLS | 1         |
| <b>Total</b>  |                                | <b>18</b> |

## Ultrasound Technology Certificate of Applied Science

The Ultrasound Technology Certificate of Applied Science (CAS) program prepares students to function as ultrasonographers in a broad variety of clinical settings, including hospitals, clinics, and community health centers. The three-semester

CAS program includes classroom, laboratory, and clinical learning opportunities. Laboratory and clinical experience allow students to integrate classroom knowledge in a practical setting. Students may rotate through different clinical sites during the program.

## Program Entrance Requirements

Ultrasound applicants must meet the following program entrance requirements:

- Completed a 200-level anatomy & physiology course with a C or higher
- Have an associate degree in an allied health care field from a regionally accredited (p. 41) college that includes hands-on patient care OR a bachelor's degree
- Hold a current medical registry, licensure, or certification
- Must have a minimum number of patient care hours (volunteer, clinical, or work)

Additional details can be found at the program webpage: [www.msubillings.edu/citycollege/programs/ProgUltrasound.htm](http://www.msubillings.edu/citycollege/programs/ProgUltrasound.htm) (<http://www.msubillings.edu/citycollege/programs/ProgUltrasound.htm>).

The Ultrasound Tech program is a competitive entrance program. Applicants to the program will need to be admitted to City College first, and then complete the program's application process by the deadline specified by the department.

Please see the program webpage ([www.msubillings.edu/citycollege/programs/ProgUltrasound.htm](http://www.msubillings.edu/citycollege/programs/ProgUltrasound.htm) (<http://www.msubillings.edu/citycollege/programs/ProgUltrasound.htm>)) for more details on the application process. Space is limited based on clinical accessibility. Please note that clinical sites can be throughout Montana and other states upon approval by the department.

Students must complete all required Ultrasound Technology (US) classes with a "C" (75%) or higher to proceed to the next semester. If a student does not pass all required courses with a "C" (75%) or higher, he/she will not be able to continue in the program.

After successfully completing the program, students are awarded a Certificate of Applied Science degree and are prepared to sit for the American Registry of Diagnostic Medical Sonographers (ARDMS).

Conviction of a crime (misdemeanor or felony) could leave an individual ineligible for participation in the certifying test and/or becoming registered in Montana or other states. Background checks are required prior to clinical internships. Please contact the ARDMS and/or the ARRT to complete and Ethics Review if the student believes there may be a potential problem.

| Code  | Title                       | Credits |
|---|-----------------------------|---------|
| <b>Prerequisite Courses</b>   |                             |         |
| The required prerequisite courses listed below may have already been completed in previous health science studies, and if so, may be accepted as transfer courses. If not, they must be completed before entry into the Ultrasound Certificate program. |                             |         |
| AHMS 144  | Medical Terminology         | 3       |
| CAPP 120  | Introduction to Computers   | 3       |
| COMX 106  | Comm in a Dynamic Workplace | 3       |
| M 111   | Technical Mathematics       | 3       |
| WRIT 104  | Workplace Communications    | 3       |

## Required Courses

| Code                    | Title                      | Credits |
|-------------------------|----------------------------|---------|
| <b>Required Courses</b> |                            |         |
| AHUS 100                | Introduction to Ultrasound | 3       |
| AHUS 101                | Ultrasound Instrumentation | 3       |

|                              |                         |           |
|------------------------------|-------------------------|-----------|
| AHUS 102                     | Abdominal Sonography    | 3         |
| AHUS 103                     | OB and GN Sonography    | 3         |
| AHUS 104                     | Clinical Experience I   | 4         |
| AHUS 105                     | Clinical Experience II  | 4         |
| AHUS 106                     | Sectional Anatomy       | 3         |
| AHUS 107                     | Ultrasound Physics      | 3         |
| AHUS 108                     | Clinical Experience III | 4         |
| <b>Total Minimum Credits</b> |                         | <b>30</b> |

Students should check the course descriptions for required prerequisites.

## Suggested Plan of Study

| Code                         | Title                       | Credits   |
|------------------------------|-----------------------------|-----------|
| <b>Prerequisite Semester</b> |                             |           |
| AHMS 144                     | Medical Terminology         | 3         |
| COMX 106                     | Comm in a Dynamic Workplace | 3         |
| M 111                        | Technical Mathematics       | 3         |
| CAPP 120                     | Introduction to Computers   | 3         |
| WRIT 104                     | Workplace Communications    | 3         |
| <b>Total</b>                 |                             | <b>15</b> |
| <b>First Semester</b>        |                             |           |
| AHUS 100                     | Introduction to Ultrasound  | 3         |
| AHUS 101                     | Ultrasound Instrumentation  | 3         |
| AHUS 102                     | Abdominal Sonography        | 3         |
| AHUS 104                     | Clinical Experience I       | 4         |
| <b>Total</b>                 |                             | <b>13</b> |
| <b>Second Semester</b>       |                             |           |
| AHUS 103                     | OB and GN Sonography        | 3         |
| AHUS 105                     | Clinical Experience II      | 4         |
| AHUS 106                     | Sectional Anatomy           | 3         |
| <b>Total</b>                 |                             | <b>10</b> |
| <b>Third Semester</b>        |                             |           |
| AHUS 107                     | Ultrasound Physics          | 3         |
| AHUS 108                     | Clinical Experience III     | 4         |
| <b>Total</b>                 |                             | <b>7</b>  |

## Welding and Metal Fabrication Technology Associate of Applied Science

Welding is a fall start program only. See an advisor for more information.

The welding industry offers workers immediate tangible rewards for their efforts. Few professions allow the opportunity for creativity found in the fabrication shop. In addition, the fabrication industry represents one of the largest employment segments in our local economy. Graduates may qualify for advanced placement in the Ironworkers, Pipefitters, or Boilermakers unions.

Graduates find work in structural and steel fabrication shops and with heavy equipment rebuilders and manufacturers, mining, refineries, and other energy related enterprises in the region. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate safe work practices in the welding and metal fabrication environment.
- Interpret blueprints and apply appropriate construction methods.
- Successfully weld ferrous and non-ferrous metals in all positions with a variety of welding processes.
- Understand basic metallurgy and apply those principles to metal fabrication.

## Required Courses

| Code                         | Title                          | Credits   |
|------------------------------|--------------------------------|-----------|
| <b>Required Courses</b>      |                                |           |
| CAPP 120                     | Introduction to Computers      | 3         |
| COMX 106                     | Comm in a Dynamic Workplace    | 3         |
| M 114                        | Extended Technical Mathematics | 3         |
| WLDG 117                     | Blueprint Rd & Weld Symbols    | 3         |
| WLDG 124                     | Welding Theory Tech & Safety   | 3         |
| WLDG 125                     | Cut/Shielded Mtl Arc Weld Lab  | 5         |
| WLDG 126                     | Shielded Metal Arc Welding Lab | 4         |
| WLDG 153                     | Metal Fabrication Basics       | 3         |
| WLDG 154                     | Metal Fabrication Basics Lab   | 3         |
| WLDG 156                     | Semi-Automatic Welding         | 2         |
| WLDG 157                     | Semi-Automatic & SMAW Lab      | 5         |
| WLDG 205                     | Applied Metallurgy             | 2         |
| WLDG 212                     | Pipe Welding & Layout          | 3         |
| WLDG 213                     | Pipe Welding I Lab             | 5         |
| WLDG 215                     | Gas Tungsten Arc Welding       | 5         |
| WLDG 250                     | Metals Production              | 2         |
| WLDG 251                     | Specialty Weld Processes       | 5         |
| WLDG 280                     | Weld Testing Certification     | 2         |
| WLDG 281                     | Weld Testing Certification Lab | 3         |
| WRIT 122                     | Intro to Business Writing      | 3         |
| <b>Suggested Elective</b>    |                                |           |
| WLDG 298                     | Internship/Cooperative Educ    |           |
| <b>Total Minimum Credits</b> |                                | <b>67</b> |

In order to take the first semester of WLDG courses, students must prove their skills in Reading Comprehension and Writing. For more information, please contact the Advising Office.

## Suggested Plan of Study

| Code                   | Title                          | Credits   |
|------------------------|--------------------------------|-----------|
| <b>First Semester</b>  |                                |           |
| WRIT 122               | Intro to Business Writing      | 3         |
| WLDG 117               | Blueprint Rd & Weld Symbols    | 3         |
| WLDG 124               | Welding Theory Tech & Safety   | 3         |
| WLDG 125               | Cut/Shielded Mtl Arc Weld Lab  | 5         |
| WLDG 126               | Shielded Metal Arc Welding Lab | 4         |
| <b>Total</b>           |                                | <b>18</b> |
| <b>Second Semester</b> |                                |           |
| M 114                  | Extended Technical Mathematics | 3         |
| WLDG 153               | Metal Fabrication Basics       | 3         |

|                        |  |            |
|------------------------|--|------------|
| WLDG 154               | Metal Fabrication Basics Lab           | 3          |
| WLDG 156               | Semi-Automatic Welding                 | 2          |
| WLDG 157               | Semi-Automatic & SMAW Lab              | 5          |
| <b>Total</b>           |  | <b>16</b>  |
| <b>Summer</b>          |  |            |
| WLDG 298               | Internship/Cooperative Educ (optional) | 3-9        |
| <b>Total</b>           |  | <b>3-9</b> |
| <b>Third Semester</b>  |  |            |
| CAPP 120               | Introduction to Computers              | 3          |
| WLDG 205               | Applied Metallurgy                     | 2          |
| WLDG 212               | Pipe Welding & Layout                  | 3          |
| WLDG 213               | Pipe Welding I Lab                     | 5          |
| WLDG 215               | Gas Tungsten Arc Welding               | 5          |
| <b>Total</b>           |  | <b>18</b>  |
| <b>Fourth Semester</b> |  |            |
| COMX 106               | Comm in a Dynamic Workplace            | 3          |
| WLDG 250               | Metals Production                      | 2          |
| WLDG 251               | Specialty Weld Processes               | 5          |
| WLDG 280               | Weld Testing Certification             | 2          |
| WLDG 281               | Weld Testing Certification Lab         | 3          |
| <b>Total</b>           |  | <b>15</b>  |

## Welding and Metal Fabrication Technology Certificate of Applied Science

Welding is a fall start program only. See an advisor for more information.

The welding industry offers workers immediate tangible rewards for their efforts. Few professions allow the opportunity for creativity found in the fabrication shop. In addition, the fabrication industry represents one of the largest employment segments in our local economy. Graduates find work in structural and steel fabrication shops and with heavy equipment rebuilders and manufacturers, mining, refineries, and other energy related enterprises in the region. See our website at [www.msubitillings.edu/careers](http://www.msubitillings.edu/careers) for graduate data.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Demonstrate safe work practices in the welding and metal fabrication environment.
- Interpret blueprints and apply appropriate construction methods.
- Successfully weld ferrous metals in all positions with a variety of welding processes.

## Required Courses

| Code                    | Title                         | Credits |
|-------------------------|-------------------------------|---------|
| <b>Required Courses</b> |                               |         |
| CAPP 120                | Introduction to Computers     | 3       |
| COMX 106                | Comm in a Dynamic Workplace   | 3       |
| M 111                   | Technical Mathematics         | 3       |
| WLDG 117                | Blueprint Rd & Weld Symbols   | 3       |
| WLDG 124                | Welding Theory Tech & Safety  | 3       |
| WLDG 125                | Cut/Shielded Mtl Arc Weld Lab | 5       |

|                              |                                |           |
|------------------------------|--------------------------------|-----------|
| WLDG 126                     | Shielded Metal Arc Welding Lab | 4         |
| WLDG 153                     | Metal Fabrication Basics       | 3         |
| WLDG 154                     | Metal Fabrication Basics Lab   | 3         |
| WLDG 156                     | Semi-Automatic Welding         | 2         |
| WLDG 157                     | Semi-Automatic & SMAW Lab      | 5         |
| WRIT 104                     | Workplace Communications       | 3         |
| <b>Total Minimum Credits</b> |                                | <b>40</b> |

*In order to take the first semester of WLDG courses, students must prove their skills in Reading Comprehension and Writing. For more information, please contact the Advising Office.*

## Suggested Plan of Study

| Code            | Title                          | Credits |
|-----------------|--------------------------------|---------|
| First Semester  |                                |         |
| WRIT 104        | Workplace Communications       | 3       |
| COMX 106        | Comm in a Dynamic Workplace    | 3       |
| WLDG 117        | Blueprint Rd & Weld Symbols    | 3       |
| WLDG 124        | Welding Theory Tech & Safety   | 3       |
| WLDG 125        | Cut/Shielded Mtl Arc Weld Lab  | 5       |
| WLDG 126        | Shielded Metal Arc Welding Lab | 4       |
| Total           |                                | 21      |
| Second Semester |                                |         |
| M 111           | Technical Mathematics          | 3       |
| CAPP 120        | Introduction to Computers      | 3       |
| WLDG 153        | Metal Fabrication Basics       | 3       |
| WLDG 154        | Metal Fabrication Basics Lab   | 3       |
| WLDG 156        | Semi-Automatic Welding         | 2       |
| WLDG 157        | Semi-Automatic & SMAW Lab      | 5       |
| Total           |                                | 19      |

# Outreach & Community Programs

## City College at MSU Billings Workforce Training

**Workforce and Resource Development**  
 (406) 247-3055  
[workforcedevelopment@msubillings.edu](mailto:workforcedevelopment@msubillings.edu)

As City College at MSU Billings evolves into a comprehensive community college, a critical part of its mission is to become a center for community learning. Workforce Training at City College offers short-term non-credit courses, customized training solutions for industry partners, and access to City College academic courses and programs.

### Non-Credit Training Courses

Workforce training offers regularly scheduled non-credit training for Nursing Assistant training, welding (Introduction to Welding and TIG Welding) and paralegal courses. More information about these can be found on our website <https://www.msubillings.edu/citycollege/wtc/> (<https://www.msubillings.edu/citycollege/wtc/>)

### Customized Solutions

Why outsource your training issues when you can in-source a training director to be part of your executive team? Through a multi-step, consultative process, we listen to your needs and design a customized organizational development solution that may include technical and “soft skills” training. City College at MSU Billings can bring the resources of MSU Billings to your business and help you achieve the next level.

As an effective community partner, the City College at MSU Billings Workforce Training Center develops and delivers customized training contracts for local businesses. These contracts include courses delivered on campus and at employer’s worksites. Courses have included safety training, skills training, software, HazMat, and a variety of other specially developed courses. Many of the courses offer nationally recognized, portable skills certifications.

For additional information about City College at MSU Billings Workforce Training, contact [workforcedevelopment@msubillings.edu](mailto:workforcedevelopment@msubillings.edu).

## MSU Billings Online University

Online Advising: [inquiry@msubonline.org](mailto:inquiry@msubonline.org) or (406) 657-2240  
[www.msubillings.edu/msubonline/](http://www.msubillings.edu/msubonline/) (<http://www.msubillings.edu/msubonline/>)

### Offered Online

Through the MSU Billings Online University, complete General Education requirements as well as the following certificates and degrees listed below. We are continuously reviewing our programs to determine what we can offer in an online format. To get a current list of degrees and classes offered online, please check the online website [www.msubonline.org](http://www.msubonline.org) (<http://www.msubonline.org>).

### Online Programs currently offered at the City College at MSU Billings:

#### Associate Degree Programs

A.A.S. Accounting Technology  
 A.A. General Studies (Self-Designed)  
 A.S. General Studies (Self-Designed)  
 A.S. Business Administration  
 A.S. Human Resources-Applied Emphasis  
 A.S. Human Resources-College of Business Articulated Emphasis

#### Certificates of Applied Science

Human Resources Management

Medical Coding & Insurance Billing  
 Ultrasound Technology

Please refer to the program requirements for information on any of these programs.

**Students can also take individual online courses** for professional development, to transfer to another institution, to apply toward another MSU Billings degree program, or to supplement your on-campus course schedule with an online learning experience.

Students are encouraged to work with an advisor when pursuing any of these degree programs to ensure that courses selected will successfully meet all degree requirements and also fulfill the student’s academic interests and goals. For academic advising and course selection assistance, please contact the MSU Billings Online University Advisor at [inquiry@msubonline.org](mailto:inquiry@msubonline.org).

## International Studies

**LA 700 (406) 657-1705**

[www.msubillings.edu/internationalstudies/](http://www.msubillings.edu/internationalstudies/) (<http://www.msubillings.edu/internationalstudies/>)

Who am I? What is my place in this world? The International Studies Program seeks to engage students in a process of awakening. Through various study abroad programs and the International Studies Minor, students begin to experience the complexity of cultures and the richness of diversity. The end result produces students who are involved, lifelong learners, with a concern for the world in which we live, and an ability to become leaders who think of future generations.

The Office of International Studies (OIS), provides support services for current and prospective international students, the International Studies Club, and facilitates study abroad applications, as well as the Be a Foreign Friend (BFF) program.



# Administration & Faculty

## Administration

**Trier, Dr. Vicki**  
Dean

## Faculty

**Andujar, Jenna**  
Instructor, Level II  
Nursing, Health & Public Safety

**Bailey, Allison**  
Instructor, Level II  
General Education & Transfer

**Bennett, Austin**  
Instructor, Level II  
General Education & Transfer

**Bergerson, Melissa**  
Instructor, Level II  
Nursing, Health & Public Safety

**Bogunovich, Nicole**  
Instructor  
Business, Construction & Energy Technology

**Brumley, Bruce**  
Instructor, Level IV  
Computer Technology

**Cole, Anne**  
Instructor, Level II  
General Education & Transfer

**Curry, Katie**  
Instructor, Level II  
Nursing, Health & Public Safety

**Dayley, Cody**  
Instructor, Level II  
Business, Construction & Energy Technology

**Gagnon, Vern**  
Instructor, Level IV  
Transportation & Welding Technology

**Garza, Andrea**  
Instructor, Level II  
General Education & Transfer

**Gilbertsen, Eric**  
Instructor, Level II  
General Education & Transfer

**Hall, Tim**  
Instructor, Level II  
Business, Construction & Energy Technology

**Johnson, Ben**  
Instructor, Level I  
Computer Technology

**Jones, Sharon Holly**

Instructor, Level II  
Nursing, Health & Public Safety

**Landon, Chad**  
Instructor, Level II  
Nursing, Health & Public Safety

**Leibrand, Curtis**  
Instructor, Level II  
Nursing, Health & Public Safety

**Lohof, Alan**  
Instructor, Level II  
Nursing, Health & Public Safety

**MadPlume, Roger**  
Instructor, Level II  
General Education & Transfer

**McKenzie, Craig**  
Instructor, Level IV  
Computer Technology

**Millard, Cindy**  
Instructor, Level II  
Business, Construction & Energy Technology

**Mouser, Lance**  
Instructor, Level II  
General Education & Transfer

**Nedrow, David**  
Instructor, Level II  
Business, Construction & Energy Technology

**Pannell, John**  
Instructor, Level II  
Computer Technology

**Pfau, Katherine**  
Instructor, Level III  
Transportation & Welding Technology

**Rasmussen, Robin**  
Instructor, Level II  
Nursing, Health & Public Safety

**Roberts, Randal**  
Instructor, Level II  
Transportation & Welding Technology

**Russell, Samuel**  
Instructor, Level I  
Transportation & Welding Technology

**Shea, Erica**  
Instructor, Level II  
General Education & Transfer

**Shumway, Kelly**  
Instructor, Level II  
Nursing, Health & Public Safety

**Stene, Andrew**  
Instructor, Level I

Transportation & Welding Technology

**Stenson, Timothy**

Instructor, Level II

Transportation & Welding Technology

**Stewart, Chairsty**

Instructor, Level II

General Education & Transfer

**Thompson-Bahm, Heather**

Instructor, Level III

Business, Construction & Energy Technology

**White, Victor**

Instructor, Level II

Nursing, Health & Public Safety

**Whitlatch, Christine**

Instructor, Level II

General Education & Transfer

**Wodrich, Steven**

Instructor, Level I

Transportation & Welding Technology

## Emeritus Faculty

Allard, Mr. W. Gregory *University Lecturer, Educational Theory and Practice* (2003-2018)

Amundson, Mr. Gary *Adjunct Instructor, Business Administration* (1998-2016)

Baack, Ms. Susan *Instructor, General Education-English* (1995-2008)

Barfield, Dr. Susan *Professor, Educational Theory & Practice* (1997-2015)

Behm, Dr. Gary *Professor, Music* (1979-2008)

Boden, Dr. Anneke-Jan *Professor, Communication Arts* (1964-1996)

Campbell, Mr. Michael *Professor, Accounting* (1978-2020)

Card, Dr. Kenneth *Professor, Special Education* (1964- 1981)

Cast, Mr. Brian *Professor, Art* (1987-2013)

Christensen, Mr. Alan, *Lecturer, Educational Theory & Practice* (2004-2021)

Christensen, Dr. Linda *Professor, Special Education* (1982-2008)

Coffman, Dr. Stephen L. *Professor, Communication and Theatre* (1977-2018)

Coffman, Dr. Victoria Marie Tait *Professor, Communication Arts* (1967-2004)

Dell, Dr. Cindy *Professor, Educational Theory & Practice* (2004-2020)

Dunlop, Dr. Lowell A. *Professor, Elementary and Secondary Education, Dean of Students* (1965-1989)

Fargo, Dr. Mumatz A. *Professor, History* (1969-2000)

Farsio, Dr. Farzad *Professor, Finance and Economics* (1987-2007)

Fishbaugh, Dr. Mary Susan E. *Dean of Education* (1990-2019)

Floyd, Dr. Joseph W. *Professor, Native American Studies, Political Science, and Sociology* (1978-2007)

Gabel, Dr. Kathie *Professor, Health and Human Performance* (2009-2017)

Groseth, Dr. Rolf S. *Chancellor* (2010-2014)

Gross, Dr. Daniel *Professor, Communication* (1991-2019)

Gulick, Dr. Walter B. *Professor, Philosophy, Humanities, and Religious Studies* (1974-2002)

Healey, Dr. James *Professor, English* (1975-1999)

Hecimovic, Dr. Anton *Professor, Educational Theory and Practice* (1990-2016)

Heiat, Dr. Abbas *Professor, Information Systems* (1987-2019)

Heiat, Dr. Nafiseh *Professor, Information Systems* (1988-2019)

Heidenreich, Dr. C. Adrian *Professor, Native American Studies* (1977-2006)

Heikes, Mr. Kenneth W. *Administrator Emeritus* (1967- 1992)

Hinthorne, Dr. Thomas *Professor, Management* (1993-2008)

Hobbs, Dr. Sharon F. *Professor, Educational Theory and Practice* (1996-2018)

Holman, Ms. Patricia *Adjunct Assistant Professor, Business Administration* (1993-2011)

Howard, Mr. C. Randy *Professor, Accounting* (1973-1996)

Howell, Dr. Joseph O. *Professor, Mathematics* (1980-2008)

Jensen, Dr. Theodore W. *Professor, Modern Languages and Literatures* (1974-2006)

Jussila, Mr. Neil R. *Professor, Art* (1969-2012)

Karnos, Dr. David D. *Professor, Philosophy* (1977-2006)

Kamowski, Dr. William *Professor, English* (1985-2018)

Kemmerer, Dr. Lisa *Professor, Philosophy* (2002-2020)

Khaleel, Dr. Tasneem *Professor, Biology* (1976-2017)

Kochner, Mr. Curtis *Vice Chancellor of Student Affairs Emeritus* (1984-2006)

LaCounte, Dr. Marlene *Professor, Education* (1982-2003)

Lin, Dr. Ruey-Lin *Professor, Sociology* (1974-2002)

Lord, Dr. Russell *Professor, Health and Human Performance* (1985-2016)

McNally, Dr. Mary *Professor, Management* (1987-2016)

Metheny, Dr. Dixie *Professor, Educational Theory and Practice & Mathematics* (1990-2012)

Miller, Dr. Kenneth *Professor, Educational Theory and Practice* (1992-2018)

Moses, Dr. Norton H. *Professor, History* (1969-2005).

Mossman, Dr. Beal *Professor, Psychology* (1967-1996)

Pollock, Mr. John W. *Professor, Art* (1974-2010)

Rietz, Dr. Sandra *Professor, Educational Theory and Practice* (1974-2015)

Sanders, Dr. Jeffrey *Professor, Native American Studies* (1996-2016)

Schulz, Dr. Dennis D. *Professor, Habilitative Services* (1967- 1987)

Selsor, Marcia L. *Professor, Art* (1975-2000)

Sexton, Dr. Ronald P. *Chancellor; Professor, Educational Theory and Practice* (1966-71, 1975-2010)

Shaw, Mr. John "Jay" H. *Associate Professor, Health and Human Performance* (1967-2014)

Sheridan, Ms. Joanne *Professor, Accounting* (1978-79, 1981-2002)

Smith, Dr. Kenyard E. *Professor, Music* (1987-1994)

Spicer, Dr. Janeth *Professor, Information Systems* (1972-2002)

Stannard, Dr. William *Professor, Mathematics* (1966- 1984)

Urbaniak, Dr. Timothy *Instructor, Computer Technology and Drafting and Design* (1987-2016)

Utroske, Mr. Walter F. *Associate Professor, English* (1966-2006)

Waltner, Dr. Richard H. *Professor, Sociology* (1981- 1993)

Wiatr, Dr. Stanley *Professor, Biology* (1979-2017)

Willett, Dr. Flora *Associate Professor, English* (1965- 1990)

Yazak, Dr. Daniel *Professor, Educational Theory and Practice* (1990-2018)

Young-Pelton, Dr. Cheryl, *Professor, Educational Theory & Practice* (2008-2021)

Zwick, Dr. Thomas T. *Professor, Geology* (1971-2007)

# Glossary of Terms

The following is a collection of explanations and interpretations of terms commonly used in the City College at Montana State University Billings Catalog.

**Academic Probation** - Denotes that a student's academic performance is below standard as defined by the institution; the student is warned of possible suspension.

**Academic Record** - The unabridged and complete historical record of a student's academic coursework.

**Academic Year** - That period of time from the opening of Fall Semester to the closing of the next Spring Semester is the "academic year." Summer Session is specifically excluded.

**Accredited Institution** - A college or university accredited by, or a candidate for accreditation from, one of the recognized regional accrediting commissions. Montana State University Billings is accredited by the Northwest Commission on Colleges and Universities. As such, all college-level coursework from institutions accredited by the following list of agencies will be received and applied toward associate or baccalaureate degrees as applicable to general education, major, minor, and elective requirements.

- Higher Learning Commission
- Middle States Commission on Higher Education
- New England Commission of Higher Education
- Northwest Commission on Colleges and Universities
- Southern Association of Colleges and Schools Commission on Colleges
- WASC Senior College and University Commission

**Admission** - The process of accepting a candidate for enrollment into college.

**Advising** - A service provided by a faculty member or designated person (advisor). An advisor guides students through academic questions, problems, and/or coursework to plan and complete a degree program.

**Adjunct Faculty** - A part-time faculty member.

**Academic Advisor** - A faculty member or designated person who guides students through academic questions, problems, and/or coursework to plan and complete a degree program.

**Associate Degree** - A degree which generally requires two years to complete. MSU Billings offers Associate of Arts and Associate of Science degrees as well as the Associate of Applied Science degree.

**Auditor** - One who enrolls in a class for informational instruction only. No academic credit is granted for auditing a class.

**Bachelor's Degree** - A first-level degree granted upon completion of a course of study in a given field and based on at least four years of college work, or the equivalent thereof.

**Candidate for a Degree or Certificate** - A status students assume when they have completed all requirements for a degree and apply for graduation. To apply for graduation a student completes an application for graduation at the Registrar's Office, pays a fee, and returns the application to the Registrar's Office.

**Certificate** - Official recognition denoting successful completion of a technical body of knowledge.

**Class Schedule** - The list of courses and sections offered in a given semester, including days, hours, places of meeting and names of instructors.

**College** - One of five major divisions of academic areas at MSU Billings. They are the College of Business, the College of Education, College of Health Professions and Science, the College of Liberal Arts and Social Sciences, and City College. Each college is headed by a dean who reports to the Provost and Academic Vice Chancellor.

**Core Courses** - Courses required by the University, the college, or the department by all students in a degree program regardless of the option or concentration in which they may choose to major.

**Course** - A unit of academic work in a particular subject, normally one semester long, for which credit toward graduation is usually given.

**Course Load** - The number of semester credit hours associated with the academic work in which a student is enrolled in any given term.

**Credit Hour** - A credit is the unit used in recording an amount of work and engaged effort represented in learning outcomes and verified by evidence of student achievement. Each credit hour represents a minimum of three class-oriented work hours (60 minutes of classroom instruction and an additional two hours of out-of-class engaged effort and work per student) each week during a 15-week (minimum) semester. One credit of achievement should approximate 45 hours of combined instruction and student work/engaged effort. At least an equivalent amount of work and engaged effort is required regardless of pedagogical format (lab, web-enhanced, on-line, condensed coursework, internships, studio, independent study, etc).

**Degree** - An academic title MSU Billings is authorized to confer as official recognition to those who complete an academic program. An example is a Bachelor of Science Degree.

**Degree or Certificate Program** - A prescribed course of study which leads to a degree or certificate.

**DegreeWorks** - A program used to provide degree audit information for students, faculty, and graduation.

**Dual Enrollment** - Dual enrollment, or concurrent enrollment as it is also known, is the practice of allowing a student to be enrolled in two academic institutions at once. Usually, this involves a high school and a college. The credits can apply to both high school diploma requirements and college graduation requisites.

**Electives** - Courses which are not a required part of a degree program are electives. Some departments may insist that their majors choose between certain electives, referred to as Restricted Electives.

**Faculty Advisor** - A faculty member who helps a student plan and complete a degree program.

**Fall Start Program** - Programs which start their core class rotations only in the Fall semester. Please note that some students may be able to take general education courses prior to the Fall-start semester. Some programs require a prerequisite semester of training.

**Full-time Student** - An undergraduate student registered for 12 or more semester credits, or any graduate student registered for nine or more semester credits is considered a full-time student.

**General Education/Related Instruction** - A common body of knowledge which supports every program of study for which a specialized associate degree or certificate is granted.

**Good Standing** - Status which denotes that a student is eligible to continue at or return to an institution.

**Grade Point Average (GPA)** - The grade average a student earns for each semester. It is calculated by multiplying the number of credits given for a course times the



value of the grade received for the course (A=4, B=3, C=2, D=1, F=0), adding the value calculated for each class and dividing by the total number of credits. Thus, if a student has an "A" in a 4 credit course; a "B" in a 3 credit course; a "C" in a 2 credit course, and a "D" in a 2 credit course the GPA calculation would be as follows:

| Letter Grade | Description                         |
|--------------|-------------------------------------|
| A            | 4 times 4 credits = 16 grade points |
| B            | 3 times 3 credits = 9 grade points  |
| C            | 2 times 2 credits = 4 grade points  |
| D            | 1 times 2 credits = 2 grade points  |

Total = 31 grade points divided by 11 total credits = 2.82 GPA.

**Grade Report** - A report of the student's grades earned at the end of each semester.

**Graduation Check** - The determination of whether a student has met the specified minimum educational requirements necessary for the granting of a degree.

**Headcount** - The number of students enrolled in an educational institution, program, course, etc., without regard to the number of credit hours being taken by individual students.

**Hours** - Sometimes referred to as semester credit hours unless specifically stated otherwise.

**Intersession** - An enrollment period that is held between the end of Fall term and the beginning of Spring term.

**Laboratory** - A course involving supervised experimentation or practice related to an academic area. It generally requires hands-on use of equipment and materials.

**Major** - The area in which a student concentrates. An academic major is required for graduation.

**Moratorium** - The academic program remains in the catalog, but the University has suspended admission to the program.

**Part-time Student** - A student enrolled with 11 or fewer credits.

**Pre-registration** - The process by which students select courses for a succeeding term in advance of the official opening date of the semester.

**Prerequisite** - A course to be completed successfully or a condition to be met before a student may enroll in a specific course.

**Probation** - Academic probation is the result of unsatisfactory scholarship. It is not a penalty but a warning and an opportunity to improve.

**Registration** - The process by which students officially enroll in classes and pay fees. Students must be formally admitted to MSU Billings before they may register.

**Restricted Electives** - Courses where students choose between several particular classes to meet requirements of the University, college, or department.

**Section** - A division of a course, as between one or more instructors, but having the same course title and the same subject matter.

**Semester** - An enrollment period of about sixteen to eighteen weeks.

**Semester Credit** - Units of credit awarded for successful completion of academic work. Students' progress toward fulfilling curricular, degree and certificate requirements is measured in terms of semester credit hours.

**Semester Hour** - Normally one semester credit hour represents 60 minutes of classroom instruction each week for one semester. Credit in a laboratory, independent study, or internship may require a longer period. A three-credit class

will meet for three 60-minute or two 90-minute sessions each week for the entire semester. A semester hour is the basis of college credit at Montana State University Billings. A semester hour is the credit received for passing a subject taken one hour a week for one semester. Laboratory courses require two or three hours a week for each semester hour of credit.

**Spring Start Program** - Programs which start their core class rotations only in the Spring semester. Please note that some students may be able to take general education courses prior to the Spring-start semester. Some programs require a prerequisite semester of training.

**Summer Session** - An enrollment period that begins after the Spring Semester ends.

**Suspension** - Academic suspension is an involuntary separation of the student from the University for unsatisfactory scholarship. Financial Aid also has suspension policies. (See Minimal Academic Progress (p. 41) or the Financial Aid section (p. 31) for details.)

**Transcript** - An Official Transcript is an unabridged and certified copy of a student's permanent academic record. A small fee is charged for each copy. (An uncertified working copy of the student's academic record is available at no charge.)

**U-card** - Refers to a student ID card used to make purchases at the food services on campus.

**Undergraduate Student** - A student who has not yet earned a bachelor's degree or who has earned a bachelor's degree, but is a candidate for an additional bachelor's degree, or is pursuing additional undergraduate coursework.

## Courses A-Z

### A

- ABDY - Autobody (p. 96)
- ACTG - Accounting (p. 98)
- AHMS - Allied Health: Medical Support (p. 98)
- AHUS - Allied Health: Ultrasound (p. 99)
- AHXR - Allied Health: Radiologic Technology (p. 100)
- AST - Auto Service Technician (p. 101)

### B

- BGEN - Business: General (p. 103)
- BIOH - Biology: Human (p. 103)
- BMGT - Business: Management (p. 104)
- BMKT - Business: Marketing (p. 105)

### C

- CAPP - Computer Applications (p. 105)
- CMP - Computer Apps (p. 105)
- COMX - Communication (p. 106)
- CSCI - Computer Science/Programming (p. 106)
- CSTN - Construction Trades (p. 107)

### D

- DST - Diesel Service Technician (p. 108)

### E

- ECP - Emergency Care Provider (p. 109)
- ELCT - Electrical Technology (p. 111)
- ETEC - Electronics Technology (p. 111)

### F

- FIRE - Fire & Emergency Services (p. 111)

### H

- HIT - Health Information Technology (p. 112)
- HVC - Heating, Ventilating, Air Conditioning, and Refrigeration (p. 112)

### I

- ITS - Information Technology Systems (p. 113)

### M

- M - Mathematics (p. 114)

### N

- NRGY - Sustainable Energy (p. 115)
- NRSG - Nursing (p. 116)
- NTS - Networking Technology Systems (p. 119)

### P

- PPT - Process Plant Technology (p. 119)
- PWRP - Power Plant Technology (p. 121)

### R

- RD - Reading (p. 121)

### T

- TRID - Trade & Industry (p. 122)

### W

- WLDG - Welding (p. 123)
- WRIT - Writing (p. 124)

## ABDY - Autobody

ABDY 101 Introduction to Estimating. 2 Credits

Term Typically Offered: Fall

Understand the basics of writing estimates using both hand written and computer based estimating systems. Learn techniques for estimating repair times as well as the estimating abbreviations and terminology.

Lecture Hours 2

Department: Transportation - COT

ABDY 110 Intro to Collision Repair. 4 Credits

Term Typically Offered: Fall

Identify the names of all the body panels and how to remove them. Students will learn what types of fasteners are used on modern vehicles as well as how to align the various body panels.

Lecture Hours 4

Department: Transportation - COT

ABDY 111 Intro to Auto Body Repair. 5 Credits

Term Typically Offered: Fall

Covers the basic methods and techniques used in the repair of non-structurally damaged automobile sheet metal panels, the use and care of basic hand tools, identifying metal composition, automobile body construction, set up and use of a metal inert gas (MIG) and resistance welding equipment.

Lecture Hours 2, Lab Hours 3

Department: Transportation - COT

ABDY 112 Minor Collision Repair. 6 Credits

Term Typically Offered: Fall

Prerequisite(s): ABDY 111.

Covers training in removal, replacement, and alignment of various panels and parts, including glass. Diagnosis and correcting body component malfunctions. Advanced training in panel repair, damage analysis and estimating using manuals and computer software programs.

Lecture Hours 2, Lab Hours 4

Department: Transportation - COT

ABDY 120 Non-Structural Collision Repair. 6 Credits

Term Typically Offered: Fall

Demonstrate how to remove damage from panels involved in minor collisions. Teaches metal-straightening techniques as well as how to repair plastics and the proper use of body fillers. Students will learn some basic paintless dent repair procedures.

Lecture Hours 6

Department: Transportation - COT

|   |   |
|---|---|
| <p>ABDY 121 Automobile Body Repair. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): ABDY 111.<br/>           Covers the inspection, measurements, and repair of automobile bodies. Methods and techniques recommended by the manufacturers are studied and utilized. Tasks and procedures which are promoted by ASE and I-CAR programs are incorporated into the training. Repair of plastic body parts as recommended by manufacturers is practiced.<br/>           Lecture Hours 2, Lab Hours 4<br/>           Department: Transportation - COT</p> | <p>ABDY 160 Automotive Undercoats. 4 Credits<br/>           Term Typically Offered: Fall<br/>           Teaches how to prepare a vehicle for paint using various types of primers and other undercoats used on modern vehicles.<br/>           Lecture Hours 4<br/>           Department: Transportation - COT</p>  |
| <p>ABDY 122 Automobile Collision. 5 Credits<br/>           Term Typically Offered: Spring<br/>           Includes the removal, replacement, and service of mechanical and electrical components in repairing collision damaged automobiles. Components include suspension, steering, brakes, drive train, cooling system, fuel system and restraint system.<br/>           Lecture Hours 5<br/>           Department: Transportation - COT</p>  | <p>ABDY 170 Automotive Topcoats. 6 Credits<br/>           Term Typically Offered: Fall<br/>           Understand the various types of topcoats applied to modern vehicles. Learn proper techniques for spraying everything from industrial single stage paint to base-coat/clear-coat. Learn how to spray metallic and pearl paints as well as how to identify the type of paint and location of the paint code.<br/>           Lecture Hours 6<br/>           Department: Transportation - COT</p> |
| <p>ABDY 131 Intro Refinishing Principles. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Provides the student with entry level training in job safety, refinishing basic application techniques, tools and equipment, and the skills necessary to prepare a vehicle for the refinishing process.<br/>           Lecture Hours 6<br/>           Department: Transportation - COT</p>   | <p>ABDY 201 Advanced Estimating. 1 Credit<br/>           Term Typically Offered: Spring<br/>           Provides instruction on advanced estimating techniques such as researching factory procedures to repair a vehicle properly. Offers negotiation strategies when working with insurance companies.<br/>           Lecture Hours 1<br/>           Department: Transportation - COT</p>  |
| <p>ABDY 132 Intro to Auto Undercoats. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): ABDY 131.<br/>           Provides the student with entry level access to knowledge in automotive refinishing undercoats: types, specific usages, and application. The course also provides the student with automotive plastic identifications, alternate repair procedures, and refinishing.<br/>           Lecture Hours 2, Lab Hours 4<br/>           Department: Transportation - COT</p>   | <p>ABDY 220 Structural Collision Repair. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Demonstrates how to repair major collision damage and determine the integrity of the structure. Explores frame and unibody straightening techniques as well as structural panel replacement.<br/>           Lecture Hours 6<br/>           Department: Transportation - COT</p>   |
| <p>ABDY 141 Advanced Auto Refinishing. 6 Credits<br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): ABDY 131 and ABDY 132.<br/>           Provides the student with training in application and paint makeup of current automotive finishes. Causes and the possible cures of surface defects and the art of finesse polishing are also studied. The student is exposed to the latest techniques in duplicating original factory paint finishes.<br/>           Lecture Hours 2, Lab Hours 4<br/>           Department: Transportation - COT</p>                     | <p>ABDY 240 Aluminum Repair. 4 Credits<br/>           Term Typically Offered: Spring<br/>           Applies proper techniques for repairing aluminum that has been damaged in a collision. Teaches how to weld aluminum as well as distinguish the differences between aluminum and steel.<br/>           Lecture Hours 4<br/>           Department: Transportation - COT</p>   |
| <p>ABDY 142 Intro Paint Blend &amp; Color Mtch. 7 Credits<br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): ABDY 131, ABDY 132 and ABDY 141.<br/>           Develops mental and optical skills in the art of color matching. Alternate processes in spot repairing solid, metallic, and MICA finishes are also covered. Skills in equipment adjustment and techniques provide for blendable repair procedures.<br/>           Lecture Hours 3, Lab Hours 4<br/>           Department: Transportation - COT</p>  | <p>ABDY 270 Advanced Refinishing. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Develops the understanding of automotive topcoats by teaching color-blending techniques. Students will also learn how to spray three-stage paints as well as how and when to tint.<br/>           Lecture Hours 6<br/>           Department: Transportation - COT</p>  |
| <p>ABDY 150 Refinish Safety. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Explains the hazards in the refinish facility and how to avoid them. Teaches proper handling of the various chemicals present in the refinish facility and proper equipment maintenance.<br/>           Lecture Hours 2<br/>           Department: Transportation - COT</p>   | <p>ABDY 275 Waterborne Paint Systems. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Differentiates between waterborne paint and solvent-based paint. Teaches blending techniques specific to waterborne paint and various aspects of the different systems.<br/>           Lecture Hours 3<br/>           Department: Transportation - COT</p>   |
|   | <p>ABDY 280 Custom Painting. 5 Credits<br/>           Term Typically Offered: Spring<br/>           Applies custom painting techniques on vehicles. Introduces airbrush techniques, proper use of candy paints, and other custom finishes.<br/>           Lecture Hours 5<br/>           Department: Transportation - COT</p>   |

ABDY 298 Internship/Cooperative Educ. 1-9 Credits  
 Pass/No Pass  
 (45 hours/credit) Provides university credit for a sophomore work experience in the area of Automobile Collision Repair and Refinishing Technology, supervised by faculty. Learning agreement must be completed prior to registration (restricted).  
 Department: Transportation - COT

## ACTG - Accounting

ACTG 101 Accounting Procedures I. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Introduces fundamental double-entry accounting concepts and terminology for a service-oriented enterprise. Emphasizes the analysis and recording of business transactions including adjusting and closing entries and financial statements. Covers procedures for banking and cash funds and the preparation of payroll and employer payroll taxes. Includes the study of accounting for a merchandising concern with the use of special journals.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 102 Accounting Procedures II. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Prerequisite(s): ACTG 101.  
 Introduces accounting for notes payable and receivable as well as valuation for receivables, inventories, and plant assets. Introduces advanced accounting topics including accounting procedures for corporations, statement of cash flows, analysis of financial statements, and an overview of departmental and manufacturing accounting.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 103 Accounting Procedures III. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Prerequisite(s): ACTG 102.  
 Introduces advanced accounting topics. Includes voucher systems, accounting procedures for partnerships and corporations, statement of cash flows, analysis of financial statements, and an overview of departmental and manufacturing accounting.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 125 QuickBooks. 3 Credits  
 Prerequisite(s): ACTG 101.  
 Studies QuickBooks, an accounting system for small-business owners and bookkeepers. Topics of this course include creating a company, setting up company lists, editing a preset chart of accounts, entering opening balances, entering sales and invoices, receiving payments and making deposits, handling expenses and bills, working with bank accounts, analyzing financial data, tracking and paying sales tax, managing inventory, and preparing payroll.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 180 Payroll Accounting. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Prerequisite(s): ACTG 101.  
 Introduces the various aspects of the Fair Labor Standards Act and other laws that affect payroll operations and employment practices. Emphasizes the methods of computing wages and salaries, the methods of keeping records, and the preparation of government reports. Includes a project requiring students to record all of the payroll information for a business.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 205 Computerized Accounting. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Prerequisite(s): ACTG 101.  
 Uses a hands-on approach to emulate commercial software packages. Provides a capstone experience as students complete the accounting cycle for merchandise or service businesses including entries for voucher systems, departmentalized accounting, financial statement analysis, depreciation, inventory, and payroll. Offered ONLY Online.  
 Lecture Hours 3  
 Department: Business Management - COT

ACTG 211 Income Tax Fundamentals. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): ACTG 102.  
 Presents an overview of the U.S. Federal taxation process. This course leads the student through the basic terminology, principles, concepts, and procedures pertaining to individual, sole proprietorship, partnership, and corporate requirements of the Federal Internal Revenue Service. Material is presented using a forms approach, incorporating a computerized Learning Management System (LMS).  
 Lecture Hours 3  
 Department: Business Management - COT

## AHMS - Allied Health: Medical Support

AHMS 105 Health Care Delivery. 3 Credits  
 Term Typically Offered: Spring  
 Develops the student's understanding of the history of health care delivery in the United States; American beliefs and values regarding health care delivery; barriers to accessing health care services; how health care is paid for in the United States; as well as current laws, developments, and key forces that are likely to shape the delivery of health care services in the future. Offered ONLY Online.  
 Lecture Hours 3  
 Department: Health Occupations - COT

AHMS 144 Medical Terminology. 3 Credits  
 Term Typically Offered: Fall, Spring, Summer  
 Introduces the student to the specialized language of the medical profession and builds a background vocabulary in this area using a word-building system which provides a solid foundation for understanding medical terms. Basic word-building concepts are taught with emphasis on spelling, pronunciation, and definitions.  
 Lecture Hours 3  
 Department: Health Occupations - COT

AHMS 154 Advanced Medical Terminology. 3 Credits  
 Term Typically Offered: Fall  
 Prerequisite(s): AHMS 144.  
 Builds on the knowledge obtained in AHMS 144. Develops the student's understanding of medical terminology as it applies to diseases, disease processes, treatments, and surgical techniques as they apply to each body system. Offered ONLY Online.  
 Lecture Hours 3  
 Department: Health Occupations - COT

AHMS 156 Medical Billing Fundamentals. 3 Credits  
 Term Typically Offered: Fall  
 Develops the student's understanding of common commercial, managed care, and federal health insurance plans in the U.S. Teaches billing processes and procedures, as well as legal, regulatory, and ethical issues in health insurance. Offered ONLY Online.  
 Lecture Hours 3  
 Department: Health Occupations - COT

AHMS 160 Beginning Procedural Coding. 3 Credits

Term Typically Offered: Fall, Spring

Develops the knowledge, skills, and abilities necessary for students to correlate a numerical code to a handwritten or typed procedure description generated by clinical staff in the health care setting for insurance purposes utilizing the principles of Current Procedural Terminology 4th edition (CPT-4). This course is required for the Medical Coding and Insurance Billing Certificate.

Lecture Hours 3

Department: Health Occupations - COT

AHMS 162 Beginning Diagnosis Coding. 3 Credits

Term Typically Offered: Fall, Spring

Develops the knowledge, skills, and abilities necessary for a student to correlate a numerical code to a handwritten or typed diagnosis description generated by clinical staff in the health care setting for insurance purposes utilizing published ICD-CM. Also emphasizes the standards for accuracy in medical coding. This course is required for the Medical Coding and Insurance Billing Certificate.

Lecture Hours 3

Department: Health Occupations - COT

AHMS 175 Medical Law and Ethics. 3 Credits

Term Typically Offered: Spring

Addresses legal and ethical issues relevant to the healthcare field. Students will learn the importance of a professional code of ethics and the consequences of illegal or unethical behavior in health care. The course will also help the student distinguish among law, ethics, bioethics, etiquette, and protocol.

Lecture Hours 3

Department: Health Occupations - COT

AHMS 210 Basic Medical Coding. 3 Credits

Term Typically Offered: Fall

Develops the student's ability to extract necessary information from the medical record to find Diagnosis and Procedure, use the Index and Tabular List in the code book to find the Diagnosis code that will prove medical necessity, use the Index and Tabular List in the code book to find the Procedure Code associated with the diagnosis and procedure, and analyze and accurately interpret evidence to make appropriate decisions based on professional standards. Offered ONLY Online.

Lecture Hours 3

Department: Health Occupations - COT

AHMS 220 Medical Office Procedures. 3 Credits

Term Typically Offered: Fall, Spring

Emphasizes the standards for accuracy in health insurance claims processing and professional reporting which includes accurate claim form completion, an introduction to national coding requirements, medical ethics and legal responsibilities, and medical and insurance terminology.

Lecture Hours 3

Department: Health Occupations - COT

AHMS 250 Advanced Medical Coding. 3 Credits

Term Typically Offered: Fall, Spring

Develops the knowledge, skills, and abilities necessary for students to correlate a numerical code to a handwritten or typed procedure description generated by clinical staff in the health care setting for insurance purposes utilizing the principles of CPT-4, ICD-CM, and HCPCS Coding. This course is required for the Medical Coding and Insurance Billing Certificate.

Department: Health Occupations - COT

AHMS 299 Capstone Project. 1 Credit

Evaluates and expands the student's knowledge of medical coding, insurance billing, and individual professionalism through job shadowing with a local coder, completing a resume building session, and attending test preparation sessions with focus on the national coding exam.

Lecture Hours 1

Department: Health Occupations - COT

## AHUS - Allied Health: Ultrasound

AHUS 100 Introduction to Ultrasound. 3 Credits

Term Typically Offered: Fall

Prerequisite(s): Admission to the Ultrasound Technology program.

Corequisite(s): AHUS 101, AHUS 102, AHUS 104.

Introduces the student to the profession of sonography and the role of the sonographer. Emphasis on medical terminology, ethical/legal aspects, written and verbal communication, and professional issues relating to registry, accreditation, professional organizations, and history of the profession. Offered ONLY Online.

Lecture Hours 3

Department: Health Occupations - COT

AHUS 101 Ultrasound Instrumentation. 3 Credits

Term Typically Offered: Fall

Prerequisite(s): Admission to the Ultrasound Technology program.

Corequisite(s): AHUS 100, AHUS 102, AHUS 104.

Introduces students to ultrasound equipment operation. Topics include ultrasound wave generation and propagation, transducers, pulse echo instruments, pulse echo imaging, image storage and display, Doppler, artifacts, quality assurance, bioeffects, and safety. Offered ONLY Online.

Lecture Hours 3

Department: Health Occupations - COT

AHUS 102 Abdominal Sonography. 3 Credits

Term Typically Offered: Fall

Prerequisite(s): Admission to the Ultrasound Technology program.

Corequisite(s): AHUS 100, AHUS 101, AHUS 104.

Introduces students to an in-depth study of anatomy, physiology, and spatial relationships of the abdomen, retroperitoneal cavity, and superficial structures. Emphasis will be placed on related clinical signs and symptoms, and normal and abnormal sonographic patterns. Harmonic imaging and two-dimensional Doppler color imaging will be used to evaluate the sonographic appearance of abdominal organs such as the liver, gallbladder, biliary tree, spleen, pancreas, great vessels, kidneys, and urinary tract. Offered ONLY Online.

Lecture Hours 3

Department: Health Occupations - COT

AHUS 103 OB and GN Sonography. 3 Credits

Term Typically Offered: Spring

Prerequisite(s): Admission to the Ultrasound Technology program.

Corequisite(s): AHUS 105, AHUS 106.

Introduces students to OB/GYN sonography and the female reproductive and urogenital systems as they pertain to performing ultrasound examinations of that area. Normal and abnormal anatomy and physiology, instrumentation set-up, patient preparation, proper scanning technique, and normal and abnormal findings are presented. Offered ONLY Online.

Lecture Hours 3

Department: Health Occupations - COT

AHUS 104 Clinical Experience I. 4 Credits

Term Typically Offered: Fall

Prerequisite(s): Admission to the Ultrasound Technology program.

Corequisite(s): AHUS 100, AHUS 101, AHUS 102.

(12 clinical/wk) Instructs students in the hands-on scanning of patients via ultrasonography at clinical sites. Students will obtain hands-on clinical experience performing ultrasound examinations under the direct supervision of the clinical instructor or certified ultrasonographer.

Department: Health Occupations - COT



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| <p>AHUS 105 Clinical Experience II. 4 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): Admission to the Ultrasound Technology program.<br/>           Corequisite(s): AHUS 103, AHUS 106.<br/>           (12 clinical/wk) Instructs students in the hands-on scanning of patients via ultrasonography at clinical sites. Students will obtain hands-on clinical experience performing ultrasound examinations under the direct supervision of the clinical instructor or certified ultrasonographer.<br/>           Department: Health Occupations - COT</p>                           | <p>AHXR 150 Radiological Technology I. 3 Credits<br/>           Term Typically Offered: Fall<br/>           Corequisite(s): AHXR 195A &amp; AHXR 151.<br/>           Presents the fundamentals of producing radiographic images, radiation protection, and radiographic equipment. Radiographic positioning and anatomy are included for chest, abdomen, and extremity procedures.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>  |
| <p>AHUS 106 Sectional Anatomy. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): Admission to the Ultrasound Technology program.<br/>           Corequisite(s): AHUS 103, AHUS 105.<br/>           Introduces students to sectional anatomy in the transverse, longitudinal, and coronal planes, with emphasis on the organs of sonographic interest within the abdominopelvic cavity. Offered ONLY Online.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>  | <p>AHXR 151 Radiology I Positioning Lab. 1 Credit<br/>           Corequisite(s): AHXR 150 &amp; AHXR 195A. (F)<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>  |
| <p>AHUS 107 Ultrasound Physics. 3 Credits<br/>           Term Typically Offered: Summer<br/>           Prerequisite(s): Admission to the Ultrasound Technology program.<br/>           Corequisite(s): AHUS 108.<br/>           Introduces students to the physical principles of diagnostic medical sonography. Topics include the characteristics of real-time ultrasound transducers, the ultrasound beam, and the ultrasound instrumentation. Offered ONLY Online.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   | <p>AHXR 160 Radiological Technology II. 4 Credits<br/>           Prerequisite(s): AHXR 150.<br/>           Corequisite(s): AHXR 161 and AHXR 195B. (Sp)<br/>           Lecture Hours 4<br/>           Department: Health Occupations - COT</p>   |
| <p>AHUS 108 Clinical Experience III. 4 Credits<br/>           Term Typically Offered: Summer<br/>           Prerequisite(s): Admission to the Ultrasound Technology program.<br/>           Corequisite(s): AHUS 107.<br/>           (12 clinical/wk) Instructs students in the hands-on scanning of patients via ultrasonography at clinical sites. Students will obtain hands-on clinical experience performing ultrasound examinations under the direct supervision of the clinical instructor or certified ultrasonographer.<br/>           Department: Health Occupations - COT</p>                                    | <p>AHXR 161 Radiology II Positioning Lab. 1 Credit<br/>           Corequisite(s): AHXR 160 &amp; AHXR 195B. (Sp)<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>  |
| <p>AHXR 101 Patient Care in Radiology. 3 Credits<br/>           Term Typically Offered: Fall<br/>           Provides students with an introduction to radiologic technology including the history of radiology, patient care and the radiographer's role in health care, medical ethics, infection control, radiology organizations, and radiologic technology certification.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>  | <p>AHXR 181 Radiology III Positioning Lab. 1 Credit<br/>           Corequisite(s): AHXR 195C. (Su)<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>  |
| <p>AHXR 108 Intro to Radiologic Physics. 3 Credits<br/>           Corequisite(s): AHXR 150, AHXR 195A. (F)<br/>           X-ray production and the interaction of radiation with matter are examined in detail.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>  | <p>AHXR 195 Clinical Radiology Intersession. 1 Credit<br/>           Prerequisite(s): AHXR 150 &amp; AHXR 195A. (Sp)<br/>           (40 total)<br/>           Lecture Hours 1<br/>           Department: Health Occupations - COT</p>  |
| <p>AHXR 150A Radiographic Clinical I. 5 Credits<br/>           Term Typically Offered: Fall<br/>           Corequisite(s): AHXR 150 &amp; AHXR 151.<br/>           (15 clinical/wk) Instructs students in radiographic examinations in the clinical environment. The students are required to perform radiographic examinations on patients and to participate in scheduled clinicals under the direct supervision of the clinical instructor or registered technologist. Students will be oriented into patient care methodologies. CPR certification is required.<br/>           Department: Health Occupations - COT</p> | <p>AHXR 195B Radiographic Clinical II. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): AHXR 150 &amp; AHXR 195A. Corequisites<br/>           (18 clinical/wk) Provides sequential clinical instruction on application, critical analysis, integration, synthesis, and evaluation of concepts and theories required to perform radiologic procedures. Patient centered clinical practice labs and professional development will be taught through competency-based assignments in the clinical setting.<br/>           Department: Health Occupations - COT</p> |
| <p>AHXR 150 Radiological Technology I. 3 Credits<br/>           Term Typically Offered: Fall<br/>           Corequisite(s): AHXR 195A &amp; AHXR 151.<br/>           Presents the fundamentals of producing radiographic images, radiation protection, and radiographic equipment. Radiographic positioning and anatomy are included for chest, abdomen, and extremity procedures.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   | <p>AHXR 195C Radiographic Clinical III. 9 Credits<br/>           Term Typically Offered: Summer<br/>           Prerequisite(s): AHXR 195B. Corequisite<br/>           (27 clinical/wk) Continues to provide sequential clinical instruction in radiographic procedures. Patient-centered clinical practice labs and professional development will be taught through competency-based assignments in the clinical setting.<br/>           Department: Health Occupations - COT</p>  |

## AHXR - Allied Health: Radiologic Technology



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| <p>AHXR 225 Radiobiology/Radiation Ptrctn. 3 Credits<br/>Term Typically Offered: Spring<br/>Emphasizes radiation safety and the biological effects of radiation on the human body. Explores the various modalities including equipment requirements, design and quality assurance.<br/>Lecture Hours 3<br/>Department: Health Occupations - COT</p>  | <p>AST 107 Auto Man Drive Train/Axles Lab. 2 Credits<br/>Term Typically Offered: Fall<br/>Corequisite(s): AST 106.<br/>Provides a study of the service, repair, and reconditioning of automotive power train components. Components covered include clutches, transmissions, differentials, axles, transaxles, and transfer cases.<br/>Lab Hours 2<br/>Department: Transportation - COT</p>  |
| <p>AHXR 250 Radiological Technology III. 4 Credits<br/>Prerequisite(s): AHXR 160.<br/>Corequisite(s): AHXR 295A. (F)<br/>Includes fluoroscopic and other diagnostic imaging modalities.<br/>Lecture Hours 4<br/>Department: Health Occupations - COT</p>   | <p>AST 114 Automotive Brakes. 2 Credits<br/>Term Typically Offered: Spring<br/>Provides a study in the design and operation of today's sophisticated braking and related systems. Subject matter includes brake systems fundamentals, safety, master cylinders, power assist units, hydraulic lines and valves, disk and drum brakes, antilock systems, parking brakes, and brake electrical and electronic components.<br/>Lecture Hours 2<br/>Department: Transportation - COT</p>           |
| <p>AHXR 260 Radiological Technology IV. 2 Credits<br/>Prerequisite(s): AHXR 250.<br/>Corequisite(s): AHXR 295B. (Sp)<br/>Includes a review of program content in conjunction with registry review.<br/>Lecture Hours 2<br/>Department: Health Occupations - COT</p>  | <p>AST 115 Automotive Brakes Lab. 2 Credits<br/>Term Typically Offered: Spring<br/>Corequisite(s): AST 114.<br/>Provides a study in the diagnosis and service of today's sophisticated braking and related systems. Subject matter includes brake system safety, master cylinders, power assist units hydraulic lines and valves, disk and drum brakes, antilock systems, parking brakes, and brake electrical/electronic components.<br/>Lab Hours 2<br/>Department: Transportation - COT</p> |
| <p>AHXR 270 Radiographic Registry Review. 2 Credits<br/>Term Typically Offered: Spring<br/>Prerequisite(s): AHXR 250.<br/>Provides a comprehensive review of the Radiologic Technology course material in preparation for the national certification examination.<br/>Lecture Hours 2<br/>Department: Health Occupations - COT</p>   | <p>AST 162 Automotive Engine Diagnostics. 3 Credits<br/>Term Typically Offered: Spring<br/>Prerequisite(s): TRID 170 and TRID 180.<br/>Studies the theory of fuel systems, emission control systems, ignition systems, and engine mechanical tests. Proper testing with modern diagnostic equipment will also be discussed.<br/>Lecture Hours 3<br/>Department: Transportation - COT</p>   |
| <p>AHXR 294 Seminar/Workshop. 1 Credit<br/>Department: Health Occupations - COT</p>  | <p>AST 163 Auto Engine Diagnostics Lab. 3 Credits<br/>Term Typically Offered: Spring<br/>Prerequisite(s): TRID 170 &amp; TRID 180.<br/>Corequisite(s): AST 162.<br/>Examines diagnosis, testing, and repair of fuel systems, emission control systems, ignition systems, and engine mechanical tests. This course provides training on the proper uses of modern engine diagnostic equipment.<br/>Lab Hours 3<br/>Department: Transportation - COT</p>   |
| <p>AHXR 295A Radiographic Clinical IV. 8 Credits<br/>Term Typically Offered: Fall<br/>Prerequisite(s): AHXR 195C. Corequisite (24 clinical/wk) Provides sequential clinical instruction of the analysis and evaluation of concepts and theories required to perform radiographic procedures. Patient-centered clinical practice labs will be taught through competency-based assignments in the clinical setting.<br/>Department: Health Occupations - COT</p> | <p>AST 175 Engine Rebuild Lab. 5 Credits<br/>Term Typically Offered: Spring<br/>Prerequisite(s): TRID 170.<br/>Gives an overview of the design, operation, diagnosis, and service procedures of modern automotive engines. Students participate in the disassembly and re-assembly of engine units. Service and technical engine data are presented to prepare the students for practical experience in engine servicing.<br/>Lecture Hours 5<br/>Department: Transportation - COT</p>         |
| <p>AHXR 295B Radiographic Clinical V. 8 Credits<br/>Term Typically Offered: Spring<br/>Prerequisite(s): AHXR 250.<br/>Corequisite(s): AHXR 260.<br/>(24 clinical/wk) Provides the clinical practice and experience necessary for the performance of advanced radiographic procedures. Includes the study of pathology and rotations through the different modalities within radiology.<br/>Department: Health Occupations - COT</p>                            | <p>AST 220 Auto Steering and Suspension. 2 Credits<br/>Term Typically Offered: Fall<br/>Prerequisite(s): M 111 or equivalent.<br/>Provides a study in the design and operation of modern automotive suspension, steering, and related systems.<br/>Lecture Hours 2<br/>Department: Transportation - COT</p>  |
| <h2 style="text-align: center;">AST - Auto Service Technician</h2>   |  |
| <p>AST 106 Auto Manual Drive Train/Axles. 2 Credits<br/>Term Typically Offered: Fall<br/>Includes a study of the basic theory and principles of gearing, and reconditioning of automotive power train components. Components covered include clutches, transmissions, differentials, axles, transaxles, and transfer cases.<br/>Lecture Hours 2<br/>Department: Transportation - COT</p>   |  |

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| <p>AST 221 Auto Steering/Suspension Lab. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): M 111 or equivalent.<br/>           Corequisite(s): AST 220.<br/>           Provides a practical study in the diagnosis and service of modern automotive suspension, steering, and related systems. Alignments are performed on computerized four-wheel alignment systems. This class is designed to provide the student with the training necessary to perform chassis-related service on automobiles and light trucks.<br/>           Lab Hours 2<br/>           Department: Transportation - COT</p>  | <p>AST 270 Auto Transmissions/Transaxles. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): AST 106, TRID 180.<br/>           Covers automatic transmissions including theory of operation, design, and construction for the purpose of understanding the functions, servicing, and trouble-shooting procedures of modern automatic transmissions and transaxles.<br/>           Lecture Hours 3<br/>           Department: Transportation - COT</p>  |
| <p>AST 230 Elec/Elctrncs Sys II. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): TRID 180.<br/>           Studies electrical/electronic systems and applications found in today's automotive industry. This course is designed to give the student a strong background in the theory of operation of electrical and electronic systems. Upon completion of this course, the student will have acquired the knowledge necessary to effectively diagnose modern automobiles.<br/>           Lecture Hours 2<br/>           Department: Transportation - COT</p>   | <p>AST 271 Auto Transmissns/Transxls Lab. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): AST 106, TRID 180.<br/>           Corequisite(s): AST 270.<br/>           Covers automatic transmissions including demonstration and student participation in disassembly and re-assembly of selected transmissions for the purpose of understanding function, construction, operation, servicing, and trouble-shooting procedures of modern automatic transmissions and transaxles.<br/>           Lab Hours 3<br/>           Department: Transportation - COT</p>   |
| <p>AST 231 Elec/Elctrncs Sys II Lab. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): TRID 180.<br/>           Corequisite(s): AST 230.<br/>           Studies electrical/electronic systems and applications found in today's automotive industry. This course is designed to give the student a strong background in the operation, diagnosis, and repair of electrical/electronic systems. Upon completion of this course, the student will have acquired the knowledge and developed the skills necessary to effectively diagnose and repair the vehicles and equipment presently used in the industry.<br/>           Lab Hours 2<br/>           Department: Transportation - COT</p> | <p>AST 280 Applied Lab Exp/Light Repair. 4 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): TRID 150, TRID 152, TRID 170, TRID 180, AST 106, AST 114, AST 220, AST 162, AST 230.<br/>           Provides in-depth, practical analysis and repair of components related to engine, chassis, power trains systems, and standard power trains systems. This course simulates service department operations as found in industry.<br/>           Lab Hours 4<br/>           Department: Transportation - COT</p>   |
| <p>AST 260 Advanced Auto Diagnostics. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): TRID 170, TRID 180, AST 162, AST 230.<br/>           Covers the theory of operation for General Motors, Ford, Chrysler, Toyota, and Bosch computerized systems. The student will obtain the necessary knowledge required to use the specialized test equipment designed for diagnosis and repair of domestic and foreign automotive systems.<br/>           Lecture Hours 3<br/>           Department: Transportation - COT</p>   | <p>AST 285 ASE Exam Prep: Section One. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): TRID 170, TRID 150, TRID 180, AST 106, AST 162, AST 175, or consent of instructor.<br/>           Prepares students for automotive technician ASE exams in the Automobile/Light Truck Test Series including eight certification areas: Engine Repair (A1), Automatic Transmission/Transaxle (A2), Manual Drive Train and Axles (A3), Suspension and Steering (A4), Brakes (A5), Electrical/Electronic Systems (A6), Heating and Air Conditioning (A7), and Engine Performance (A8). Emphasis of certification areas covered will be determined by the general make up of the student body per semester (i.e., if all students are registering for A5-Brakes, the course content will use examples from the brakes area). At the conclusion of this course, students will take four of the automotive technician ASE certification exams.<br/>           Lecture Hours 1<br/>           Department: Transportation - COT</p> |
| <p>AST 261 Advanced Auto Diagnostics Lab. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): TRID 170, TRID 180, AST 162, AST 230.<br/>           Corequisite(s): AST 260.<br/>           Covers operation and testing for General Motors, Ford, Chrysler, Toyota, and Bosch computerized systems during practical exercises. This course focuses on the diagnosis and repair of computerized engine control systems. The student will obtain the necessary hands-on training required to use the specialized test equipment to diagnose and repair domestic and foreign automotive systems.<br/>           Lab Hours 3<br/>           Department: Transportation - COT</p>                | <p>AST 292 Independent Study. 1-5 Credits<br/>           Department: Transportation - COT</p>   |
|   | <p>AST 294 Seminar/Workshop. 0.5-6 Credits<br/>           Provides students an opportunity to investigate intensively topics pertinent to the field of automotive technology.<br/>           Department: Transportation - COT</p>   |
|   | <p>AST 298 Internship/Cooperative Educ. 1-9 Credits<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           (45 hours/credit) Provides university credit for a sophomore work experience in the area of Automotive Technology, supervised by faculty. Learning agreement must be completed prior to registration (restricted).<br/>           Department: Transportation - COT</p>   |

## BGEN - Business: General

BGEN 105B Introduction to Business. 3 Credits

Term Typically Offered: Fall, Spring

Provides an overall picture of business operations. Specialized fields within business organizations are presented and analyzed. The role of business in today's society is examined and career opportunities in business are explored.

Lecture Hours 3

Department: Business Management - COT

BGEN 110 Applied Business Leadership. 3 Credits

Term Typically Offered: Fall

Focuses on the aspect of leadership in business and management. Topics include leadership skills for motivation, organizational change, teamwork, empowerment, ethics, communication, decision-making, conflict management, and diversity. Personality traits will be examined and how personalities contribute to team dynamics.

Lecture Hours 3

Department: Business Management - COT

BGEN 220 Bus Ethics & Soc Respnsbility. 3 Credits

Term Typically Offered: Spring, Summer

Provides students with an overview of business ethics and ethical management practices with emphasis on the process of ethical decision-making and working through contemporary ethical dilemmas faced by business organizations, managers, and employees. The course is intended to demonstrate how ethics can be integrated into strategic business decisions, and can be applied to students' careers. The course uses a case study approach to encourage the student in developing analytical, problem solving, critical thinking, and decision-making skills.

Lecture Hours 3

Department: Business Management - COT

BGEN 235B Business Law. 3 Credits

Covers the nature, origin and philosophy of law and civil procedure. Provides a comprehensive treatment of contracts and also emphasizes the advantages and disadvantages of different organizational forms.

Lecture Hours 3

Department: Business Management - COT

BGEN 280 Business Planning. 3 Credits

Term Typically Offered: Spring

Prerequisite(s): BMGT 210, BMGT 235, BMKT 225.

Corequisite(s): ACTG 102.

Provides students with knowledge and skills necessary for a small business manager or entrepreneur to develop a business plan. Topics include concepts of mission statements, goals and objectives, business and community compatibility, development of product or service idea, determination of market feasibility, determination of financial feasibility, development of marketing strategy, development of operations outline, and application of financial concepts.

Lecture Hours 3

Department: Business Management - COT

BGEN 292 Independent Study. 1-6 Credits

Lecture Hours 1-6

Department: Business Management - COT

BGEN 294 Seminar/Workshop. 1-3 Credits

Provides students an opportunity to investigate topics pertinent to the field of Business.

Lecture Hours 1-3

Department: Business Management - COT

BGEN 299 Capst: Brewing & Fermentation. 2 Credits  
Pass/No Pass

(90 hours) Provides students an individual opportunity to engage in education and training not covered by regular coursework. Students will be working directly for a brewery, distillery, or winery. Students, through advising with course instructor, must select either the 90 hour professional internship or professional project option (business, scientific, brew house/mechanical, etc.) in consultation with the site supervisor for their capstone experience.

Department: Business Management - COT

## BIOH - Biology: Human

BIOH 104 Basic Human Biology. 3 Credits

Term Typically Offered: Fall, Spring, Summer

Provides students with a basic understanding of human anatomy and physiology. Concepts of the body plan and homeostasis will be introduced. Students will also learn the basic structure, function, and interaction of the integumentary, skeletal, muscular, nervous, endocrine, blood, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.

Lecture Hours 3

Department: Health Occupations - COT

BIOH 105 Basic Human Biology Lab. 1 Credit

Term Typically Offered: Fall, Spring

Corequisite(s): BIOH 104.

Introduces the student to the structure and function of the human body in a lab course. Offered ONLY Online.

Lab Hours 1

Department: Health Occupations - COT

BIOH 201 Human Anatomy & Physiology I. 3 Credits

Corequisite(s): BIOH 202.

Introduces functional human anatomy and physiology at the molecular, cellular, tissue, and organ levels. This course is appropriate for those individuals entering allied health fields. Topics include chemistry, cell biology, histology, and a detailed overview of the anatomy and physiology of the integumentary, skeletal, muscular, and nervous systems. Entry is restricted to City College at MSU Billings students only.

Lecture Hours 3

Department: Health Occupations - COT

BIOH 202 Human Anatomy & Phys I Lab. 1 Credit

Corequisite(s): BIOH 201.

Supplements concepts of human anatomy and physiology introduced in BIOH 201 with hands-on laboratory experience. Entry is restricted to City College at MSU Billings students only.

Lab Hours 1

Department: Health Occupations - COT

BIOH 211 Human Anatomy & Physiology II. 3 Credits

Prerequisite(s): BIOH 201, BIOH 202.

Corequisite(s): BIOH 212.

Continues the examination of functional human anatomy and physiology at the molecular, cellular, tissue, and organ levels introduced in BIOH 201. Topics include the sensory, endocrine, blood, cardiovascular, respiratory, lymphatic, digestive, urinary, and reproductive systems. Entry is restricted to City College at MSU Billings students only.

Lecture Hours 3

Department: Health Occupations - COT

BIOH 212 Human Anatomy & Phys II Lab. 1 Credit  
 Prerequisite(s): BIOH 201, BIOH 202.  
 Corequisite(s): BIOH 211.  
 Supplements concepts of human anatomy and physiology introduced in BIOH 211 with hands-on laboratory experience. Entry is restricted to City College at MSU Billings students only.  
 Lab Hours 1  
 Department: Health Occupations - COT

## BMGT - Business: Management

BMGT 102 Bus Basics Brewing/Distillery. 3 Credits  
 Term Typically Offered: Spring  
 Provides an overall picture of business operations in micro-brewing and distillery. Specialized business concepts within brewery business are presented and analyzed. This course will cover functional concepts and fundamentals required to start and operate a craft brewery. Areas of focus include regulations, operations, finance, and marketing.  
 Department: Business Management - COT

BMGT 180 Employment Law and Practices. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Introduces students to laws and practices affecting the employer-employee relationship. Students gain a general knowledge of employment law, diversity management, equal employment opportunity, record-keeping requirements, and affirmative action.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 210 Small Business Entrepreneurship. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): BGEN 105B, BGEN 110, ACTG 101, BMKT 225.  
 Corequisite(s): BGEN 235.  
 Introduces the essentials of starting, managing, and growing a small business. Topics will include the role of the entrepreneur, pricing, advertising, financing, layout of facilities, inventory control, staffing, purchasing, vendor selection, and relevant laws affecting small business.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 222 Princ of Project Management. 3 Credits  
 Term Typically Offered: Spring, Summer  
 Covers project management concepts including project definition, strategic planning process, organizational structure, culture, roles, stakeholder management, portfolio management, leadership, teambuilding, conflict management, risk management, cost estimation and budgeting, scheduling and project closeout, and termination. Critical Project Management Body of Knowledge elements are also covered in this course.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 230 Business Logistics. 3 Credits  
 Term Typically Offered: Spring  
 Provides a general knowledge of current management practices in logistics management. The focus of the course will be planning, organizing, and controlling of these activities. The course will introduce the student to transport, inventory, location strategies, customer service goals, and organization control.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 235 Management. 3 Credits  
 Introduces students to the study of management and organizational principles of business firms. Emphasis is on effectively working through others to achieve objectives. This is done by exploring planning, decision making, organizing, leading, staffing, controlling, EEOC requirements, appraising performance, and handling disciplinary problems.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 237 Human Relations in Business. 3 Credits  
 Term Typically Offered: Fall  
 Focuses on the aspects of human relations and effective communication in the business environment. This course will include focus on creating strong one-on-one and group communication channels that promote healthy interaction with others for effective and strong business relationships. Subsets of the course will include communication, empathy, stress management, conflict resolution, tactfulness, dealing with conflict, listening skills, and establishing rapport.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 245 Customer Service Management. 3 Credits  
 Term Typically Offered: Spring  
 Focuses on the relationship between business and consumer. This course will enable the student to understand the relationship of self to customers, problem solve, and learn the importance of communicating effectively with customers. Specific emphasis is given to managing customer expectations by building positive customer rapport.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 250 Employment & Comp Strategies. 3 Credits  
 Term Typically Offered: Fall  
 Introduces students to the recruiting and selection process, including interviewing techniques and the legal implications in the recruiting and hiring process. Explores different labor market approaches and organizational recruiting activities. Examines compensation practices and differentiates organizational culture, philosophies, strategies, and objectives that impact compensation.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 281 Risk Mgmt, Safety & Security. 3 Credits  
 Term Typically Offered: Fall, Spring  
 Introduces students to legal and record-keeping requirements affecting health and safety. Students explore safety management activities and policies, workplace health issues, health promotion, workplace violence, and security management.  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 282 Organizational Training & Dev. 3 Credits  
 Introduces students to the training and change management process associated with organizational development and planning. The student will explore training needs and objectives, delivery approaches, levels of training evaluation, adult learning techniques, and coaching strategies .  
 Lecture Hours 3  
 Department: Business Management - COT

BMGT 294 Seminar/Workshop. 1-3 Credits  
 Lecture Hours 1-3  
 Department: Business Management - COT

BMGT 298 Internship/Cooperative Educ. 1-9 Credits  
(45 hours/credit) Provides students with an opportunity for experimental study in the varied areas of human resource management. Students complete a specific assignment in a pre-arranged employer setting. Examples of assignments may include developing an Exit Interview, New Employee Orientation Program, or Training Program, auditing records, assisting with personnel files, or writing job descriptions.  
Lecture Hours 1-9  
Department: Business Management - COT

## BMKT - Business: Marketing

BMKT 112 Applied Sales. 3 Credits  
Term Typically Offered: Fall  
Provides basic principles and techniques for selling, and practical application. Includes selling as a profession, preparation for relationship selling, the selling process, and planning and managing a sales territory.  
Lecture Hours 3  
Department: Business Management - COT

BMKT 225 Marketing. 3 Credits  
Provides students with the fundamental principles and concepts of sales practices and procedures as well as an introduction into marketing terminology and strategies. Topics covered include: personal selling, product development, the marketing concept, consumer behavior, marketing research, pricing, channels of distribution, and promotion.  
Lecture Hours 3  
Department: Business Management - COT

## CAPP - Computer Applications

CAPP 103 Quickbooks Fundamentals. 2 Credits  
Term Typically Offered: Fall  
Provides a step-by-step introduction to the terminology, concepts, and techniques used in QuickBooks Pro. The course is designed for computer users who want a basic understanding of the capabilities of QuickBooks Pro and covers journal entries, customer and vendor activities, payroll, and closing activities for both service-based and merchandising-based businesses.  
Lecture Hours 2  
Department: Computer Technologies - COT

CAPP 110 Short Courses: MS Outlook. 1 Credit  
Prerequisite(s): CAPP 120.  
Instructs students in the full functional usage of Microsoft Outlook as a tool. Students will learn the special features for the application such as: Scheduling, Managing Contacts and Emails, and Integrating Outlook with other applications.  
Lab Hours 2  
Department: Computer Technologies - COT

CAPP 120 Introduction to Computers. 3 Credits  
Instructs students in fundamental computing skills. Concepts include the creation and manipulation of files, use of a common Operating System, a basic understanding of computer hardware, and a functional knowledge of common business applications such as: word processing, spreadsheets, Internet and email, and presentation software. The course is performed in a lab setting with access to computers and necessary software.  
Lecture Hours 3  
Department: Computer Technologies - COT

CAPP 153 MS PowerPoint. 2 Credits  
Prerequisite(s): CAPP 120.  
Instructs students in the features of PowerPoint and its usage as a tool for presentations. Students will learn the full host of features available in PowerPoint to create, modify, and enhance presentations and slide-shows. Further, students will be instructed in design techniques and how to give presentations.  
Lecture Hours 1, Lab Hours 2  
Department: Computer Technologies - COT

CAPP 154 MS Word. 3 Credits  
Prerequisite(s): CAPP 120.  
Provides hands-on experience in word processing on the microcomputer using Word for Windows software. The process of creating and formatting business documents includes editing, search and replace, pagination, document assembly, merging, macros, printing, headers and footers, columns and file management.  
Lecture Hours 3  
Department: Computer Technologies - COT

CAPP 156 MS Excel. 3 Credits  
Prerequisite(s): CAPP 120.  
Introduces students to business applications using spreadsheets. Emphasis is placed on the essential functions of spreadsheet operation, as well as introduction to some advanced functions such as lookup functions and database management. Content emphasizes mastery of spreadsheet concepts and applications and development of analytical thinking skills.  
Lecture Hours 3  
Department: Computer Technologies - COT

CAPP 158 MS Access. 3 Credits  
Prerequisite(s): CAPP 120.  
Examines the process of database design using a relational model. Use of applications software focuses on data query, report generation, multiple file relationships and interface techniques.  
Lecture Hours 3  
Department: Computer Technologies - COT

CAPP 291 Special Topics. 1-3 Credits  
Prerequisite(s): CAPP 120.  
Investigates intensively topics pertaining to an area of data processing.  
Department: Computer Technologies - COT

## CMP - Computer Apps

CMP 205 Computer Skills Aide. 2 Credits  
Prerequisite(s): Approval from the appropriate instructor and department chairperson.  
Allows students the opportunity to enhance their own skills while assisting other students in the development of technical and academic skills as a computer classroom instructional aide. The student must have completed the same course with a grade of "B" or better. Students are allowed to aide in one computer course per semester and only once per course.  
Lecture Hours 2  
Department: Computer Technologies - COT

CMP 236 Advanced Web Programming. 3 Credits  
Prerequisite(s): CSCI 211.  
Provides students with advanced programming skills to create and maintain dynamic web sites using technologies such as Java Server Pages and languages such as PHP and JavaScript. Students will gain skills in developing interactive web sites that perform both client-side and server-side processing while interacting with databases.  
Lecture Hours 3  
Department: Computer Technologies - COT



## COMX - Communication

COMX 106 Comm in a Dynamic Workplace. 3 Credits  
 Term Typically Offered: Fall, Spring, Summer  
 Offers a theoretical and practical understanding of communication processes in the working environment, self-awareness in that environment, and the individual's participation in these relationships. The course aims to develop the student's perception and expression skill to communicate successfully in a variety of work contexts.  
 Lecture Hours 3  
 Department: General Education - COT

## CSCI - Computer Science/ Programming

CSCI 100 Intro to Programming. 3 Credits  
 Term Typically Offered: Fall  
 Introduces key programming concepts such as variables, functions, iteration, and control flow. Using the Python language, students will also explore data structures such as lists, tuples, sets, and dictionaries. Attention will be given to introducing the concepts of object-oriented programming, and students will gain experience developing algorithms to solve problems by modeling real-life situations.  
 Lecture Hours 2, Lab Hours 2  
 Department: Computer Technologies - COT

CSCI 111B Programming with Java I. 3 Credits  
 Prerequisite(s): CAPP 120.  
 Demonstrates the power of Object-Oriented programming through the use of the Java Programming language. Students will learn specifics about the Java programming language and how to use that programming language to create objects, Graphical User Interfaces, Applets, and other basic Java applications.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 114 Programming with C#. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): CSCI 100.  
 Provides students with the knowledge and skills required to program in the high-level, strongly-typed "C" language family. The course provides the skills required to compile program code, work with .NET framework class library, and create user-defined types. The course also teaches students how to troubleshoot coding errors, logic errors, and run-time errors. Students will also develop skills to work with built-in numeric types as well as more complex types that represent a wide variety of logical constructs, such as the file system, network connections, collections and arrays of objects, and dates.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 116 Intro to Python Programming. 3 Credits  
 Term Typically Offered: Fall  
 Provides instruction for students in a scripting language that is being used to work with major application such as network applications, robotics, machine interfaces, geographic information systems, and document imaging.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 121 Programming with Java II. 3 Credits  
 Prerequisite(s): CSCI 111B or consent of instructor.  
 Consolidates students' knowledge concerning Java and then proceeds into more advanced areas. The course begins with a rapid review of concepts covered in CSCI 111B, then dives into more advanced subjects such as Swing, Java Database Connectivity (JDBC), Java Server Pages (JSP), Servlets, Advanced Collections, Networking, and Java Utilities.  
 Lecture Hours 2, Lab Hours 2  
 Department: Computer Technologies - COT

CSCI 124 Advanced C#/.NET. 3 Credits  
 Term Typically Offered: Fall  
 Prerequisite(s): CSCI 114 or consent of instructor.  
 3cr. Provides students with an understanding of basic data structures such as arrays and array lists and their usefulness in manipulating data. This course will provide students with learning experiences in connecting to database applications and external measurement devices and manipulating, analyzing, and displaying the data acquired by those means to develop C#/.NET dynamic applications.  
 Lecture Hours 2, Lab Hours 2  
 Department: Computer Technologies - COT

CSCI 181 Web Design & Programming. 3 Credits  
 Provides students with the necessary skills to design, create, and maintain a complete website on a server. The class will cover many of the elements of web design, including HTML5, CSS, scripting, visual information design, and usability/information architecture techniques. This course also covers basic tools for developing websites such as Notepad++ and Dreamweaver.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 211 Client Side Programming. 3 Credits  
 Prerequisite(s): CSCI 181 or consent of instructor.  
 Provides students with scripting skills required to create and maintain interactive and dynamic web content, data validation, and management of CSS scripts using the Javascript language along with AJAX, jQuery, and other javascript extensions.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 214 Server-Side Web Prog & Admin. 3 Credits  
 Term Typically Offered: Fall  
 Prerequisite(s): CSCI 181 or consent of instructor.  
 3cr. Provides students with a working knowledge of the PHP Web Server language, including logic structures, control structures, include statements, database connectivity, registration forms, password encryption, and web server administration.  
 Lecture Hours 2, Lab Hours 2  
 Department: Computer Technologies - COT

CSCI 223 Software Development. 3 Credits  
 Prerequisite(s): CSCI 100.  
 Examines standard methodologies for developing software and documenting that software. This course will instruct students how to model and diagram applications using Unified Modeling Language, how to decompose problems into base pieces, and how to manage projects. Further, the course will also focus on maintaining solid documentation of any program developed.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

CSCI 240 Databases and SQL. 3 Credits  
 Initiates the student into the art of deploying database applications. The class will focus on designing and creating databases, Structured Query Language, integration with Visual Basic .NET applications, deployment of such databases, and various maintenance and setup issues. Coursework relies heavily on hands-on projects and working within the SQL Server and Visual Basic .NET environments.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

|   |               |  |           |
|---|---------------|--|-----------|
| CSCI 241 PL/SQL.  | 3 Credits     | CSTN 148 Blueprint Codes and Est..   | 3 Credits |
| Term Typically Offered: Spring  |               | Term Typically Offered: Fall   |           |
| Prerequisite(s): CAPP 158 or CSCI 240 or consent of instructor.   |               | 3cr. Concentrates on concepts associated with blueprint reading and interpreting residential and light commercial construction drawings. Includes instruction in the recognition of construction materials, procedures, and specifications, and methods of estimating construction costs from blueprints. Covers trade specific symbols found on construction drawings. Provides introduction to state and local laws and regulations related to construction. |           |
| Provides students with experience in developing Oracle database applications, including an understanding of the general structure of PL/SQL statements, designing forms and reports, and understanding Oracle decision making and looping constructs.                                       |               | Lecture Hours 3  |           |
| Lecture Hours 3   |               | Department: Engineering & Industrial - COT   |           |
| Department: Computer Technologies - COT   |               |  |           |
| CSCI 258 Web Application Development.   | 3 Credits     | CSTN 160 Constructn Cncpts & Bldg Lab.   | 3 Credits |
| Term Typically Offered: Spring  |               | Term Typically Offered: Fall   |           |
| Prerequisite(s): CSCI 181 and CSCI 214.   |               | Corequisite(s): CSTN 120.  |           |
| Explores development of a more complex server-side application with development of a website and API. Students will use web-database integration, Laravel, PHP, and MySQL to create an application developed with the Model/View/Controller architecture.                                   |               | 3cr. Provides hands-on experience in which the student applies, with direct supervision, the basic skills and knowledge presented in the Program. The course is designed as a practical task-oriented application.   |           |
| Lecture Hours 2, Lab Hours 2  |               | Lab Hours 6  |           |
| Department: Computer Technologies - COT   |               | Department: Engineering & Industrial - COT   |           |
| CSCI 292 Independent Study.   | 1-6 Credits   | CSTN 161 Constructn Cncpts & Bldg Lb II.   | 4 Credits |
| Department: Computer Technologies - COT   |               | Term Typically Offered: Fall   |           |
| CSCI 294 Seminar/Workshop.  | 0.5-5 Credits | Prerequisite(s): CSTN 120, CSTN 142, CSTN 160.   |           |
| Department: Computer Technologies - COT   |               | 4cr. Provides hands-on experience in which the student applies, with direct supervision, the skills and knowledge presented thus far in the Program. The course is designed as a practical, task-oriented application utilizing the skills learned in CSTN 120 and CSTN 142.   |           |
| CSCI 298 Cooperative Educ/Internship.   | 1-9 Credits   | Lab Hours 8  |           |
| Department: Computer Technologies - COT   |               | Department: Engineering & Industrial - COT   |           |
| CSCI 299 Thesis/Capstone.   | 4 Credits     | CSTN 250 Construction Estimating.  | 3 Credits |
| Strives to grant students real-world experience by requiring that they create a fully functioning application that meets specified criteria. This course will cover most every aspect of programming from requirements gathering to design to actual coding and testing of the application. |               | Term Typically Offered: Spring   |           |
| Lecture Hours 1, Lab Hours 6  |               | Prerequisite(s): CSTN 148.   |           |
| Department: Computer Technologies - COT   |               | 3cr. Provides instruction in the recognition of construction materials, procedures, specifications, codes, and methods from blueprints and other construction project documents. Provides instruction in estimating construction costs based on this information.  |           |
|   |               | Lecture Hours 3  |           |
|   |               | Department: Engineering & Industrial - COT   |           |
|   |               | CSTN 260 Constructn Cncpts & Bldg Lb III.  | 3 Credits |
|   |               | Term Typically Offered: Spring   |           |
|   |               | Prerequisite(s): CSTN 160, CSTN 161.   |           |
|   |               | Corequisite(s): CSTN 299.  |           |
|   |               | Provides instruction and practice in multiple tasks demanded of a carpenter on a jobsite throughout the progression of a building project.   |           |
|   |               | Lecture Hours 0, Lab Hours 6   |           |
|   |               | Department: Engineering & Industrial - COT   |           |
|   |               | CSTN 271 Construction Project Mgmt.  | 3 Credits |
|   |               | Term Typically Offered: Fall   |           |
|   |               | Prerequisite(s): CSTN 148, CSTN 250.   |           |
|   |               | 3cr. Provides instruction in aspects of construction management including project planning, sales and marketing, budgeting and estimating, financing, supervision, scheduling, tracking, and reporting.  |           |
|   |               | Lecture Hours 3  |           |
|   |               | Department: Engineering & Industrial - COT   |           |

## CSTN - Construction Trades

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|--|-----------|
| CSTN 120 Carpentry Bscs & Rough-In Frmg.   | 4 Credits |
| Term Typically Offered: Fall   |           |
| Corequisite(s): CSTN 160.  |           |
| 4cr. Introduces the carpentry trade, including history, career opportunities, and requirements. This course covers a variety of building materials, fasteners, and adhesives. It also covers installation procedures for windows and exterior doors. Skills required for framing a simple structure are studied and practiced. |           |
| Lecture Hours 2, Lab Hours 4   |           |
| Department: Engineering & Industrial - COT   |           |
| CSTN 142 Int - Ext Finish Carpentry.   | 4 Credits |
| Term Typically Offered: Spring   |           |
| Prerequisite(s): CSTN 120, CSTN 160.   |           |
| Introduces students to the materials and methods for sheathing, exterior siding, stairs, and roofing. Students will lay out and build a simple stair system. Includes instruction in interior finishing materials and methods for interior doors and trim, flooring, cabinets, countertops, and fixtures.                      |           |
| Lecture Hours 2, Lab Hours 4   |           |
| Department: Engineering & Industrial - COT   |           |

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| <p>CSTN 280 Const Proj Schedule &amp; Control. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): CSTN147 or CSTN148, CSTN250, CSTN271.<br/>           3cr. Provides the skills and knowledge required to successfully plan, schedule, and control simple to complex projects in the residential and commercial construction sectors.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>DST 117 Intro to Diesel Fuel Systems. <span style="float: right;">4 Credits</span><br/>           Term Typically Offered: Spring<br/>           Introduces students to diesel fuel hydromechanical injection systems. Students are required to disassemble and reassemble assorted diesel fuel system components. Students will be exposed to mechanical inline and distributor pumps, unit, poppet, and pintle injectors and nozzles, and basic electronic control methods. The course will also cover manufacturer-specific systems including Detroit, Caterpillar, Cummins PT, and John Deere pumps, injectors, and governors.<br/>           Lecture Hours 4<br/>           Department: Transportation - COT</p>   |
| <p>CSTN 281 Construction Project Mgmt II. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): CSTN 148, CSTN 250, CSTN 271.<br/>           Corequisite(s): CSTN 299.<br/>           3cr. Provides instruction in advanced construction management including residential and commercial project planning, estimating, and bidding. Combines with CSTN 299 to form a capstone for the Program.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>DST 132 Diesel Engine Overhaul. <span style="float: right;">6 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): TRID 170.<br/>           Provides a detailed overview of the design, operation, and repair procedures for diesel engines. The lecture portion of this class covers procedures for overhauling, machining, and dynamometer performance testing. Students are then required to apply lectured topics in the lab portion of this class.<br/>           Lecture Hours 6<br/>           Department: Transportation - COT</p>   |
| <p>CSTN 292 Independent Study. <span style="float: right;">1-5 Credits</span><br/>           Department: Engineering &amp; Industrial - COT</p>  |   |
| <p>CSTN 294 Seminar/Workshop. <span style="float: right;">1-4 Credits</span><br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>DST 140 Intro to Hydraulics. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Fall<br/>           Corequisite(s): DST 141.</p>  |
| <p>CSTN 298 Internship. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): CSTN160, CSTN161.<br/>           Corequisite(s): CSTN299.<br/>           3cr. (3 other/wk) Provides students with an opportunity to apply concepts and skills learned in the classroom and lab to workplace settings while participating in experiences in an actual business workplace.<br/>           Department: Engineering &amp; Industrial - COT</p>  | <p>Presents the theories of basic hydraulic principles and their uses in heavy-duty truck, heavy equipment, and agricultural applications. Students are exposed to the application of standard fluid power schematic symbols.<br/>           Lecture Hours 2<br/>           Department: Transportation - COT</p>  |
| <p>CSTN 299 Capstone: Construction. <span style="float: right;">4 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): CSTN 120, CSTN 142, CSTN 160, CSTN 161, CSTN 250.<br/>           Corequisite(s): CSTN 281.<br/>           Provides an opportunity for the student to demonstrate mastery of the skills and knowledge presented in the Program. Student will complete and present a final project including multiple aspects of construction management.<br/>           Lecture Hours 1, Lab Hours 6<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>DST 141 Intro to Hydraulics Lab. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Fall<br/>           Corequisite(s): DST 140.<br/>           Provides students a means to demonstrate knowledge of basic principles on live work stations, as well as disassemble and reassemble components. Students will work with linear and rotary actuators, directional valves, fixed displacement gear pumps, and pressure controls.<br/>           Lab Hours 2<br/>           Department: Transportation - COT</p>   |
| <p><b>DST - Diesel Service Technician</b></p> <p>DST 101 Power Trains. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Spring<br/>           Instructs students in the design and operation of manual transmissions. Emphasis will be placed on diagnosis and service procedures for clutches, transmissions, drivelines, and differentials in on and off highway trucks, heavy equipment, and agricultural applications. Students will be expected to perform service tasks on clutches, transmissions, differentials, and drivelines using supplied training equipment.<br/>           Lecture Hours 2<br/>           Department: Transportation - COT</p> | <p>DST 155 Adv Hydraulics &amp; Pneumatics. <span style="float: right;">4 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): DST 140 &amp; DST 141.<br/>           Instructs students on fluid power system pressure, flow, and directional controls. Students receive training on fluid conductors, seals, and fixed and variable displacement pumps. Diagnosis and repair of controls, conductors, seals, and pumps are also covered. Students will be required to understand, describe, and design fluid power systems using standard schematic symbols.<br/>           Lecture Hours 4<br/>           Department: Transportation - COT</p>  |
|  | <p>DST 202 Advanced Power Trains. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): DST 141, DST 140.<br/>           Instructs students in the design and operation of automated twin counter shafts, automatic, and powershift transmissions. Emphasis will be placed on diagnosis and service procedures for twin counter shaft, powershifts, and automatic transmissions in on and off highway truck, heavy equipment, and agricultural applications. Students will be expected to perform service tasks on twin counter shafts, powershifts, and automatic transmissions using supplied training equipment.<br/>           Lecture Hours 2<br/>           Department: Transportation - COT</p> |

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| DST 250 Heavy Duty Chassis.<br>Term Typically Offered: Fall<br>Instructs students on suspension and braking systems for on- and off-road truck, heavy equipment, and agricultural applications. Studies will include heavy duty truck suspension diagnosis, repair, and alignment procedures, as well as hydraulic and pneumatic braking systems.<br>Lecture Hours 6<br>Department: Transportation - COT   | 6 Credits   |
| DST 256 Applied Diesel Service Oper I.<br>Term Typically Offered: Fall<br>Applies diagnosis and repair procedures for chassis, powertrains, preventative maintenance, and engine systems for on and off road trucks and heavy equipment. The course will simulate an actual shop environment.<br>Lab Hours 2<br>Department: Transportation - COT   | 2 Credits   |
| DST 257 Applied Diesel Service Oper II.<br>Term Typically Offered: Spring<br>Applies diagnosis and repair procedures for chassis, powertrains, preventative maintenance, and engine systems for on and off road trucks and heavy equipment. The course will simulate an actual shop environment.<br>Lab Hours 2<br>Department: Transportation - COT  | 2 Credits   |
| DST 260 Diesel Eng Diag & Troubleshoot.<br>Term Typically Offered: Fall<br>Prerequisite(s): DST 140 & DST 141, DST 117, DST 132, TRID 170, TRID 180.<br>Coordinates diagnosis and testing of diesel engine problems using electrical test equipment and an engine dynamometer. This course will expand on engine assembly and startup procedures, as well as tuning and performance testing.<br>Lecture Hours 5<br>Department: Transportation - COT  | 5 Credits   |
| DST 277 Adv Fuel Systems & Diesel Eng.<br>Term Typically Offered: Spring<br>Prerequisite(s): DST 140 & DST 141, DST 117, DST 132, DST 155, DST 260, TRID 180.<br>Provides an in-depth study of modern diesel fuel systems used in on- and off-road truck, heavy equipment, agricultural, and stationary engine applications. The course will cover engine and powertrain electronic management systems used for common high speed diesel engines. Students will also be exposed to stationary industrial engine electronic control systems.<br>Lecture Hours 6<br>Department: Transportation - COT | 6 Credits   |
| DST 292 Independent Study.<br>Department: Transportation - COT   | 1-6 Credits |
| DST 294 Seminar/Workshop.<br>Provides students an opportunity to investigate intensively topics pertinent to the field of diesel technology.<br>Department: Transportation - COT   | 1-3 Credits |
| DST 298 Internship/Cooperative Educ.<br>Term Typically Offered: Fall, Spring, Summer<br>(45 hours/credit) Provides university credit for a sophomore work experience in the area of Diesel Technology, supervised by faculty. Learning agreement must be completed prior to registration (restricted).<br>Department: Transportation - COT   | 1-9 Credits |

## ECP - Emergency Care Provider

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| ECP 200 Transition to Paramedic Care.<br>Term Typically Offered: Spring<br>Provides an opportunity to start learning the cognitive, psychomotor, and behavioral differences between an EMT and paramedic. Topics covered include roles and responsibilities of the paramedic, EMS systems, licensure/recertification requirements, medical legal, patient evaluation, radio communication, documentation, and current issues that impact the EMS profession.<br>Lecture Hours 3<br>Department: Health Occupations - COT  | 3 Credits |
| ECP 201 Paramedic Fundamentals.<br>Term Typically Offered: Fall<br>Prepares the paramedic student in the basic knowledge and skills needed in the pre-hospital environment. Topics covered include roles and responsibilities of the paramedic, medical legal considerations, communications, rescue and disaster operations, initial patient assessment and management, airway management and ventilation, pathophysiology of shock, and emergency pharmacology.<br>Lecture Hours 3<br>Department: Health Occupations - COT   | 3 Credits |
| ECP 202 Paramedic Fundamentals Lab.<br>Term Typically Offered: Fall<br>Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 201.<br>Lab Hours 2<br>Department: Health Occupations - COT  | 1 Credit  |
| ECP 206 EMS Case Studies.<br>Term Typically Offered: Fall<br>Provides an opportunity to study and manage trauma and respiratory emergencies from a case study perspective. Trauma topics covered include shock, head, spinal, thoracic, abdominal, burns, and environmental. Respiratory topics covered include asthma, emphysema, chronic bronchitis, pneumonia, pulmonary edema, and embolism.<br>Lecture Hours 4<br>Department: Health Occupations - COT  | 4 Credits |
| ECP 207 Cardiology.<br>Term Typically Offered: Fall<br>Provides an in-depth study in the pathophysiology and management of cardiovascular disease and related emergencies. Topics include anatomy and physiology of the heart and circulatory system, basics of electrophysiology, assessment of the cardiac patient, pathophysiology of atherosclerosis, specific conditions resulting from atherosclerotic heart disease, peripheral vascular emergencies, pharmacologic intervention, dysrhythmia recognition, and specific management of cardiac emergencies.<br>Lecture Hours 4<br>Department: Health Occupations - COT | 4 Credits |
| ECP 208 Cardiology Lab and ACLS.<br>Term Typically Offered: Spring<br>Corequisite(s): ECP 207.<br>The student practices and gains manipulative skills to satisfactorily manage the task in ECP 207. Upon completion, the student receives provider certification in Advanced Cardiac Life Support.<br>Lab Hours 2<br>Department: Health Occupations - COT  | 1 Credit  |

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| <p>ECP 216 Hospital Clinical I. 5 Credits<br/>           Term Typically Offered: Fall<br/>           Pass/No Pass<br/>           (15 clinical/wk) Provides the opportunity to apply, in a clinical setting, the didactic knowledge and skills developed in the classroom and lab. Serves as the first stage in assisting the student to become an employable EMS provider. Clinical skills addressed include patient assessment and evaluation, vital signs management, development of airway management skills, autopsy observation, development of communication skills, introduction to various skills necessary for patient care, and development of safety practices.<br/>           Department: Health Occupations - COT</p> | <p>ECP 233 Trauma/Pulmonary Lab and PHTLS. 1 Credit<br/>           Term Typically Offered: Fall<br/>           Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 230 and ECP 232. Upon completion, the student receives provider certification in Pre-Hospital Trauma Life Support.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>  |
| <p>ECP 220 Special Considerations. 1 Credit<br/>           Term Typically Offered: Spring<br/>           Provides an opportunity to study and manage behavioral emergencies. Students are taught to recognize symptoms of abnormal behavior and responses. Students learn techniques to manage the suicide patient.<br/>           Lecture Hours 1<br/>           Department: Health Occupations - COT</p>   | <p>ECP 242 Medical. 2 Credits<br/>           Term Typically Offered: Spring<br/>           Provides an intense course in the pathophysiology and management of medical emergencies to include endocrine, nervous system, the acute abdomen, anaphylaxis, toxicology and substance abuse, infectious diseases, environmental, geriatric and pediatric emergencies.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>   |
| <p>ECP 221 OB/Neonate/Pediatrics. 2 Credits<br/>           Term Typically Offered: Spring<br/>           Provides the student with the opportunity to participate in normal and abnormal obstetrical problems. Anatomy and physiology of the female reproductive system, assessment of the gynecologic patient, deliveries (normal, abnormal and complicated), routine care of the neonate, care of the distressed infant, neonatal emergencies, and neonatal transport are addressed.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>  | <p>ECP 243 Medical Lab. 1 Credit<br/>           Term Typically Offered: Spring<br/>           Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 242.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>   |
| <p>ECP 222 OB/Neonate/Ped Lab, NRP, PALS. 1 Credit<br/>           Term Typically Offered: Spring<br/>           Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 221. Upon completion, the student receives provider certification in Neonatal Resuscitate Program (NRP) and Pediatric Advanced Life Support (PALS).<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>  | <p>ECP 246 Hospital Clinical II. 6 Credits<br/>           Term Typically Offered: Spring<br/>           Pass/No Pass<br/>           (18 clinical/wk) A continuation of the clinical skills initiated in ECP 216. Provides the opportunity to apply in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. Serves as a final stage in assisting the student to become an employable EMS provider. Clinical skills addressed include electrocardiology, assessment and management of acute and chronic disease, pediatric advanced life support skills, obstetrical and neonatal care, and behavioral intervention techniques.<br/>           Department: Health Occupations - COT</p> |
| <p>ECP 230 Trauma. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Provides an intense course in the pathophysiology and the management of trauma to include assessment of the trauma patient, management of head injuries, chest injuries, abdominal injuries, spinal injuries, orthopedic injuries, management of the multi-trauma patient, management of special airway problems, and current trends in trauma management.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>  | <p>ECP 250 NREMT Exam Preparation. 3 Credits<br/>           Term Typically Offered: Summer<br/>           Prepares the paramedic student for the national registry paramedic exam. It is a review of the core curriculum taught throughout 2nd and 3rd semester of the paramedic program.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   |
| <p>ECP 232 Pulmonary. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Provides an in-depth study of the anatomy of the respiratory system, its relationship to the other systems of the body, the pathophysiology of diseases of the respiratory system, and treatment modalities of pulmonary disease. Topics included are anatomy of the respiratory system, measurements of pulmonary function, respiration and gas exchange, assessment of the respiratory system, pathophysiology and management of respiratory disorders, and principles and management of acute respiratory insufficiency.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>                      | <p>ECP 251 NREMT Exam Prep Lab. 1 Credit<br/>           Term Typically Offered: Summer<br/>           Prepares the paramedic student for the national registry paramedic exam. It is a review of the psychomotor skills taught throughout 2nd and 3rd semester of the paramedic program.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>  |
| <p>ECP 233 Trauma/Pulmonary Lab and PHTLS. 1 Credit<br/>           Term Typically Offered: Fall<br/>           Practices and gains the manipulative skills necessary to effectively manage the tasks in ECP 230 and ECP 232. Upon completion, the student receives provider certification in Pre-Hospital Trauma Life Support.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>  | <p>ECP 291 Special Topics. 1-6 Credits<br/>           Provides an opportunity for students to investigate intensively in an area of Paramedicine.<br/>           Department: Health Occupations - COT</p>  |
| <p>ECP 232 Pulmonary. 2 Credits<br/>           Term Typically Offered: Fall<br/>           Provides an in-depth study of the anatomy of the respiratory system, its relationship to the other systems of the body, the pathophysiology of diseases of the respiratory system, and treatment modalities of pulmonary disease. Topics included are anatomy of the respiratory system, measurements of pulmonary function, respiration and gas exchange, assessment of the respiratory system, pathophysiology and management of respiratory disorders, and principles and management of acute respiratory insufficiency.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>                      | <p>ECP 294 Seminar/Workshop. 1-6 Credits<br/>           Provides students an opportunity for experiential study on topics pertinent to the field of Paramedicine.<br/>           Department: Health Occupations - COT</p>  |



ECP 295 Field Internship. 8 Credits  
 Term Typically Offered: Summer  
 Prerequisite(s): ECP 201, ECP 202, ECP 230, ECP 232, ECP 233, ECP 216, ECP 207, ECP 208, ECP 242, ECP 243, ECP 220, ECP 221, ECP 222, ECP 246.  
 (24 clinical/wk) Provides the opportunity to apply in the clinical setting, the didactic knowledge and skills developed in the classroom and lab. It serves as the final stage in assisting the student to become an employable EMS provider. Cognitive, psychomotor, and effective evaluation skills addressed include patient assessment, history gathering, treatment prioritizing, diagnostic impression, protocol knowledge, radio communication, written documentation, airway management, fluid/drug management, cardiac management, trauma/medical management, attitude, professionalism, assertiveness, team leader qualities.  
 Department: Health Occupations - COT

## ELCT - Electrical Technology

ELCT 130 Electric Motors and Generators. 3 Credits  
 Prerequisite(s): ETEC 101.  
 Introduces terminology and basic principles of DC and AC motors and generators. Students will study single-phase and three-phase motors and generators and operational controls. Common AC and DC power generation equipment and testing techniques will also be covered.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ELCT 241 Electric Motor Controls. 3 Credits  
 Term Typically Offered: Fall  
 Orients students to the study of electromechanical control system concepts. Experiments are designed to illustrate the principles, applications, connection, and installation procedures of electrical controllers. Special emphasis is placed on the analysis and development of control circuits.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ELCT 250 Programmable Logic Controllers. 3 Credits  
 Prerequisite(s): ETEC 103.  
 Introduces a variety of programmable logic controllers (PLCs). The application, operation, and programming of PLCs will be covered, with an emphasis on programming. Computers and manual methods will be used to program PLCs.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

## ETEC - Electronics Technology

ETEC 101 AC/DC Electronics I. 3 Credits  
 Term Typically Offered: Spring  
 Introduces safety rules, concepts, and operating characteristics of direct current (DC) and alternating current (AC) electrical circuits. Selection, inspection, use, and maintenance for common electrical test equipment are also covered.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ETEC 103 AC/DC Electronics II. 3 Credits  
 Prerequisite(s): ETEC 101 or TRID 185 & TRID 186.  
 Expands the students' knowledge of AC/DC electronics. Safety rules, concepts, and operating characteristics of electrical circuits will be emphasized. Capacitors, inductors, low voltage power supplies, diodes, transistors, and triodes will be introduced and analyzed.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ETEC 192 Fund Electrical Technicians I. 3 Credits  
 Term Typically Offered: Fall  
 Introduces students to the National Electrical Code, device boxes, hand bending, raceways and fittings, conductors and cables, basic electrical construction drawings, residential electrical services, and electrical test equipment.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ETEC 193 Fund Electrical Technicians II. 3 Credits  
 Term Typically Offered: Spring  
 Expands on the content covered in Fundamentals of Electrical Technicians I. The course covers electrical lighting, conduit bending, pull and junction boxes, conduit installations, cable tray, conductor terminations and splices, grounding and bonding, and circuit breakers and fuses.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ETEC 231 Electronic Drive Systems. 3 Credits  
 Prerequisite(s): ETEC 103.  
 Exposes students to advanced electronic drive systems used in industrial applications. Electronic control of DC and AC motors, transmission and solid-state controllers, and electronic control of power generation equipment will be discussed.  
 Lecture Hours 3  
 Department: Engineering & Industrial - COT

ETEC 284 Digital Electronics. 4 Credits  
 Prerequisite(s): ETEC 103.  
 Introduces basic digital circuits and their use in microprocessors and other digital devices. Reading digital logic schematics and building, testing, and troubleshooting digital circuits are also covered.  
 Lecture Hours 4  
 Department: Engineering & Industrial - COT

## FIRE - Fire & Emergency Services

FIRE 106 Wildland Firefighting. 3 Credits  
 Term Typically Offered: Spring  
 Directs the students in the identification, description, and reaction to situations and conditions that would be considered dangerous to the wildland firefighter. The course content will also provide the student with a better understanding of fire behavior. The course includes federal requirement qualifications needed for beginning wildland firefighting.  
 Lecture Hours 3  
 Department: Safety - COT

FIRE 115 Firefighter I Foundations. 3 Credits  
 Term Typically Offered: Fall  
 Introduces students to fire and emergency services careers. Through lecture and practice, students will learn to apply principles of modern fire behavior, safety, air management, and crew resource management to structure firefighting.  
 Lecture Hours 3  
 Department: Safety - COT

FIRE 119 Fire Service Ethics. 2 Credits  
 Term Typically Offered: Spring  
 Instructs students in ethical theories, ethical standards, and ethical problems encountered in fire and emergency services, including social media ethics and ethical responsibility of fire service personnel to each other and to those whom they serve.  
 Lecture Hours 2  
 Department: Safety - COT

FIRE 130 Firefighter Ldrshp & Influence. 3 Credits  
Prerequisite(s): Accuplacer test proficiency/WRIT proficiency for placement into WRIT 101 or WRIT 122.

Instruct students in the practical application of leadership and influence in fire and emergency services. Analyze decision-making, problem solving, creativity, leadership models, and influencing and managing change. Includes leadership development models for firefighters.

Lecture Hours 3  
Department: Safety - COT

FIRE 131 Fire Apparatus and Hydraulics. 3 Credits  
Acquire the basic knowledge of various types of fire apparatus used in the fire service and their unique requirements needed to provide emergency services. Assess the equipment and its applications used for suppressing fires and applications to other emergency responses. Learn to apply the principles used in hydraulics for the delivery of water in fire protection and supply systems. Demonstrate proficiency of this knowledge by using applied field operational hydraulics.

Lecture Hours 3  
Department: Safety - COT

FIRE 180 Incident Command. 3 Credits  
Term Typically Offered: Spring  
Acquaints the student with basic principles of emergency incident management. The components of management and chain of command will be emphasized. A computer simulator will be used to give hands-on training with incident success as the goal.

Lecture Hours 3  
Department: Safety - COT

FIRE 201 Firefighter Resilience. 3 Credits  
Term Typically Offered: Spring  
Introduces students to resilience science as applied to fire and emergency services personnel. Students will define resilience, understand models and methods in resilience science, and evaluate adaptation and pathways of resilience applicable to personnel to work in emergency and disaster situations. Students will analyze the impacts of psychological and emotional stress in high-stress operational environments common to emergency response personnel and methods of applied personal resilience.

Lecture Hours 3  
Department: Safety - COT

FIRE 214 Inspec Codes & Practices. 3 Credits  
Term Typically Offered: Fall  
Provides essential information concerning the background and evolution of fire prevention, code interpretation and applicability, hazard identification and abatement, risk assessment, operation of a fire prevention bureau, design and operation of fire protection systems and equipment, and the basic concepts of fire investigation. Emphasizes building construction and associated hazards.

Lecture Hours 3  
Department: Safety - COT

FIRE 255 Cause & Origin. 2 Credits  
Term Typically Offered: Fall  
Instructs students in basic investigative techniques for fire causes and origin. Fire behavior in structures is discussed as well as legal requirements of fire service personnel for evidence preservation.

Department: Safety - COT

FIRE 270 Fire Prevention. 3 Credits  
Term Typically Offered: Fall  
Provides fundamental knowledge relating to the field of fire prevention. Topics include history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation.

Lecture Hours 3  
Department: Safety - COT

FIRE 275 Fire Service Instructor. 3 Credits  
Term Typically Offered: Spring  
Develops the student's speaking and creative skills as well as the ability to use instructional tools and various media in an educational environment. Emphasis will be placed on developing lesson plans and evaluation instruments. Students will give instructional presentations using the aforementioned tools.

Lecture Hours 3  
Department: Safety - COT

FIRE 298 Internship/Cooperative Educ. 1-9 Credits  
Term Typically Offered: Spring  
Prerequisite(s): FIRE 115.  
V1-9cr. (1-9 other/wk) (45 hours per credit) Provides observational field internship with an area fire department to give first hand experience of the profession of firefighter. Requires consent of instructor.

Department: Safety - COT

## HIT - Health Information Technology

HIT 101 Intro Health Care Informatics. 3 Credits  
Term Typically Offered: Fall, Spring  
Introduces how multidisciplinary fields use health information technology. This course provides an overview of the subject including history, basic knowledge of health care technology, and information and tools as applied in support of health care delivery. Students will gain an introduction to the complexities of health care and how information technology fits within the U.S. health care system.

Lecture Hours 3  
Department: Computer Technologies - COT

HIT 265 Elec Health Rec in Med Practic. 3 Credits  
Term Typically Offered: Spring  
Prerequisite(s): CAPP 120, AHMS 220.  
Introduces concepts of use and maintenance of Electronic Health Record (EHR) systems. Includes skill development for navigation, implementation, and how to achieve a paperless office environment. Explores issues around privacy, security, government regulations, and ethical/legal aspects involved with medical records in a health information technology environment.

Lecture Hours 3  
Department: Computer Technologies - COT

## HVC - Heating, Ventilating, Air Conditioning, and Refrigeration

HVC 110 Introduction to HVAC. 3 Credits  
Exposes students to theories and concepts of the HVAC industry. Topics covered will include principles of thermodynamics, the study and nature of air, and an introduction to heating and cooling loads.

Lecture Hours 3  
Department: Engineering & Industrial - COT

HVC 255 Advanced Controls. 3 Credits  
Introduces students to commercial control systems such as digital direct, programmable logic, and pneumatic controls. Students will install, diagnose, and repair all types of pneumatic systems using test equipment, diagrams, and computer simulators.

Lecture Hours 3  
Department: Engineering & Industrial - COT

HVC 294 Seminar/Workshop. 1-5 Credits  
Department: Engineering & Industrial - COT

HVC 298 Internship/Cooperative Educ. 1-9 Credits  
Department: Engineering & Industrial - COT

HVC 299 Capstone.  
Lecture Hours 1  
Department: Engineering & Industrial - COT

1 Credit

## ITS - Information Technology Systems

ITS 161 MS Windows 7 Configuration.  
Lecture Hours 3  
Department: Computer Technologies - COT

3 Credits

ITS 162 Wndws Srvr 08 Actv Drctry Cnfg.  
Lecture Hours 3  
Department: Computer Technologies - COT

3 Credits

ITS 166 Configuring MS Windows 10.  
Term Typically Offered: Fall  
Prerequisite(s): CAPP 120.

3 Credits

Provides students with the knowledge and skills required to set up and administer a computer running Microsoft Windows 10 operating system as a single workstation and a member of a domain. The course provides the skills required to perform basic installation, configuration tasks, and day-to-day administration tasks in a Windows-based network. The course also teaches students how to troubleshoot basic installation, configuration, and administration problems.

Lecture Hours 2, Lab Hours 2  
Department: Computer Technologies - COT

ITS 212 Network Operating Sys-Server A.  
Term Typically Offered: Fall  
Prerequisite(s): ITS 166.

3 Credits

(2 lec/2lab/wk.) Provides students with the knowledge and skills required to set up and administer a computer running Microsoft Server 2016 operating system in a single domain environment. The course provides the skills required to perform basic installation, configuration tasks, and day-to-day administration tasks in a Microsoft-based network. The course also teaches students how to troubleshoot basic installation, configuration, and administration problems. The course content applies to the Windows 2016 Server network operating system and the Windows client operating system.

Lecture Hours 2, Lab Hours 2  
Department: Computer Technologies - COT

ITS 217 Network OS - Server Admin/Apps.  
Term Typically Offered: Fall  
Prerequisite(s): ITS 161 & ITS 162.

3 Credits

Provides students with the knowledge and skills to configure and troubleshoot a Windows Server 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies. Students will gain an understanding of the networking technologies most commonly used with Windows Server 2008 and IP-enabled networks. Students will also learn how to secure servers and maintain update compliance.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 224 Introduction to Linux.  
Term Typically Offered: Fall, Spring

3 Credits

Provides students with the knowledge and skills required to set up and administer a computer running a Linux operating system. The course provides the skills required to perform basic installation, configuration tasks, and day-to-day administration tasks in a Linux network. The course also teaches students how to troubleshoot basic installation problems and perform system maintenance.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 226 Advanced Linux.  
Term Typically Offered: Fall  
Prerequisite(s): ITS 224.

3 Credits

3cr. Provide students with a working knowledge of Linux networking and security. Students will be exposed to file sharing technologies such as the Network File System (NFS), samba, and the File Transfer Protocol (FTP). Network security includes concepts such as firewalls, encryption, and network intrusion detection. In order to reinforce the material, the course provides a range of laboratory and hands-on assignments that puts the student in the role of a problem solver, requiring the student to apply concepts presented into situations that might occur in a real-life work environment.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 245 Computer Forensics.  
Term Typically Offered: Spring

3 Credits

3cr. Explore computer forensics using the skills and knowledge acquired to perform computer forensics. Apply that knowledge to computers and mobile forensic concepts in forensic investigations procedures.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 246 Cybersecurity Operations.  
Term Typically Offered: Fall  
Prerequisite(s): CAPP 120 or ITS 166 or ITS 224.

3 Credits

Introduces the core security concepts and skills needed to monitor, detect, analyze, and respond to cybercrime, cyberespionage, insider threats, advanced persistent threats, regulatory requirements, and other cybersecurity issues facing organizations. It emphasizes the practical application of the skills needed to maintain and ensure security operational readiness of secure networked systems.

Lecture Hours 2, Lab Hours 2  
Department: Computer Technologies - COT

ITS 256 CCNA Security.  
Term Typically Offered: Fall  
Prerequisite(s): NTS 105.

3 Credits

Provides students with the technical knowledge required of foundation-level security practitioners. Provides a foundation level of skill and knowledge in general security concepts, communication security, infrastructure security, basics of cryptography, and operational/organizational security.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 257 Intro to Comp Virtualization.  
Term Typically Offered: Spring  
Prerequisite(s): ITS 212, ITS 224.

3 Credits

Introduces operating system virtualization and shared storage. Emphasis is placed on virtualization terminology, virtual machine storage, virtual networking, and access control. Students will install, configure, and troubleshoot a computing environment that includes virtualization software from multiple software vendors. Upon completion, students should be able to perform tasks related to installation, configuration, and management of virtual machines. Students should explain the role of shared storage in OS virtualization.

Lecture Hours 3  
Department: Computer Technologies - COT

ITS 274 Adv Hrdwr/Sftwr Trbl & Spprt. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): ITS 162 & ITS 280.  
 Studies advanced software applications in order to solve in-depth business cases. Provides students with the skills necessary to troubleshoot computers, networks, and peripheral devices. Students complete software and hardware installation projects to increase competency and hands-on skills and then learn how to troubleshoot common problems associated with each stage of the project.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

ITS 280 Computer Repair & Maintenance. 3 Credits  
 Prerequisite(s): CAPP 120 or Instructor Approval.  
 Provides students with the skills necessary to install and troubleshoot hardware devices. Topics include system setup, RAM, hard and floppy drives, data buses, power supplies, IO cards, and diagnostic tools.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

ITS 283 Health Information Networking. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): CAPP 120, NTS 104, and NTS 105.  
 Equips students with the knowledge and skills that can be applied toward entry-level specialist careers in healthcare networking. Health Information Networking is a blended curriculum with both online and classroom learning. Health Information Networking aims to develop an in-depth understanding of principles and practicalities needed for information technology professionals wishing to specialize in healthcare network implementations.  
 Lecture Hours 2, Lab Hours 2  
 Department: Computer Technologies - COT

ITS 284 Network Storage. 3 Credits  
 Term Typically Offered: Spring  
 Prerequisite(s): ITS 217 or consent of instructor.  
 Provides students with the knowledge and skills required to set up and administer digital information in traditional media, network media storage devices, and virtual media storage devices.  
 Lecture Hours 3  
 Department: Computer Technologies - COT

ITS 289 Professional Certification. 1 Credit  
 Term Typically Offered: Spring  
 Prerequisite(s): NTS 205.  
 Pass/No Pass  
 Prepares students to successfully pass the Cisco CCNA exam by reviewing current exam requirements and topics and building students' self-confidence as they prepare for the exam.  
 Lecture Hours 1  
 Department: Computer Technologies - COT

ITS 291 Special Topics. 1-4 Credits  
 Lecture Hours 1-4  
 Department: Computer Technologies - COT

ITS 292 Independent Study. 1-6 Credits  
 Department: Computer Technologies - COT

ITS 294 Seminar/Workshop. 0.5-5 Credits  
 Prerequisite(s): CAPP 120.  
 Investigates intensively topics pertaining to an area of data processing.  
 Department: Computer Technologies - COT

ITS 298 Cooperative Educ/Internship. 1-9 Credits  
 Department: Computer Technologies - COT

ITS 299 Capstone. 3 Credits  
 Prerequisite(s): All 100-level courses in the program or consent of instructor.  
 Strives to grant students real-world experience by requiring that they create a fully functioning network that meets specified criteria. This course will cover most every aspect of networking from requirements gathering to design to actual application and testing of the network.  
 Lecture Hours 1, Lab Hours 4  
 Department: Computer Technologies - COT

## M - Mathematics

M 065 Prealgebra. 3 Credits  
 Covers pre-algebra concepts involving terminology, fractions, decimals, percent, ratio and proportion, measurement, geometry, and statistics. Credits do not apply toward graduation requirements nor fulfill General Education requirements. However, the credits do count towards enrollment status for financial aid.  
 Lecture Hours 3  
 Department: General Education - COT

M 088 Mathematical Literacy. 4 Credits  
 Term Typically Offered: Fall, Spring  
 Prerequisite(s): appropriate placement score.  
 Develops mathematical literacy through peer collaboration, problem solving, critical thinking, writing, and communicating mathematics. Students represent and solve relevant, real-world problems using various forms of numbers, equations, and graphs. Topics include proportional reasoning, algebra, introductory statistical formulas, geometry, and measurement.  
 Lecture Hours 4  
 Department: General Education - COT

M 090 Introductory Algebra. 3 Credits  
 Prerequisite(s): M 065 or equivalent.  
 Covers basic algebra concepts including terminology, operations on rational numbers, solving and graphing linear equations and inequalities in one and two variables, determining equations of lines, and polynomial and function operations. Credits do not apply toward graduation requirements and do not fulfill General Education requirements. However, the credits do count towards enrollment status for financial aid.  
 Lecture Hours 3  
 Department: General Education - COT

M 095 Intermediate Algebra. 4 Credits  
 Prerequisite(s): M 090 or equivalent.  
 Reviews basic algebra concepts including terminology, operations on rational numbers, solving and graphing linear equations and inequalities in one and two variables, determining equations of lines, and polynomial operations. Covers function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; and solving and graphing quadratic equations. Credits do not apply toward graduation requirements and do not fulfill General Education requirements. However, the credits do count towards enrollment status for financial aid.  
 Lecture Hours 4  
 Department: General Education - COT

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| <p>M 098A Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p>M 108 Business Mathematics. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): Passing M 065 or appropriate placement test scores.<br/>           3cr. Examines the mathematics of business ownership and exposes the mathematical needs of business decisions. Techniques include marketing, payroll, cash flow, simple and compound interest, credit, promissory notes, insurance financial statements, ratio analysis, depreciation, annuities, and inventory valuation.<br/>           Lecture Hours 3<br/>           Department: General Education - COT</p>  |
| <p>M 098B Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p>M 111 Technical Mathematics. 3 Credits<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): M 065 or appropriate placement scores.<br/>           Applies math to problems drawn from diverse occupational fields. In addition to a review of operations on rational numbers, the topics of measurement, percent, proportion and variation, applications of algebra to the extent of solving quadratic equations, and applications of plane and solid figure geometry are developed for use in a trade or industrial setting. Course may serve as a prerequisite to M 114, but does not satisfy the prerequisite of any other math courses. Credits apply to graduation but do not fulfill General Education requirements.<br/>           Lecture Hours 3<br/>           Department: General Education - COT</p> |
| <p>M 098C Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p>M 114 Extended Technical Mathematics. 3 Credits<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): M 111 or appropriate placement score.<br/>           Applies math to problems drawn from diverse occupational fields. Provides college level study of measurement, algebra, geometry, and trigonometry as needed to solve mathematical applications in a trade or technical work environment.<br/>           Lecture Hours 3<br/>           Department: General Education - COT</p>   |
| <p>M 098D Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p>M 120 Math Health Care Applications. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): appropriate placement score.<br/>           Provides students with a solid mathematical foundation necessary to succeed in a health care profession. This course will review algebra, systems of measurement, medication and syringe calculations, ratio and proportions, calculations for intravenous therapy, basic statistics, ionic solutions, and pH calculations. Offered ONLY Online.<br/>           Lecture Hours 3<br/>           Department: General Education - COT</p>   |
| <p>M 098E Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p>M 140 College Math for Healthcare. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): M 088 or appropriate placement score.<br/>           Provides students with a solid mathematical foundation necessary to succeed in a health care profession. This course will review algebra, systems of measurement, ratio and proportions, basic probability and statistics concepts, and ionic solutions and pH calculations. This course will apply mathematical reasoning and problem solving as it applies to the healthcare field and is a suitable prerequisite for STAT 216.<br/>           Lecture Hours 3<br/>           Department: General Education - COT</p>   |
| <p>M 098E Intro &amp; Intermediate Algebra. 1 Credit<br/>           Term Typically Offered: Fall, Spring, Summer<br/>           Prerequisite(s): appropriate placement score.<br/>           Covers basic algebra concepts including terminology; operations on rational numbers; solving and graphing linear equations and inequalities in one and two variables; determining equations of lines; polynomial and function operations; operations on exponential and radical expressions; factoring; solving rational, absolute value, radical, and systems of equations; solving and graphing quadratic equations. This is a modularized course based on mastery learning in which students will earn credit for each module (A, B, C, D, E) by examination.<br/>           Lecture Hours 1<br/>           Department: General Education - COT</p> | <p><b>NRGY - Sustainable Energy</b></p> <p>NRGY 101 Intro to Sustainable Energy. 3 Credits<br/>           Term Typically Offered: Spring<br/>           Provides an overview of sustainable energies including solar, wind, hydro, biomass, and geothermal. Students will learn the basic principles of each technology. Students will also investigate renewable resources and their associated technologies.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>  |



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| NRGY 120 Industrial Safety and Rigging.<br>Term Typically Offered: Spring<br>Provides an overview of safe industrial practices and basic rigging techniques. At completion of this course, students will have earned the OSHA 10 certification.<br>Lecture Hours 3<br>Department: Engineering & Industrial - COT   | 3 Credits   | NRGY 299 Senior Thesis/Capstone.<br>Term Typically Offered: Fall<br>Prerequisite(s): NRGY 101, ETEC 103, NRGY 243, and ELCT 241.<br>Provides hands-on experience in which the student, under supervision, applies the skills and knowledge presented thus far in the Sustainable Energy program. Students will participate in a sustainable energy technology design, build, and testing project of their choice. The instructor will coach students as they take a project from concept to a working product.<br>Lecture Hours 3<br>Department: Engineering & Industrial - COT  | 3 Credits |
| NRGY 121 Climb Safety and Rigging.<br>Term Typically Offered: Fall<br>Introduces students to the concept of rigging and basic skills needed for every rigging operation. The skills learned include determining the center of gravity, load balancing, operation of hoists, and use of slings to lift material. Hooks and eyebolts will also be discussed. Students will also learn climb safety and rescue techniques.<br>Lab Hours 1<br>Department: Engineering & Industrial - COT   | 1 Credit    |  |           |
| NRGY 130 Fundmtl of Mechanical Systems.<br>Term Typically Offered: Spring<br>Explains energy industry mechanical systems at the component level. Topics covered include repairing a basic mechanical system, familiarity with basic tooling, and understanding gears and rotational relationships.<br>Lecture Hours 3<br>Department: Engineering & Industrial - COT  | 3 Credits   |  |           |
| NRGY 220 Wind Turbine Equipment.<br>Prerequisite(s): NRGY 120.<br>Introduces common wind turbine components and equipment. The mechanical systems that make up the subsystems of wind turbines will be covered in addition to structural characteristics and aerodynamic principles.<br>Lecture Hours 3<br>Department: Engineering & Industrial - COT  | 3 Credits   |  |           |
| NRGY 243 Fundmtl Photovol Dsgn Instal.<br>Term Typically Offered: Fall<br>Prerequisite(s): NRGY 101 and ETEC 103.<br>Provides students with an introduction to the fundamental principles and technologies of solar energy systems. Emphasis on system design and installation, including site and resource assessment, load analysis, trouble shooting, and cost analysis. The material covered prepares students for a career in renewable energy or for installing a renewable energy system on their own homes. Solar hydronics will also be covered.<br>Lecture Hours 3<br>Department: Engineering & Industrial - COT | 3 Credits   |  |           |
| NRGY 291 Special Topics.<br>Term Typically Offered: Fall<br>(1-3 lec/wk) Provides experimental offerings in Sustainable Energy Technology.<br>Lecture Hours 1-3<br>Department: Engineering & Industrial - COT  | 1-3 Credits |  |           |
| NRGY 298 Internship/Cooperative Educ.<br>Term Typically Offered: Fall<br>(V/wk) Provides university credit for student work experience in the area of Sustainable Energy Technology. Learning agreement must be completed prior to registration (restricted).<br>Department: Engineering & Industrial - COT  | 3 Credits   |  |           |
|  |             | <b>NRS - Nursing</b>   |           |
|  |             | NRSG 130 Fundamentals of Nursing.<br>Term Typically Offered: Fall, Spring<br>Prerequisite(s): Acceptance to PN program.<br>Corequisite(s): NRS 131.<br>Introduces learners to knowledge, basic clinical skills, and attitudes essential for the nursing role. The course approach presents concepts and behaviors of nursing roles within the context of the nursing process and multicultural, holistic healthcare. Emphasis is on theoretical and practical concepts of nursing skills required to meet the needs of patients in a variety of settings. Offered ONLY Online.<br>Lecture Hours 3<br>Department: Health Occupations - COT  | 3 Credits |
|  |             | NRSG 131 Fundamentals of Nursing Lab.<br>Term Typically Offered: Fall, Spring<br>Prerequisite(s): Acceptance to PN program.<br>Corequisite(s): NRS 130.<br>Performance of clinical skills is integrated into this lab using healthcare scenarios which focus on implementation of the nursing process, clinical decision making, and caring interventions in collaboration with the interdisciplinary team in a variety of healthcare settings.<br>Lab Hours 3<br>Department: Health Occupations - COT   | 3 Credits |
|  |             | NRSG 135 Pharmacology for PN.<br>Term Typically Offered: Fall, Spring<br>Corequisite(s): NRS 136.<br>Introduces the student to the knowledge needed to provide safe nursing care to patients across the lifespan in the administration of medications. Content covered includes the basic principles of pharmacology such as pharmacokinetics, pharmacodynamics, medication interactions, potential adverse medication reactions, and pathophysiology of common disease processes. The emphasis is on patient-centered care utilizing the nursing process and incorporating evidence-based practice. Offered ONLY Online.<br>Lecture Hours 3<br>Department: Health Occupations - COT | 3 Credits |
|  |             | NRSG 136 Pharmacology for PN Lab.<br>Term Typically Offered: Fall, Spring<br>Corequisite(s): NRS 135.<br>Integrates the knowledge of safe medication administration into a laboratory environment. This includes dosage calculation and safe administration of medications through a variety of appropriate routes, including intravenous therapy.<br>Lab Hours 2<br>Department: Health Occupations - COT  | 1 Credit  |

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| <p>NRSRG 140 Adult Health Nursing. 4 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 141.<br/>           Builds upon the knowledge acquired in Fundamentals of Nursing. The focus is on safe, effective care environments, health promotion and maintenance, and psychosocial and physiological integrity of adults who are experiencing health interruptions in well-defined practice settings. Principles of pharmacology, cultural competency, gerontology, nutrition, end-of-life, and palliative care are integrated throughout the course. Offered ONLY Online.<br/>           Lecture Hours 4<br/>           Department: Health Occupations - COT</p>   | <p>NRSRG 152 Gerontology and Comm Nsg. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 153.<br/>           Presents the knowledge, skills, and attitudes needed to provide high quality holistic nursing care for the geriatric client, as well as other vulnerable populations in the local and rural communities. The safe application of the nursing process in community based, patient-centered, interdisciplinary care environments is emphasized in order to promote patient well-being in regard to common acute and chronic health issues, including end-of-life and palliative care. Offered ONLY Online.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>   |
| <p>NRSRG 141 Adult Health Nursing Clinical. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 140.<br/>           (6 clinical/wk) Focuses on the implementation of the nursing process, professional behaviors, communication, clinical decision making, caring interventions, and collaboration in interdisciplinary practice to promote, maintain, and restore basic health in well-defined practice settings.<br/>           Lab Hours 6<br/>           Department: Health Occupations - COT</p>  | <p>NRSRG 153 Gerontology and Comm Nsg Cl. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 152.<br/>           (6 clinical/wk) Integrates theory into the clinical setting. The emphasis is on promoting the highest level of health and wellness for common acute and chronic health issues for the geriatric and other vulnerable populations in local and rural communities.<br/>           Lab Hours 6<br/>           Department: Health Occupations - COT</p>  |
| <p>NRSRG 142 Nsg Care Women &amp; Children. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 143.<br/>           Introduces the student to the knowledge needed to provide safe nursing care for the female patient and family with regard to reproductive issues, including perinatal. Also included is the child patient and family regarding normal growth and development as well as common and chronic disease processes. Psychosocial aspects of care, legal and ethical issues, and cultural beliefs will be incorporated throughout. The emphasis is on patient and family centered care utilizing evidence-based practice and effective interpersonal communication skills while functioning within an interdisciplinary team environment. Offered ONLY Online.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p> | <p>NRSRG 230 Nursing Pharmacology. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 231.<br/>           Provides the student with an overview of pharmacology with an emphasis on the study of effects, interactions, and nursing considerations of pharmacologic agents on the client population across the lifespan. The course also explores the ethical, legal, cultural, and age implications of pharmacologic therapy across diverse populations and the lifespan.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   |
| <p>NRSRG 143 Nsg Care Women &amp; Children Cl. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 142.<br/>           (3 clinical/wk) Integrates the knowledge of care for women, children, and families in a variety of clinical settings.<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>   | <p>NRSRG 231 Nursing Pharmacology Lab. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 230.<br/>           Focuses on the basic principles in providing safe medication administration, including intravenous therapy across diverse populations and the lifespan.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>  |
| <p>NRSRG 148 Leadership Issues for PN. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 149.<br/>           Explores the legal and ethical principles of Practical Nursing leadership in providing safe, relationship-centered care. The concepts of accountability, fiscal responsibility in relation to patient outcomes, collaboration, effective communication, conflict management skills, critical thinking, delegation, principles of human caring, and prioritization are emphasized throughout the course. Application of concepts in the rural environment is included. Offered ONLY Online.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>   | <p>NRSRG 232 Foundations for Nursing. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 233.<br/>           Provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner, using the nursing process. Students learn concepts and skills necessary for maintaining standard precautions and physical and psychological safety, along with skills needed in therapeutic interventions. Students are introduced to the concepts of professional nursing, patient needs, safety, communication, teaching/learning, critical thinking, ethical-legal, rural nursing, cultural and ethnic diversity, and interdisciplinary patient-centered care.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p> |
| <p>NRSRG 149 Leadership Issues for PN Cl. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 148.<br/>           (3 clinical/wk) Integrates theory with implementation of basic leadership skills. Preceptor experiences are based on selected nursing needs in the local and rural communities with a focus on knowledge, skills, and attitudes of nursing leadership needed to provide high quality, holistic, safe nursing care.<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>   | <p>NRSRG 233 Foundations of Nursing Lab. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSRG 232.<br/>           Focuses on psychomotor nursing skills needed to assist individuals in meeting basic human needs. Application of the nursing process and hands-on learning experiences for nursing skills, patient assessments, and basic therapeutic skills are practiced and demonstrated.<br/>           Lab Hours 3<br/>           Department: Health Occupations - COT</p>  |

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| <p>NRSNG 234 Adult Nursing I. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 235.<br/>           Builds upon the knowledge and skills acquired in Foundations of Nursing and places them in the context of patient-centered care. Social, cultural, ethical, rural, and legal issues, as well as end-of-life and palliative care across diverse adult populations are introduced. Health promotion and prevention throughout the adult lifespan, with specific focus on the geriatric patient, are emphasized. Normal aging, health alterations associated with aging, and their implications are addressed.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p> | <p>NRSNG 246 Hlth/Illness Child/Fmly Nursng. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 247.<br/>           Applies holistic concepts to the professional nursing care of children and their families in health, illness, end-of-life, and palliative care. Emphasis is placed on incorporating growth and development principles to facilitate positive health outcomes through health promotion, nutrition, and disease prevention.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>  |
| <p>NRSNG 235 Adult Nursing I Cl. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 234.<br/>           Introduces the student to nursing practice in care of the stable adult patient. This includes care of the adult in a variety of health care settings. Students utilize the nursing process to develop individualized plans of care to prevent illness, promote wellness, and maintain or restore health, based on patient needs and evidence based practice.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>   | <p>NRSNG 247 Hlth/Illness Child/Fam Nrs Cln. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 246.<br/>           Utilizing the nursing process, students will provide nursing care to healthy and high-risk pediatric populations and their families experiencing disruptions in biological, psychological, social, cultural, and spiritual needs. Emphasis is also placed on health promotion, health maintenance, and therapeutic communication.<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>   |
| <p>NRSNG 236 Health/III Maternity Nsg. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 237.<br/>           Applies holistic concepts to the professional nursing care of the childbearing family, including conception, prenatal, intrapartum, postpartum, and newborn care. Content addresses health and complex alterations; reproduction and menopause; nutrition; therapeutic communication; and ethical, legal, cultural, and evidence based practice.<br/>           Lecture Hours 2<br/>           Department: Health Occupations - COT</p>   | <p>NRSNG 254 Mental Health Concepts. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): Acceptance to ASN program.<br/>           Corequisite(s): NRSNG 255.<br/>           Utilizing the basic nursing concepts of basic human needs, developmental theory, nursing process, therapeutic communication, and nursing interventions, the student will learn to promote and maintain health for clients and families experiencing mental health issues. The student will examine client responses to stressors across the life span. Tasks of biological-behavioral concepts in psychosocial nursing care, rural, and cultural impacts will be addressed.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p> |
| <p>NRSNG 237 Health/III Maternal Nsg Cl. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 236.<br/>           Introduces the student to the role of the registered nurse in the care of the childbearing family. Students will utilize the nursing process to assess and develop individualized plans of care for mother and infant. Emphasis will be placed on patient education to promote healthy mother, infant, and childbearing family bonding.<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>   | <p>NRSNG 255 Mental Health Concepts Cl. 1 Credit<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): Acceptance to ASN program.<br/>           Corequisite(s): NRSNG 254.<br/>           (3 clinical/wk) Applies the knowledge of psychiatric and mental health nursing. Students will have mental health focused clinical experiences in a variety of settings.<br/>           Lab Hours 1<br/>           Department: Health Occupations - COT</p>   |
| <p>NRSNG 244 Adult Nursing II. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 245.<br/>           Builds upon previous knowledge of the nursing process and care of the patient experiencing acute and chronic disease alterations. Pathophysiologic processes are discussed as related to evidence-based nursing interventions. Students apply the nursing process, nutritional therapy, and pharmacological therapy utilizing interdisciplinary practice to promote, maintain, and restore health across the adult lifespan.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   | <p>NRSNG 256 Pathophysiology. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Prerequisite(s): Acceptance into ASN program or consent of instructor.<br/>           Introduces the student to the basic principles and processes of pathophysiology, including cellular communication, genes and genetic disease, forms of cellular injury, fluid and electrolyte/acid base balance, immunity, stress coping and illness, and tumor biology. Pathophysiology of the most common alterations according to body systems will be discussed as well as the latest development in research and patient-centered nursing interventions.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>                                     |
| <p>NRSNG 245 Adult Nursing II Cl. 2 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 244.<br/>           Provides clinical experiences for the student to care for individuals and families experiencing acute health alterations and those associated with chronic disease processes. Students use the nursing process to systematically analyze information to plan and implement nursing interventions which are individualized and founded on evidence-based practice.<br/>           Lab Hours 2<br/>           Department: Health Occupations - COT</p>   | <p>NRSNG 259 Adult Nursing III. 3 Credits<br/>           Term Typically Offered: Fall, Spring<br/>           Corequisite(s): NRSNG 260 and NRSNG 261.<br/>           Expands on the nursing role in care of patients with complex health alterations. Students utilize evidence-based, interdisciplinary interventions to meet patient and family needs.<br/>           Lecture Hours 3<br/>           Department: Health Occupations - COT</p>   |

NRSRG 260 Adult Nursing III Lab. 1 Credit

Term Typically Offered: Fall, Spring

Corequisites: NRSRG 259 and NRSRG 261. Utilizing previous knowledge, students are introduced to basic electrocardiogram interpretation, advanced concepts of perfusion, ventilation, and complex pharmacologic regimens.

Lab Hours 1

Department: Health Occupations - COT

NRSRG 261 Adult Nursing III Cl. 2 Credits

Term Typically Offered: Fall, Spring

Corequisite(s): NRSRG 259 and NRSRG 260.

Focuses on application of the nursing process and utilization of information to provide comprehensive nursing care to the acutely ill patient experiencing complex health alterations in a variety of settings. Emphasis is placed on prioritization of care and collaboration with other members of the interdisciplinary team to ensure optimal client care.

Lab Hours 2

Department: Health Occupations - COT

NRSRG 266 Managing Client Care RN. 2 Credits

Term Typically Offered: Fall, Spring

Corequisite(s): NRSRG 267.

Examines concepts of leadership and management, emphasizing prioritization, delegation, and supervision of nursing care for patients across the lifespan. Topics also include communication techniques, legal and ethical issues, care of the culturally diverse patient, and utilizing change theory. Healthcare policy, finance, and regulatory environment issues are explored and applied to planning, collaborating, and coordinating care across the continuum.

Lecture Hours 2

Department: Health Occupations - COT

NRSRG 267 Managing Client Care RN Cl. 2 Credits

Term Typically Offered: Fall, Spring

Corequisite(s): NRSRG 266.

(6 clinical/wk) Focuses on principles of nursing leadership and management in a variety of settings. Students apply knowledge to provide culturally competent, holistic interventions within the professional nursing role for individuals, communities, and families across the lifespan in this precepted clinical.

Lab Hours 2

Department: Health Occupations - COT

NRSRG 291 Special Topics. 1-3 Credits

Provides an opportunity for experimental study in an area of Nursing or Allied Health professions.

Department: Health Occupations - COT

NRSRG 294 Seminar/Workshop. 1-3 Credits

Provides an opportunity for experimental study in an area of Nursing or Allied Health professions.

Department: Health Occupations - COT

NRSRG 298 Internship/Cooperative Educ. 1-9 Credits

Department: Health Occupations - COT

## NTS - Networking Technology Systems

NTS 104 CCNA 1: Intro to Networks. 4 Credits

Prerequisite(s): CAPP 120 or Instructor Approval.

Provides students in the first of four semester courses with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment or further education and training in the computer networking field. Covers the following networking topics and skills: OSI model and industry standards, network topologies, IP addressing including subnet masks, networking components, basic network design, beginning router configurations, and routed and routing protocols.

Lecture Hours 2, Lab Hours 4

Department: Computer Technologies - COT

NTS 105 CCNA 2: Routing & Switching Es. 4 Credits

Prerequisite(s): NTS 104.

Teaches students the skills they will need to design, build, and maintain small to medium size networks. The focus of this course is basic configuration of routers into small networks.

Lecture Hours 2, Lab Hours 2

Department: Computer Technologies - COT

NTS 204 CCNA 3: Scaling Networks. 3 Credits

Prerequisite(s): NTS 105.

Teaches students the skills they will need to design, build, and maintain small to medium size networks. The focus of this course is the integration of routers and switches into small networks.

Lecture Hours 3

Department: Computer Technologies - COT

NTS 205 CCNA 4: Connecting Networks. 3 Credits

Prerequisite(s): NTS 204.

Teaches students the skills they need to design, build, and maintain small to medium size networks. The focus of this course is configuring routers and small networks into WANs (wide area networks).

Lecture Hours 3

Department: Computer Technologies - COT

## PPT - Process Plant Technology

PPT 101 Fund of Process Technology. 4 Credits

Introduces the student to the fundamentals of process/refinery technology. Areas covered are the mechanics of fluids, hydrocarbons, gases, heat, and chemistry. The student realizes how each plays a significant role in the refining distillation process.

Lecture Hours 4

Department: Engineering & Industrial - COT

PPT 102 Fund of Process Technology Lab. 1 Credit

Corequisite(s): PPT 101.

Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in PPT 101.

Lab Hours 1

Department: Engineering & Industrial - COT

PPT 120 Environ Awareness. 2 Credits

Provides the student with the history behind certain environmental policies, the creation of OSHA, and key environmental issues. Provides learning in treatment processes, waste water units, vapor recovery systems, cleanup, and an overview of the specialty equipment necessary for an ecologically sound process plant.

Lecture Hours 2

Department: Engineering & Industrial - COT

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| <p>PPT 130 Process Diagrams for Proc Tech. 2 Credits<br/>Provides the student with an introduction in the use of process flow and instrument drawings. Upon completion of this course, students will be familiar with using P&amp;ID (Process and Instrument Drawings) drawings in the course of their work as process technicians. In addition, students will obtain the skills necessary to produce process flow diagrams.<br/>Lecture Hours 2<br/>Department: Engineering &amp; Industrial - COT</p>   | <p>PPT 176 Process Plant Sciences Lab. 1 Credit<br/>Corequisite(s): PPT 175.<br/>Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in PPT 175.<br/>Lab Hours 1<br/>Department: Engineering &amp; Industrial - COT</p>  |
| <p>PPT 135 Instrument &amp; Control Systems. 4 Credits<br/>Prerequisite(s): PPT 101, PPT 130, TRID 185.<br/>Familiarizes the student with the vocabulary surrounding the instrument and control field as well as examining the function of each instrument. The topics of process measurements, analytical instrumentation, process controls, and instrument systems are also covered in this course.<br/>Lecture Hours 4<br/>Department: Engineering &amp; Industrial - COT</p>  | <p>PPT 207 Boilers, Access &amp; Basic Oprtns. 3 Credits<br/>Offers an introduction to boiler equipment, controls, and systems. Instruction includes the function and operation of all major components and control devices, common troubleshooting problems, and common maintenance concerns.<br/>Lecture Hours 3<br/>Department: Engineering &amp; Industrial - COT</p>  |
| <p>PPT 136 Instrument &amp; Controls Lab. 1 Credit<br/>Corequisite(s): PPT 135.<br/>Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in PPT 135.<br/>Lab Hours 1<br/>Department: Engineering &amp; Industrial - COT</p>  | <p>PPT 208 Equipment and Operations Lab. 2 Credits<br/>Corequisite(s): PPT 210.<br/>Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in PPT 210.<br/>Lab Hours 2<br/>Department: Engineering &amp; Industrial - COT</p>   |
| <p>PPT 140 Brewing Process Technology. 2 Credits<br/>Term Typically Offered: Spring<br/>Introduces the student to actual brewing processes, taking an in-depth look at each process, unit variables, equipment design and function, process control methodologies, and unit specific operating and safety considerations. Various types of equipment are discussed, including heaters, coolers, pumps, filters, fermentation reactors, distillation columns, reboilers, and condensers. The course is designed to provide classroom time balanced with hands-on review of the various processes.<br/>Department: Engineering &amp; Industrial - COT</p> | <p>PPT 210 Equipment and Operations. 4 Credits<br/>Prerequisite(s): PPT 175.<br/>Covers the equipment necessary for the operation of a process/refining plant. A few topics of discussion include pumps, compressors, valves, heat exchangers, distillation towers, cooling towers, as well as auxiliary systems. Some of the operations principles reviewed are pneumatics, boilers, hydraulic functions, furnace processes, reactor systems, and distillation. Reading process flows and instrument diagrams is also included.<br/>Lecture Hours 4<br/>Department: Engineering &amp; Industrial - COT</p>  |
| <p>PPT 151 Process Plant Safety I. 2 Credits<br/>Examines the regulatory safety programs instituted by OSHA and other regulatory agencies which are specific to the processing industry. Covers a variety of topics such as hazards safety, personal protective equipment, emergency response and safe work practices.<br/>Lecture Hours 2<br/>Department: Engineering &amp; Industrial - COT</p>   | <p>PPT 211 Advanced Operations. 2 Credits<br/>Prerequisite(s): PPT 210.<br/>Introduces the student to actual refining processes, taking an in-depth look at each process, as well as the unit variables, equipment, critical control areas, product and unit specific safety considerations. Various types of processes are discussed, including Fluid Catalytic Cracking, Alkylation, Catalytic Reforming, De-sulfurization, Crude/Vacuum Systems, Amine, Coking, and Hydro treating. The course is also designed to provide classroom time balanced with field review of the various processes.<br/>Lecture Hours 2<br/>Department: Engineering &amp; Industrial - COT</p> |
| <p>PPT 161 Process Plant Safety II. 2 Credits<br/>Prerequisite(s): PPT 151.<br/>Provides the student with detailed instruction in the field of safety and health within the Process industry. In this course, the student will complete an in-depth study in the use of gas detection equipment, the use of the permitting system including lock out/tag out, the use of OSHA logs, the use of advanced safety equipment, and study the importance of industrial hygiene in an industrial setting.<br/>Lecture Hours 2<br/>Department: Engineering &amp; Industrial - COT</p>   | <p>PPT 212 Advanced Operations Lab. 1 Credit<br/>Corequisite(s): PPT 211.<br/>Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in PPT 211.<br/>Lab Hours 1<br/>Department: Engineering &amp; Industrial - COT</p>   |
| <p>PPT 175 Process Plant Sciences. 4 Credits<br/>Prerequisite(s): PPT 101.<br/>Provides the fundamentals necessary for an in-depth look at the distillation process. Examines the concepts of heat and thermodynamics, as well as the chemical bonds, organic chemistry, the periodic table and hydrocarbon concepts. Gives students the necessary tools for a better understanding of the process taking place in the refining and power industries.<br/>Lecture Hours 4<br/>Department: Engineering &amp; Industrial - COT</p>  | <p>PPT 220 Quality Control Practices. 2 Credits<br/>Prerequisite(s): PPT 210.<br/>Provides the student with an overview of the field of quality within the Process industry. Within this course, students will be introduced to many industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills, and statistical process control (SPC).<br/>Lecture Hours 2<br/>Department: Engineering &amp; Industrial - COT</p>  |



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| <p>PPT 225 Plant Investigation. <span style="float: right;">2 Credits</span><br/> Prerequisite(s): PPT 210.<br/> Provides the student with an overview of the various troubleshooting models used by process technicians. Process troubleshooting involves different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning. The student is exposed to many different trouble situations similar to those encountered in the process plant experience. The student is taught a systematic way to solve problems, using measured process variables and personal knowledge of how they affect each other (cause and effect).<br/> Lecture Hours 2<br/> Department: Engineering &amp; Industrial - COT</p>  | <p>PWRP 214 Power Generation. <span style="float: right;">4 Credits</span><br/> Prerequisite(s): PPT 175.<br/> Introduces the basic elements of generator design, protection, and operation. Students are introduced to the theoretical aspects of reactive power in power systems by analyzing the inductive and capacitive components of the system, with an emphasis on megavar loading as it is affected by the excitation system. The generator's auxiliary systems, including hydrogen cooling systems, stator cooling systems, seal oil systems, and generator degassing procedures, are also introduced and the function and types of exciters commonly found in power plants are examined.<br/> Lecture Hours 4<br/> Department: Engineering &amp; Industrial - COT</p>  |
| <p>PPT 291 Independent Study. <span style="float: right;">1-3 Credits</span><br/> Department: Engineering &amp; Industrial - COT</p>   | <p>PWRP 216 Elect Systm Cmpnts &amp; Prtctns. <span style="float: right;">3 Credits</span><br/> Prerequisite(s): PPT 175.</p>   |
| <p>PPT 292 Independent Study. <span style="float: right;">1-3 Credits</span><br/> Department: Engineering &amp; Industrial - COT</p>   | <p>Introduces typical devices used to protect personnel and prevent damage to plant equipment. Also covered are generator, bus, and line differential protection, as well as high- and low-pressure protection. The material presented includes trip and alarm logic for chemical protection, turbine protection, boiler protection, and generator protection. Devices covered include fuses over current relays and over- and under-voltage relays. The course covers practices for electrical protection of plant equipment and personnel.<br/> Lecture Hours 3<br/> Department: Engineering &amp; Industrial - COT</p>   |
| <p>PPT 293 Workshop. <span style="float: right;">1-5 Credits</span><br/> Department: Engineering &amp; Industrial - COT</p>  | <p>PWRP 218 Adv Plant Oprtns &amp; Trblshtng. <span style="float: right;">4 Credits</span><br/> Prerequisite(s): PWRP 201.</p>  |
| <p>PPT 298 Cooperative Educ/Intership. <span style="float: right;">1-6 Credits</span><br/> (45 hours/credit) Provides university credit for a sophomore experience in the area of Process Plant Technology, supervised by faculty. Learning agreement must be completed prior to registration (restricted).<br/> Department: Engineering &amp; Industrial - COT</p>  | <p>Allows students to gain the knowledge necessary to comprehend overall power plant operations and respond to abnormal operating conditions. Students will also participate in root cause analysis exercises while troubleshooting different operating scenarios.<br/> Lecture Hours 4<br/> Department: Engineering &amp; Industrial - COT</p> <p>PWRP 298 Cooperative Educ/Internship. <span style="float: right;">2 Credits</span><br/> 2cr. (45 hours/credit) Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.<br/> Lecture Hours 2<br/> Department: Engineering &amp; Industrial - COT</p> |
| <h2>PWRP - Power Plant Technology</h2>   |   |
| <p>PWRP 201 Power Plant Equip &amp; Oprtns. <span style="float: right;">3 Credits</span><br/> Provides the student with an introduction to the major systems and components that make up a modern power plant. Students learn how electric power is produced and distributed; how boilers, turbines, and condensers operate; and what the general responsibilities of plant operators are during all phases of plant operation. Specific attention is given to the flow of water and steam through the steam cycle, how combustion occurs, types of boilers and turbines, operation of steam cycle support systems, bearings and lubrication, turbine control, pollution control, and plant safety. This course covers the various types of equipment used in the production of electricity, including pumps, valves, air compressors, coal pulverizers, fans, cooling towers, condensers, and heat exchangers.<br/> Lecture Hours 3<br/> Department: Engineering &amp; Industrial - COT</p> | <h2>RD - Reading</h2>   |
| <p>PWRP 203 Energy Sources &amp; Conversion. <span style="float: right;">3 Credits</span><br/> Allows students to study the various forms of energy and the processes used to convert chemical and potential energy into thermal, mechanical, and in some instances, electrical energy. Energy sources that will be studied include fossil fuels (coal, oil, and natural gas), hydro, wind, fuel cells, solar, derived fuel, geothermal, and nuclear. Combustion and reaction will be discussed in detail for those energy sources that require combustion to convert from one energy form to another.<br/> Lecture Hours 3<br/> Department: Engineering &amp; Industrial - COT</p>  | <p>RD 101 College Reading Strategies. <span style="float: right;">3 Credits</span><br/> Term Typically Offered: Fall, Spring<br/> Provides instruction and practice in applying active reading strategies, improving comprehension in content areas, demonstrating critical thinking skills in responding to individual content area reading assignments, and increasing vocabulary to improve academic success. RD 101 prepares students for the demands of college-level reading. Course earns academic credit but does not count toward General Education, a degree, or certification.<br/> Lecture Hours 3<br/> Department: EDCI/EDF</p>  |
| <p>PWRP 210 Turbines, Accessories &amp; Bsc Op. <span style="float: right;">3 Credits</span><br/> Prerequisite(s): PPT 135, PPT 175<br/> This course also covers the safe and efficient operation of gas turbines and heat recovery steam generators and their different applications as used in combine cycle and cogeneration configurations. Students will learn how thermal energy is converted to mechanical energy as the steam passes through a typical industry steam turbine. Steam turbine start-up and shut-down procedures will also be studied.<br/> Lecture Hours 3<br/> Department: Engineering &amp; Industrial - COT</p>  |   |

## TRID - Trade & Industry

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| TRID 140 Auto Sheet Mtl Strct MIG Wldng.<br>Term Typically Offered: Fall<br>Demonstrates the basic methods and techniques used in GMAW (Gas Metal Arc Welding) also referred to as MIG (Metal Inert Gas) welding. The MIG welding concentration is focused on gauges of metal used in the production of modern automobiles.<br>Lecture Hours 1, Lab Hours 2<br>Department: Transportation - COT   | 2 Credits | TRID 180 Electrical Systems.<br>Term Typically Offered: Fall, Spring<br>Prerequisite(s): M065 or appropriate placement score.<br>Covers introductory material in Automotive Electrical Systems. This course is designed to give the student a strong background in the theory of operation, diagnosis, and repair of electrical and electronic systems. Theory of AC/DC electricity, Ohm's Law, magnetism, wiring, and measuring devices are discussed. Units covered include the theory of testing and/or repair of automotive and heavy-duty batteries, starters, alternators, and regulators.<br>Lecture Hours 2, Lab Hours 4<br>Department: Transportation - COT | 4 Credits   |
| TRID 150 Environ/Shop Practices.<br>Term Typically Offered: Fall, Spring<br>Informs students on safety, hazardous materials and toxic waste. Students are given a working knowledge of tool use, measuring devices, fasteners, use of shop manuals, and hazardous waste precautions and handling procedures.<br>Lecture Hours 2<br>Department: Transportation - COT   | 2 Credits | TRID 181 Transport Elect Systems Lec.<br>Term Typically Offered: Fall, Spring<br>Corequisite(s): TRID 182.<br>Covers introductory theory of electrical systems found in the transportation and heavy equipment industry. This course is designed to give the student a strong background in the theory of operation of electrical and electronic systems. Theory of AC/DC electricity, Ohm's Law, magnetism, wiring, and measuring devices are discussed. Units covered include the theory of testing and/or repair of automotive and heavy-duty batteries, starters, alternators, and regulators.<br>Lecture Hours 2<br>Department: Transportation - COT            | 2 Credits   |
| TRID 151 Welding.<br>Term Typically Offered: Fall, Spring<br>A theory and practical course designed to give students experience in oxyacetylene welding, cutting, and arc welding processes used in the trade and industrial field applications. Various types of welders and electrodes are used for practice on weld coupons.<br>Lecture Hours 1, Lab Hours 2<br>Department: Transportation - COT   | 2 Credits | TRID 182 Transport Elect Systems Lab.<br>Term Typically Offered: Fall, Spring<br>Corequisite(s): TRID 181.<br>Covers introductory testing and repair of electrical systems found in the transportation and heavy equipment industry. This course is designed to give the student a strong background in the diagnosis and repair of electrical and electronic systems. Application of AC/DC electricity, Ohm's Law, magnetism, wiring, and measuring devices are applied. Units covered include the testing and/or repair of automotive and heavy-duty batteries, starters, alternators, and regulators.<br>Lab Hours 2<br>Department: Transportation - COT          | 2 Credits   |
| TRID 152 Vehicle Htg, Vent & AC.<br>Term Typically Offered: Fall, Spring<br>The auto air portion of this course is designed to help students gain an understanding and working knowledge of air conditioning systems and controls currently used in automobiles and trucks. Theory, diagnosis and service procedures, and environmental concerns are presented to give students the necessary skills to repair vehicle air conditioning systems.<br>Lecture Hours 1, Lab Hours 4<br>Department: Transportation - COT                                | 3 Credits | TRID 185 Intro Industrial Power Systems.<br>Covers the fundamental principles of direct current and alternating current circuits and their use in an industrial setting. Also includes transformers and electrical distribution systems.<br>Lecture Hours 2<br>Department: Transportation - COT  | 2 Credits   |
| TRID 160 Hazrdz Mtrl Tech Gen Trng.<br>Term Typically Offered: Spring<br>Provides hazardous materials training needed to meet all requirements of the first responder at the awareness, operations, and technician level of emergency hazardous materials response. Technicians shall meet the training requirements in accordance with requirements of OSHA and NFPA (National Fire Protection Association).<br>Lecture Hours 2, Lab Hours 2<br>Department: Transportation - COT   | 3 Credits | TRID 186 Intro Indstrl Pwr Systms Lab.<br>Corequisite(s): TRID 185.<br>Provides students exposure to major concepts of industry through hands-on laboratory investigations and application of principles learned in TRID 185.<br>Lab Hours 1<br>Department: Transportation - COT   | 1 Credit    |
| TRID 170 Engine Theory.<br>Term Typically Offered: Fall<br>Prerequisite(s): Eligible to enter WRIT 104 and either RD 101 or appropriate placement score.<br>Theory-driven introductory course that will give the student a basic understanding of compression and spark ignition engines. This course will study engine components, terminology of engine design, and will provide a basic understanding of engine design and operation. This is not an engine overhaul course.<br>Lecture Hours 2, Lab Hours 4<br>Department: Transportation - COT | 4 Credits | TRID 292 Independent Study.<br>Provides students an opportunity to investigate intensively topics pertinent to the field of trade and industry.<br>Department: Transportation - COT  | 1-3 Credits |
|   |           | TRID 294 Workshop.<br>Provides an opportunity for experimental study in an area of trade and industry.<br>Department: Transportation - COT   | 1-3 Credits |
|   |           | TRID 298 Internship.<br>Credit varies. Integrates coursework with program-related work experience in business, industry, and/or government. Students do not receive pay. This must be coordinated through the department chairperson.<br>Department: Transportation - COT  | 1-3 Credits |

## WLDG - Welding

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| <p>WLDG 117 Blueprint Rd &amp; Weld Symbols. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): RD 101 and WRIT 104 or appropriate placement score.<br/>           Introduces the student to structural steel, piping, and mechanical blueprint reading. Hand sketching of orthographic and isometric drawings are taught along with weld symbols and solid modeling for blueprint design.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>WLDG 124 Welding Theory Tech &amp; Safety. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): RD 101 and WRIT 104 or appropriate placement score.<br/>           Examines and presents welding and shop safety, oxy-fuel safety, base metal preparation, weld quality, SMAW equipment and set-up, electrode selection, and joint design and fit-up. Other topics introduced are air carbon arc cutting, plasma cutting, and beginning pipe welding.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>WLDG 154 Metal Fabrication Basics Lab. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): WLDG 124, WLDG 117, WLDG 125, WLDG 126, or consent of instructor.<br/>           Corequisite(s): WLDG 153.<br/>           Uses techniques learned in WLDG 153 to perform layout, cutting and fabrication, fitting, and weld-out procedures applicable to fabricating a finished product or project. Includes the proper use of fabrication equipment and shop practices. Safety, accuracy, quality, and commitment to excellence are emphasized. Semester projects are assigned.<br/>           Lab Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>       |
| <p>WLDG 125 Cut/Shielded Mtl Arc Weld Lab. <span style="float: right;">5 Credits</span><br/>           Term Typically Offered: Fall<br/>           Corequisite(s): WLDG 124.<br/>           Includes manual and semi-automated oxy-acetylene cutting processes and safety. Shielded Metal Arc Welding with 6010 electrode prepares students for the American Welding Society D1.1 and American Society of Mechanical Engineers Section IX structural certification. In addition, air carbon cutting process, plasma arc cutting process, and equipment set-up are presented. Welding shop safety and quality are emphasized.<br/>           Lab Hours 5<br/>           Department: Engineering &amp; Industrial - COT</p> | <p>WLDG 156 Semi-Automatic Welding. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): WLDG 124, WLDG 117, WLDG 125, WLDG 126, or consent of instructor.<br/>           Prepares and teaches students basic knowledge of Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), shielded and non-shielded, and GMAW-Pulsed. Equipment needs, set-up, joint design, filler metals, shielding gasses, welding techniques, and safety will be taught.<br/>           Lecture Hours 2<br/>           Department: Engineering &amp; Industrial - COT</p>  | <p>WLDG 157 Semi-Automatic &amp; SMAW Lab. <span style="float: right;">5 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): WLDG 124, WLDG 125, WLDG 126, or consent of instructor.<br/>           Corequisite(s): WLDG 156.<br/>           Introduces semi-automatic wire feed processes. This course leads to AWS and ASME certification of plate (all positions) with the SMAW, GMAW, GMAW-P, and FCAW-G and FCAW processes. Safe practices and weld quality are emphasized.<br/>           Lab Hours 5<br/>           Department: Engineering &amp; Industrial - COT</p>   |
| <p>WLDG 126 Shielded Metal Arc Welding Lab. <span style="float: right;">4 Credits</span><br/>           Term Typically Offered: Fall<br/>           Corequisite(s): WLDG 124.<br/>           Continues WLDG 125 which leads the student toward American Welding Society D1.1 and American Society of Mechanical Engineers Section IX structural certification for 6010 and 7018 electrodes in all positions. Equipment set-up, operation, weld quality, and safety are emphasized.<br/>           Lab Hours 4<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>WLDG 205 Applied Metallurgy. <span style="float: right;">2 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): Completion of first year of program or consent of instructor.<br/>           Introduces the student to weldability of metals, welding metallurgy, welding automation and robotics, and related cutting and welding processes.<br/>           Lecture Hours 2<br/>           Department: Engineering &amp; Industrial - COT</p>   | <p>WLDG 212 Pipe Welding &amp; Layout. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): Completion of first year of program or consent of instructor.<br/>           Provides the second year welding student with an introduction to pipe layout, fitting, and welding. Instructs students in piping information, basic pipe layout practices, use of pipe layout tools, and basic pipe welding techniques for 1G rolled position, 2G, 5G, and 6G fixed position using 6010 and 7018 electrodes. Safety, quality, and proper welding techniques according to ASME SEC IX and API 1104 standards are stressed.<br/>           Department: Engineering &amp; Industrial - COT</p> |
| <p>WLDG 153 Metal Fabrication Basics. <span style="float: right;">3 Credits</span><br/>           Term Typically Offered: Spring<br/>           Prerequisite(s): WLDG 124, WLDG 117, WLDG 125, WLDG 126, M 111, or instructor consent.<br/>           Corequisite(s): WLDG 154.<br/>           Introduces metal fabrication procedures and safe operation of fabrication equipment. Instruction covers operation of shears, press-brakes, ironworkers, punches, drill presses, CNC plasma tables, and CAD software. Common terminology, fabrication theory, material use, and equipment safety are taught.<br/>           Lecture Hours 3<br/>           Department: Engineering &amp; Industrial - COT</p>               | <p>WLDG 213 Pipe Welding I Lab. <span style="float: right;">5 Credits</span><br/>           Term Typically Offered: Fall<br/>           Prerequisite(s): Completion of first year of program or consent of instructor.<br/>           Corequisite(s): WLDG 212.<br/>           (5 lec/10 lab/wk) Provides students with the practical application of pipe welding and fitup. Students will practice pipe layout, fitting, and welding techniques in the 1G rolled position the 2G, 5G, and 6G fixed position using 6010 and 7018 welding electrodes and semi-automatic wire processes. Quality and safety will be emphasized.<br/>           Department: Engineering &amp; Industrial - COT</p> |  |

WLDG 215 Gas Tungsten Arc Welding. 5 Credits  
Term Typically Offered: Fall

Prerequisite(s): Completion of first year of program or consent of instructor.  
Provides an intense course in all aspects of manual gas tungsten arc welding (GTAW). Course covers welding techniques and applications, equipment setup, and procedures for ferrous and non-ferrous metals. Quality and safety will be stressed.  
Department: Engineering & Industrial - COT

WLDG 250 Metals Production. 2 Credits  
Term Typically Offered: Spring

Prerequisite(s): WLDG 205, WLDG 213, WLDG 215.  
2cr. Complete a project from conceptualization to final product that includes creating blueprints, developing bill of materials, and generating cost estimates. The students fabricate the project to print dimensions and tolerances. Students use CAD and other software, math skills, various welding positions, fabrication, and assembly techniques for product completion.  
Lab Hours 4

Department: Engineering & Industrial - COT

WLDG 251 Specialty Weld Processes. 5 Credits  
Term Typically Offered: Spring

Prerequisite(s): Completion of first year of program, WLDG 213, WLDG 215, and WLDG 205 or instructor's consent.  
Provides welding students with the practices and difficulties welding high carbon and low alloy steels, cast iron, stainless steel, and aluminum with SMAW, GTAW, GMAW, and FCAW. Welding safety will be a component of this course.  
Department: Engineering & Industrial - COT

WLDG 280 Weld Testing Certification. 2 Credits  
Term Typically Offered: Spring

Prerequisite(s): WLDG 205, WLDG 213, WLDG 215.  
2cr. Prepares the student for weld testing and certification. Covers destructive and non-destructive testing for weld inspection. Students learn the weld certification process and welding codes governing welding.  
Lecture Hours 2  
Department: Engineering & Industrial - COT

WLDG 281 Weld Testing Certification Lab. 3 Credits  
Term Typically Offered: Spring

Prerequisite(s): WLDG 205, WLDG 213, WLDG 215.  
Corequisite(s): WLDG 280.  
3cr. Provides students with the opportunity to prepare and practice for plate and pipe tests according to AWS D1.1, API 1104, and ASME Section IX codes and standards.  
Lab Hours 6  
Department: Engineering & Industrial - COT

WLDG 294 Seminar/Workshop. 1-3 Credits

Provides students an opportunity to investigate intensively topics pertinent to the field of metal fabrication.  
Department: Engineering & Industrial - COT

WLDG 298 Internship/Cooperative Educ. 1-9 Credits

(45 hours/credit) Provides university credit for a sophomore work experience in the area of Welding and Metal Fabrication Technology, supervised by faculty. Learning agreement must be completed prior to registration (restricted).  
Department: Engineering & Industrial - COT

## WRIT - Writing

WRIT 095 Developmental Writing. 3 Credits

Reviews basic grammar with emphasis on sentence structure and mechanics. Also presents basic writing considerations, especially paragraph organization and development of the multi-paragraph essay. Placement by student's request or by results of Writing Placement Test, SAT, or ACT and by faculty recommendation. Credits do not apply toward graduation requirements and do not fulfill General Education requirements. Credits not applicable to English major or minor. However, the credits do count towards enrollment status for financial aid.  
Lecture Hours 3

Department: General Education - COT

WRIT 104 Workplace Communications. 3 Credits

Prerequisite(s): RD 101 or concurrent enrollment in RD 101 or qualifying score on reading placement exam.

Designed to teach students the fundamentals of the English language including grammar, spelling, punctuation, and word usage, with emphasis on applying these skills in written communication for the work world.  
Lecture Hours 3

Department: General Education - COT

WRIT 121 Intro to Technical Writing. 3 Credits

Term Typically Offered: Spring  
Prerequisite(s): WRIT 095 or WRIT 104 or qualifying score on placement exam. In addition, RD 101 or concurrent enrollment in RD 101 or qualifying score on reading placement exam. Introduces the student to the creation and evaluation of several kinds of written and oral technical communication.  
Lecture Hours 3

Department: General Education - COT

WRIT 122 Intro to Business Writing. 3 Credits

Term Typically Offered: Fall, Spring, Summer  
Prerequisite(s): Satisfactory completion of WRIT 095 or WRIT 104 or qualifying score on the placement exam.

In addition, RD 101 or concurrent enrollment in RD 101 or qualifying score on reading placement exam. Provides instruction in the preparation of business memos, letters, reports, oral presentations, and computer assisted writing in business contexts.  
Lecture Hours 3

Department: General Education - COT

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