

# Disclaimer

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FVCC reserves the right to change its policies and fees, and revise curricula in this catalog at any time during the period this publication is in effect. For the most current revisions, visit our website at: [fvcc.edu](http://fvcc.edu).

This catalog is published by Flathead Valley Community College as a guide for students, faculty and others. Students are expected to be familiar with the college regulations and information which are set forth in this publication. This catalog is effective beginning fall 2019.

FVCC reserves the right to change its policies and fees and revise curricula in this catalog at any time during the period this publication is in effect. For the most current revisions, visit our website at: [fvcc.edu](http://fvcc.edu). For further information, write to: Admissions and Registration Office, Flathead Valley Community College, 777 Grandview Drive, Kalispell, MT 59901.

Accommodations for persons with disabilities can be provided upon request by calling (406) 756-3881. Any qualified student with a disability who believes that an auxiliary aid is necessary for participation in any course activity or degree program is strongly urged to indicate a need for services to the Advocate for Students with Disabilities a minimum of six weeks prior to the beginning of the academic semester. This will provide sufficient time to assess student need and obtain any necessary auxiliary aid. For more information, please call (406) 756-3881 (voice or TTY).

Flathead Valley Community College does not discriminate on the basis of race, color, national origin, sex, age or handicap in admission or access to, or treatment or employment in its educational programs or activities. Inquiries concerning Title VI, Title IX and Section 504 may be referred to Vice President of Academic and Student Affairs, Blake Hall, Rm. 136, 777 Grandview Drive, Kalispell, MT 59901, (406) 756-3894; or the Montana Human Rights Commission, 1236 Sixth Avenue, P.O. Box 1728, Helena, MT 59624, (406) 444-2884/1-800-542-0807.

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# Academic Calendar

## Fall Semester 2019

|                       |   |
|-----------------------|---|
| August 7 (W)          | Tuition Due: Registered Students  |
| August 21 (W)         | Priority Application Deadline (Degree and Non-degree Students)              |
| August 21-23 (W-F)    | ECC Closed  |
| August 26 (M)         | Campus Closed 8:00 - 10:15 a.m. for College Inservice                       |
| August 26-27 (M-T)    | ECC Closed  |
| August 28 (W)         | Semester Begins   |
| September 2 (M)       | No classes. Campus and ECC closed for Labor Day                             |
| September 18 (W)      | Last Day to Change Residency Status   |
| October 9 (W)         | Last Day to Change Degree/Major   |
| October 14 (M)        | Classes will meet: Columbus Day   |
| November 1 (F)        | Registration Begins, Spring 2020: Sophomores                                |
| November 4 (M)        | Registration Begins, Spring 2020: Returning Students                        |
| November 11 (M)       | Registration Begins, Spring 2020: New Degree-Seeking Students               |
| November 11 (M)       | Classes will meet: Veteran's Day  |
| November 18 (M)       | Registration Begins, Spring 2020: Running Start and New Non-degree Students |
| November 28-29 (Th-F) | No classes. Campus & ECC closed for Thanksgiving                            |
| December 2 (M)        | Graduation Applications Due for Spring 2020                                 |
| December 16-19 (M-Th) | Finals  |
| December 19 (Th)      | Semester Ends   |
| Dec 24 - Jan 3        | No classes. Campus & ECC Closed for Semester Break                          |

| Full Semester 2019      | Session Dates   | End of 100% refund | Last day to add classes w/o instructor's permission | End of 50% refund (0% refund after this date) | Last day to add classes with instructor's permission | Last day to drop classes w/o a "W" grade | Last day to withdraw from classes or request/rescind an audit grade |
|-------------------------|-----------------|--------------------|---|---|--|--|---|
| Session A - 1st 8 weeks | Aug 28 - Oct 25 |                    | Sept 3  |   | Sept 5   |  | Oct 7   |
| Session B - 2nd 8 weeks | Oct 28 - Dec 19 |                    | Oct 31  |   | Nov 4  |  | Dec 6   |
| Full Semester           | Aug 28 - Dec 19 |                    | Sept 5  |   | Sept 18*   |  | Nov 14  |

\* Financial Aid census date; last day to charge to financial aid in the bookstore; last day to opt out of Inclusive Access books/access codes; last day for Running Start students to drop classes and receive a 100% refund.

Short classes are classes that run fewer than 8 weeks. Short classes that do not begin in the first week of Session A, B, or Full Semester must be dropped by the next business day of the start of class in order to receive a 100% refund. No refund will apply after this day. A "W" grade will be recorded if dropping a class after the refund period. See the refund policy in the academic catalog for classes that do not begin in the first week of the semester and last 8 weeks or longer.

### FVCC Bookstore:

- Textbooks can be returned through the end of 100% refund period (conditions apply - see website).
- Textbook buyback begins two days before the end of Block C and ends the last day of finals.
- Textbook rentals are due in the Kalispell bookstore the last day of Block C finals.

Refund Information & Policy: [fvcc.edu/refund](http://fvcc.edu/refund)

Bookstore information: [fvcc.edu/bookstore](http://fvcc.edu/bookstore)

Billing and statement questions: Business Office (406) 756-3831

Assistance with course add, drop, or withdrawal: Admissions & Registration (406) 756-3846

## Spring Semester 2020

|                     |   |
|---------------------|---|
| January 6 - 17      | Interim Session   |
| January 8 (W)       | Tuition Due: Registered Students  |
| January 15 (W)      | Campus & ECC closed from 8:00-10:15 a.m. for College Inservice                |
| January 17 (T)      | Priority Application Deadline (Degree and Non-degree Students)                |
| January 20 (M)      | No classes. Campus & ECC closed for Martin Luther King Jr. Day                |
| January 21 (T)      | Semester Begins   |
| February 10 (M)     | Last Day to Change Residency Status   |
| February 17 (M)     | No classes. Campus & ECC closed for Presidents Day                            |
| March 2 (M)         | Registration Begins, Summer 2020: All Students: New, Returning, Running Start |
| March 3 (T)         | Last Day to Change Degree/Major   |
| March 23-27 (M - F) | No classes. Spring Break  |
| April 1 (W)         | Registration Begins, Fall 2020: Sophomores                                    |
| April 2 (Th)        | Registration Begins, Fall 2020: Returning Students                            |
| April 16 (Th)       | Registration Begins, Fall 2020: New Degree-Seeking Students                   |
| May 1 (F)           | Graduation Applications Due for Summer and Fall 2020                          |
| May 7 (Th)          | Registration Begins, Fall 2020: Running Start and New Non-degree Students     |
| May 11-14 (M - Th)  | Finals  |
| May 14 (Th)         | Semester Ends   |
| May 15 (F)          | Commencement  |

| Spring Semester 2020    | Session Dates   | End of 100% refund | Last day to add classes w/o instructor's permission | End of 50% refund (0% refund after this date) | Last day to add classes with instructor's permission | Last day to drop classes w/o a "W" grade | Last day to withdraw from classes or request/rescind an audit grade |
|-------------------------|-----------------|--------------------|---|---|--|--|---|
| Session A - 1st 8 weeks | Jan 21 - Mar 13 | Jan 24             | Jan 24  | Jan 28  | Jan 28   | Jan 28                                   | Feb 28  |
| Session B - 2nd 8 weeks | Mar 16 - May 14 | Mar 19             | Mar 19  | Mar 30  | Mar 30   | Mar 30                                   | Apr 29  |
| Full Semester           | Jan 21 - May 14 | Jan 28             | Jan 28  | Feb 10*                                       | Feb 10*  | Feb 10*                                  | Apr 15  |

\* Financial Aid census date; last day to charge to financial aid in the bookstore; last day to opt out of Inclusive Access books/access codes; last day for Running Start students to drop classes and receive a 100% refund.

Short classes are classes that run fewer than 8 weeks. Short classes that do not begin in the first week of Session A, B, or Full Semester must be dropped by the next business day of the start of class in order to receive a 100% refund. No refund will apply after this day. A "W" grade will be recorded if dropping a class after the refund period. See the refund policy in the academic catalog for classes that do not begin in the first week of the semester and last 8 weeks or longer.

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- Textbook buyback begins two days before the end of Full Semester and ends the last day of finals.
- Textbook rentals are due in the Kalispell bookstore the last day of Full Semester finals.

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Assistance with course add, drop, or withdrawal: Admissions & Registration (406) 756-3846

## Summer Semester 2020

|             |  |
|-------------|--|
| May 15 (F)  | Tuition Due: Registered Students                               |
| May 19 (T)  | Priority Application Deadline (Degree and Non-degree Students) |
| May 25 (M)  | No classes. Campus and ECC closed for Memorial Day Holiday     |
| May 26 (T)  | Semester Begins  |
| June 9 (T)  | Last Day to Change Residency Status                            |
| June 22 (M) | Last Day to Change Degree/Major                                |
| July 3 (Th) | No classes. Campus and ECC closed for Fourth of July           |
| July 31 (F) | Semester Ends  |

| Summer Semester 2020    | Session Dates  | End of 100% refund | Last day to add classes w/o instructor's permission | End of 50% refund (0% refund after this date) | Last day to add classes with instructor's permission | Last day to drop classes w/o a "W" grade | Last day to withdraw from classes or request/rescind an audit grade |
|-------------------------|----------------|--------------------|---|---|--|--|---|
| Session A - 1st 5 weeks | May 26- Jun 26 | May 29             |   |   | Jun 2  |  | Jun 18  |
| Session B - 2nd 5 weeks | Jun 29- Jul 31 | Jul 2              |   |   | Jul 7  |  | Jul 23  |
| Full Semester           | May 26- Jul 31 | Jun 2              |   |   | Jun 9*   |  | Jul 14  |

\* Financial Aid census date; last day to charge to financial aid in the bookstore; last day to opt out of Inclusive Access books/access codes; last day for Running Start students to drop classes and receive a 100% refund.

Short classes: classes that run less than 8 weeks. Short classes that do not begin in the first week of Session A, B, or Full Semester must be dropped by the next business day of the start of class in order to receive a 100% refund. No refund will apply after this day. A "W" grade will be recorded if dropping a class after the refund period. See the refund policy in the academic catalog for classes that do not begin in the first week of the semester and last 8 weeks or longer.

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# About FVCC

## Mission

Flathead Valley Community College promotes excellence in lifelong learning, focusing on student success and community needs.

## Core Themes

FVCC has identified four core themes that individually manifest essential elements of its mission. Each element serves as an important component of lifelong learning. Collectively, the core themes encompass lifelong learning, supporting FVCC's role as a comprehensive community college.

The four core themes are

1. Transfer preparation;
2. Workforce preparation;
3. Developmental education; and
4. Community education.

## Governance

Flathead Valley Community College is governed by a seven-member Board of Trustees. The trustees are elected by the citizens of Flathead County. Members serve three-year terms on a rotating basis with elections held yearly on the Tuesday following the first Monday in May. The trustees are charged with the primary responsibilities of setting college policies and selecting a president to administer the operations of the institution.

FVCC coordinates with the Montana Board of Regents.

## Finance

### All Funds

Flathead Valley Community College receives funding from federal, state, and local sources. The total budget authority is based on projected student enrollments and determined according to a formula. State of Montana appropriations, state and federal grants, and local sources (i.e. county taxes, student tuition, and other income) provide funding for FVCC.

## Accreditation

Flathead Valley Community College is accredited by the Northwest Commission on Colleges and Universities. Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the Northwest Commission on Colleges and Universities applies to the institution as a whole. As such, it is not a guarantee of every course or program offered or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

The last comprehensive review and reaffirmation occurred in the spring of 2012.

Four FVCC Career and Technical programs have been awarded specialized accreditations.

1. Surgical Technology AAS is accredited through the Commission on Accreditation of Allied Health Programs (CAAHEP), in cooperation with the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC-STSA).
2. Medical Assistant CAS is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Curriculum Review board of the American Association of Medical Assistants Endowment (AAMAE).
3. Paramedicine AAS is accredited through the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions through the Commission of Accreditation of Allied Health Education.
4. Physical Therapist Assistant AAS is accredited by the Commission on Accreditation in Physical Therapy Education.

Three FVCC Career and Technical programs have been approved by State Boards.

1. Surveying AAS has been approved by the Montana State Board of Professional Land Surveyors.
2. Practical Nursing CAS has been approved by the Montana State Board of Nursing. Graduates are eligible to take the National Council Licensure Examination (NCLEX-PN).
3. Registered Nursing ASN has been approved by the Montana State Board of Nursing. Graduates are eligible to take the National Council Licensure Examination (NCLEX-RN).

FVCC is an Accredited Test Facility for the American Welding Society (AWS ATF).

## **Memberships**

FVCC is an institutional member of various organizations, including the American Association of Community Colleges, Association of Community College Trustees, Montana Association of Community College Trustees, Mountain States Association of Community Colleges, Association of Student Financial Aid Administrators, Kalispell Chamber of Commerce, Columbia Falls Chamber of Commerce, Bigfork Chamber of Commerce, Whitefish Chamber of Commerce, Lakeside and Somers Chamber of Commerce, Libby Area Chamber of Commerce, and Eureka Chamber of Commerce.

## **Lincoln County Campus (LCC)**

The Lincoln County Campus of FVCC, located in Libby, provides access to the beautiful Cabinet Mountains, alpine lakes, and the famous Kooocanusa Reservoir. The facility is home to LCC's administrative offices, nine classrooms, an art lab, science lab and three computer labs, in addition to the Glacier Bank Adult Basic Education Learning Center and the Academic Reinforcement Center. The single-story, remodeled building provides a comfortable, pleasant learning environment. LCC offers students a variety of ways to earn a degree or certificate. Students may opt to (1) attend live-site classes in Libby and Troy, (2) take online classes, and/or (3) take courses via interactive teleconferencing.

### Lincoln County Library

The Lincoln County Library serves as a resource center for the Lincoln County Campus. The library has an extensive collection of books and periodicals available to students and is connected electronically with a network of university libraries providing extraordinary access to academic data.

### Lincoln County Academic Reinforcement Center

Free tutorial services are available to all students enrolled at the Lincoln County Campus. A professional tutor provides individual or small group instruction on most course offerings. Research tools such as style guides and internet access are available in a modern computer lab with seven workstations.

# Admissions and Registration

## Admissions

*fvcc.edu/admissions*

Flathead Valley Community College has an "open door" policy for those who are 16 years or older. FVCC does not discriminate on the basis of age, color, religion, creed, disability, marital status, veteran status, national origin, gender, or sexual orientation. The admissions process is based on self-selection and FVCC encourages individuals who feel their educational needs will be met by the programs and services offered by the college to seek admission.

Admission to degree/certificate programs, except for selective programs, shall be open to anyone who has earned a high school diploma from an accredited high school or received a high school equivalency diploma. (See "Selective Program Admission" below) Exceptions may be made for students enrolled in Running Start/Dual Enrollment programs. Exceptions will be approved by the registrar. (See "Degree-Seeking Student Exceptions" below.)

Application Priority Deadline: FVCC will continue to accept applications ten business days prior to the start of the semester, and for students interested in taking late-starting classes.

The admission file, complete with all records listed below, must be provided to the Admissions and Registration Office.

For non-degree students, a complete admission file consists of the following:

- A completed Application for Admission form;
- Measles, mumps and rubella (MMR) immunization records for anyone taking six or more credits a semester who was born on or after January 1, 1957; and
- Residency verification when requested.

For degree-seeking students, a complete admission file consists of the following:

- A completed Application for Admission form;
- Official high school transcript, unless the student has completed an AA/AS or bachelor's degree from a regionally accredited college;
- Official copies of any and all college transcripts;
- MMR immunization records for anyone born on or after January 1, 1957; and
- Residency verification when requested.

Application records will be held for two years after submission, after which one must reapply and resubmit all records.

Selective Program Admission: FVCC has additional requirements for selective programs. To be considered for selective program admission, applications must be submitted to the Admissions and Registration Office by the appropriate deadlines. Currently, selective programs include the following:

- Brewing Science and Brewery Operations;
- Culinary Arts and Catering;
- Firearms Finishing;
- Firearms Technology;
- Medical Assistant;
- Medical Laboratory Technician;
- Paramedicine;
- Physical Therapist Assistant;
- Practical Nursing;
- Radiologic Technology;
- Registered Nursing; and
- Surgical Technology.

Application deadlines and requirements for admission into selective programs vary by program. Contact the Student Support Center by calling (406) 756-3880 for more information.

### Placement Tests

Degree-seeking students, as well as any students planning to enroll in math, English, or classes with placement prerequisites are required to complete placement tests. Testing information can be found at [fvcc.edu/placement](http://fvcc.edu/placement) and in the Student Portal. The tests are used for placement purposes only.

Advisors use placement test scores to determine accurate course placements in order to maximize students' opportunities for success. Test scores guide placement in specific courses, as well as evaluate preparation for courses with significant reading demands. Scores are not kept on students transcripts and do not impact grades.

Call the Student Support Center at (406) 756-3880 for more information about placement tests.

### **FVCC Enrollment for Home-Schooled Students and Students under the Age of 16.**

Applicants under the age of 16 are required to

- Contact the registrar by calling (406) 756-3845 to petition the Admissions and Registration Office for an exception.
- Complete the following:
- Provide written permission from parents;
- Complete placement testing and call (406) 756-3880 to meet with a Student Support Center Advisor and have scores evaluated to determine college readiness;
- Submit a non-degree Application for Admission form and provide required immunization records; and
- Obtain instructors' signatures before registering for classes.
- Acknowledge the following guidelines:
- A maximum of six credits can be taken the first term;
- Students will be enrolled as "non-degree" status until reaching 16 years of age and successfully completing the GED/HiSET or high school equivalency diploma. At that point, students can be enrolled as "degree" status;
- Because of federal regulations, financial aid is not available until students reach 16 years of age; and
- An instructor in any course can recommend withdrawal if students are not socially and/or emotionally mature enough to fully benefit or if their participation should in any way slow the normal progress of the class.

An applicant who is 16 years of age or older, or has graduated from a religious/private school not accredited by the state of Montana, is required to provide the following:

- Completed Application for Admission form and required immunization records;
- GED/HiSET certificate or high school equivalency diploma or proof of completion of FVCC placement tests. Call the Student Support Center at (406) 756-3880 to schedule an appointment for test score evaluation to determine college readiness; and
- Complete financial aid forms if applying for financial aid.

### **Admission of International Students**

Flathead Valley Community College is authorized under federal law to enroll non-immigrant alien students. Each international applicant is required to furnish the following in order to be considered for admission as a full-time, degree-seeking student:

- Completed International Student Application for Admission. (There is no cost associated with this application.)
- Proof of English Proficiency: FVCC accepts TOEFL, IELTS, EIKEN, ELS scores from accredited testing services. A minimum 61 IBT (internet-based) TOEFL test (or equivalent) are acceptable standards. (Note: Canadian students are not required to submit English proficiency scores.)
- Proof of completion of the equivalent of an American high school education.
- Certificate of Financial Responsibility: This financial guarantee can be either a "Declaration of Finances" or other evidence of funds necessary to cover the annual cost of attendance at FVCC (approximately \$18,200), or, if sponsored by a U.S. citizen or permanent resident, a USCIS Affidavit of Support (Form I-134).
- Physician-validated immunization record for two separate vaccinations for measles, mumps, rubella, and a tuberculosis skin test.
- Current evidence of a student accident and sickness insurance policy for each semester at FVCC must be presented before a student can start attending classes.
- Copy of valid passport (and, if applicable, student visa).

After an applicant has submitted all of the above items, his/her admission file will be reviewed. Upon acceptance, FVCC will issue an I-20 Certificate of Eligibility for non-immigrant "F-1" or "M-1" student status, which will allow the applicant to obtain a student visa at the U.S. Embassy of his/her home country. Depending on the applicant's country of origin, this process may take a minimum of six weeks.

International students transferring from other U.S. institutions should contact the Director of Global Programs directly at [international@fvcc.edu](mailto:international@fvcc.edu) to obtain admission and I-20 transfer instructions.

All international students pay out-of-state tuition.



### **Degree-Seeking Student Exceptions to Admissions**

Students who apply for degree-seeking status and are unable to provide verification of high school graduation or equivalent may be enrolled as a degree-seeking student if they meet all of the following conditions:

- Unable to provide high school graduation or equivalent due to extreme circumstances (e.g., left high school/home school without graduating, high school records are no longer available, etc.);
- Initially enrolls as a non-degree student and passes a minimum of 50% of the required credits within his/her intended program of study;
- In good academic standing (2.0 or better cumulative grade point average);
- Applicant Status is recorded as "Provisional Admit (No HS)" status; and
- If planning to transfer, the student is responsible for contacting the transfer institution regarding their requirements for admission.

Financial Aid may not be available. Students should contact the Financial Aid Office for more information.

Students currently enrolled in FVCC's Running Start program and/or enrolled in high school, home school, or a high school equivalency program do not qualify for this exception and must graduate from high school or the equivalent before applying as a degree-seeking student. Students meeting the FVCC degree requirements prior to graduating from high school can apply for FVCC graduation if their high school graduation date falls within the semester and confirmation is received; otherwise, they will apply for FVCC graduation in a semester after their high school graduation date.

### **Running Start**

*fvcc.edu/runningstart*

The Running Start program provides eligible high school juniors, seniors, and those students at least 16 years of age the opportunity to get an affordable "running start" on their college education with classes offered at a significantly reduced cost. Students eligible for Running Start will be assessed the appropriate reduced tuition until the student graduates from high school or home school, or through age 19, whichever occurs first. High school students can elect to earn only college credit while enrolled in the Running Start program.

Classes taken as part of the Running Start program are limited to college-level classes numbered 100 or above.

Students must maintain a cumulative grade point average of 2.0 or higher at FVCC to continue in the Running Start program. Running Start courses are the beginning of the student's college education and will remain on the student's college transcript.

Each participating high school determines course acceptance and credit equivalency.

For more information regarding enrollment procedures, contact the Running Start Coordinator at (406) 756-3923 or [eromain@fvcc.edu](mailto:eromain@fvcc.edu) or the Academic Coordinator at (406) 285-1523 or [bladensburg@fvcc.edu](mailto:bladensburg@fvcc.edu).

### **Immunizations**

Montana law requires immunization records from all degree-seeking students, and non-degree-seeking students registering for more than five credits, born on or after January 1, 1957. Proof of two doses of measles, mumps, and rubella (MMR) immunizations must be provided before students can be allowed to register for more than five credits. To fulfill this requirement, applicants must meet the following guidelines:

- If high school records of immunization are not available, records from physicians' offices or health departments may be substituted with official signatures to verify authenticity.
- If no records are available, applicants must comply with one of the following options: (1) get immunized and submit written medical verifications signed by licensed physicians, (2) provide notarized religious forms or medical exemption forms, or (3) provide blood test results showing immunity.

## Residency

FVCC classifies in-state students as those who are either in-district (Flathead or Lincoln County residents) or out-of-district (Montana residents outside of Flathead or Lincoln County).

Out-of-state students are those individuals who are not Montana residents nor are dependents of Montana residents, or are students who are real property taxpayers in Montana but are not Montana residents.

### Requirements for In-State Residency (In-District or Out-of-District):

To be considered in-state (in-district or out-of-district) for admissions and tuition, status is granted to those students who have demonstrated over a period of time that their permanent residence is Montana, a state which they have supported through the payment of appropriate taxes. To be considered, a student must meet the requirements listed below to qualify for in-state status:

1. A student must be physically present in Montana for twelve or more consecutive months without an absence in excess of a total of thirty days. One must demonstrate by appropriate actions during the twelve month period the intent to make Montana one's permanent home.
2. Specific actions to become a Montana resident include
  - Obtain a Montana driver's license, or a Montana State ID within the required legal time limit.
    - A student cannot apply for in-state residency with a current driver's license from another state.
  - If a person owns a motor vehicle in Montana, license the vehicle in Montana within the required legal time limit.
  - Register to vote in Montana
    - An individual must register to vote in Montana if she or he expects to exercise the right to vote.
  - Purchase a principal residence where a Montana title is obtained.
  - File a resident Montana income tax return.
3. During the 12 month period of establishing Montana residency, a student must remain enrolled in seven or fewer credits per semester.

There are additional regulations for special circumstances and/or exemptions for in-state residency which are listed on [fvcc.edu/residency](http://fvcc.edu/residency).

In addition to the in-state Montana residency requirements, in-district students must also fulfill the following criteria to be considered in-district for tuition purposes:

Please note: if you are dependent of a parent or guardian residing outside of Flathead or Lincoln County, you will not qualify for in-district residency requirements.

- Montana driver's license, or a Montana State ID; and

- Live in the college district of Flathead or Lincoln County for one continuous year; or
- Own, reside, and pay taxes on real property located within the college district; or
- Dependents whose parents own, reside, and pay taxes on real property located within the college district.

A student applying for in-district residency may be required to provide proof of the following:

- If a person owns a motor vehicle in Flathead or Lincoln County, he or she must license the vehicle in Flathead or Lincoln County.
- If a registered voter, be registered in Flathead or Lincoln County.
- If employed, proof of non-seasonal employment in Flathead or Lincoln County.

For more information, students should refer to [fvcc.edu/residency](http://fvcc.edu/residency). Students can request a change in residency status and may obtain the form and more information from the Admission & Registration Office in BH 111 or online at [fvcc.edu/residency](http://fvcc.edu/residency).

Although closely aligned with the Montana University Systems (MUS) residency policy (Montana University System Residency Requirements), FVCC residency policy is separate from the Montana University System. Any student establishing Montana residency with the intent to transfer to another Montana university or college, should contact the transfer institution and be informed of their residency requirements.

### Requesting a Change in Residency

For tuition and fee purposes, a student requesting a change in residency status is required to abide by the following process and submit the required form and documentation by the 15th class day from the start of the semester (11<sup>th</sup> class day in the summer) in which the student wants the change in residency:

1. Remain in part-time status (seven or fewer credits per semester) for the first year when seeking in-state residency. Residency cannot be established while taking eight or more credits a semester.

Current Montana residents who are out-of-district students seeking Flathead in-district residency may take more than seven credits/semester.

2. Submit the following required documentation after one year's residency in Montana.

Residency Change Request Form  
Attach Supporting Documentation

3. Submit all the required forms and documentation to the Admissions & Registration Office:

Blake Hall, Room 111  
RE: Residency Change Request  
777 Grandview Drive, Kalispell, MT 59901

All requests are reviewed by the Residency Committee within ten business days of receipt. Students will be notified via email and /or phone of the decision. Any appeals to the residency decision will be reviewed by FVCC administration.

If you have additional question or need assistance please contact the Admission & Registration Office in Blake Hall, Room 111 or email [admissionsinfo@fvcc.edu](mailto:admissionsinfo@fvcc.edu).

### **Residency Exchange/WUE**

Flathead Valley Community College participates in the Western Undergraduate Exchange (WUE), a program of the Western Interstate Commission for Higher Education and other western states. Through WUE, certain students not residing in Montana may enroll in designated programs at FVCC at the in-state tuition rate plus 50 percent (plus other fees that are paid by all students).

Application must be made to the Admissions and Registration Office by the 15th class day from the start of fall and spring semesters, or 10th class day of summer semester. WUE participants must maintain their state's residency, maintain a 2.5 cumulative GPA, and remain enrolled in an FVCC WUE eligible program of study or be a fully online non-degree-seeking student.

WUE participating states are Alaska, Arizona, California, Colorado, Hawaii (four-year colleges only), Idaho, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Because FVCC participates in the WUE program, residents of Montana may enroll under the same terms in designated institutions and programs in other participating states.

Students attending under the WUE classification are not allowed to calculate the time as a WUE student toward gaining in-district or in-state residency.

Information about WUE programs may be obtained from <https://www.wiche.edu/wue>.

Montana residents may obtain information about WUE programs in other states from The Office of the Commissioner of Higher Education, 2500 Broadway, Helena, MT 59620, (406) 444-6570; or from WICHE Student Exchange Program, P.O. Drawer P, Boulder, CO 80301-9752, (303) 497-0210.

## **Registration**

[fvcc.edu/registration](http://fvcc.edu/registration)

### **How to Register**

To register for classes, a student is required to

1. Complete an Application for Admission. If it has been two or more years since a student last attended FVCC, he or she must complete an Application for Admission, available at [fvcc.edu/apply](http://fvcc.edu/apply);
2. Review placement requirements in the Student Portal, under "Admissions Status, Placements" and, if necessary, enroll in the online Reading and Writing Placement test and/or take the Math Placement in the Foundational Math Center;
3. Review the semester course schedule online at [fvcc.edu/schedule](http://fvcc.edu/schedule); and
4. Meet with a Student Support Center Advisor for new degree-seeking students; meet with their assigned advisor for returning students. Returning students can find their assigned advisor in the Student Portal. The advisor is listed on the homepage. To schedule an appointment with a Student Support Center Advisor call (406) 756-3880.

The Registrar or Director of Student Services is required to approve course loads over 18 credits.

Non-degree students can register by mail, fax at (406) 756-3965, or online via the Student Portal. Registrations are required to be accompanied by check, money order, VISA, Master Card, Discover, or American Express.

Students are required to make arrangements for payment of tuition and fees. See the Academic Calendar for specific dates and deadlines.

Account balances are required to be paid before the end of the semester. A deferred payment plan is available.

Students with unpaid account balances will not receive grades, transcripts, diplomas, or other academic documents until the account balances are paid. Visit the Business Services Office in BH 132 or call (406) 756-3831 for additional information.

A student who registers or adds class after the third week of the semester is charged a \$40 late registration fee. For short or late starting classes, a late fee will be charged to a student who registers for the class after it has begun.

Student ID cards can be obtained from the Business Services Office.

### **Registration**

Registration dates vary by semester. See the Academic Calendar for specific dates and deadlines.

All registrations should be completed by the first day of the semester. Schedule changes will be accepted through the second week, but permission from the instructor will be required to register for classes after the first week of the semester. New registrations will not be accepted after the second week of the semester for full-semester classes. Refer to the Academic Calendar for specific registration dates and deadlines.

Only registered students are permitted to attend class. Any exceptions must be approved in advance by the Dean of Student Affairs.

### **Online Registration**

Online Registration is available via the Student Portal. Students should visit the Student Support Center / (406) 756-3880 or the Admissions and Registration Office / (406) 756-3848 for assistance in registering online.

### **Registration Hold**

Students who have not submitted required documents, failed to complete a required training including but not limited to sexual assault prevention, or have an outstanding balance, will receive a registration hold which will prevent them from registering for the current and/or future semesters until the issue has been resolved.

### **Sexual Assault Prevention Course and AlcoholEdu**

All new degree-seeking students are required to complete a sexual assault prevention course: Sexual Prevention for Undergraduates (SAPU) or Sexual Assault Prevention for Adult Learners (SAPAL) if over 21 years of age. Additionally, all new degree-seeking students 21 years of age or younger are required to complete AlcoholEdu, an alcohol abuse prevention course, prior to registering for future classes. All students 22 years of age or older are welcome and encouraged, but not required, to complete AlcoholEdu. Additionally, all students are welcome to complete Transit, a financial literacy program. These courses are available online via the Student Portal.

### **Change of Class Schedule**

During the first week of classes, students can make course changes online via the Student Portal.

After the first week of classes, students must submit a Course Drop/Add form from the Admissions and Registration Office. The completed form must be turned into the Admissions and Registration Office by the posted deadlines for the schedule change to occur. See the academic calendar for specific dates and deadlines.

Refunds for dropped courses are determined by the refund schedule. Added classes will be charged full tuition and fees.

A student who receives financial aid or veterans' benefits is required to have the Financial Aid Director and/or Veterans' Certifying Official sign the Course Drop/Add form.

NOTE: Classes may only be added during the first two weeks of the semester with the exception of late-starting classes.

The last day to drop a class is indicated on the academic calendar. Students who wish to drop a class without the class appearing on their transcripts are required to drop the class during the first three weeks of the semester. (The above information applies to classes that meet the full length of fall and spring semesters.) Failure to attend class DOES NOT constitute withdrawal.

In order to prevent dropped summer semester classes and short- or late-starting classes from appearing on students' transcripts, students are required to drop the class during its refund period. (See refund schedule.)

No refunds will be granted for full-length semester classes dropped after the second week of the semester. (See refund schedule.)

### **Change of Major**

Enrolled students who wish to change their major must submit a change online via the Student Portal within 30 business days of the start of the semester. After this date, the major change will be posted for the next semester.

### **Cancellation of Courses**

FVCC reserves the right to cancel any course through the first week of the class due to low enrollment.

### **Changes in Student Records**

Effective fall semester 2017, the maximum time frame to petition a revision/change to student transcripts or records is within one year of the semester in question. For name changes, the student must provide official documentation, such as court documents, updated social security card, or valid driver's license.

### **Eagle Mail**

A student email account, called Eagle Mail, is the college's official means of communication with all students. The college reserves the right to send official communications to students by email with the full expectation that students receive and read emails in a timely fashion. Email may not be used for unlawful activities.

Students are expected to check their FVCC Eagle Mail accounts frequently and consistently to stay current with college-related communications.

Faculty may assume a student's official college email is a valid mechanism for communication. Students who "forward" the FVCC student email account to a private (unofficial) email address outside the official college network address do so at their own risk. The college is not responsible or liable for any difficulties that may occur in the proper or timely transmission or access of email forwarded to any unofficial email address. Any such problems will not absolve students of the responsibility to know and comply with the content of official communications sent to official FVCC student email addresses.

Use of a private account requires students to keep the account active and available to receive messages. FVCC is not responsible nor will be held liable for lost or deleted email due to account closures or storage restrictions.

For questions concerning Eagle Mail, please contact the MIS Help Desk at (406) 756-3930.

# Tuition, Fees, Financial Aid

## Tuition

[fvcc.edu/tuition](http://fvcc.edu/tuition)

### Semester Tuition and Fee Schedule

Tuition and Mandatory Fees vary based on a student's residency status.

Approximate semester costs for the 2019-2020 academic year are shown below (for a full-time, in-district student with 14 to 18 credits):

| Category            | Average Cost |
|---------------------|--------------|
| Tuition             | \$1816       |
| Mandatory Fees      | \$680        |
| Course/Lab Fees     | \$140        |
| Books/Supplies      | \$500        |
| TOTAL (approximate) | \$3136       |

#### Category Descriptions:

- **Tuition** is a set dollar amount per credit.
- **Mandatory Fees** include the activity fee, building fee, equipment fee, grounds and maintenance fee, student health fee, and the technology fee. Details on these fees are given below.
- **Course/Lab Fees** vary by course. These fees are for consumables such as materials, supplies, or access to software. Examples might be clay for ceramics, an access code for math, or chemicals in chemistry.
- **Books/Supplies** include items the student purchases outside of class such as required textbooks, notebooks, paper, or calculators.

#### Mandatory Fees

*These are fees applicable to all students. See the Tuition and Fee Schedule for the current fees. Note: mandatory fees are subject to increase in the 2019-2020 academic year.*

##### Activity Fee

A per credit activity fee is administered by Student Government to support programs, services, and activities for FVCC students.

##### Building Fee

A per credit building fee is assessed to maintain and improve existing facilities, to construct facilities, and to purchase new land or buildings.

##### Equipment Fee

A per credit equipment fee is assessed to assist FVCC in maintaining and updating instructional equipment.

##### Grounds and Maintenance Fee

A per credit grounds and maintenance fee is assessed for the purpose of maintaining and improving the campus grounds. This fee also assists in maintaining existing parking and constructing new parking areas.

##### Student Health Fee

A mandatory fee is assessed to maintain and operate the Student Health Clinic for students enrolled in six or more credits.

##### Technology Fee

A per credit technology fee is assessed to off-set the cost of purchasing or leasing computer equipment, software, maintenance, or related items which benefit instructional programs.

##### **Other Fees**

These fees are applicable in specific circumstances, for example as related to a specific course or form of payment.

\*See the Tuition and Fee Schedule for the current fees.

##### Calculator Rentals

Calculators may be rented for the semester from the Media Center with a valid FVCC library card and are paid for at the Bookstore. Calculator rental fees are \$10 per semester. Contact the Media Center in LRC 117 for additional details and specific contract terms.

##### *Late Fee*

An overdue fee of \$10 per day (capped at \$100) will be assessed to a student's account if not returned by the due date. A hold will be placed on the borrower's college account, rendering grades and transcripts inaccessible until the balance has been paid.

##### *Replacement Fee*

A fee of \$100 is added to a student's account if the calculator is lost or damaged.

##### Chromebook Rentals

Google Chromebooks may be rented for \$40 per semester in the college bookstore. Students must present their receipt to Media Services in LRC 117 to check out a Chromebook using an FVCC Library card.

##### *Late Fee*

If a Chromebook is lost, stolen, or damaged, a replacement cost of \$250 will be assessed. All connecting cables and cases must also be returned or an additional \$10 replacement fee will be assessed. An overdue fee of \$10 per day will be assessed to a student's account if not returned by the due date. A hold will be placed on the borrower's college account, rendering grades and transcripts inaccessible until the balance has been paid.

##### *Damage or Replacement Fee*

A fee of \$250 is added to the student's account if the Chromebook is lost or damaged. Failure to return the Chromebook within 10 days of the due date will result in a replacement charge of \$250.

##### Transcript Fee

Transcript information is available at [fvcc.edu/transcripts](http://fvcc.edu/transcripts). Transcript request cost \$10 per order. Transcripts are not issued until all accounts with the college are in good standing. Students may print an unofficial transcript through the Student Portal.

## Payment of Tuition and Fees

### Payment

Students can pay in full on the tuition due date. See the Academic Calendar for specific dates. The Business Services Office accepts cash, personal checks, money orders, Visa, MasterCard, Discover, or American Express. Payments can also be made online via the Student Portal.

### Deferred Payment

In the event an account is not paid in full by the tuition due date, students can contact the Business Services Office to establish a deferred payment plan. If an account balance is already covered in full by awarded financial aid, a third-party authorization, and/or scholarships, a deferred payment plan is not necessary.

- In case of default or delinquency in the repayment of all or any part of a scheduled installment, a late charge of \$25 shall be assessed against each late installment.

### **PLEASE NOTE:**

- Grades and/or transcripts will not be released to students who have holds like unpaid library fines or outstanding balances.
- Registration for subsequent semesters is blocked for students with unpaid balances.
- Non-payment of tuition and fees will result in turning the account over for collections to the Montana Department of Revenue. Collection costs will be added to the balance.

### Release of Information

The Business Services Office will not release a student's account information without written permission of the student, including Running Start students, according to the Family Education Rights and Privacy Act (FERPA) regulations. Students may complete an Information Release Authorization form at the Business Services Office which will permit the Business Services Office to discuss payment arrangements with parents, spouses, or others designated by the student.

It is assumed that if a student has an authorization for payment from a third party (a contractual agreement) the Business Services Office can discuss the student's account with the payer.

## Discounts and Waivers

### Running Start

Classes taken as part of the Running Start program are offered at a reduced tuition. Payment and refund policies still apply as stated for all students. Eligible in-district and out-of-district Running Start students are granted a 6-credit tuition waiver. This does not include non-college level classes. Contact a Student Support Center Advisor or the Running Start Coordinator at [eromain@fvcc.edu](mailto:eromain@fvcc.edu) or (406) 756-3923 to ensure that classes taken are eligible to receive the waiver.

### Senior Citizen Discount

The senior citizen discount is available to Flathead and Lincoln County in-district residents 65 years of age and older.

### **Tax Reporting**

1098T Forms - FVCC will send a 1098T form to all eligible students.

## Refunds

### **Refund of Tuition and Per Credit Fees**

Refunds of tuition and fees are made according to the following guidelines:

- Tuition and fees are refunded according to the refund procedure.
- Students must officially withdraw from their courses at the Admissions and Registration Office located in Blake Hall.
- Failure to attend courses DOES NOT drop or withdraw a student from those courses.
- When a student whose tuition and fees are paid under a third-party contractual agreement withdraws, the student is required to make full payment on the balance owed.
- Refunds are calculated from the date of official withdrawal, not from the date the student stopped attending classes.
- The college processes tuition and fee refunds after the third week of the semester.
- Refunds are mailed to students' addresses on file with the Business Services Office.
- All existing debts such as library charges, calculator replacement, bookstore charges, and deferred payment plan balances, may be deducted from any refund due to the student.
- Questions regarding refunds should be directed to the Accounts Receivable Specialist in the Business Services Office in BH 132 or call (406) 756-3802.

### Refund Schedule

The refund schedule presumes the account is paid in full at the time of registration. It is based on the total amount owed the college, not the amount paid. The refund schedule is date specific.

Refunds are calculated from the day the Course Add/Drop form is received in the Admissions and Registration Office. Students who do not officially withdraw owe full tuition and fees and may receive an "F" for a course. The length of a course determines which refund schedule applies when a student drops a course.

*Note: Students may withdraw from courses until the 75% point of the course.*

In order to prevent a dropped full-semester course from appearing on a student's transcript, the course must be dropped by the end of the third week of the fall or spring semester. For summer semester, short- or late-starting courses, the course must be dropped by the end of its refund period.

Financial Aid students should refer to the withdrawal policy in the Financial Aid section of the catalog.

Add/Drop/Refund Calculations:

(Session class days starting with day one of session)

| Summer Semester        | End of 100% refund | Last day to add classes w/o instructor's permission | End of 50% refund (0% refund after this date) | Last day to add classes with instructor's permission | Last day to drop classes w/o a "W" grade | Last day to withdraw from classes or request/rescind an audit grade |
|------------------------|--------------------|---|---|--|--|---|
| Session A: 1st 5 weeks | 4                  | 4   | 6   | 6  | 6  | 18  |
| Session B: 2nd 5 weeks | 4                  | 4   | 6   | 6  | 6  | 18  |
| Full Semester          | 6                  | 6   | 11  | 11*  | 11                                       | 35  |

| Fall and Spring Semesters | End of 100% refund | Last day to add classes w/o instructor's permission | End of 50% refund (0% refund after this date) | Last day to add classes with instructor's permission | Last day to drop classes w/o a "W" grade | Last day to withdraw from classes or request/rescind an audit grade |
|---------------------------|--------------------|---|---|--|--|---|
| Session A :1st 8 weeks    | 4                  | 4   | 6   | 6  | 6  | 28  |
| Session B: 2nd 8 weeks    | 4                  | 4   | 6   | 6  | 6  | 28  |

\* Financial Aid census date; last day to charge to financial aid in the bookstore; last day to opt out of Inclusive Access books/access codes; last day for Running Start students to drop classes and receive a 100% refund.

Short classes are classes that run fewer than 8 weeks. Short classes that do not begin in the first week of Session A, B, or Full Semester must be dropped by the next business day of the start of class in order to receive a 100% refund. No refund will apply after this day. A "W" grade will be recorded if dropping a class after the refund period. See the refund policy in the academic catalog for classes that do not begin in the first week of the semester and last 8 weeks or longer.

FVCC Bookstore:

- Textbooks can be returned through the end of 100% refund period (conditions apply - see website).
- Textbook buyback begins two days before the end of Full Semester and ends the last day of finals.
- Textbook rentals are due in the Kalispell bookstore the last day of Full Semester finals.

Refund Information & Policy: [fvcc.edu/refund](http://fvcc.edu/refund)

Bookstore information: [fvcc.bookstore.com](http://fvcc.bookstore.com)

Billing and statement questions: Business Office (406) 756-3831

Assistance with course add, drop or withdrawal: Admissions & Registration (406) 756-3846

## Appeals

Inadequate knowledge regarding the refund policy is not considered sufficient cause for student appeal.

Failure to attend DOES NOT withdraw a student from their courses, nor does it excuse them from their financial obligations to Flathead Valley Community College.

Students wishing to appeal the refund policy may do so before the end of the term by submitting a written appeal explaining their particular circumstances to the College's Financial Appeals Committee.

Students with third-party sponsors should communicate with their sponsor prior to making changes to their schedules. Sponsorship payment of tuition and fees may be withheld making the student responsible for payment to the college.

## **Financial Responsibility**

### Financial Liability

Unless a student officially withdraws from classes before the start of the semester, the student remains responsible for the balance owing on the account. The non-attendance of classes does not release the student from the obligations for the debt.

Students who receive financial aid and then withdraw may be liable for a repayment of funds to the college. They should consult with the Financial Aid Office before withdrawing.

Students receiving payment from an employer or job retraining program are responsible for the remaining balance of the account if they withdraw before fulfilling those contractual agreements. Students should check with their sponsor before withdrawing.

### Financial Obligations

Students who owe FVCC money cannot register for the succeeding semester, secure transcripts, records, grades, diplomas, or degrees until the obligations are paid or satisfactorily adjusted through the Business Services Office.

### Late Payment Fee

In case of default or delinquency in the payment of all or any part of a scheduled installment, a monthly late charge of \$25 will be assessed against each late installment, up to \$100.

### Late Registration Fee

A \$40 late registration fee is charged to each student registering or adding classes after the third week of the semester. For short- and late-starting classes, the fee will be charged if registering after the class has begun.

### NSF Check

A fee is charged for each non-sufficient fund check written to the college. All NSF checks are turned over to the Flathead County Attorney for the cost of the check plus the additional fee assessed by the county. Holds are placed on student accounts for NSF checks, and the student cannot register or receive transcripts until this debt is satisfied at the Flathead County Attorney's office.

## **Financial Aid**

*fvcc.edu/financialaid*

### **Eligibility**

- A student must be a U.S. citizen or eligible non-citizen.
- A male student must be registered with Selective Service.
- A student must have a high school diploma or GED/HiSET.
- A student may receive federal or state financial assistance only if he/she does not owe a repayment on federal financial aid previously awarded and is not in default on any federal loan previously received.
- A student must be enrolled in a program leading toward a degree or certificate offered by FVCC.
- A student must maintain satisfactory academic progress (SAP):
  1. A student must have a minimum 2.0 cumulative grade point average in previous coursework at FVCC and have successfully completed 67% of his/her attempted hours at FVCC.
  2. Degree requirements must be completed within a specific time frame. The maximum time frame for a program of study at FVCC is 150% of the program requirements (i.e. an AS degree requires 60 credits for graduation so maximum time frame would be 90 attempted credits). Hours earned at FVCC, as well as hours transferred and accepted by FVCC, are considered in this maximum time frame.
  3. For more detailed SAP information, please visit the Financial Aid website.

### **How to Apply**

- Complete the FVCC admission process for a degree or certificate program; and
- Complete the Free Application for Federal Student Aid (FAFSA) at [www.fafsa.gov](http://www.fafsa.gov). This application can take three to four weeks to process, so early application is encouraged.

Students who submit their FAFSA by December 1 and provide all requested information within two weeks will be given first priority for Work Study funds, and FSEOG as funding permits.

### **When to Apply**

Students must apply for financial aid each academic year. Applications are available after October 1 for the following fall and should be submitted as soon as possible using the prior year tax information. Applications are processed in the order received. Students are notified of their fall awards beginning in December.



## **Federal and State Aid**

Flathead Valley Community College administers a variety of government financial assistance programs for degree-seeking students. Students are required to complete the FAFSA (Free Application for Federal Student Aid) to determine eligibility.

### Federal Pell Grant

The value of this grant varies from year to year depending on Congressional appropriations. The projected maximum annual award is \$6,195 for two semesters of full-time attendance. Full and part-time students are eligible. A student's particular dollar amount depends on the student's expected family contribution (EFC) from the FAFSA and enrollment status term by term during the year.

### Federal Supplemental Educational Opportunity Grant (FSEOG)

This grant is awarded to students with the lowest EFCs who are also eligible for the Pell Grant. Full- and part-time students are eligible. Annual awards range from \$200 to \$500.

### Iraq and Afghanistan Service Grant (IASG)

For students who are not Pell-eligible; who's parent or guardian died as a result of military service in Iraq or Afghanistan after September 11, 2001; and who, at the time of the parent's or guardian's death, were less than 24 years old or were enrolled at least part-time at an institution of higher education. The projected maximum annual award is \$6,195 for two semesters of full-time attendance. Payment is adjusted for less-than-full-time study.

### Work Study

Through part-time employment on campus, students who show financial need may earn a portion of their educational expenses. Ten to fifteen hours per week is the recommended work load. Students are paid a competitive wage and may gain experience in their career field.

### Direct Stafford Loans

Eligible students registered in six or more credits may borrow up to \$5,500/\$6,500 per year. Additional eligibility may exist for independent students. Congress sets the rates annually and new interest rates go into effect on July 1 of each year. Visit [fvcc.edu/loans](http://fvcc.edu/loans) for the current rates or contact the Financial Aid Office. Repayment of principal and interest begins six months after a student is no longer enrolled or drops below half-time attendance (six credits).

### Direct Plus Loans

Eligible parents may borrow for their dependent undergraduate student(s) enrolled at least half-time. Congress sets the rates annually and new interest rates go into effect on July 1 of each year. Visit [fvcc.edu/loans](http://fvcc.edu/loans) for the current rates or contact the Financial Aid Office.

In addition to the above programs, FVCC also works with third-party sponsors who provide payment. These include Job Service, Community Action Partnership of Northwest Montana, Vocational Rehabilitation, Worker's Comp, Head Start, various employers, and others. All sponsorship authorizations must be sent to the Financial Aid Office. Authorization letters must be received prior to the start of the semester.

## **Changes in Enrollment Status**

Financial aid is awarded based on the student's FAFSA application. Enrollment verification is completed after the census class day: 15th class day of fall and spring semesters; 10th class day of summer semester. Financial

aid awards are adjusted based on the student's current registration at the census class day. Any changes to enrollment after that date will not affect the value of a student's award package, unless a student drops a course that has not started, or withdraws from all courses for that term.

Students who withdraw from classes after the 15th class day should review the eligibility section of the Satisfactory Academic Progress Requirements to ensure they are maintaining the required academic standards.

## **Financial Aid Refunds**

If students receive more financial aid than their direct institutional costs, the college will issue a refund check about a month into the semester.

In some circumstances, students who are registered in late-starting classes may have their refund check reduced or held until they are in attendance in the late-starting courses and have passed the refund period for those courses.

## **Withdrawal/Return of Title IV Funds**

Financial aid recipients of Pell Grant, FSEOG, IASG, Stafford or Plus Loan funds are advised to first meet with the director of financial aid before completely withdrawing from all classes for the semester. The director will explain the consequences of a withdrawal, as well as the financial implications of this action.

If a student officially or unofficially withdraws (stops attending classes) before the 60% point of the semester, federal regulations require that the school complete the Return of Title IV Funds calculation.

The student's withdrawal date, in calendar days, is used to determine the percentage of the semester that the student completed. This percentage is used to determine the "earned" aid that a student is eligible to retain. The student will be responsible for any "unearned" aid that MUST be returned. Examples of this calculation can be provided by the Financial Aid Office.

The student's withdrawal date is either the date they began the withdrawal process or last day they attended classes. For a student who didn't officially withdraw, the withdrawal date is the last date of attendance as reported by the instructor or the 50% point in the semester.

## **Scholarships**

Flathead Valley Community College offers numerous need-based and merit-based institutional and privately funded scholarships. To qualify for need-based scholarships, students must have applied for financial aid by completing the FAFSA (Free Application for Federal Student Aid) application at [www.fafsa.gov](http://www.fafsa.gov) and demonstrate financial need. Merit-based scholarships are based on grade point average, academic standing, program of study, or activities.

Applications are completed online at [fvcc.academicwork.com](http://fvcc.academicwork.com). Scholarship information can be found online at [fvcc.edu/scholarships](http://fvcc.edu/scholarships). Scholarship deadlines exist throughout the calendar year; however, for priority consideration apply by February 15 for the following academic year. The award process and regulations are subject to change. In addition, outside scholarship opportunities are published in "The Privy Press" and "Timber Alerts" as they become available.

# Veterans Benefits

[fvcc.edu/veterans](http://fvcc.edu/veterans)

The Veterans Affairs Office assists veterans in enrolling at FVCC, applying for educational benefits, contacting the Veterans Administration when benefits payments are delayed, securing tutorial assistance, and arranging transfer to other institutions so that payment of educational benefits will not be unnecessarily interrupted.

## How to Apply

Applications for veterans educational benefits should be initiated through the Veterans Affairs Office in Blake Hall or by calling (406) 756-3982. Veterans should be prepared to provide a certified copy of their DD-214 and/or DD Form 2384 (notice of basic eligibility) along with some personal history. To receive advance payment, students are required to have a complete admissions file and to contact the school certifying official at FVCC at least 90 days in advance of the semester for which they plan to register.

## Eligibility

- All degree and certificate programs offered at FVCC are approved for benefits under the current GI Bills®.
- Widows and children of veterans who died of service-connected disabilities or who have total and permanent service-connected disabilities may be eligible for Chapter 35 educational benefits or the Fry Scholarship.
- The Montgomery GI Bill - Active Duty Educational Assistance Program, Chapter 30 - may provide benefits for individuals who first entered on active duty after July 1, 1985.
- The Montgomery GI Bill, Chapter 1606 - Selected Reserve Educational Assistance Program (including National Guard) provides benefits for individuals who enlist, extend, or reenlist for at least six years after July 1, 1985. Those individuals are required to have completed an initial active duty for training.
- The Ronald Reagan National Defense Authorization Act established Chapter 1607 - Department of Defense Educational Program to provide educational assistance to members of the reserve components called or ordered to active duty in response to a war or national emergency (contingency operations) as declared by the President or Congress. This program is being "sunsetting" by the VA as of 11/14/2016.
- The post-9/11 Veterans Educational Assistance Act of 2008 or "New GI Bill" provides benefits for veterans who have at least 90 days of aggregate active duty service after September 10, 2001 and are still on active duty, or who are honorably discharged, or were discharged with a service-connected disability after 30 days. Veterans with eligibility for the Post-9/11 GI Bill and any other GI Bill program must make an irrevocable election of the Post-9/11 GI Bill before receiving any benefits. The post-9/11 GI Bill has two specific components that are unavailable in other GI Bill programs: Yellow Ribbon Program and Transfer of Entitlement Options.
- Although most veterans have 10 years from their date of discharge to use their VA educational benefits, the "New GI Bill" allows 15 years.
- Forever GI Bill - Harry W. Colmery Veterans Educational Assistance Act has eliminated the 15-year delimiting date for veterans whose discharge from active duty was on or after January 1, 2013.

## Benefits Requirements

Rates of benefits vary. For the most recent information on all VA educational programs, visit the VA website at [www.gibill.va.gov](http://www.gibill.va.gov) or call toll free 1-888-442-4551.

All veterans and eligible individuals receiving subsistence allowances under the GI Bill® are required to promptly report any changes which may affect the amount of money being received to the Veterans Affairs Office. Students are required to report when they drop courses, withdraw from school, change marital status, or stop attending classes for any reason. Students are not only expected to achieve satisfactory progress but to regularly pursue goals and attend classes.

The repeat of a course for a grade of A, B, C, D, or S will not count toward the required minimum credit hours. However, if the first grade earned was an F, the course may be repeated for veteran's credit. Veterans educational benefits will not pay for audited classes, course challenges, or unsatisfactory grades.

Students receiving Veterans educational benefits will be placed on academic probation any time their cumulative grade point average (GPA) falls below 2.0.

A student on probation will be required to meet with a Student Support Center Advisor before starting the next semester to discuss academic goals and barriers and ways to achieve the goals. A review of the academic assistance available at FVCC and the development of a plan to assist individuals in achieving academic goals will also take place.

A student who fails to improve his/her GPA each term while on academic probation will have two options: academic suspension for a period of no less than one year or agree to a plan of extensive remediation developed by the college. If remediation is unsuccessful or if a student fails to comply with the prescribed plan, he/ she will be suspended immediately for no less than one year. A student reinstated after being on academic suspension will be required to meet with a Student Support Center Advisor prior to registering each semester.

Once a student's cumulative GPA improves to a 2.0 or better, he/ she will be removed from academic probation or suspension status and will no longer be required to meet with a Student Support Center Advisor.

FVCC will be participating in the Yellow Ribbon program for Veterans using the Post-9/11 GI Bill during the 2019/2020 academic year. Visit [www.gibill.va.gov](http://www.gibill.va.gov) for more information about the Yellow Ribbon Program.

VA laws are subject to change without notice. Students should visit the GI Bill® website for the most updated information: [www.gibill.va.gov](http://www.gibill.va.gov).

Section 702 of Veterans Access, Choice and Accountability Act of 2014 allows a "covered individual" to be charged at the in-state tuition rate. A "covered individual" is a veteran, individual using transferred benefits, or individual using benefits under the Fry Scholarship who enrolls in school within three years of discharge or death in the line of duty of a service member following a period of active duty service of 90 days or more. Students maintain covered individual status as long as they are using Post 9/11 GI Bill® (Chapter 33) or MGIB-AD (Chapter 30) benefits and remain continuously enrolled at the SAME public university.

Effective for courses or terms beginning after March 1, 2019, VA Vocational Rehabilitation - Chapter 31 participants must be charged the resident rate.

# Student Resources

## Student Support Center

[fvcc.edu/student-support-center](http://fvcc.edu/student-support-center)

The mission of the Student Support Center is to promote student success; increase retention, graduation, and transfer rates; and foster an institutional climate conducive to student success.

The FVCC Student Support Center provides a number of services and activities designed to promote student access and success in postsecondary education, including

- Academic Advising and Coaching;
- Adult Education and English Language Acquisition;
- Career Advising and Exploration;
- Disability Services;
- Mental Health Counseling;
- Testing and Proctoring;
- TRIO Student Support Services Program; and
- Tutoring Services and Tutoring Labs: Math and Science, and Writing.

### Academic Advising and Coaching

*Learning Resource Center, Room 129*

*For appointments, call (406) 756-3880.*

Student Support Center Academic Advisors, in coordination with Faculty Advisors, provide initial advising for Associate of Arts, Associate of Science, Associate of Applied Science, certificate, and transfer students.

Academic Advisors in the Student Support Center provide admissions assistance, new student academic advising and degree planning, major exploration, general financial aid and scholarship information, and transfer assistance.

Academic Advisors also assist students in their transition to college and can coach students in basic academic skills including time management, effective study techniques, and test-taking strategies.

Faculty Advisors specific to a student's program of study are assigned shortly after he or she determines a degree or certificate program. Faculty Advisors are a student's primary professional and academic resource at FVCC.

### Adult Education

Funded with federal, state, and local dollars, the free Adult Education classes help students improve their reading, writing, math, critical thinking, and computer skills to obtain a high school equivalency diploma, find employment, retain employment, or build skills to enter postsecondary education.

The Adult Education Center offers FREE day and evening classes in Flathead and Lincoln counties. The center assists individuals 16 years of age and older who wish to

- Improve reading, writing, math, and computer skills;
- Prepare for the HiSET (High School Equivalency Test);
- Refresh academic skills before entering college or a training program;
- Build employment and life skills to enhance transition to work;
- Explore career options; and
- Build English as a Second Language (ESL) speaking, writing, reading, math, and job readiness skills for those whose native language is not English.

HiSET testing is conducted at the FVCC Kalispell and Lincoln County campuses. Call (406) 756-3884 in Flathead County or (406) 293-2721, ext. 235, in Lincoln County for testing schedules, registration, and questions.

*Flathead County*

*Student Support Center, Learning Resource Center, Room 126 (406) 756-3884, [mgirkins@fvcc.edu](mailto:mgirkins@fvcc.edu)*

*Lincoln County*

*FVCC Lincoln County Campus, 225 Commerce Way, Libby, MT, (406) 293-2721*

## **Career Advising and Internships**

*Learning Resource Center, Room 129*

*For appointments, call (406) 756-3880*

Career planning services are available to students and the community. Services include

- college major exploration;
- career directions;
- career inventories;
- individual career advising, decision making, and goal setting; and
- computerized career assessment tools.

The Career Advisor is a resource for students interested in finding either full or part-time employment or credit internships within their program of study. Services available to FVCC students and alumni include

- Online job board listing of active jobs from employers who want to hire FVCC students,
- Job searching assistance with:
  - Resumes, online templates;
  - Interviewing;
  - Effective job search techniques;
  - Mock interviews;
  - Career events; and
  - Employer research; and
- Occupational outlook information.

## **Disability Services**

*Learning Resource Center, Room 129*

*For appointments, call (406) 756-3880*

The Disability Services Coordinator assists in creating reasonable academic accommodations for students with disabilities. Accommodations may include but are not limited to ASL interpreting, note takers, audio books, alternative testing, and assistive technology. To access services and accommodations, students must contact the Student Support Center and meet with the Disability Services Coordinator upon their decision to attend FVCC, or immediately following the diagnosis of a disability. Each qualified person shall receive the accommodations needed to ensure equal access to educational opportunities, programs, and activities. FVCC strives to create an accessible and inclusive campus environment for students with disabilities.

### Americans with Disabilities Act

Flathead Valley Community College, as required by the Americans with Disabilities Act (ADA), has an established grievance procedure for handling a claim or allegation of discrimination based on a disability. The purpose of this procedure is to promote the prompt and efficient resolution of complaints by any person for alleged discrimination concerning program, activity, service, or physical accessibility at FVCC. Copies of this procedure may be obtained from the Student Support Center and the Disability Services Coordinator.

## **Mental Health Counseling**

*Learning Resource Center, Room 129*

*For appointments, call (406) 756-3880*

FVCC's Mental Health Counselor is available from 8 to 5, Monday through Friday, year-round and during college breaks. Counseling services are confidential, not considered part of a student's academic record, and free to students enrolled in credit courses.

Counseling services can offer assistance with

- Support for emotional and personal concerns;
- Coping with stress and anxiety;
- Adjusting to school and life changes; and
- Overcoming academic barriers to success.

## **Proctored Testing/Test Center**

*Learning Resource Center, Room 123A*

*Proctored Test Scheduling: [fvcc.edu/proctoring](http://fvcc.edu/proctoring)*

Campus-based test proctoring is offered at no cost for FVCC students taking fully online courses, FVCC hybrid courses, and make-up tests for any course. The Test Center offers some workforce/professional certification tests. Computer-based tests or written pencil/paper tests can be accommodated. For more information about proctored tests contact the Student Support Center at (406) 756-3888.

## **TRIO: Student Support Services**

*Learning Resource Center, Room 129*

*For appointments or questions, call (406) 756-3880*

The FVCC TRIO Student Support Services program provides comprehensive academic support to selected first-generation, low-income college students and/or students with disabilities. The goal is to offer the support necessary to empower students to succeed and achieve their personal and academic goals.

The TRIO Student Support Services program assists eligible college students in earning a certificate or degree and/or transferring to a four-year degree program. Funded by the U.S. Department of Education, TRIO Student Support Services offers an array of services designed to make a student's college career a success. FVCC's TRIO Student Support Services is a supportive community of peers with an academic focus.

Student Support Services include

- Personalized academic, career, and transfer advising;
- Peer-mentoring program;
- Tutoring labs to build skills in reading and writing;
- Individual and group tutoring to foster academic success;
- Transition to college and career readiness courses designed for TRIO students;
- Financial aid/scholarship information and assistance with FAFSA application;
- Study skills workshops and academic coaching;
- Fully-funded transfer trips to Montana universities;
- Volunteer and leadership opportunities; and
- TRIO community events.

Applications for the TRIO program are available in the Student Support Center, Learning Resource Center Building, Room 129.

### **Tutoring Labs and Tutoring Services**

*Learning Resource Center & Library & Learning Commons  
Math and Science Lab (Rooms 134 and 148) and Writing  
Lab (Library & Learning Commons)*

As a free service of the Student Support Center, Flathead Valley Community College provides learning labs designed to meet people at their point of personal academic needs. Students may use any or all of the labs by dropping in or by making appointments with the lab instructors.

The FVCC Math and Science Labs, located in the Learning Resource Center, Rooms 134 and 148 respectively, are available to all students for free assistance in math and science coursework. Math and Science Lab tutors are available on a drop-in basis for the following purposes:

- Tutoring in math concepts, problems, and homework assistance;
- Test preparation and review;
- Computer access to online homework assignments;
- Assistance with biology, chemistry, and other science courses;
- Individual or group study; and
- Exam preparation and review.

The FVCC Writing Lab, located in the Library and Learning Commons, is available to all students for free, one-on-one help in areas such as

- Proofreading;
- MLA, APA, Chicago, and other writing formats;
- Resumes;
- Cover letters;
- Scholarship letters;
- Library databases;
- Computer skills;
- Vocabulary development;
- Note-taking strategies;
- Reading accuracy;
- Reading fluency;
- Critical reading skills;
- Printing;
- FVCC program applications/letters/essays; and
- Grammar/punctuation.

### **Individual Tutoring**

*Learning Resource Center, Room 129  
For appointments or questions, call (406) 756-3880*

TRIO-eligible students can access free, one-on-one tutoring. Students ineligible for TRIO may discuss other tutoring arrangements with the TRIO Tutor Coordinator.

- Tutors are most often students who have already successfully completed the course. They may also be former students or professionals in the community.
- Tutors meet one-on-one with students for up to three hours a week per subject.
- All tutoring takes place on the FVCC campus.

## Student Resources

### Dining Services

[fvcc.edu/eaglesnest](http://fvcc.edu/eaglesnest)

The Eagle's Nest Cafe, located in Blake Hall, serves breakfast, lunch, and snacks on weekdays when classes are in session. Dining cards of \$10 and \$20 values are available in the Business Services Office. Menus and prices are established with student budgets in mind.

### Bookstore

[fvccbookstore.com](http://fvccbookstore.com)

The FVCC Bookstore, located in Blake Hall, supplies all textbooks and school and art supplies required for classes. The bookstore also stocks study aids, computer supplies, postage stamps, snack items, college T-shirts and sweatshirts, greeting cards, and gift items. Visa, Mastercard, Discover, and American Express are accepted.

### Textbook Refund Policy (beginning of term)

Students should not write in new textbooks until they are certain the books are for the course in which they are enrolled.

- Books purchased for full-term classes can be returned for a refund within the first 6 days of the semester.
- Books purchased for 8-week classes can be returned for a refund within the first 4 days of the semester.
- Books purchased for 5-week summer classes can be returned for a refund within the first 2 days of the semester.
- All refunds or exchanges require a receipt.
- Any books that are shrink-wrapped may not be returned if unwrapped.
- New books must be in mint condition.
- Return your book immediately if
  - You have the wrong book,
  - You drop a class or your class is canceled, or
  - You decide that you don't need the book.
- Defective books must be exchanged at least four weeks before finals.

*No exceptions will be allowed.*

\*Refunds on rented textbooks are subject to the same policies listed above for printed textbooks.

### Textbook Rental Return Policy (end of term)

- Rented textbooks can be returned within the first four days of the semester.
- All textbook rentals are due back to the Bookstore by the last day of finals.

**Textbook Buyback Policy** (Textbook buyback begins two days before the last day of classes.)

- Student ID required.
- The Bookstore cannot guarantee the buyback of any book.
- During finals week the Bookstore usually pays 50% of the new book price if:
  - The instructor has ordered the book for the following semester;
  - The quota has not yet been met; and
  - The book can be sold used (books sold with an access code don't qualify).
- The best national wholesale prices will be offered for books not available to buy on the FVCC campus.
- Study guides, workbooks, loose-leaf books, damaged books, and old editions are generally not bought back (if it can't be reused and there's no national demand then it won't be bought).
- If student owes the college money, then buyback funds are posted to a student's account.

### Textbook Reservations

Students can order books at [fvccbookstore.com](http://fvccbookstore.com) or by filling out a textbook reservation form. Students may choose to pick up books or have them shipped to their home addresses. Students receiving federal/state grants, student loans, or other scholarships may request that the bookstore take the cost of books out of their financial aid. If not charging to financial aid, payment may be made by cash, check, or credit card. Online orders can be charged to financial aid or paid by credit card.

### Student Health Clinic

*Broussard Center, Room 136*

*Questions? Call (406) 756- 4331*

[fvcc.edu/studenthealthclinic](http://fvcc.edu/studenthealthclinic)

The Student Health Clinic, funded by the Student Health Fee, is available to students taking six or more credits. Students taking between four and five credits can opt in by paying the semester health fee at the Business Services office.

The clinic provides health care services that include

- Primary health care/Urgent Care;
- Health evaluations, treatment of minor injuries, and acute health problems such as colds, flu, bladder infections, sprains, and strains;
- STD evaluations and tests;
- Procedures and cultures including blood and urine testing, pap smears, and pregnancy testing;
- Reproductive health care;
- Medical, surgical, and dental referrals;
- Limited in-office laboratory testing provided free of charge (mono, strep, flu, urinary infections and pregnancy testing). Other laboratory tests and all x-rays are referred into the community and payment is the student's responsibility;
- Physical examinations for overseas academic programs, some employment physicals, and nursing and allied health programs;
- Loan of crutches;
- Condoms - free of charge; and
- Flu shots.

For immediate or serious emergencies, dial 911.

## Health Insurance

Student health insurance is not offered through the college. Students are responsible for making their own arrangements for health insurance.

## Library

[fvcc.edu/p/library](http://fvcc.edu/p/library)

Flathead Valley Community College's library staff is available to help students find quality books, online academic journal articles, and websites to answer questions, help evaluate information, and support student research needs. The library is also a great place to study or read newspapers and magazines. The library also offers extensive online resources, including academic journals, eBooks, and research guides for every subject.

### Library Hours

| Semester                  | Days            | Open            |
|---------------------------|-----------------|-----------------|
| Fall and Spring Semesters | Monday-Thursday | 8 a.m. - 8 p.m. |
|                           | Friday          | 8 a.m. - 5 p.m. |
| Summer Semester           | Monday-Friday   | 8 a.m. - 5 p.m. |

### Library services include

- **Assistive Technology Station:** The library has a station with specialized hardware and technology to help those users with visual or mobility needs.
- **Borrowing:** Materials can be checked out using an FVCC student ID card. Books check out for 28 days and DVDs check out for 14 days. Books and DVDs are also available from other Montana Academic Libraries through TRAILS Resource Sharing and also through interlibrary loan. These materials have special due dates assigned by the loaning library.
- **Café:** The café area serves hot and cold drinks, snacks, and pastries. There are areas for large group seating, small groups, and individual seating.
- **Classrooms:** There are two classrooms available for student use. These classrooms can seat up to 20 people each and can also be set up as one larger classroom when the room divider is removed. The classrooms feature mobile chairs and tables. Students can connect laptops to a 70-inch monitor in each classroom. There are also several mobile whiteboards, as well as whiteboards secured to the wall for student use. The classrooms must be reserved either by calling or stopping by the library.
- **Collaborative Study Rooms:** The library has two collaborative study rooms. Both contain whiteboards and display monitors which can be connected to laptops. The study rooms must be reserved either by calling the library or stopping by. These rooms are limited to groups of 2-5 people for two hours at a time and can be reserved up to 10 days in advance.
- **Computers and Wi-Fi:** Desktop computers and circulating laptops are available for student use. In addition, personal computers and mobile devices can connect to the wireless network and can be used for printing.
- **Course Reserves:** Faculty often place materials such as textbooks and course-related articles on reserve at the circulation desk. Most of these materials are for use in the library only, but must still be checked out with a library card. Some textbooks not on course reserves are available in the library's non-circulating collection of college textbooks.

- **Interlibrary Loan:** Occasionally, students need books or articles that are not available in the library. Library staff at the circulation desk can assist in ordering these materials from other libraries. Interlibrary loan takes an average of three days for articles and ten days for books, although some hard-to-find items may take longer. Students are responsible for any fees associated with late, damaged, or lost materials. These fees are set by the lending library and vary. Students are notified by phone or e-mail when items arrive.
- **Lost and Found:** The library has a lost-and-found cabinet located at the circulation desk.
- **Maker Space:** This room has a seating capacity of 20 with mobile tables and chairs, a whiteboard wall, and a sink. The Maker Space can be reserved either by calling the library or stopping by.
- **Media Equipment:** The library has a copier, printer, and scanner available for student use. There are also two 360° cameras and calculators for student checkout.
- **One Button Studio:** The One Button Studio has a simplified video recording setup that can be used without any previous video production experience. Users can create high-quality video projects without having to know anything about lights and cameras. The One Button Studio must be reserved either by calling or stopping by the library.
- **Podcast Station:** Besides the main recording station in the One Button Studio, there is a separate audio/video recording station called a Marantz Professional Turret, with laptop available inside the room. Like the One Button Studio, all users need to bring is a flash drive to save the recording. The podcast station must be reserved either by calling the library or stopping by.
- **Quiet Study Room:** Students who need absolute quiet when studying can use the Quiet Study Room. This room is set up with individualized seating for working alone.
- **Resource Sharing (TRAILS):** Students who need physical copies of books or media that are not available at the FVCC Library may request these items through our partnership with 16 other Montana Academic Libraries (TRAILS). Students may request that these items be borrowed and shipped to FVCC for pickup. These items can be found via the library's online website (Primo) and can be ordered through the student's library account online. Library staff are available to help locate and order these items for students in person as well. The loan period is at the discretion of the partner library, but may be anywhere from 4-10 weeks.
- **Virtual Reality Room:** Explore ideas, data, content, and places in new and astonishing ways. The VR room is designed to provide access to an immersive, real-time virtual experience for users with no prior experience or training using this technology. The Virtual Reality Room must be reserved either by calling the library or stopping by.
- **Writing Lab:** Students receive free one-on-one help in areas such as proofreading; MLA, APA, Chicago, and other writing formats; resumes; cover letters; scholarship letters; library databases; computer skills; vocabulary development; note-taking strategies; reading accuracy; reading fluency; critical reading skills; printing; FVCC program applications/letters/essays; and grammar/punctuation.

## **The Honors Program at FVCC**

*fvcc.edu/honors*

The Honors Program at FVCC, established in 2009, provides an opportunity for highly motivated students to experience academically rigorous, cross-disciplinary honors courses. The program is limited to 50 students. The seminar style courses are four credits each and are primarily taught through the Socratic Method with emphasis placed on class discussion and student presentation.

The classes combine any two of the traditional academic disciplines - global issues, humanities, social sciences, mathematics, science, and fine arts - and are taught by a team of instructors. Students can choose to apply the credits toward the appropriate category of general education courses required for graduation. These courses are offered in the fall and spring semesters.

The Honors Program offers academic preparation and curriculum planning to help students succeed in transferring to honors programs and articulates with both the Davidson Honors College at The University of Montana and the University Honors Program at Montana State University.

Program benefits include a full-tuition waiver for two semesters, one-on-one mentoring with faculty, an enriched learning environment with a specially designed classroom and study area, and increased potential for financial aid upon transfer.

Graduates of The Honors Program receive special designations on their transcripts and are presented with medallions at FVCC commencement. Admission requirements include a complete honors program application, an essay, letter of reference, statement of career and academic plans, transcripts, and ACT, SAT or FVCC placement test scores.

## **Veterans Center**

*fvcc.edu/veterans*

Located in the Learning Resource Center, Room 111, the center serves as a place to meet fellow veterans, learn about upcoming events, study, relax between classes, and get involved with the FVCC Veterans Association student group.

## **Residence Life and Founders Hall**

*fvcc.edu/student-housing*

Email: [reslife@fvcc.edu](mailto:reslife@fvcc.edu)

Phone: (406)756-4586

On-campus student housing is comprised of one residence hall, which features studio and two-bedroom apartments for up to 124 full-time, degree-seeking students. All apartments are furnished with a stove, refrigerator, dishwasher, microwave, extra-large twin bed, dresser, chairs, and private bathroom. A student lounge, two laundry facilities, and areas to study are located throughout Founders Hall. Walking paths allow easy access to the rest of campus, as well as nearby retail stores and restaurants.

Residence Life strives to positively influence academic and personal growth by offering a variety of programs, both social and educational. Residents are encouraged to be an active part of the on-campus community. Through campus involvement, students will build relationships with neighbors and classmates to develop life-long skills.

## **Student Engagement Office**

Blake Hall, Room 155, (406) 756-3908

The Student Engagement Office serves as a resource for all student organizations on campus and sponsors a variety of campus activities and events including the Week of Welcome. Visit [fvcc.edu/studentlife](http://fvcc.edu/studentlife) for a current list of ways to get involved, such as participating in student organizations, campus recreation and intramurals, service learning, and Logger Sports.



# College Regulations

## Student Rights and Responsibilities

Flathead Valley Community College students are responsible for knowing the information, policies, and procedures outlined in this catalog. The college reserves the right to make changes as necessary and once those changes are posted online, they are in effect. Students are encouraged to check online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) for the current versions of all policies and procedures.

### Release of Information

Flathead Valley Community College will release to outside agencies or persons, upon request, the following directory information pertaining to a specific student:

- Name;
- Photograph;
- Phone number;
- Temporary or permanent address;
- Home or campus email address;
- Campus location;
- Enrollment status;
- Dates of attendance;
- Area of study;
- Degrees/certificates awarded;
- Participation in officially recognized activities and sports;
- Honors and awards received; and
- Grade level.

Complete student directory information will be provided according to the Solomon Amendment.

Students who choose not to have any or all of the directory information released are required to inform the Admissions and Registration Office in writing by submitting a "Nondisclosure of Directory Information" form available in the Admissions and Registration Office. The college will not release other information without written permission unless subpoenaed by a court or tribunal of competent jurisdiction (M.C.A.20-25-515).

Students have the right to review and inspect all information pertaining to their educational records, including admissions and academic records. The Admissions and Registration Office requires at least 48 hours' notice to release a student's records for review. Students may request an amendment to their records if they feel the records are inaccurate, misleading, or violate their rights. If the amendment is denied, the contents can be challenged through a hearing process with the Dean of Student Affairs.

According to the Family Educational Rights and Privacy Act (FERPA) regulations, a student's educational records may be disclosed without prior written consent to specific bodies. A record of each request will be kept in the student's file. Students who believe that FVCC is not complying with the requirements of FERPA may file complaints in writing to the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave., SW, Washington, D.C. 20202-5920.

FERPA prohibits disclosure of academic information to third parties without prior written consent of the student. (Exception: the disclosure of academic information to other agencies or institutions that have requested the records and in which the student seeks or intends to enroll or is already enrolled so long as the disclosure is for purposes related to the student's enrollment or transfer.)

### Academic Probation and Academic Suspension

Effective fall 2018, all students will be placed on academic probation anytime his/her cumulative grade point average (GPA) falls below 2.0.

Academic Probation process for degree-seeking or Running Start students:

A student on academic probation will be required to meet with a Student Support Center Advisor to discuss academic goals and barriers and ways to achieve their goals. A review of the academic assistance available at FVCC and the completion of an Academic Plan to assist the individual in achieving his/her academic goals is required before the student may register for any future semesters.

If a student improves his/her semester academic GPA to a 2.0 or higher, but the cumulative GPA is still below a 2.0, the student remains on academic probation. Before registration for future terms, the student is required to meet with a Student Support Center Advisor each semester until his/her cumulative GPA is above a 2.0.

If a student fails to improve his/her semester GPA while on academic probation, he/she will be placed on academic remediation. The student is provided two options: choose to leave FVCC for a period of no less than one year, or agree to a Remediation Plan developed by the Student Support Center Advisor and approved by the Director of Student Services. If the student does not complete a Remediation Plan one week prior to the start of the academic remediation semester, the student's schedule may be cancelled. If the student's academic remediation semester GPA is below a 2.0 and/or the student did not successfully complete the Remediation Plan, he/she will be academically suspended immediately for no less than one year.

A student reinstated after being on academic suspension will be required to meet with a Student Support Center Advisor to develop an updated Remediation Plan prior to registering and the plan will be approved by the Director of Student Services. If the reinstated student does not earn a 2.0 or higher semester GPA, he/she will be academically suspended for no less than one year. If a student improves his/her semester academic GPA to a 2.0 or higher, but the cumulative GPA is still below a 2.0, the student remains on academic remediation. Before registration for future terms, the student is required to meet with a Student Support Center Advisor each semester until his/her cumulative GPA is above a 2.0.

Once a student's cumulative GPA improves to a 2.0 or better, he/she will be removed from academic probation or academic remediation.

The Academic Probation process for non-degree seeking students:

A non-degree-seeking student who has a cumulative GPA below a 2.0 will be limited to five credits or fewer per semester until the student's cumulative GPA improves to a 2.0 or better.

Non-degree seeking students with a cumulative GPA below a 2.0 may request to enroll in more than five credits per semester by creating an Academic Plan with a Student Support Center Advisor. If the non-degree student does not earn a semester GPA of a 2.0 or higher while on an Academic Plan, the student will be limited to five credits or fewer per semester until the student's cumulative GPA improves to a 2.0 or better.

### **Code of Student Conduct and Student Complaints**

The purpose of Board Policy Chapter VII Section 60 Code of Student Conduct and Student Complaints is to promote the prompt and efficient resolution of student conduct violations and student complaints about college employees. The core values of student conduct at FVCC include integrity, community, social justice, respect, and responsibility. Complaints involving discrimination, harassment, sexual misconduct, stalking, or retaliation are addressed in Board Policy Chapter I Section 60 Discrimination, Harassment, Sexual Misconduct, Stalking, and Retaliation Policy and the Discrimination and Harassment Grievance Procedure. Copies of the Code of Student Conduct, Student Conduct Procedures, Student Complaint Procedures, and Student Complaint Form may be obtained from the Dean of Student Affairs or online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) under Policies and Procedures.

The Code of Student Conduct and the student conduct procedures apply to the conduct of individual students and all college affiliated student organizations. For the purposes of student conduct, the College considers an individual to be a student when the student registers for a class.

### **Academic Integrity**

FVCC faculty, staff, and administration believe academic dishonesty conflicts with a college education and the free inquiry of knowledge. Plagiarism, cheating, forgery, facilitating or aiding academic dishonesty, unauthorized access, or otherwise manipulating student records and/or computer programs, are all forms of dishonesty that corrupt the learning process and threaten the educational environment for all students. Academic misconduct is an intolerable offense in the academic community and is strictly forbidden.

Students at FVCC are expected to practice academic integrity at all times and have full responsibility for the content and integrity of all academic work submitted. Ignorance of FVCC policy does not constitute a basis for waiving the policy or the consequences for violating the policy. Students unclear about a specific situation should ask their instructors or academic staff who will explain what is and is not acceptable in their classes or on campus.

Violations of this policy will result in appropriate disciplinary action up to and including expulsion. Copies of Board Policy Chapter VIII Section 20 Academic Integrity and corresponding procedures may be obtained from the Dean of Student Affairs or online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) under Policies and Procedures.

### **Cell Phones**

Cell phones and other noise-making devices are required to be turned off or silenced in classrooms, labs, library and study areas, and at other functions where they may be disruptive.

### **Student Publications**

FVCC recognizes that student publications are a valuable aid in establishing and maintaining an atmosphere of free and responsible discussion and intellectual exploration. They serve as vehicles to bring student concerns to the college community's and public's attention and help formulate student opinions on various issues.

As citizens, students enjoy the same basic rights and are bound by the same responsibilities as are all citizens. Among these rights are freedom of speech and freedom of press. The FVCC Board, faculty, and staff shall not exercise editorial control over student publications, except where specifically provided by FVCC policies and procedures. The college shall not be deemed to endorse the content of these publications unless so stated. Copies of Board Policy Chapter VII Section 50 Student Publications may be obtained from the Dean of Student Affairs or online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) under Policies and Procedures.

### **Waiver of Regulations**

Rules and regulations contained in this catalog have been adopted by the FVCC faculty, administration, and Board of Trustees and are subject to modification and revision. Students who feel that extenuating circumstances might justify the waiver of any college regulation may file a petition with the Dean of Student Affairs.

### **Campus Safety**

FVCC works diligently to provide a safe learning environment for students, faculty, staff, and visitors. To review FVCC's emergency procedures or report a campus incident, visit [fvcc.edu/campus-safety](http://fvcc.edu/campus-safety). Through the Safe Walk program, students, faculty, and staff may call for an escort to a building or a car on campus by calling (406) 471-8700 (Kalispell) or (406)291-6086 (Lincoln County Campus).

In case of a campus emergency, FVCC will send out alerts through Omnilert to campus email addresses. Although campus email accounts are automatically enrolled to receive emergency messaging, FVCC will also send validation messages to personal email addresses and mobile phone numbers on record. Validation messages provide a convenient opportunity for all new and returning students and faculty to opt-in to receiving emergency alerts. Personal email addresses and phone numbers can be managed, added, and deleted by visiting [omnilert.com](http://omnilert.com). For more information, visit [fvcc.edu/campus-safety/](http://fvcc.edu/campus-safety/).

### **Smoking and Tobacco-free Policy**

FVCC is committed to complying with the Montana Clean Indoor Air Act and supports a healthy, comfortable, and productive work environment for all students, employees, and visitors to the campus. Therefore, FVCC prohibits any form of smoking, including the use of electronic cigarettes (e-cigarettes) or any form of tobacco usage, in all of its campus facilities as well as at all points of entrance and exit from its facilities, including all walkways and parking lots. Failure to comply will result in disciplinary action as stipulated by college policy for student infractions and the appropriate disciplinary process as set forth in collective bargaining agreements or Board of Trustees policy for faculty and staff. Copies of Board Policy Chapter I Section 85 Smoking and Tobacco Free Policy may be obtained from the Dean of Student Affairs or online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) under Policies and Procedures.

### **Discrimination, Harassment, Sexual Misconduct, Stalking, and Retaliation Policy**

FVCC recognizes the importance of every individual's personal dignity and is therefore committed to providing an educational and work environment where students, faculty, and staff are safe, secure, and respected. FVCC is committed to serving as a learning community free of all forms of sexual harassment, exploitation, or intimidation. Sexual harassment unfairly interferes with the opportunity for all persons, regardless of gender, to have comfortable and productive education and work environments.

It is also unlawful and against college policy to retaliate against an employee or student for filing a sexual harassment complaint or cooperating in a sexual harassment investigation.

Copies of Board Policy Chapter I Section 60 Discrimination, Harassment, Sexual Misconduct, Stalking, and Retaliation Policy and the Discrimination and Harassment Grievance Procedure may be obtained from the Title IX Coordinator, Dean of Student Affairs, or online at [fvcc.edu/current-student/](http://fvcc.edu/current-student/) under Policies and Procedures or at [fvcc.edu/campus-guide/campus-safety/title-ix/](http://fvcc.edu/campus-guide/campus-safety/title-ix/).

### **Campus Crime Report**

The health and safety of students, faculty, and staff is important to FVCC. Each year the college publishes an annual security report that provides information on important policies and procedures related to campus crime and crime statistics, alcohol and drugs, sexual assault, and risk management. Copies of the Annual Security Report may be obtained from the Dean of Student Affairs or at [fvcc.edu/campus-safety/](http://fvcc.edu/campus-safety/).

## **Student Consumer Information**

The general public, prospective students, and enrolled students may visit [fvcc.edu/student-admissions/](http://fvcc.edu/student-admissions/) to view FVCC's Student Consumer Information page, which includes information on FVCC's student body, price of attendance, retention rates, voter registration forms, textbook information, copyright infringement policies, and more.

## **Credits, Grading, Courses, and Transfer**

### **Transcripts**

A transcript is an official record of each student's coursework at FVCC and is maintained in the Admissions and Registration Office. Requests for official transcripts must be made online at [fvcc.edu/transcripts](http://fvcc.edu/transcripts) and cost \$10 per order. Transcripts are processed within 10 business days of receipt. Rush transcripts are sent within two business days of receipt and there is a \$15 charge per transcript. Rush orders cannot be processed during campus closures. Delays may occur during registration and the beginning or end of each semester. Official transcripts will not be issued until all accounts with the college are in good standing.

Current students may print an unofficial transcript free of charge online via the Student Portal.

### **Credits**

The typical unit of measurement of college work is called a credit hour. One credit is usually assigned for one lecture or laboratory period per week. The lecture period consists of 50 minutes; the laboratory period may consist of two or more hours. In addition to class time, the average student may expect two to three hours of outside work for each credit of lecture or laboratory.

### **Class Standing**

Freshmen are degree-seeking students who have earned fewer than 30 semester credits. Degree-seeking students who have completed 30 or more semester credits are considered sophomores.

### **Full-time Student**

In general, FVCC defines a full-time student as a person enrolled in 12 or more credit hours per semester. A part-time student is enrolled in 11 or fewer credits per semester. However, other definitions of full-time and part-time loads exist specifically pertaining to veterans, Social Security recipients, and other specific groups.

In order to earn a degree in two years, a student must enroll in an average of 15 credits per semester. For more information see your assigned academic advisor.

Students registering for more than 18 credits are required to obtain special approval from the Registrar or Director of Student Services.

## Grades

### Grade Reports

Grade are available at the end of each academic semester after all financial obligations to the college are met. Grades are available online via the Student Portal. Students are required to meet course requirements to receive grades and credits.

All of the campuses that make up the Montana University System have adopted a grading system that includes pluses and minuses. Therefore, faculty system-wide have the right to award letter grades that include a plus or a minus (i.e., B+, B and B-; or C+, C and C-). However, faculty members are not required to attach a plus or minus to letter grades. Faculty have the right to determine grades in their classes based on their evaluations of student work. The highest grade a student can earn is an A. An A+ grade is not possible. Pluses and minuses will not be attached to an F.

| GRADE | INTERPRETATION  | GRADE POINTS |
|-------|---|--------------|
| A     | High degree of excellence   | 4.0          |
| A-    |   | 3.7          |
| B+    |   | 3.3          |
| B     | Above average   | 3.0          |
| B-    |   | 2.7          |
| C+    |   | 2.3          |
| C     | Average   | 2.0          |
| C-    |   | 1.7          |
| D+    |   | 1.3          |
| D     | Below average   | 1.0          |
| D-    |   | 0.7          |
| F     | Failure   | 0.0          |
| S     | Satisfactory<br><i>Equivalent to a "C" or better</i>  | N/A          |
| U     | Unsatisfactory completion of course   | N/A          |
| I     | Incomplete  | N/A          |
| AU    | Audit   | N/A          |
| W     | Withdrawal  | N/A          |
| WI    | Withdrawal by Instructor or<br>Administrative Withdrawal  | N/A          |
| NG    | No Grade<br><i>The instructor has not submitted a grade for the student at the time of posting.</i> | N/A          |

### Repeating Courses

Students may repeat any courses offered by FVCC. However, credits will be granted for the repeated courses only once, unless the catalog lists the classes as repeatable for credit. Each time students take the classes, the grades and credits will be recorded on their transcripts. This information will not be removed, but only the most recent grades and credits will affect the grade point averages and total number of credits. Non-letter grades such as I, AU, W and WI will not replace letter grades such as A or B. If students receive financial aid or veterans' benefits, they should check with the Financial Aid Office before repeating a course.

### Grade Point Average (GPA)

GPA is determined by dividing total grade points by number of semester hours attempted. Grades of S, U, I, W, WI, AU and NG are not included in the calculations. If the course has been repeated, the last grade received in a course will be used to calculate the GPA with the exception of W, WI, AU, NG or I grades.

If a student receives a grade he/she feels is inaccurate or inequitable, the student should consult with the instructor. Only the instructor can initiate a grade change. This is done by completing a grade change form and filing it with the Admissions and Registration Office. The change will appear on the student's transcript, and the student will not receive any other notice of the correction. If the student feels the situation has not been resolved equitably, he/she should review the Student Appeals Procedure. Copies of this procedure are available by calling the Dean of Student Affairs at (406) 756-3812.

Effective fall semester 2017, the maximum time frame to petition a revision/change to student transcripts or records is within one year of the semester in question. Effective fall semester 2011, the maximum time frame to petition a revision/change to student transcripts or records is within two years of the semester in question. The maximum time frame to petition adjustments to records prior to fall semester 2011 is within 10 years of the semester in question.

### Honors

FVCC recognizes academic achievements according to the following standards:

#### Dean's List

A student taking 12 or more credits in courses numbered 100 or above and earning a GPA of 3.5 or higher for that semester will be placed on the Dean's List. The Dean's List is distributed to area newspapers for publishing unless a student files a "Nondisclosure of Information" form in the Admissions and Registration Office to not have this information published.

#### Graduation with Honors

Students graduating with final cumulative grade point averages of at least 3.75, will receive honors designations on their college transcripts. To be acknowledged at the graduation ceremony with high honors, students must have a cumulative GPA of at least 3.75 as of the semester prior to graduation.

### **Satisfactory/Unsatisfactory**

Satisfactory/Unsatisfactory ("S/U") grading is available only at the discretion of the instructor. A limit of 15 semester credits graded "S" may count toward an associate degree at FVCC, excluding credits awarded from Advanced Placement and International Baccalaureate exams.

*Note: Transfer students must check their transfer institutions' policies regarding acceptance of "S" credits.*

### **Minimum Course Grades**

All students must earn a "D-" or better in all classes used to satisfy elective credits in an associate degree program. A "C-" or better must be earned in all classes used to satisfy the prerequisites or required courses in an associate of applied science, certificate of applied studies, or certificate program.

*Note: Students need to be aware that although "C-" grades are accepted in general education, prerequisite and required courses (with some exceptions), students must maintain a cumulative grade point average of 2.0 ("C") to graduate. The grade point equivalent of the "C-" grade is 1.7 which does not meet the 2.0 GPA graduation requirement.*

*The Minimum Course Grades policy applies to all students who are enrolled in the Montana University System or the three community colleges on or after fall 2005.*

*Copies of the Minimum Course Grades policy (MUS policy 301.5.3) are available from the FVCC Admissions and Registration Office or from Montana Board of Regents' website at <http://mus.edu/transfer/minimumgrades.asp>.*

### **Incomplete**

An incomplete ("I") grade is given when, in the opinion of the instructor, there is strong probability the student can complete the course without retaking it. In all cases, the "I" grade is given at the discretion of the instructor within the following guidelines:

- The student has been in attendance and doing passing work up to three weeks before the end of the semester;
- The student is unable to complete the requirements of the course on time because of extenuating circumstances, i.e., illness, death or illness in the immediate family, family emergencies, or military orders;
- The instructor sets the conditions for the completion of the coursework including the time period within which the work must be made up;
- The instructor prepares an "I" Grade Authorization form which specifies the coursework that must be made up as well as the time period within which the work must be completed. A copy of this form must be attached to the instructor's grade roster and submitted to the Admissions and Registration Office;
- An "I" grade shall be made up within 12 months from the end of semester the "I" grade was assigned unless the instructor sets a shorter time period.
- An "I" grade converts to a failure ("F") if it is not made up by the due date.
- The "I" (incomplete) must be completed/made up through the instructor who assigned the "I" grade; the instructor changes the grade with the Grade Change Form which must be submitted to the Admissions and Registration Office.

### **Audit**

A student who audits a course attends class but does not receive credit for the course. To audit a course, a student must register for the course, complete an audit form, and submit the form to the Admissions and Registration Office by the date listed in the Academic Calendar or at the 75% point of short or late starting courses. Instructor's approval is required before a student may audit a class. The grade of "AU" will be recorded on the student's transcript for this course. Full tuition and fees are charged for course audits. The audit grade cannot be changed to a letter grade once grades have been posted to a student's transcript. In order to receive a letter grade in an audited course, a statement from the instructor and the student rescinding the audit grade option must be submitted to the Admissions and Registration Office by the 75% point of the course.

Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before auditing a course.

### **Withdrawal**

A withdrawal is initiated by a student who wishes to drop a course. The effective date of withdrawal is the date the Course Add/Drop form is received by the Admissions and Registration Office. Refunds, etc., are governed by regulations in effect on that date. In order to prevent a course from appearing on a student's transcript, he/she is required to drop the class during its refund period.

- Failing to attend class DOES NOT constitute withdrawal.
- To withdraw from a course lasting the full semester, the student must have a Course Drop/Add form on file in the Admissions and Registration Office by the date listed in the Academic Calendar.
- The student can withdraw from short or late starting courses until the 75% point of the course.

### **Withdrawal by Instructor**

The "WI" (Withdrawal by Instructor) grade may be issued at the discretion of the instructor only when extenuating circumstances prohibit a student from completing the course. This grade is not an option for students who have earned an "F" in the course.

### **Medical Withdrawal**

A student may be eligible to retroactively withdraw from college classes and/or initially request a medical withdrawal based on certain medical conditions (applies to student or immediate family member only).

In order to qualify for this benefit, a student must submit a complete a Course Add/Drop form accompanied by medical documentation signed by a doctor and attesting to an inability to complete classes due to health problems. Submit these two items to the Admissions and Registration Office with a completed Medical Withdrawal form. The Medical Withdrawal form is only available at the Admissions and Registration Office.

The documents will be reviewed, and if approved, all grades for the semester in question will be removed and replaced with a "W." "Medical Withdrawal" will be printed on the student's transcript across the semester in question.

## Courses

### Interactive Television (ITV) Courses

State-of-the-art interactive television (ITV) allows both the Kalispell campus and the Lincoln County campus to televise and receive live, two-way audio and video transmissions of select FVCC courses. Additional technology fees apply only to students registering to attend at a remote site. These courses will have section numbers in the 70's in semester schedules.

### Online and Hybrid Courses

There are two types of online courses available at FVCC: hybrid and online. Students taking hybrid or online classes are responsible for obtaining access to a computer with internet access, the required browser and software, and a college email account. For specific requirements, visit [fvcc.edu/online-education](http://fvcc.edu/online-education). Students may use the campus computer labs as scheduling permits.

Hybrid courses meet online and on campus. These courses are assigned section numbers in the 90s in semester schedules.

Online courses have no requirement for coming to campus or meeting face-to-face with instructors. However, online courses are not self-paced. Students are responsible for accessing their courses promptly and for meeting course due dates and deadlines. These courses are assigned section numbers in the 80s in semester schedules.

For complete information regarding online courses at FVCC, including how to access your courses once you have registered, visit the FVCC website at [fvcc.edu/online-education](http://fvcc.edu/online-education).

Students who need technical assistance with a hybrid or online course can contact the FVCC Help desk at (406) 756-3930 or [onlinehelpdesk@fvcc.edu](mailto:onlinehelpdesk@fvcc.edu).

### Independent Study

Independent study credits are available to allow students to study subject areas outside existing courses.

An independent study course is developed with the guidance of a supervising full-time faculty member. The Vice President of Academic and Student Affairs and the appropriate division chair must approve all independent study proposals. Each credit of independent study should involve 45 plus hours of study. Regularly scheduled classes are not available for independent study.

Regular tuition and fee costs will be charged for independent study courses and registration must be completed before starting the course.

A \$40 late registration fee may be assessed to students registering for an independent study course after the second week of the semester or after the start of the course, whichever is later.

### Directed Study

Directed study courses are courses currently approved by the Curriculum Committee, included in the current catalog, and taught on an individual basis by full-time instructors at the same level as regularly scheduled courses.

The directed study option can be utilized only in unusual circumstances and is not an alternative to inadequate planning or inconvenient timing. Only persons who normally teach the courses are expected to teach the directed study courses. Regular tuition and fees will be charged for every directed study credit. Registration must be completed within the first two weeks of the semester.

## Transfer

### Transfer of Credits to FVCC

Students wishing to transfer credits to FVCC must

1. Completed and submit a degree-seeking application to the Admissions and Registration Office; and
2. Arrange to have an official transcript of previously attended institutions mailed to the FVCC Admissions and Registration Office.

Transcripts should be submitted at least 30 days before the semester begins. Credits will be evaluated by the Admissions and Registration Office and accepted according to current scholastic standards. The evaluation will be posted on the Student Portal. The number of credits accepted will be posted on the student's FVCC transcript.

### General Education Core

An undergraduate student entering or moving from one institution to another within the Montana University System who has not completed the general education core at the sending institution will be required to either complete the general education core at the campus to which they transfer or complete the MUS core. Click here for more information about student options regarding the general education core: [General Education Requirements](#).

### Outdated Coursework

In evaluating coursework from postsecondary institutions, the campuses within the Montana University System guarantees that any postsecondary coursework taken

1. within five years of being admitted or readmitted to the campus will be included in the transfer analysis of specific required classes in a major, minor, option or certificate;
2. within 15 years of being admitted or readmitted to the campus will be included in the transfer analysis of general education coursework; and
3. within 15 years of being admitted or readmitted to the campus will be included in the transfer analysis of elective coursework.

Coursework that falls outside these guarantee periods may be included in the evaluation at the discretion of FVCC and other individual campuses in the Montana University System. Since it is a discretionary decision, it cannot be challenged by students.

### Transfer Appeal Process

The following process has been implemented to assist students in resolving any questions or concerns they may have regarding the evaluation and acceptance of transferred credits:

1. The student should contact the Admissions and Registration Office.
2. The student should obtain a copy of the description for the course(s) in question; if it is available, the course syllabus is preferred.
3. If the course(s) under review will be applied toward either an AA or AS degree, the Admissions and Registration Office will provide the supplied information to the appropriate division chair or faculty member. If the course(s) in question will be applied toward an AAS

degree or certificate program, the Admissions and Registration Office will contact faculty and program directors in the appropriate program of study.

4. The division chair or program faculty will review the material supplied by the Admissions and Registration office and either concur with the original evaluation or agree to accept the credit.
5. If the division chair or program faculty agrees with the original evaluation, the student can appeal the decision to FVCC's Vice President of Academic and Student Affairs.
6. The decision of the Vice President of Academic and Student Affairs will be final.

#### **Military Credits**

Credits may be earned for courses completed in military service schools and training programs at the associate degree level. A student is required to provide an official DD-214 and any transcripts of courses completed. A maximum of 15 credits may be used toward an associate degree.

#### **Prior Learning/Course Challenge and CLEP Credit**

A student admitted to FVCC may petition to challenge courses based on work done through private study and/or prior learning experience or to validate courses taken at non-accredited institutions. Course challenges will be considered on an individual case basis. Only courses listed in the current college catalog may be considered for challenge, although not all of the courses may be challenged. Additional stipulations include the following:

- Students are not permitted to challenge a prerequisite course after having completed an advanced course at FVCC or any accredited college.
- Credit by examination will not be granted for a course that a student has previously taken for credit or audited.
- Credit will be granted provided the student earns the equivalent of a grade of "C" or better.
- Neither the grade of "S" nor credit earned through the challenge process will be counted in any given semester to determine credit load or grade point average, nor will they be included in computing cumulative grade point averages.
- Students may challenge a course prior to or during enrollment through the first week of the semester.
- Prior to challenging a course, a Course Challenge form must be completed with the approval of the full-time faculty member and Vice President of Academic and Student Affairs.
- A \$50/course challenge fee must be paid before taking the exam.

\*The College Level Entrance Exam (CLEP) Program can also be used by anyone who can demonstrate competency in a variety of subjects by receiving a satisfactory grade on a CLEP general or subject test. FVCC awards credit based on ACE (American Council on Education) recommendations. FVCC is a CLEP testing site.

#### **Course Substitution**

A student who believes he/she possesses skill proficiency due to work experience can request a substitute class. The appropriate division will review the student's credentials that support proficiency, and if satisfied the student meets the class requirements, can approve a substitute class of equal or greater academic or technical content to be completed in substitution for the required class. This can include independent study course offerings.

#### **Advanced Placement (AP) and International Baccalaureate (IB)**

Students may earn college credit by taking the Advanced Placement (AP) exams or International Baccalaureate (IB) exams while in high school and providing official transcripts showing satisfactory scores. FVCC recognizes IB achievement and awards credits for each higher-level exam passed with examination scores of four or higher. Some standard-level exams are accepted. Students may contact the Admissions and Registration Office with any further questions on AP and IB exams.

The FVCC policy for accepting either AP or IB credit is as follows:

1. Students must be degree-seeking.
2. Official transcripts showing scores at the accepted minimum or above will be awarded credit with an "S" (satisfactory) grade. This grade is not used for calculation of the student's grade point average. The number of credits awarded per test is determined by the Admissions and Registration Office in partnership with faculty.
3. There is no limit to the number of credits that may be granted and applied toward an FVCC degree although some programs may require letter grades for degree completion.
4. Department approval may be necessary to replace specific requirements with AP and IB scores in that program.
5. General Education courses may be satisfied with AP and IB credit. The Admissions and Registration Office makes these designations on the student's FVCC transcript.

Please Note: Every college and university makes their own policies on the acceptance of AP or IB credit. Students intending to transfer cannot automatically assume every school will accept these credits as FVCC does. Students should verify the intended transfer school's policy.

#### **Math Waiver/Substitution Policy**

Request for math course substitution will be reviewed on a case-by-case basis. Contact the Disability Services Coordinator at (406)756-3376 or refer to the disability services manual at [fvcc.edu/disability](http://fvcc.edu/disability) for the course substitution policy and assistance with completing substitution requests. Applicants should make requests prior to the semester in which graduation is expected.

## **WRIT 101 Bypass Policy**

Students who meet one of the following criteria may bypass WRIT 101W, College Writing I, and enroll in WRIT 201W, College Writing II, to satisfy the General Education Core Curriculum Writing requirement. The student does not receive a grade for WRIT 101W, nor is the student waiving a composition course. This is not a challenge policy, meaning that students must still take a writing course as required by their program or course of study, but can choose to challenge themselves in a higher level course if one of the following criteria is met:

- A score of at least 32 on the ACT combined English/Writing section;
- A score of at least 11 on the ACT Writing Test Subscore;
- A score of at least 700 on the SAT Writing Section;
- A score of at least 11 on the SAT Essay Subscore; or
- A score of at least 5.5 on the Montana University System Writing Assessment.

Students may earn credit for WRIT 101W through transfer credit, AP, IB, and CLEP exams.

## **Transfer to Other Institutions**

FVCC is fully accredited, enabling students to transfer to other colleges or universities with ease. Courses numbered 100 or above are considered transfer courses. FVCC keeps in frequent contact with other Montana colleges and universities in order to accommodate changes in curriculum and programs and to provide the best advising to students who plan to transfer.

Regardless of the number of credits earned at FVCC, the number accepted toward a degree at another institution is determined by the institution awarding the degree. A student will be expected to meet the program requirements in effect at the institution to which he/she transfers. An FVCC student who has completed the FVCC general education core requirements can transfer to any Montana University System school and be guaranteed the transfer institution's general education core requirements are met.

## **Transfer Articulation Agreements**

Transfer agreements have been established in certain programs to facilitate transfer of Flathead Valley Community College credits to other institutions. Agreements include articulation procedures as well as course equivalency lists. The agreements guarantee transfer of credits once specific curriculums have been satisfactorily completed. Students interested in transferring under articulation agreements should discuss their plans with their academic advisors early in their studies.

## **How to Transfer**

A student who plans to transfer to a four-year college or university should follow these steps:

### **1. Plan Ahead**

- a. Obtain or view online a current catalog from the transfer institution;
- b. Review the transfer institution's transfer and major requirements. Enroll in classes a typical freshman and sophomore take for the major field of interest selected; and
- c. Review the transfer institution's course equivalency guides or the Montana University System course equivalency guide at [www.mus.edu/Transfer/transfer.asp](http://www.mus.edu/Transfer/transfer.asp).

### **2. Keep in Touch and Pay Attention**

- a. Confer with the faculty advisor about fulfilling FVCC's and the transfer institution's general education and major requirements;
- b. Discuss the transfer process with Student Support Center Advisors;
- c. Contact the Admissions and Registration Office and/or the major department of the transfer institution to learn about applicable transfer regulations. For example, several schools will only accept a grade of "C" or higher for major requirements. Similarly, some programs such as nursing and education have specific application deadlines; and
- d. Meet with an academic advisor often to assure a smooth transfer and appropriate course selection.

### **3. Apply for Admission**

- a. Apply for admission and send official copies of transcripts to the transfer institution. When transferring to a public institution in Montana, request a transmittal of record to be forwarded to any college within the Montana University System for \$8 at the Admissions and Registration Office in Blake Hall. The transmittal replaces applying directly to the institution.

## **Single Admissions File/Transmittals**

In order to assist undergraduate, degree-seeking students who (1) transfer between units of the Montana University System; or (2) enroll in coursework at more than one unit of the Montana University System in the same semester, the Montana Board of Regents authorizes a "single admissions file" that will follow the student throughout the system, much like a patient's medical records, regardless of the campus(s) at which the student enrolls.

If a student decides to attend another unit of the Montana University System under the two situations described above, the student must complete a Request for Transmittal of Application Materials and submit it to the FVCC Admissions and Registration Office. The Admissions and Registration Office will prepare a certified copy of the student's admissions file and pass it along to the unit identified in the Request for Transmittal of Application. An \$8 fee will be assessed for the transmittal of records.

Copies of the Single Admissions policy (MUS policy 301.5.4) are available from the FVCC Admissions and Registration Office or from Montana Board of Regents' website at <http://mus.edu/borpol/bor300/301-5-4.pdf>.



# Academic Requirements

## Students' Responsibilities

The following regulations, procedures, and definitions are important for all students taking classes for credit. Understanding and following these procedures is an essential part of acquiring a college degree or other credentials. Any questions should be directed to the Admissions and Registration Office.

Students are responsible for following their curriculum, meeting graduation requirements, and/or meeting transfer requirements. Assistance in planning acceptable programs is available from faculty advisors and Student Support Center Advisors.

FVCC courses require college-level reading as well as basic computer and typing skills. For every one credit hour students take, they may expect to spend a minimum of 2-3 hours each week on coursework; therefore, a student enrolled in 15 credits should spend 30-45 hours per week outside the classroom engaged in studying, reading, writing, and/or reviewing course materials.

## Graduation Application

Graduation applications are due on December 1 for spring graduation and May 1 for summer and fall graduation. Students intending to graduate in the summer who would like to attend the spring graduation ceremony will need to meet the December 1 graduation application deadline. Applications for Graduation are available from the Admissions and Registration Office in BH 111 or at [fvcc.edu/graduation](http://fvcc.edu/graduation).

Students commonly graduate under the catalog in use during the first year they attended FVCC. However, a student may graduate using any FVCC catalog under which they have attended, up to five years prior to graduation. For example, the 2019-2020 catalog can be used through summer 2025. College or program requirements may change to comply with accreditation requirements, professional certification, and licensing requirements, etc. In the event a change is made after the catalog is published, the changes will be posted online.

If a student initially enrolled more than five years before their graduation, they must follow the catalog requirements currently in effect during the semester they apply for graduation.

**Note:** A student who has been on hiatus for at least one year will not be able to return to a program that is no longer offered at FVCC.

## Graduation Waivers and Substitutions

Given unusual circumstances, specific program requirements may be waived with the approval of the advisor, the Program Director, and the Division Chair. This approval must be in writing, signed, and dated. Program waivers are granted only when there is evidence of competency that will satisfy the program requirement.

General Education or Related Instruction course requirements may be waived or substituted at the Program Director's discretion for students holding a higher degree than that which they are currently seeking. The waiver or substitution must be approved by a majority vote of the General Education Team, the Program Director, and the Division Chair.

Individuals with prior work experience may request an appropriate course substitution for a program requirement(s). The substitute course must be of equal or greater academic or technical content as that of the required course and must have the approval of the Division Chair and program director.

A single course may not be used to meet more than one group requirement, e.g., if ARTH 200 is used to meet the humanities requirement, it cannot be used to meet the global requirement.

## Academic Advising

Academic advising is critical to student success, and FVCC is committed to providing every student with meaningful academic advising. FVCC employs a mixed advising model with full-time faculty advisors and Student Support Center Advisors.

All degree-seeking students (including transfer students) are required to meet with an academic advisor for course schedule approval each semester. Non-degree students taking courses with prerequisites need to meet with an advisor in the Student Support Center. Degree students are blocked from registration until they meet with their advisors.

Students with a declared major are generally assigned to a faculty advisor most closely aligned to their field of study.

**The role of the advisor:**

- Assist students with defining and developing realistic educational and career plans.
- Make available pertinent and accurate information about FVCC programs and professional requirements.
- Approve designated educational transactions (e.g. registration, drop-adds, directed study, petitions, graduation applications, other forms).
- Assist students in the evaluation of progress toward established goals.
- Provide accurate information about resources.
- Assist students in identifying career opportunities.
- Refer students when attitudinal, educational, or personal problems require intervention.
- Reinforce student responsibility for academic decisions and behaviors.
- Encourage program completion.

**The role of the student:**

- Spend time and effort to identify and clarify personal values, abilities, interests, and goals.
- Communicate and share ideas in the academic planning process.

- Become knowledgeable about and adhere to institutional procedures, policies, and requirements. This means reading, understanding, and utilizing the catalog.
- Contact and make appointments with advisors when required and as needed. The online campus directory has phone numbers, email addresses, and office locations.
- Notify the advisor about changes in appointments, career or major plans, or course schedules.
- Plan in advance for advising sessions: bring necessary materials such as transcripts, placement scores, FVCC catalog, proposed class schedule, and questions.
- Follow through on actions identified in each academic advising session.
- Request a change in major/degree online via the Student Portal. Program changes submitted after 30 business days from the start of fall or spring semester will be applied to the next semester. See the Academic Calendar for specific dates for fall, spring, and summer semesters.
- Accept final responsibility for all decisions.

## **Associate of Applied Science Degree Requirements (AAS)**

The Associate of Applied Science (AAS) degree is an occupational degree and is the only degree FVCC awards with a specified area of emphasis.

To earn the Associate of Applied Science degree, the following must be met:

1. Completion of a minimum of 60 semester credit hours.
2. Completion of course requirements as outlined for the specific AAS program listed in the "Programs" section of the catalog, which include three Related Instruction requirements: Communication (one speaking, one writing), Interactions, and Quantitative Literacy.
3. Final cumulative grade point average (GPA) of 2.0 or above. A grade of "C-" or better is required for all program requirements unless otherwise stated.
4. At least 20 semester credits earned at FVCC and the final 10 credits earned at FVCC.
5. A limit of 15 semester credits graded "S" may count toward the AAS degree, excluding AP and IB credits. Some programs may further limit "S" grades.
6. Courses within the department "SR" (Senior) cannot be used toward an AAS degree.

Note: Substitutions for Related Instruction requirements must have approval from the Program Director. In most cases, Division Chair and General Education Team approval is also required.

(One course cannot satisfy more than two Related Instruction areas.)

## **Certificate of Applied Science Degree Requirements (CAS)**

To earn a Certificate of Applied Science, the following must be met:

1. Completion of a minimum of 30 semester credit hours for each certificate.
2. Completion of course requirements as outlined for the specific CAS program listed in the "Programs" section of the catalog, which include three Related Instruction requirements: Communication (only one course required, speaking or writing), Interactions, and Quantitative Literacy.
3. Final cumulative grade point average (GPA) of 2.0 or above. A grade of "C-" or better is required for all program requirements unless otherwise stated.
4. At least one-third of the program credits must be earned at FVCC.
5. A limit of one-fourth of the semester credits graded "S" may count toward a CAS, excluding AP and IB credits. Some programs may further limit "S" grades.
6. Courses within the department "SR" (Senior) cannot be used toward a CAS.

Note: Substitutions for Related Instruction requirements must have approval from the Program Director. In most cases, Division Chair and General Education Team approval is also required.

(One course cannot satisfy more than two Related Instruction areas.)

## **Certificate of Technical Studies Requirements (CTS)**

To earn a Certificate of Technical Studies, the following must be met:

1. Completion of a minimum of 16 semester credit hours.
2. Completion of course requirements as outlined for the specific CTS program listed in the "Programs" section of the catalog.
3. Final cumulative grade point average (GPA) of 2.0 or above. A grade of "C-" or better is required for all program requirements unless otherwise stated.
4. At least one-third of the program credits must be earned at FVCC.
5. A limit of one-fourth of the semester credits graded "S" may count toward a CTS, excluding AP and IB credits. Some programs may further limit "S" grades.
6. Courses within the department "SR" (Senior) cannot be used toward a CTS.

## Related Instruction Learning Outcomes

The goal of Related Instruction at FVCC is to prepare students for a productive life of work by developing skills in the areas of communication, computation, and human relations that align with and support program-specific outcomes. Related Instruction courses are embedded within the AAS and CAS program curricula and are organized into three categories: Communication, Interactions, and Quantitative Literacy.

### Communication

Upon completion of the Communication Related Instruction requirement, students should be able to express, interpret, or modify ideas to communicate effectively.

Components:

1. Speaking
  - Develop the main point of a speech/presentation with specific, concrete examples and details
  - Present in an organized manner, connecting sections with effective transitions
  - Use appropriate delivery strategies and techniques
  - Use outside sources, vocabulary, and visual aids with accuracy and relevancy
  - Actively listen using paraphrasing, questions and reflections
  - Recognize that conflict is natural and demonstrate competent methods/strategies of conflict management
  - Employ strategies to overcome communication problems
2. Writing
  - Effectively use relevant, adequate supporting details, examples, reasons, logical arguments, facts, and/or statistics
  - Organize and connect major ideas with effective transitions
  - Use a variety of sentence structures and appropriate word choice in the expression of ideas for readers and purposes
  - Use appropriate conventions in areas of mechanics, usage, sentence structure, spelling, and format

### Interactions

Upon completion of the Interactions Related Instruction requirement, students should be able to collaborate with others in complicated, dynamic, and/or ambiguous situations.

Components:

1. Self-Awareness
  - Demonstrate responsibility/accountability for one's actions/thoughts/emotions
  - Display self-initiative
2. Interpersonal Communication/Teamwork
  - Apply appropriate verbal and nonverbal communication skills
  - Demonstrate methods/strategies of conflict management
  - Respond to changing job demands and help others succeed as needed
3. Human Relations/Ethics
  - Respect cultural and ethnic differences
  - Maintain positive working relationships
  - Practice integrity and observe confidentiality
  - Apply ethical principles to situations and make decisions appropriately

### Quantitative Literacy

Upon completion of the Quantitative Literacy Related Instruction requirement, students should be able to understand and apply quantitative concepts and reasoning using numerical data.

Components:

1. Ratios and Percent
  - Recognize problems as ratios or proportions
  - Use proportional reasoning when appropriate
2. Graphical Interpretation
  - Collect and identify information from graphical representations of data using appropriate terminology/units of measurement
  - Evaluate graphical information and interpolate and/or extrapolate as necessary
  - Recognize trends in data from a graphical display
3. Problem Solving
  - Represent mathematical information symbolically and numerically as needed to solve a problem
  - Evaluate results for acceptable solutions and communicate findings using appropriate mathematical language and symbolism.

# Related Instruction Courses

## Communications Courses

### A – Speaking (one course)

- AHXR 101 - Patient Care in Radiology Credit(s): 2 \*
- BGEN 110 - Applied Business Leadership Credit(s): 3
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- COMX 215 - Negotiations/Conflict Resolution Credit(s): 3
- GDSN 250 - Graphic Design I Credit(s): 3
- GDSN 274 - Portfolio Presentation Credit(s): 1 \*
- NRSG 232 - Foundations of Nursing Credit(s): 3 \*

### B – Writing (one course)

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 237 - Human Relations in Business Credit(s): 3
- CJLE 109C - Police Report Writing Credit(s): 3
- WRIT 101W - College Writing I Credit(s): 3 \*
- WRIT 121C - Introduction to Technical Writing Credit(s): 3 \*

## Interactions Courses: (one course)

- AGSC 202z - Practical Farm Production and Equipment: Fall Credit(s): 4
- AGSC 202y - Practical Farm Production and Equipment: Spring Credit(s): 4
- AHMT 295y - Clinical III: Medical Laboratory Clinical Credit(s): 5 \*
- AHPT 105 - Introduction to Physical Therapist Assisting Credit(s): 3
- AHST 255 - Advanced Surgical Clinical Credit(s): 10 \*
- AHXR 295y - Radiographic Clinical: V Credit(s): 8 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 237 - Human Relations in Business Credit(s): 3
- BREW 199 - Capstone I: Brewing Methods III Credit(s): 5 \*
- CJUS 121A - Introduction to Criminal Justice Credit(s): 3
- COLS 115 – Workforce Preparation for Occupational Trades Credit(s): 1
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- COMX 215 - Negotiations/Conflict Resolution Credit(s): 3
- ENST 285 - Environmental Policy and Impact Analysis Credit(s): 3
- GDSN 247 - Digital Portfolio Preparation Credit(s): 4 \*
- NRSG 148 - Leadership Issues for Practical Nurses Credit(s): 2 \*
- NRSG 266 - Managing Client Care for the RN Credit(s): 2 \*
- SRVY 270 - Legal Principles in Surveying I Credit(s): 5 \*

## Quantitative Literacy Courses: (one course)

- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BREW 150 - Brewhouse Processes Credit(s): 4 \*
- CULA 220 - Purchasing and Cost Control Credit(s): 3 \*
- FORS 153 - Forest Resource Calculations Credit(s): 3 \*
- M 090~ - Introductory Algebra Credit(s): 4 \*
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- M 095~ - Intermediate Algebra Credit(s): 4 \*
- M 114 - Extended Technical Mathematics Credit(s): 3 \*
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- M 124 - Surveying Mathematics II Credit(s): 3 \*
- M 140M - College Math for Healthcare Credit(s): 3 \*
- M 152M - Precalculus Algebra Credit(s): 3 \*
- or any General Education math course or its equivalent

Note: \* indicates prerequisite and/or corequisite needed. Check course description.

## Associate of Arts (AA) Degree

The Associate of Arts (AA) degree is a general transfer degree that indicates a student has completed a course of study equivalent to the first two years of a bachelor's degree. This degree is not specific to any major or minor area of study.

An Associate of Arts degree from FVCC prepares students to transfer to any Montana University System school with the guarantee that the lower division general education core at the transfer school is complete.

To earn an AA degree, students must fulfill the following requirements:

1. Completion of 60 semester credits in courses numbered 100 and above. A single course cannot satisfy more than one general education core or graduation requirement.
2. Completion of a general education core curriculum (30 credits).
3. Completion of the designated additional degree requirements: 3 semester credits of Fine Arts (F) and 3 semester credits of either Communications (C), Humanities (H), Social Sciences (A or B), or Writing (W).
4. Final cumulative grade point average (GPA) of 2.0 or above. A grade of "C-" or better is required in all courses other than electives unless otherwise stated.
5. At least 20 semester credits earned at FVCC and the final 10 semester credits earned at FVCC.
6. A limit of 15 semester credits graded "S" may count toward the associate degree, excluding AP or IB credits. Transfer students should check with the transfer institution regarding the acceptance of "S" grades.

To earn both the AA and the AS degree, requirements must be met for each degree plus completion of a minimum of 75 semester credits in courses numbered 100 and above. A single course cannot satisfy more than one general education core or graduation requirement.

### Associate of Arts Degree Requirements

| <b>General Education Core Requirements</b><br>Refer to the General Education Core Curriculum for a list of courses meeting these requirements. | <b>Minimum Credits</b> | <b>Number of Courses</b>  |
|--|------------------------|---------------------------|
| Communications (C)   | 3                      | 1 C                       |
| Humanities (H)   | 3                      | 1 H                       |
| Fine Arts (F) or Humanities (H)  | 3                      | 1 F or 1 H                |
| Global Issues (G)  | 3                      | 1 G                       |
| Mathematics (M)  | 3                      | 1 M                       |
| Natural Science (NL)   | 3                      | 1 NL                      |
| Natural Science (N) or Natural Science (NL)  | 3                      | 1 N or 1 NL               |
| Social Sciences (A)  | 3                      | 1 A                       |
| Social Sciences (B)  | 3                      | 1 B                       |
| Writing (W)  | 3                      | 1 W                       |
| <b>TOTAL</b>   | <b>30</b>              |                           |
| <b>Additional Degree Requirements</b>  |                        |                           |
| Fine Arts (F)  | 3                      | 1 F                       |
| Communications (C) or Humanities (H) or Social Sciences (A) or Social Sciences (B) or Writing (W)  | 3                      | 1 A, B, C, H, or W course |
| <b>TOTAL</b>   | <b>6</b>               |                           |
| <b>Electives</b>   |                        |                           |
| Courses chosen in specific subjects to prepare for transfer  | 24                     |                           |
| <b>TOTAL DEGREE CREDITS</b>  | <b>60</b>              |                           |

## Associate of Science (AS) Degree

The Associate of Science (AS) degree is a general transfer degree that indicates a student has completed a course of study equivalent to the first two years of a bachelor's degree. This degree is not specific to any major or minor area of study.

An Associate of Science degree from FVCC prepares students to transfer to any Montana University System school with the guarantee that the lower division general education core at the transfer school is complete.

To earn an AS degree, students must fulfill the following requirements:

1. Completion of 60 semester credits in courses numbered 100 and above. A single course cannot satisfy more than one general education core or graduation requirement.
2. Completion of a general education core curriculum (30 credits).
3. Completion of the designated additional degree requirements: 6 semester credits of Mathematics (M) or Natural Science (N, L, or NL).
4. Final cumulative grade point average (GPA) of 2.0 or above. A grade of "C-" or better is required in all courses other than electives unless otherwise stated.
5. At least 20 semester credits earned at FVCC and the final 10 semester credits earned at FVCC.
6. A limit of 15 semester credits graded "S" may count toward the associate degree, excluding AP and IB credits. Transfer students should check with the transfer institution regarding the acceptance of "S" grades.

To earn both the AS and the AA degree, requirements must be met for each degree plus completion of a minimum of 75 semester credits in courses numbered 100 and above. A single course cannot satisfy more than one general education core or graduation requirement.

### Associate of Science Degree Requirements

| <b>General Education Core Requirements</b>   | <b>Minimum Credits</b> | <b>Number of Courses</b> |
|--|------------------------|--------------------------|
| Refer to the General Education Core Curriculum for a list of courses meeting these requirements. |                        |                          |
| Communications (C)   | 3                      | 1 C                      |
| Humanities (H)   | 3                      | 1 H                      |
| Fine Arts (F) or Humanities (H)  | 3                      | 1 F or 1 H               |
| Global Issues (G)  | 3                      | 1 G                      |
| Mathematics (M)  | 3                      | 1 M                      |
| Natural Science (NL)   | 3                      | 1 NL                     |
| Natural Science (N) or Natural Science (NL)  | 3                      | 1 NL or 1 N              |
| Social Sciences (A)  | 3                      | 1 A                      |
| Social Sciences (B)  | 3                      | 1 B                      |
| Writing (W)  | 3                      | 1 W                      |
| <b>TOTAL</b>   | <b>30</b>              |                          |
| <b>Additional Degree Requirements</b>  |                        |                          |
| Mathematics (M) or Natural Science (N) or (L) or Natural Science (NL)                            | 6                      | M, N, L, or NL           |
| <b>TOTAL</b>   | <b>6</b>               |                          |
| <b>Electives</b>   |                        |                          |
| Courses chosen in specific subjects to prepare for transfer                                      | 24                     |                          |
| <b>TOTAL DEGREE CREDITS</b>  | <b>60</b>              |                          |

## General Education: Core Complete!

### General Education Core Curriculum

A General Education Core Curriculum (Gen Ed Core) consists of 30 credits from a specific list and is a required component of all Associate of Science (AS) and Associate of Arts (AA), as well as bachelor's degrees. The multi-disciplined nature of a Gen Ed Core offers students foundational knowledge that supports success in college, in a career, and in life.

FVCC students may choose between two, 30-credit Gen Ed Cores, depending on their transfer goals: FVCC Core or Montana University System (MUS) Core. Once completed, both cores transfer to any MUS college as a guarantee that the lower-division Gen Ed Core requirements have been met: Core Complete!

Students should choose which Core to pursue based on whether they plan to transfer before or after earning an FVCC AA or AS degree:

Option #1: FVCC Core - Best for students who plan to earn an AA or AS degree from FVCC.

Option #2: MUS Core - Best for students who plan to transfer prior to earning an AA or AS degree from FVCC.

Students who complete 20 or more credits in the MUS Core, and plan to transfer without earning an AA or AS degree, should talk with a Student Support Center advisor and connect with the registrar and advisors at their new institution to complete the MUS core.

As a public institution legally committed to church-state separation, FVCC cannot accept as fulfilling the Humanities requirement those doctrinally-oriented courses in religion, scripture study and theology which are taught at Bible schools, seminaries, and theological institutes or which are directed primarily toward training clergy and lay missionaries in a specific faith or set of religious beliefs.

## MUS Core Option

**For students who cannot complete the AA or AS degree at FVCC:**

Students transferring to a Montana University System school have the option to complete the Montana University System Transferable Core (MUS Core) in lieu of the FVCC General Education Core. This option may be advantageous for students who transfer prior to completing an AA or AS degree.

Montana University System Transferable Core (MUS Core)  
See the MUS Core course lists at  
<https://ccn.mus.edu/search/>

| MUS Core  | Minimum Credits |
|---|-----------------|
| Communication:<br>Written and Oral                    | 6               |
| Mathematics   | 3               |
| Humanities/<br>Fine Arts                              | 6               |
| Social Sciences/<br>History                           | 6               |
| Natural Science<br>(at least one<br>laboratory class) | 6               |
| Cultural Diversity                                    | 3               |

### Rules for the MUS Core Option

An undergraduate student who has completed courses identified as part of the Montana University System Transferable Core, hereafter referred to as the MUS Core, will be governed by the following rules:

1. If the student has completed the entire 30 credit MUS Core, following the operating rules approved by the Montana Board of Regents, and transfers to another unit in the Montana University System, that student cannot be required to take additional general education courses at the lower division level.
2. If that student has completed fewer than 20 MUS Core credits, that student will be required to complete the approved general education program at the campus to which he/she transfers. All general education transfer credits that are part of the MUS Core will be reviewed for possible application in the approved general education program at the campus.
3. If that student has completed 20 or more MUS Core credits, that student may choose to complete either the MUS Core or the approved general education program at the campus to which he/she transfers. The student should make that decision in consultation with a faculty advisor.
4. The student may be required to take additional coursework at the upper division level that is part of an approved general education program at the new campus.

See the MUS Core information and course lists at  
<https://mus.edu/Transfer/MUScore.asp>



## Montana University System Board Policy:

### 1. Policy:

The Montana University System is committed to facilitating the ease of undergraduate student transfer to its campuses, particularly in the area of general education. Therefore, all campuses of the Montana University System will recognize the integrity of general education programs and courses offered by units of the Montana University System, Montana's three publicly supported community colleges, the seven tribal colleges and regionally accredited independent colleges in the State of Montana. All campuses in the Montana University System shall also recognize the integrity and

transferability of the Montana University System Transferable Core. <https://mus.edu/borpol/default.asp>.

### 2. Procedures:

Campus General Education Programs: An undergraduate student who has completed the lower division coursework in an approved general education program at one of the institutions noted above, and who transfers to another of those institutions, cannot be required to take additional general education coursework at the lower division level. The student may be required to take additional coursework at the upper division level that is part of an approved general education program at the new campus. The approved general education program at each of the campuses can be found at this link: <https://mus.edu/transfer/genedbycampus.asp>.

## General Education Core Curriculum

An FVCC student who completes all the FVCC General Education Core requirements can transfer to any Montana University System school and be guaranteed the lower division general education core requirements of that school have been met: Core Complete! Students who plan to transfer without earning an AA or AS degree, should request a Core Complete! designation from the Admissions and Registration office. This designation ensures that a transfer institution honors a complete Gen Ed Core.

To complete the FVCC Gen Ed Core, students must complete 30 credits from eight categories as detailed in the course lists below.

### Communications (C): 3 credits

Communication courses will help students with the diverse applied writing and listening, speaking, and presenting opportunities they will encounter in their lives.

Upon successful completion of the Communications requirement, students should be able to evaluate purpose and audience to create a well-developed, supported, and stylistically fluent response.

Complete three semester credits selected from the following:

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- CJLE 109C - Police Report Writing Credit(s): 3
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- COMX 217CF - Oral Interpretation of Literature Credit(s): 3
- THTR 239CF - Creative Drama and Dance for K-8 Credit(s): 3
- WRIT 121C - Introduction to Technical Writing Credit(s): 3\*

### Global Issues (G): 3 credits

Global Issues courses explore differences in race, ethnicity, gender, sexual orientation, class, disability status, language, national origin, and/or religion within and across peoples and nations.

Upon successful completion of the Global Issues requirement, students should be able to demonstrate awareness of self as a member of a multicultural, global community.

Complete three semester credits selected from the following:

- ANTY 220G - Culture and Society Credit(s): 3
- ARTH 200FGH - Art of World Civilization I Credit(s): 3
- ARTH 201FGH - Art of World Civilization II Credit(s): 3
- ARTH 225FG - Art and Architecture of Venice Credit(s): 3\*
- ARTH 227FG - History of Theatre in Venice Credit(s): 3 \*
- ARTH 228FGH - History of Early Italian Renaissance Credit(s): 3
- GPHY 121GA - Human Geography Credit(s): 3
- GPHY 141GA - Geography of World Regions Credit(s): 3
- HONR 264GH - Honors: Global Issues/Humanities Credit(s): 4 \*
- HONR 265GM - Honors: Global Issues/Mathematics Credit(s): 4 \*
- HONR 266GA - Honors: Global Issues/Social Sciences-A Credit(s): 4 \*
- HONR 267GB - Honors: Global Issues/Social Sciences-B Credit(s): 4 \*
- HONR 268GF - Honors: Global Issues/Fine Arts Credit(s): 4 \*
- HONR 269GN - Honors: Global Issues/Science Credit(s): 4 \*

- HSTR 201G – The 20<sup>th</sup> Century World I Credit(s): 3
- ITLN 101GH - Elementary Italian I Credit(s): 4
- ITLN 102GH - Elementary Italian II Credit(s): 4 \*
- LIT 214GH - Regional Literature Credit(s): 3
- MUSI 207FG - World Music Credit(s): 3
- NASX 105G - Introduction to Native American Studies Credit(s): 3
- NASX 232G - Montana Indians: Cultures, Histories, Current Issues Credit(s): 3
- NRSM 271GN - Conservation Ecology Credit(s): 3
- PSCI 230G - Introduction to International Relations Credit(s): 3
- RLST 100G - Introduction to the Study of Religion Credit(s): 3
- RUSS 101GH - Elementary Russian I Credit(s): 4
- RUSS 102GH - Elementary Russian II Credit(s): 4 \*
- SIGN 101G - Introduction to American Sign Language Credit(s): 3
- SIGN 201G - Intermediate American Sign Language Credit(s): 3 \*
- SOCI 220GA - Race, Gender and Class Credit(s): 3
- SPNS 101GH - Elementary Spanish I Credit(s): 4
- SPNS 102GH - Elementary Spanish II Credit(s): 4 \*
- HONR 252HM - Honors: Humanities/Mathematics Credit(s): 4 \*
- HONR 253HN - Honors: Humanities/Science Credit(s): 4 \*
- HONR 257HB - Honors: Humanities/Social Sciences-B Credit(s): 4 \*
- HONR 264GH - Honors: Global Issues/Humanities Credit(s): 4 \*
- ITLN 101GH - Elementary Italian I Credit(s): 4
- ITLN 102GH - Elementary Italian II Credit(s): 4 \*
- LIT 110H - Introduction to Literature Credit(s): 3
- LIT 112H - Introduction to Fiction Credit(s): 3
- LIT 120H - Poetry Credit(s): 3
- LIT 210H - American Literature I Credit(s): 3
- LIT 211H - American Literature II Credit(s): 3
- LIT 214GH - Regional Literature Credit(s): 3
- LIT 216H - American Short Story Credit(s): 3
- LIT 223H - British Literature I Credit(s): 3
- LIT 224H - British Literature II Credit(s): 3
- LIT 225H - Shakespeare: Tragedy and Comedy Credit(s): 3
- LIT 226H - Shakespeare: History and Tragedy Credit(s): 3
- LIT 271H - Introduction to Science Fiction Literature Credit(s): 4
- LIT 285H - Mythologies Credit(s): 3
- MUSI 202H - Introduction to Music Literature Credit(s): 3
- PHL 101H - Introduction to Philosophy: Reason and Reality Credit(s): 3
- PHL 110H - Introduction to Ethics: Problems of Good and Evil Credit(s): 3
- RUSS 101GH - Elementary Russian I Credit(s): 4
- RUSS 102GH - Elementary Russian II Credit(s): 4 \*
- SPNS 101GH - Elementary Spanish I Credit(s): 4
- SPNS 102GH - Elementary Spanish II Credit(s): 4 \*
- THTR 101FH - Introduction to Theatre Credit(s): 3
- THTR 235H - Dramatic Literature Credit(s): 3

### Humanities (H)/Fine Arts (F): 6 credits

The Humanities reveal what it means to be human. Humanities courses explore societies, cultures, ideas and art, as well as examine the forces that shape and connect them. Upon successful completion of the Humanities requirement, students should be able to examine the nature of human experience and/or artistic expression.

Fine Arts courses explore how people reveal and express feelings, emotions and beliefs, as well as how different cultures value the arts. Through the Fine Arts, students explore the creative process as they study and construct expressions of their own creativity, talent, and passion. Upon successful completion of the Fine Arts requirement, students should be able to examine the role of the Arts as a reflection of culture.

Complete six semester credits in Humanities/FineArts selected from the list below. Students may choose to take six credits in Humanities or three credits in Humanities and three credits in Fine Arts.

#### *Humanities (H)*

- ARTH 200FGH - Art of World Civilization I Credit(s): 3
- ARTH 201FGH - Art of World Civilization II Credit(s): 3
- ARTH 228FGH - History of Early Italian Renaissance Credit(s): 3
- GH 151H - Introduction to Western Humanities (Antiquity) Credit(s): 4
- GH 152H - Introduction to Western Humanities (Modernity) Credit(s): 4
- HONR 151HA - Honors I: Humanities/Social Sciences - A Credit(s): 4 \*
- HONR 251HA - Honors: Humanities/Social Sciences-A Credit(s): 4 \*

#### *Fine Arts (F)*

- ARTH 200FGH - Art of World Civilization I Credit(s): 3
- ARTH 201FGH - Art of World Civilization II Credit(s): 3
- ARTH 225FG - Art and Architecture of Venice Credit(s): 3\*
- ARTH 227FG - History of Theatre in Venice Credit(s): 3 \*
- ARTH 228FGH - History of Early Italian Renaissance Credit(s): 3
- ARTJ 210F - Jewelry and Metalsmithing I Credit(s): 3
- ARTJ 211F - Jewelry and Metalsmithing II Credit(s): 3 \*
- ARTZ 105F - Visual Language-Drawing Credit(s): 3
- ARTZ 106F - Visual Language-2-D Foundations Credit(s): 3
- ARTZ 108F - Visual Language-3-D Foundations Credit(s): 3 \*
- ARTZ 221F - Painting I Credit(s): 3
- ARTZ 224F - Watercolor I Credit(s): 3
- ARTZ 231F - Ceramics I Credit(s): 3
- COMX 217CF - Oral Interpretation of Literature Credit(s): 3
- CRWR 110F - Beginning Fiction Credit(s): 3
- CRWR 111F - Beginning Poetry Credit(s): 3
- CRWR 212F - Introduction Nonfiction Workshop Credit(s): 3
- HONR 260FA - Honors: Fine Arts/Social Sciences-A Credit(s): 4 \*
- HONR 261FB - Honors: Fine Arts/Social Sciences-B Credit(s): 4 \*
- HONR 262FN - Honors: Fine Arts/Science Credit(s): 4 \*

- HONR 263FM - Honors: Fine Arts/Mathematics Credit(s): 4 \*
- HONR 268GF - Honors: Global Issues/Fine Arts Credit(s): 4 \*
- MUSI 101F - Enjoyment of Music Credit(s): 3
- MUSI 105F - Music Theory I Credit(s): 3 \*
- MUSI 106F - Music Theory II Credit(s): 3 \*
- MUSI 132F - History of Rock and Roll Credit(s): 3
- MUSI 207FG - World Music Credit(s): 3
- PHOT 113F - Understanding Photography Credit(s): 3
- PHOT 154F - Exploring Digital Photography Credit(s): 3
- THTR 101FH - Introduction to Theatre Credit(s): 3
- THTR 102F - Introduction to Theatre Design Credit(s): 3
- THTR 120F - Introduction to Acting I Credit(s): 3
- THTR 121F - Introduction to Acting II Credit(s): 3 \*
- THTR 239CF - Creative Drama and Dance for K-8 Credit(s): 3

### Mathematics (M): 3 credits

Mathematics courses focus on comprehension of elementary quantitative concepts, development of quantitative reasoning skills, and the ability to reasonably ascertain the implications of quantitative information.

Upon completion of the Mathematics requirement, students should be able to use mathematical techniques to problem solve.

Complete three semester credits selected from the following:

- HONR 252HM - Honors: Humanities/Mathematics Credit(s): 4 \*
- HONR 254AM - Honors: Social Sciences-A/Mathematics Credit(s): 4 \*
- HONR 256NM - Honors: Science/Mathematics Credit(s): 4\*
- HONR 259MB - Honors: Mathematics/Social Sciences-B Credit(s): 4 \*
- HONR 263FM - Honors: Fine Arts/Mathematics Credit(s): 4 \*
- HONR 265GM - Honors: Global Issues/Mathematics Credit(s): 4 \*
- M 105M - Contemporary Mathematics Credit(s): 3 \*
- M 115M - Probability and Linear Mathematics Credit(s): 3\*
- M 132M - Number and Operations for K-8 Teachers Credit(s): 3 \*
- M 133M - Geometry and Geometric Measurement for K-8 Teachers Credit(s): 3 \*
- M 140M - College Math for Healthcare Credit(s): 3 \*
- M 152M - Precalculus Algebra Credit(s): 3 \*
- M 153M - Precalculus Trigonometry Credit(s): 4 \*
- M 162M - Applied Calculus Credit(s): 4 \*
- M 171M - Calculus I Credit(s): 5 \*
- M 172M - Calculus II Credit(s): 5 \*
- M 221M - Introduction to Linear Algebra Credit(s): 4 \*
- M 225M - Introduction to Discrete Mathematics Credit(s): 4 \*
- M 273M - Multivariable Calculus Credit(s): 5 \*
- M 274M - Introduction to Differential Equations Credit(s): 4\*
- STAT 216M - Introduction to Statistics Credit(s): 4 \*

### Natural Science (NL, N): 6 credits

Natural Science courses explore the principles that rule the physical universe by asking and answering questions about processes that can be observed and measured.

Upon successful completion of the Natural Science requirement, students should be able to apply scientific concepts and methods of inquiry.

Complete two or more courses selected from the following. At least one course must be a conventional laboratory experience selected from Group NL.

### *Group N (Non-Conventional Lab):*

- ANSC 100N - Introduction to Animal Science Credit(s): 3
- ASTR 110N - Introduction to Astronomy Credit(s): 3
- BCH 280N - Biochemistry Credit(s): 3 \*
- BIOB 110N - Plant Science Credit(s): 3
- BIOB 170N - Principles of Biological Diversity Credit(s): 3\*
- BIOB 272N - Genetics and Evolution Credit(s): 4 \*
- BIOB 275N - General Genetics Credit(s): 4 \*
- BIOE 172N - Introductory Ecology Credit(s): 3 \*
- BIOM 260N - General Microbiology Credit(s): 3 \*
- BIOO 115N - Practical Botany Credit(s): 3
- BIOO 215N - Field Botany Credit(s): 3
- GEO 130N - Geology of Northwest Montana Credit(s): 3
- HONR 253HN - Honors: Humanities/Science Credit(s): 4 \*
- HONR 255AN - Honors: Social Sciences-A/Science Credit(s): 4 \*
- HONR 256NM - Honors: Science/Mathematics Credit(s): 4\*
- HONR 258NB - Honors: Science/Social Sciences-B Credit(s): 4 \*
- HONR 262FN - Honors: Fine Arts/Science Credit(s): 4 \*
- HONR 269GN - Honors: Global Issues/Science Credit(s): 4 \*
- NRSM 271GN - Conservation Ecology Credit(s): 3
- NUTR 221N - Basic Human Nutrition Credit(s): 3
- PSYX 250NA - Fundamentals of Biological Psychology Credit(s): 3 \*
- WILD 270N - Wildlife Habitat and Conservation Credit(s): 3

### *Group NL (Laboratory Courses):*

- BCH 280N - Biochemistry Credit(s): 3 \* and
- BCH 281L - Biochemistry Lab Credit(s): 2 \*
- BIOB 101NL - Discover Biology Credit(s): 4
- OR**
- BIOB 160NL - Principles of Living Systems Credit(s): 4
- BIOB 105NL - Introduction to Biotechnology Credit(s): 3
- BIOB 126NL - General Science: Earth and Life Science Credit(s): 5
- BIOB 170N - Principles of Biological Diversity Credit(s): 3\* **and**
- BIOB 171L - Principles of Biological Diversity Laboratory Credit(s): 2 \*
- BIOB 260NL - Cellular and Molecular Biology Credit(s): 5 \*
- BIOE 172N - Introductory Ecology Credit(s): 3 **and**
- BIOE 173L - Introductory Ecology Laboratory Credit(s): 1 \*

- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4
- BIOH 201NL - Human Anatomy and Physiology I Credit(s): 4 \*
- BIOH 211NL - Human Anatomy and Physiology II Credit(s): 4 \*
- BIOM 250NL - Microbiology for Health Sciences Credit(s): 4 \*
- BIOM 260N - General Microbiology Credit(s): 3 \* **and**
- BIOM 261L - General Microbiology Lab Credit(s): 2 \*
- BIOC 220NL - General Botany Credit(s): 4
- BIOC 235NL - Rocky Mountain Flora Credit(s): 3
- CHMY 105NL - Explorations in Chemistry Credit(s): 4 \*
- CHMY 121NL - Introduction to General Chemistry Credit(s): 4 \*
- CHMY 123NL - Introduction to Organic Biochemistry Credit(s): 4 \*
- CHMY 141NL - College Chemistry I Credit(s): 5 \*
- CHMY 143NL - College Chemistry II Credit(s): 5 \*
- CHMY 221NL - Organic Chemistry I Credit(s): 5 \*
- CHMY 223NL - Organic Chemistry II Credit(s): 5 \*
- CHMY 280NL - Forensic Science I Credit(s): 4 \*
- CHMY 282NL - Forensic Science II Credit(s): 4 \*
- ENSC 105NL - Environmental Science Credit(s): 4
- ENSC 245NL - Soils Credit(s): 4
- GEO 100NL - Introduction to Earth Science Credit(s): 4
- GEO 101NL - Introduction to Physical Geology Credit(s): 4 \*
- GPHY 111NL - Introduction to Physical Geography Credit(s): 4
- PHSX 126NL - General Science: Physical Science Credit(s): 5 \*
- PHSX 205NL - College Physics I Credit(s): 5 \*
- PHSX 207NL - College Physics II Credit(s): 5 \*
- PHSX 220NL - Physics I (with Calculus) Credit(s): 5 \*
- PHSX 222NL - Physics II (with Calculus) Credit(s): 5 \*
- HONR 260FA - Honors: Fine Arts/Social Sciences-A Credit(s): 4 \*
- HONR 266GA - Honors: Global Issues/Social Sciences-A Credit(s): 4 \*
- HS 100A - Introduction to Human Services/Social Work Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4
- PSYX 230A - Developmental Psychology Credit(s): 3 \*
- PSYX 240A - Fundamentals of Abnormal Psychology Credit(s): 3 \*
- PSYX 250NA - Fundamentals of Biological Psychology Credit(s): 3 \*
- PSYX 260A - Fundamentals of Social Psychology Credit(s): 3 \*
- SOCI 101A - Introduction to Sociology Credit(s): 3
- SOCI 220GA - Race, Gender and Class Credit(s): 3

*Group B (one course):*

- ECNS 101B - Economic Way of Thinking Credit(s): 3
- ECNS 201B - Principles of Microeconomics Credit(s): 3
- ECNS 202B - Principles of Macroeconomics Credit(s): 3
- HONR 257HB - Honors: Humanities/Social Sciences-B Credit(s): 4 \*
- HONR 258NB - Honors: Science/Social Sciences-B Credit(s): 4 \*
- HONR 259MB - Honors: Mathematics/Social Sciences-B Credit(s): 4 \*
- HONR 261FB - Honors: Fine Arts/Social Sciences-B Credit(s): 4 \*
- HONR 267GB - Honors: Global Issues/Social Sciences-B Credit(s): 4 \*
- HSTA 101B - American History I Credit(s): 4
- HSTA 102B - American History II Credit(s): 4
- HSTA 111B - American Civil Rights Movement Credit(s): 3
- HSTA 255B - Montana History Credit(s): 3
- HSTR 101B - Western Civilization I Credit(s): 4
- HSTR 102B - Western Civilization II Credit(s): 4
- HSTR 284B - Environmental History Credit(s): 3
- PSCI 210B - Introduction to American Government Credit(s): 3
- PSCI 250B - Introduction to Political Theory Credit(s): 3

Social Sciences (A, B): 6 credits

Social Sciences courses explore people, movements, institutions, and forces which play a major role in human history and development.

Upon successful completion of the Social Sciences requirement, students should be able to evaluate the legitimacy of multiple perspectives to reach an informed conclusion.

Complete six semester credits selected from the following. At least one course must be selected from each of Group A and Group B.

*Group A (one course):*

- ANTY 101A - Anthropology and the Human Experience Credit(s): 3
- CJUS 121A - Introduction to Criminal Justice Credit(s): 3
- GPHY 121GA - Human Geography Credit(s): 3
- GPHY 141GA - Geography of World Regions Credit(s): 3
- HONR 151HA - Honors I: Humanities/Social Sciences - A Credit(s): 4 \*
- HONR 251HA - Honors: Humanities/Social Sciences-A Credit(s): 4 \*
- HONR 254AM - Honors: Social Sciences-A/Mathematics Credit(s): 4 \*
- HONR 255AN - Honors: Social Sciences-A/Science Credit(s): 4 \*

Writing (W): 3 credits

Writing courses focus on the writing process, rhetorical knowledge, conventions, critical thinking, reading, and research. Writing courses are foundational to success in college-level writing assignments.

Upon successful completion of the Writing requirement, students should be able to demonstrate organization, coherence, and clarity in writing.

Complete three semester credits selected from the following:

- WRIT 101W - College Writing I Credit(s): 3 \*
- WRIT 201W - College Writing II Credit(s): 3 \*

# All Programs of Study

|   |     |   |     |
|---|-----|---|-----|
| Accounting Technology, AAS .....  | 46  | Physical Therapist Assistant, AAS .....                                   | 105 |
| Accounting Technology, CAS.....   | 47  | Pre-Social Work Transfer to The University of Montana -<br>Missoula ..... | 107 |
| Brewing Science and Brewery Operations, AAS .....   | 49  | Programming and Game Development, AAS.....                                | 108 |
| Business Administration Transfer to Carroll College .....                                   | 50  | Radiologic Technology, AAS.....   | 109 |
| Business Administration Transfer to Montana State<br>University - Northern .....            | 51  | Substance Abuse Counseling, AA .....                                      | 110 |
| Business: Business Administration, AAS.....   | 52  | Surgical Technology, AAS.....   | 111 |
| Business: Entrepreneurship, CAS .....   | 53  | Surveying, AAS .....  | 113 |
| Business: Small Business Management, AAS .....  | 54  | Theatre Arts Transfer to Central Washington University                    | 114 |
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| Commercial Driver's License (CDL) Training Courses .....                                    | 56  | Welding and Fabrication Technology, CAS, AAS.....                         | 116 |
| Criminal Justice Transfer to Montana State University -<br>Northern .....                   | 57  | Welding and Inspection Technology, AAS .....                              | 118 |
| Criminal Justice, AAS.....  | 58  | Welding Technology, CTS.....  | 119 |
| Culinary Arts and Catering, AAS .....   | 59  |   |     |
| Early Childhood Education, AAS .....  | 61  |   |     |
| Education: Elementary K-8 Transfer to The University of<br>Montana - Missoula .....         | 62  |   |     |
| Education: Secondary Education - Mathematics transfer to<br>Salish Kootenai College .....   | 64  |   |     |
| Electrical Apprenticeship, CTS.....   | 65  |   |     |
| Electrical Technology, CAS, AAS.....  | 66  |   |     |
| Electronics Technician, CTS, CAS, AAS .....   | 67  |   |     |
| Emergency Medical Technician (E.M.T.) Course .....  | 68  |   |     |
| Firearms Finishing, CTS.....  | 69  |   |     |
| Firearms Technologies, AAS.....   | 70  |   |     |
| Firearms Technologies, CTS.....   | 71  |   |     |
| Forestry Transfer to The University of Montana-Missoula                                     | 72  |   |     |
| Geospatial Technology, CTS.....   | 74  |   |     |
| Goldsmithing and 3D Jewelry Design, CAS, AAS .....  | 75  |   |     |
| Graphic Design, AAS .....   | 76  |   |     |
| Graphic Design, CAS .....   | 77  |   |     |
| Health Care Office Management, AAS.....   | 78  |   |     |
| Heating, Ventilation, Air-conditioning and Refrigeration<br>(HVAC) Apprenticeship, CTS..... | 79  |   |     |
| Heavy Equipment Operator, CTS.....  | 80  |   |     |
| Industrial Machine Technology, CTS, CAS, AAS .....  | 81  |   |     |
| Industrial Maintenance, CTS, CAS, AAS.....  | 83  |   |     |
| Information Technology and Security, AAS.....   | 85  |   |     |
| Integrated Agriculture and Food Systems, AAS .....  | 86  |   |     |
| Medical Assistant, AAS (Moratorium).....  | 87  |   |     |
| Medical Assistant, CAS .....  | 89  |   |     |
| Medical Coding, AAS .....   | 91  |   |     |
| Medical Laboratory Technology, AAS .....  | 92  |   |     |
| Natural Resources Conservation and Management, AAS  | 94  |   |     |
| Nondestructive Testing, CAS .....   | 95  |   |     |
| Nursing: Practical Nursing, CAS.....  | 96  |   |     |
| Nursing: Registered Nursing, ASN .....  | 98  |   |     |
| Paramedicine, AAS .....   | 100 |   |     |
| Payroll Accounting, CAS .....   | 102 |   |     |
| Personal Trainer, CAS.....  | 103 |   |     |
| Phlebotomy Courses .....  | 104 |   |     |

# Accounting Technology, AAS

This program is designed to give the student a high level of proficiency as a technical accountant and leads to an Associate of Applied Science degree in Accounting Technology. A technical accountant will possess the skills necessary to perform all accounting functions within the business organization except those of a very advanced nature. The student receives a well-rounded business education and should be able to perform organizational and supervisory duties within the office. Upon completion of this program, students will:

- Understand different types of business organizations;
- Understand the internal control structure of a business organization;
- Analyze and record financial transactions in a manual and computerized general ledger;
- Prepare financial statements according to generally accepted accounting standards;
- Analyze and prepare financial information for management decision making;
- Prepare personal income tax returns;
- Process payroll transactions in accordance with current payroll reporting requirements;
- Develop and apply flexible solutions to accounting problems with the use of spreadsheets;
- Complete tasks for the accounting cycle using general ledger accounting software; and
- Communicate financial information effectively within a business environment.

## Required Courses

### First Year - Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 215 - Human Resource Management Credit(s): 3
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3

### First Semester Total: 16

### Spring Semester

- ACTG 180 - Payroll Accounting Credit(s): 2 \*
- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- BGEN 235 - Business Law Credit(s): 4
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- ECNS 201B - Principles of Microeconomics Credit(s): 3

### Second Semester Total: 17

### Second Year - Fall Semester

- ACTG 205 - Computerized Accounting Credit(s): 2 \*
  - ACTG 211 - Income Tax Fundamentals Credit(s): 4 \*
  - ACTG 231 - Applied Accounting Credit(s): 2 \*
  - ACTG 241 - Intermediate Financial Accounting I Credit(s): 4 \*
  - ACTG 298 - Internship Credit(s): 3 \*
- OR**
- BGEN 299 - Capstone Credit(s): 3 \*

### First Semester Total: 15

### Spring Semester

- ACTG 207 - Advanced Accounting on Microcomputers Credit(s): 2 \*
- ACTG 210 - Cost Accounting Credit(s): 4 \*
- BFIN 260 - Principles of Finance Credit(s): 4 \*
- BMIS 270 - MIS Foundations for Business Credit(s): 3
- Elective(s) - ACTG, BFIN, CAPP: Credit(s): 4

### Second Semester Total: 17

### Total Credits: 65

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- All required courses within this degree program must be taken for a letter grade. Only electives may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- An internship is required for this program. Students must apply for internship placements for this program the prior semester. See Internships for more information and application deadlines.
- If you are considering transfer to a four-year college, some of the courses will transfer as electives only. See your advisor. If you are going to graduate in the current academic year, you must see an advisor in the Business Division prior to enrolling fall semester.

### Opportunities after Graduation

- Graduates work as bookkeepers, accounts payable/receivable clerks, staff accountants and office managers. The majority of new jobs will be created in small, rapidly growing organizations. Many opportunities for temporary and part-time work should be available. Experienced bookkeeping and accounting clerks may move into management positions.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

#### Faculty Advisor

Ronnie Laudati, M.B.A.  
BSS 127  
(406) 756-3990  
rlaudati@fvcc.edu

# Accounting Technology, CAS

(This program is also offered at the Lincoln County Campus.)

The following curriculum develops the competencies needed for success as an entry-level bookkeeper and may serve as the basis for further courses leading toward a full-charge bookkeeper. Upon completion of this program, students will:

- Understand different types of business organizations;
- Understand the internal control structure of a business organization;
- Prepare financial statements according to generally accepted accounting standards;
- Complete tasks for the accounting cycle using general ledger accounting software;
- Communicate financial information effectively within a business environment; and
- Record financial transactions in a manual and computerized general ledger.

## Required Courses

### Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- ACTG 205 - Computerized Accounting Credit(s): 2 \*
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BMGT 215 - Human Resource Management Credit(s): 3
- CAPP 156 - MS Excel Credit(s): 3

**First Semester Total: 15**

### Spring Semester

- ACTG 150 - Accounting on Microcomputers Credit(s): 3 \*
- ACTG 180 - Payroll Accounting Credit(s): 2 \*
- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- ACTG 207 - Advanced Accounting on Microcomputers Credit(s): 2 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- CAPP 103 - QuickBooks Fundamentals Credit(s): 2 \*
- CAPP 118 - Short Courses: MS Access Credit(s): 1

**Second Semester Total: 17**

**Total Credits: 32**

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- All courses within the certificate must be taken for a letter grade. No courses may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- If you are considering transfer to a four-year college, some of the courses will transfer as electives only. See your advisor. If you are going to graduate in the current academic year, you must see an advisor in the Business Division prior to enrolling fall semester.

## Opportunities after Graduation

- This certificate will prepare students for entry-level positions in bookkeeping, accounts payables or receivables, or as billing clerks or office assistants. Opportunities for advancement will grow with increased skills and experience.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

## Student Support Center Advisor Faculty Advisor

Jori Bullemer

Ronnie Laudati, M.B.A.

LRC 129

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## Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

## Advanced Baking and Pastry, CTS

The Advanced Baking and Pastry program provides hands-on learning experience in baking and pastry techniques.

Students receive instruction in baking and pastry, as well as theoretical knowledge that underlies competency in the field.

Upon completion of this program, students will

- Create artisan breads, desserts, pastries, chocolates and confections, wedding cakes and centerpieces;
- Demonstrate contemporary baking and pastry techniques;
- Bake a variety of cakes and tortes using classical and modern presentation;
- Incorporate current trends in ingredients, nutrition, hospitality, and principles of design; and
- Apply the principles of gastronomy, fermentation, menu development, food safety, and cost control.

### Required Courses

#### Spring Semester

- CULA 271 - Artisan Breads Credit(s): 3 \*
- CULA 272 - Chocolates and Confections Credit(s): 3 \*
- CULA 273 - European Tortes Credit(s): 3 \*
- CULA 298 - Internship: Catered Desserts Credit(s): 3 \*

**First Semester Total: 12**

#### Fall Semester

- CULA 281 - Plated Desserts Credit(s): 3 \*
- CULA 282 - Wedding Cakes Credit(s): 3 \*
- CULA 283 - Centerpieces Credit(s): 3 \*
- CULA 298 - Internship: Catered Desserts Credit(s): 3 \*

**Second Semester Total: 12**

**Total Credits: 24**

\*indicates prerequisite and/or corequisite needed. Check course description.

### Admission Guidelines

- Before applying, students must first be accepted to Flathead Valley Community College. However, current high school students can supply all application materials and a letter from a school counselor verifying readiness for graduation until an official transcript can be supplied in May/June.
- Students must apply for select admission to this program. Applications are available from the Admissions and Registration Office in Blake Hall, Room 111.
- Spring start applications are available after October 15.
- Fall start applications are available after March 1.
- Admission to the program is based upon the following:
- Completion of CULA 105 Food Service Sanitation (or proof of current ServSafe certification) and CULA 165 Baking and Pastry (or equivalent, with a grade of "C-" or higher; please provide course syllabus) **OR** completion of a degree from a culinary school.
- Well-written essay (details provided within application packet).
- References from two people who are not relatives who have knowledge of the student's work ethic, maturity, and passion for culinary arts.
- Proof of a score of 17 or higher on the FVCC Reading Placement test **OR** an official copy of a transcript proving a "C-" or better in a 100-level or above college course requiring college-level reading.
- Proof of a score of 11 or higher on the FVCC Writing Placement test **OR** an official copy of a transcript proving a "C-" or better in BMGT 205, WRIT 095~, WRIT 101, or equivalent.

- Proof of a score of 55 (Level 1) or higher in Intro/Beginning Algebra on the FVCC Math Placement test **OR** an official copy of a transcript proving a "C-" or better in M 065~, its equivalent, or a higher math course.
- Students will be able to access placement test registration through the Student Portal and Eagle Online for Reading and Writing only. Students who cannot come to the FVCC campus to take the Pearson MyMathTest math placement test can either access the test remotely with a test proctor, or use high school math placement alternatives (contact Carlin Hale at 406-756-3880 for more information).

### Program Information

- Students may begin the program in either fall or spring semester.
- Upon completion of the program, students will be eligible to take the American Culinary Federation Pastry Cook certification exam.
- Students will gain working experience by interning in FVCC's bakery café and at college events.
- Fees for this program are higher than average. Please see the Program Advisor for more details.

### Opportunities after Graduation

- Graduates will work in restaurants, resorts, schools, hotels, bakeries or patisserie.
- Employment of bakers is projected to grow 8 percent from 2016 to 2026, about as fast as the average for all occupations. Bakers with years of experience should have the best job opportunities, with employment driven by the growing demand for specialty baked products.
- Students might consider opening their own bakery or cafe.

### Advising Information

For more information about this program, contact the FVCC Student Support Center or a program advisor.

#### Student Support Center Advisor

Carlin Hale  
LRC 129  
(406) 756-3886  
chale@fvcc.edu

#### Program Advisor

### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*



# Brewing Science and Brewery Operations, AAS

The Brewing Science and Brewery Operations program prepares individuals for careers in the craft brewing industry. Students will have exclusive use of the on-campus brewery, featuring a custom 3.5 barrel brewhouse, along with cellaring equipment, a dedicated laboratory, and a 5-10 gallon pilot brewing system. They will complete coursework in brewing science and technology, microbiology, chemistry, facilities and operations, and business applications. Upon completion of this program, students will be able to

- Discuss the production, selection, and analysis of raw brewing materials;
- Describe the fundamental techniques of the brewing process;
- Apply Clean-in-Place (CIP) technologies to brewery sanitation;
- Identify, select, and safely utilize equipment and technologies in brewery operations;
- Evaluate beer quality and implement QA/QC measures into beer production, packaging, and handling;
- Explain the microbiology and biochemistry concepts related to wort production and beer fermentation;
- Identify beer styles and characteristics, as well as the causes of defects in beer;
- Apply business principles related to brewing, including compliance, licensing, and sustainability;
- Design beer recipes and implement process controls to consistently brew acceptable beer for packaging, distribution, and consumption.

## Required Courses

### First Year - Fall Semester

- BIOM 108 - Introduction to Food and Beverage Fermentation Credit(s): 3
- BMGT 205C - Professional Business Communication Credit(s): 3 \*<sup>1</sup>  
OR
- WRIT 101W - College Writing I Credit(s): 3 \*
- BREW 101 - Brewing Methods I Credit(s): 5 \*
- BREW 149 - Beer Packaging and Draught Technology Credit(s): 1 \*
- CHMY 121NL - Introduction to General Chemistry Credit(s): 4 \*

### First Semester Total: 16

### Spring Semester

- BIOM 208 - Applied Brewing Microbiology Credit(s): 3 \*
- BREW 102 - Brewing Methods II Credit(s): 5 \*
- BREW 150 - Brewhouse Processes Credit(s): 4 \*
- CHMY 123NL - Introduction to Organic Biochemistry Credit(s): 4 \*

### Second Semester Total: 16

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Program Advisor.

### Student Support Center Advisor Program Advisor

Russ Lamson  
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(406) 756-3885  
rlamson@fvcc.edu

Joe Byers  
RH 118  
(406) 756-4359  
jbyers@fvcc.edu

### Second Year - Fall Semester

- BREW 131 - Beer Styles and Sensory Evaluation I Credit(s): 2 \*
- BREW 151 - Cellar Processes Credit(s): 3 \*
- BREW 199 - Capstone I: Brewing Methods III Credit(s): 5 \*
- BREW 298 - Internship: Professional Brewing Credit(s): 1-2 \*<sup>2</sup>
- CAPP 116 - Short Courses: MS Excel Credit(s): 1<sup>1</sup>
- CHMY 170 - Applied Brewing Chemistry Credit(s): 3 \*

### First Semester Total: 15-16

### Spring Semester

- BREW 132 - Beer Styles and Sensory Evaluation II Credit(s): 2 \*
- BREW 141 - The Business of Brewing Credit(s): 2 \*
- BREW 222 - Environmental Sustainability in Brewing Credit(s): 1 \*
- BREW 298 - Internship: Professional Brewing Credit(s): 1-2 \*<sup>2</sup>
- BREW 299 - Capstone II: Brewing Methods IV Credit(s): 6 \*
- COMX 111C - Introduction to Public Speaking Credit(s): 3<sup>1</sup>  
OR
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3<sup>1</sup>

### Second Semester Total: 15-16

### Total Credits: 62-64

<sup>1</sup> WRIT 101W/BMGT 205C, COMX 111C/COMX 115C, and CAPP 116 may be taken during any semester.

<sup>2</sup> A professional brewing internship is required for this program. Students may repeat BREW 298 to complete a minimum of two internship credits and a maximum of four. Students are eligible to take internships after the second semester in the program and will be guided through the application process.

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- All courses in this program must be passed with a grade of "C" or better for graduation eligibility.

## Admission Guidelines

- Due to limited classroom and lab availability, this program requires an admissions process: Application deadline is August 1.
- Placement exams may be required.
- Students must be at least 21 years of age to start the program.

## Additional Costs

- Additional program costs, books and lab fees, are estimated at \$2,000. Scholarships are available.

## Opportunities after Graduation

This degree prepares students for entry- and mid-level brewing industry positions with opportunities for advancement. Graduates may work as assistant brewers, cellar and packaging operators, and/or quality assurance technicians to start, with excellent professional growth potential.

# Business Administration Transfer to Carroll College

## Associate of Arts Degree

### Transfer Articulation Agreement

The following program of study has been established to prepare students for transfer to Carroll College with junior standing. Students who complete the following program to earn an Associate of Arts degree at FVCC with a grade of "C-" or higher in every course, and are accepted into Carroll College, will be granted 62 credits toward a Bachelor of Arts in Business Administration. See your advisor for more information about this transfer articulation opportunity.

#### First Year - Fall Semester

- BGEN 204 - Business Fundamentals Credit(s): 3  
(Equivalent to BA 100 at Carroll College)
- BMGT 205C - Professional Business Communication Credit(s): 3 \*  
(Equivalent to CO 225 at Carroll College)
- COMX 111C - Introduction to Public Speaking Credit(s): 3  
(Equivalent to CO 101 at Carroll College)
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*  
(Equivalent to MA 117 at Carroll College)
- WRIT 101W - College Writing I Credit(s): 3 \*  
(Equivalent to ENWR 102 at Carroll College)

#### First Semester Total: 15

#### Spring Semester

- PHL 101H - Introduction to Philosophy: Reason and Reality Credit(s): 3  
(Satisfies Philosophy Core at Carroll College)
- STAT 216M - Introduction to Statistics Credit(s): 4
- Any HSTA or HSTR course: 3 credits
- Any LIT course: 3 credits
- Natural Science (NL) course: 3-4 credits

#### Second Semester Total: 16-17

#### Second Year - Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4  
(Equivalent to BA 203 at Carroll College)
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4  
(Equivalent to CS 213 at Carroll College)
- ECNS 201B - Principles of Microeconomics Credit(s): 3  
(Equivalent to EC 201 at Carroll College)
- Natural Science Requirement Credit(s): 3-4

#### Third Semester Total: 14-15

#### Spring Semester

- ACTG 202 - Principles of Managerial Accounting Credit(s): 4  
(Equivalent to BA 204 at Carroll College)
- ECNS 202B - Principles of Macroeconomics Credit(s): 3  
(Equivalent to EC 202 at Carroll College)
- PSYX 100A - Introduction to Psychology Credit(s): 4
- Fine Arts (F) Requirement Credit(s): 3
- Global Issues (G) Requirement Credit(s): 3

#### Fourth Semester Total: 17

#### Total Credits: 62-63

\*Indicates prerequisite and/or corequisite needed. Check course description.

#### Upper Division Courses to Complete at Carroll College

Upon completing the first two years of study and earning the AS degree from FVCC, students will transfer to Carroll College and complete courses to finish a Bachelor of Arts degree in Business Administration.

#### Advising Information:

For more information about the program, contact the FVCC Student Support Center or the Faculty Advisor.

| Faculty Advisor          | Student Support Center Advisor |
|--------------------------|--------------------------------|
| Connie Hitchcock, M.B.A. | Jori Bullemer                  |
| BSS 107                  | LRC 129                        |
| (406) 756-4329           | (406) 756-3905                 |
| chitchcock@fvcc.edu      | jbullemer@fvcc.edu             |

# Business Administration Transfer to Montana State University - Northern

## Associate of Science Degree

### Suggested program of study for a transfer to Montana State University - Northern:

#### Transfer Articulation Agreement

The following program of study has been established to prepare students for transfer to Montana State University - Northern (MSU-N) with junior standing. Students who complete the following Associate of Science program of study at FVCC with a grade of "C-" or higher in every course, and are accepted into MSU-N, will be granted up to 67 semester credits toward a Bachelor of Science degree in Business Administration. See your advisor for more information about this transfer articulation opportunity.

#### First Year

- BGEN 110 - Applied Business Leadership Credit(s): 3
- BMGT 237 - Human Relations in Business Credit(s): 3  
(Equivalent to BGEN 112 at MSU-N.)
- COMX 111C - Introduction to Public Speaking Credit(s): 3  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ECNS 201B - Principles of Microeconomics Credit(s): 3
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*
- WRIT 101W - College Writing I Credit(s): 3 \*
- Approved Electives Credit(s): 4 <sup>1</sup>
- Humanities (H) Requirement Credit(s): 3
- Natural Science (NL) Requirement Credit(s): 3-4
- Social Sciences (A) Requirement Credit(s): 3-4

**First Year Total: 31-33**

#### Second Year

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- BGEN 235 - Business Law Credit(s): 4
- ECNS 202B - Principles of Macroeconomics Credit(s): 3
- STAT 216M - Introduction to Statistics Credit(s): 4 \*
- Approved Electives Credit(s): 5 1
- Global Issues (G) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3  
**OR**
- Fine Arts (F) Requirement Credit(s): 3
- Natural Science (NL or N) Requirement Credit(s): 3  
(Equivalent to BGEN 253 at MSU-N.)

**Second Year Total: 33**

**Total Credits: 64-66**

<sup>1</sup> Approved electives include ACTG 205, BFIN 260, BGEN 204, BMGT 205, BMGT 235, BMIS 211, BMIS 270 and BMKT 225.

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Upper Division Courses to Complete at MSU-Northern

Upon completing the first two years of study and earning the AS degree from FVCC, students will transfer to MSU-N and complete the following courses to finish the Bachelor of Science degree in Business Administration.

|   |            |
|---|------------|
| BFIN 322 Business Finance                       | 3 credits  |
| BGEN 360 International Business                 | 3 credits  |
| BGEN 468 Contemporary Issues in Business Ethics | 3 credits  |
| BGEN 494 Seminar                                | 3 credits  |
| BMGT 322 Business Finance                       | 3 credits  |
| BMGT 329 Human Resource Management              | 3 credits  |
| BMGT 335 Management and Organization            | 3 credits  |
| BMIS 311 Management Information Systems         | 3 credits  |
| BMKT 325 Principles of Marketing                | 3 credits  |
| BMKT 341 Advanced Marketing Applications        | 3 credits  |
| Credits in minor area of study                  | 30 credits |

#### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

| Student Support Center Advisor | Faculty Advisor          |
|--------------------------------|--------------------------|
| Jori Bullemer                  | Connie Hitchcock, M.B.A. |
| LRC 129                        | BSS 107                  |
| (406) 756-3905                 | (406) 756-4329           |
| jbullemer@fvcc.edu             | chitchcock@fvcc.edu      |

The Associate of Science (AS) degree requires 60 credits at FVCC, and the Bachelor of Science (BS) degree at Montana University System (MUS) colleges and universities requires 120 credits. FVCC students may earn as many as 75-85 credits in preparation for some transfer majors, thus reducing the number of credits required for the BS degree at MUS schools. Also, by earning the AS degree from FVCC, students will have satisfied the lower division General Education Core (see General Education Requirements for requirements) for all MUS institutions and will not be required to meet additional lower division general education core requirements upon transfer. The suggested course load in AS programs is rigorous and is recommended for only the most prepared students. A more moderate semester credit load can be achieved by taking general education core courses during summer terms or completing one or two additional semesters at FVCC before transfer.

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

# Business: Business Administration, AAS

(This program is also offered at the Lincoln County Campus.)

The Business Administration program provides students with a solid foundation in current business practices as preparation for work in a wide variety of industries. Students gain an overall understanding of the areas of business inclusive of management, marketing, human resource management, accounting and finance. There is strong emphasis on professional and interpersonal communications as a means to successful business relationships. Upon completion of this program, students will

- Communicate in a professional manner with colleagues and customers;
- Analyze and use business data to make decisions;
- Demonstrate leadership and teamwork in a business setting;
- Apply ethical decision making guidelines;
- Understand how to manage business functional areas such as marketing, human resources, and accounting in achieving organizational goals;
- Apply basic accounting and finance to make business decisions;
- Use technology and specific software as related to business applications;
- Apply marketing concepts as related to the overall management and success of a business enterprise;
- Apply basic business law applications to daily business operations and personnel;
- Apply the basic principles of human resource management and employment law to the overall management of an organization.

## Required Courses

### First Year - Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- BGEN 204 - Business Fundamentals Credit(s): 3
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ECNS 201B - Principles of Microeconomics Credit(s): 3

### First Semester Total: 17

### Spring Semester

- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- BGEN 110 - Applied Business Leadership Credit(s): 3
- BMGT 235 - Management Credit(s): 3
- CAPP 156 - MS Excel Credit(s): 3
- ECNS 202B - Principles of Macroeconomics Credit(s): 3

### Second Semester Total: 16

### Second Year - Fall Semester

- BFIN 205 - Personal Finance Credit(s): 3
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- OR
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 215 - Human Resource Management Credit(s): 3
- BMKT 225 - Marketing Credit(s): 3

### First Semester Total: 15

### Spring Semester

- BFIN 260 - Principles of Finance Credit(s): 4 \*
- BGEN 235 - Business Law Credit(s): 4
- BGEN 298 - Internship Credit(s): 3 \*
- BGEN 299 - Capstone Credit(s): 3 \*
- BMKT 131 - Introduction to Social Media Marketing Credit(s): 3 \*

### Second Semester Total: 17

### Total Credits: 65

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- An internship is required for this program. Students must apply for internship placements the prior semester. See internships for more information and application deadlines.
- All required courses within the degree program must be taken for a letter grade. No courses may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- If you are considering transfer to a four-year college, some of the courses will transfer as electives only. See your advisor.
- If you are going to graduate in the current academic year, you must see an advisor in the Business Division prior to enrolling fall semester.

### Opportunities after Graduation

- This degree prepares graduates for employment in entry-level management and professional positions with both small and large businesses in retail, wholesale trade, manufacturing, banking, and service industries along with local and state governments.
- Graduates may work as employment specialists, administrative assistants, team leaders, project managers, assistant managers, management trainees, or other service professionals.
- Growth opportunities vary with industry.

### Advising Information:

For more information about the program, contact the FVCC Student Support Center or the Faculty Advisor.

### Faculty Advisor

Connie Hitchcock, M.B.A.  
BSS 107  
(406) 756-4329  
chitchcock@fvcc.edu

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

# Business: Entrepreneurship, CAS

This program offers a basic foundation in starting and/or managing a small business. All courses within this certificate can be applied to the AAS in Small Business Management. Upon completion of this program, students will be able to

- Apply a broad overview of small business management and entrepreneurial approaches;
- Identify the various services provided by the S.B.A.;
- Prepare a business plan;
- Identify the pros and cons of various forms of business ownership; and
- Discuss the startup of a new business and outline the steps necessary to get the business open and running.

## Required Courses

### Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- BGEN 204 - Business Fundamentals Credit(s): 3
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- BMKT 225 - Marketing Credit(s): 3
- Elective Credit(s): 1

### First Semester Total: 15

### Spring Semester

- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 210 - Small Business Entrepreneurship Credit(s): 3
- BMGT 215 - Human Resource Management Credit(s): 3
- BMKT 131 - Introduction to Social Media Marketing Credit(s): 3 \*

### Second Semester Total: 15

### Total Credits: 30

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- Contact your advisor for program information.
- Some courses require satisfactory scores on placement exams before being admitted. See the course descriptions for details.

## Opportunities after Graduation

- This certificate enhances the managerial skills of those already operating or planning to open a small business. Students are also prepared for entry-level positions in small business as an employee or management trainee.

## Advising Information:

For more information about the program, contact the FVCC Student Support Center or the Faculty Advisor.

### Faculty Advisor

Connie Hitchcock, M.B.A.  
BSS 107  
(406) 756-4329  
chitchcock@fvcc.edu

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

## Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Business: Small Business Management, AAS

This program is designed to develop a high level of proficiency as a small business manager or entrepreneur. Upon completion of this program, students will be able to

- Use basic accounting and financial principles to make management and marketing decisions;
- Apply technology and specific software as related to business applications;
- Apply basic business law applications to daily business operations, organizational issues and personnel;
- Explain the advantages and disadvantages of various organizational formats available to the small business owner;
- Develop a basic business plan, marketing plan and financial projections as commonly used in business;
- Apply the basic principles of human resource management and employment law to the overall management of an organization;
- Understand the benefits of various agencies available to assist the small business owner; and
- Explain the pros and cons of various funding options available for starting or expanding a business.

## Required Courses

### First Year - Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- BGEN 204 - Business Fundamentals Credit(s): 3
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ECNS 201B - Principles of Microeconomics Credit(s): 3

### First Semester Total: 17

### Spring Semester

- ACTG 150 - Accounting on Microcomputers Credit(s): 3 \*
- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 235 - Management Credit(s): 3
- BMKT 225 - Marketing Credit(s): 3

### Second Semester Total: 16

## Second Year - Fall Semester

- BFIN 205 - Personal Finance Credit(s): 3
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BGEN 235 - Business Law Credit(s): 4
- BMGT 210 - Small Business Entrepreneurship Credit(s): 3
- BMGT 215 - Human Resource Management Credit(s): 3

### First Semester Total: 16

### Spring Semester

- ACTG 180 - Payroll Accounting Credit(s): 2 \*
- BGEN 299 - Capstone Credit(s): 3 \*
- BMKT 130 - Search Engine Marketing Credit(s): 3
- BMKT 131 - Introduction to Social Media Marketing Credit(s): 3 \*
- BMKT 132 - Writing for Web Marketing Credit(s): 3 \*

### Second Semester Total: 14

### Total Credits: 63

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- An internship is an option for this program. Students must apply for placements the prior semester. See internships for more information and application deadlines.
- All required courses within the degree program must be taken for a letter grade. No courses may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- If you are considering transfer to a four-year college, some of the courses will transfer as electives only. See your advisor.
- If you are going to graduate in the current academic year, you must see an advisor in the Business Division prior to enrolling fall semester.

## Opportunities after Graduation

- Graduates may start their own business, manage a small business for someone else, or work in a small business in a professional role.
- Small businesses account for 97% of Montana businesses and employ 67% of Montana employees.

## Advising Information:

For more information about the program, contact the FVCC Student Support Center or the Faculty Advisor.

### Faculty Advisor

Connie Hitchcock, M.B.A.  
BSS 107  
(406) 756-4329  
chitchcock@fvcc.edu

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

## **Certified Nurse Aide (C.N.A.) Course**

FVCC offers a Nurse's Aide Training course that enables students to obtain a Certified Nurse Aide (C.N.A.) Certificate in 105 hours: NRSB 106 Nursing Assistant Course.

Through hands-on clinical training, the intensive course teaches students the skills and applications required to address the needs of chronically-ill patients in long-term care facilities. Students also gain understanding of basic medical terminology, basic human anatomy and physiology, and the aging process.

At the end of the course, students are given the C.N.A. test approved by the state of Montana. Students who pass the test will obtain their C.N.A. certificate and become eligible to work in long-term care facilities and other health care environments.

Before enrolling in this course, students must get a background check and several immunizations. See [fvcc.edu/cna](http://fvcc.edu/cna) for details.

### **C.N.A. Course Information:**

- NRSB 106 - Nursing Assistant Course Credit(s): 5 \*

### **For more information:**

Contact Pam Klein, C.N.A. Coordinator  
[pklein@fvcc.edu](mailto:pklein@fvcc.edu)  
(406) 756-3625

## Commercial Driver's License (CDL) Training Courses

There is a vital need for truck drivers in the United States, as 78 percent of all products are transported via truck. A 2015 study by the American Trucking Association predicts the trucking industry will need 890,000 new drivers in the next decade.

Most truckers, during their first year on the road, earn an average of \$35,000 a year. After a few years of experience, they can earn average annual salaries between \$45,000-\$50,000. Experienced drivers who own their own trucks earn average salaries of \$100,000 and beyond.

FVCC offers two main options in commercial driver's license training.

Tuition and total costs are estimates based on students who qualify for in-district rates.

This estimate is based on 2018-2019 tuition and is subject to change for the 2019-2020 academic year.

### CDL Professional Truck Driver Class:

| Course  | Title                      | Length  | Tuition (Flathead and Lincoln County Residents) | Equipment Fees | Estimated Total Cost |
|---------|----------------------------|---------|---|----------------|----------------------|
| HEO 103 | Professional Truck Driver* | 8 weeks | \$1,393.00                                      | \$2,000.00     | \$3,393.00           |

\*Includes the basic CDL, 50 hours of drive-time, plus the following endorsements:

- HazMat training for hauling hazardous materials
- Double trailers
- Triple trailers
- Tanker
- School Bus
- Passenger Endorsement

### Additional CDL Classes:

| Class   | Title  | Length  | Tuition (Flathead and Lincoln County Residents) | Equipment Fees | Estimated Total Cost |
|---------|--|---------|---|----------------|----------------------|
| HEO 100 | Commercial Truck Driver (Basic CDL, no endorsements) | 4 weeks | \$674.00  | \$1,800.00     | \$2,474.00           |
| HEO 101 | Commercial Driver's License-Bus (Class B CDL)        | 2 weeks | \$505.50  | \$960.00       | \$1,465.50           |
| HEO 102 | Commercial Truck Driver B to A Transition            | 2 weeks | \$337.00  | \$985.00       | \$1,322.00           |
| HEO 181 | Commercial Truck Driver A to Bus Transition          | 1 week  | \$168.50  | \$410.00       | \$578.50             |

### Steps to Obtain a CDL

#### Prerequisites to apply:

- At least 18 years old
- Current Montana driver's license
- Birth certificate or Passport
- Proof of state residence
- No DUIs in the past five years

#### At least one month before the class:

- Apply to FVCC as a non-degree seeking student at [fvcc.edu/apply/](http://fvcc.edu/apply/).
- Make an appointment to meet with an advisor.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

#### **Student Support Center Advisor**

Will Richards

OT 204

(406) 756-4862

wrichards@fvcc.edu



# Criminal Justice Transfer to Montana State University - Northern

## Associate of Arts Degree

### Suggested course of study for a transfer to Montana State University - Northern

#### Transfer Articulation Agreement

The following program of study has been officially established to prepare students for transfer to **Montana State University - Northern (MSU-N)** with junior standing. Students who complete an Associate of Arts degree at FVCC with grades of "C-" or higher in every course in this program of study, and are accepted into MSU-N, will be granted between 60-90 semester credits toward a Bachelor of Science degree in Criminal Justice at MSU-N. Upon completion of the AA degree at FVCC, students have the option of finishing the BS degree online or on the MSU-N campus. MSU-Northern requires a minor. Click here to see a list of minors available at MSU-N. Speak with an advisor of that minor and take lower division courses in that minor at FVCC. See your advisor for more detailed information about this transfer articulation agreement.

#### First Year

- CJUS 121A - Introduction to Criminal Justice Credit(s): 3
- CJUS 220 - Introduction to Corrections Credit(s): 3
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- M 105M - Contemporary Mathematics Credit(s): 3 \*
- PSCI 210B - Introduction to American Government Credit(s): 3
- PSYX 100A - Introduction to Psychology Credit(s): 4
- SOCI 101A - Introduction to Sociology Credit(s): 3
- SOCI 220GA - Race, Gender and Class Credit(s): 3
- WRIT 101W - College Writing I Credit(s): 3 \*
- Fine Arts (F) Requirement Credit(s): 3

#### First Year Total: 31

#### Second Year

- CHMY 280NL - Forensic Science I Credit(s): 4 \* 1
- CHMY 282NL - Forensic Science II Credit(s): 4 \* 1
- CJUS 200 - Principles of Criminal Law Credit(s): 3  
(Equivalent to CJUS 325 at MSU-Northern.)
- CJUS 230 - Police Organization Credit(s): 3
- CJUS 298 - Internship Credit(s): 3 \* 2
- OR**
- Electives Credit(s): 3
- OR**
- Minor Course Credit(s): 3
- PSYX 240A - Fundamentals of Abnormal Psychology Credit(s): 3 \*
- Elective Credit(s): 3
- Humanities (H) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3
- OR**
- Fine Arts (F) Requirement Credit(s): 3

#### Second Year Total: 29

#### Total Credits: 60 \*\*

<sup>1</sup> The CHMY courses would be advised although any approved NL and N or NL will work.

<sup>2</sup> A student is required to do six credits of Internship to earn the bachelor's degree and could do all six while earning the FVCC associate degree.

\*Indicates prerequisite and/or corequisite needed. Check course description.

\*\*Students could take more courses in their chosen minor.

## Upper Division Courses to Complete at MSU-Northern

Upon completing the first two years of study and earning an AA degree as outlined above, students will apply for admission to MSU-Northern and complete the following courses and credits to finish a Bachelor of Science degree in Criminal Justice:

|   |  |       |
|---|--|-------|
| CJUS 330  | Administration of Juvenile Justice         | 3     |
| CJUS 335  | Victimology                                | 3     |
| CJUS 427  | Deviance and Social Control                | 3     |
| CJUS 498  | Cooperative Education - Internship         | 0-3   |
| COMX 412  | Communication and Conflict                 | 3     |
| PSCI 260  | Introduction to State and Local Government | 3     |
| SOCI 211  | Introduction to Criminology                | 3     |
| SW 423  | Addiction Studies                          | 3     |
| Total credits completed at FVCC prior to transfer |  | 60    |
| Total credits of program courses taken at MUS-N   |  | 21-24 |
| Minor credits                                     |  | 21-24 |
| Elective credits                                  |  | 12-15 |
| Total credits for degree completion               |  | 120   |

#### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Jori Bullemer

LRC 129

(406) 756-3905

jbullemer@fvcc.edu

#### Faculty Advisor

Mike Skinner, M.S.

BSS 128

(406) 756-3870

mkskinner@fvcc.edu

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

# Criminal Justice, AAS

This program provides a well-rounded general education in criminal justice. The curriculum is designed to assist students in preparation for entry-level positions in the criminal justice field. Upon completion of this program, students will

- Define, describe and analyze the various components of the criminal justice system including the courts, law enforcement and corrections;
- Describe, discuss and identify various causes of crime;
- Critically examine various sources of crime data and patterns;
- Describe and assess multicultural communities; and
- Evaluate, plan and formulate the most effective law enforcement actions to reduce crime.

## Required Courses

### First Year - Fall Semester

- CJUS 121A - Introduction to Criminal Justice Credit(s): 3
- CJUS 200 - Principles of Criminal Law Credit(s): 3
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- PSYX 100A - Introduction to Psychology Credit(s): 4
- WRIT 101W - College Writing I Credit(s): 3 \*

### First Semester Total: 16

### Spring Semester

- CJUS 220 - Introduction to Corrections Credit(s): 3
- CJUS 230 - Police Organization Credit(s): 3
- COMX 215 - Negotiations/Conflict Resolution Credit(s): 3
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- SOCI 101A - Introduction to Sociology Credit(s): 3

### Second Semester Total: 16

### Second Year - Fall Semester

- CHMY 280NL - Forensic Science I Credit(s): 4 \*
- CJLE 210 - Comprehensive Investigative Interviewing Credit(s): 3 \*
- CJUS 171 - Introduction to Judicial Function Credit(s): 1 +\*
- CJUS 231 - Criminal Evidence and Procedure Credit(s): 2 +\*
- PSCI 210B - Introduction to American Government Credit(s): 3
- SOCI 220GA - Race, Gender and Class Credit(s): 3

### First Semester Total: 16

### Spring Semester

- CAPP 131 - Basic MS Office Credit(s): 2
- CHMY 282NL - Forensic Science II Credit(s): 4 \*
- CJLE 109C - Police Report Writing Credit(s): 3
- CJUS 227 - Introduction to Policing Credit(s): 3
- SOCI 260 - Introduction to Juvenile Delinquency Credit(s): 3

### Second Semester Total: 15

### Total Credits: 63

+ Indicates courses that must be taken concurrently.

\* Indicates prerequisite and/or corequisite needed. Check course description.

## Optional Course Offering:

- CJUS 298 - Internship Credit(s): 3 \*

## Program Information

- An internship is optional for this program. Students must apply for internship placements for this program the prior semester. See internships for more information and application deadlines.

## Opportunities after Graduation

- Criminal Justice graduates work as bailiffs, security guards, investigators, border patrol agents, and in positions in law enforcement and corrections. Job opportunities in the criminal justice field are greater in Montana compared to the national average.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Jori Bullemer

LRC 129

(406) 756-3905

[jbullemer@fvcc.edu](mailto:jbullemer@fvcc.edu)

### Faculty Advisor

Mike Skinner, M.S.

BSS 128

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# Culinary Arts and Catering, AAS

The Culinary Arts and Catering program provides students with entry-level skills in the culinary arts industry. Students receive instruction in cooking and baking, as well as theoretical knowledge that underlines competency in the field. Additional training involves table services, menus, cost controls, storeroom and stewarding. Upon completion of this program, students will:

- Effectively practice basic and advanced technical skills in food preparation and service;
- Explain and apply sanitation guidelines related to food handling;
- Understand usage, storage, nutrition and identification of product;
- Define and describe classic cooking terminology and methods;
- Gain experience in the proper use and maintenance of professional culinary equipment;
- Employ station organization and line management;
- Demonstrate familiarity with production, layout and workflow of professional kitchens and bakeshops;
- Appreciate the history, evolution, and international diversity of culinary arts;
- Illustrate skill in completing various components of front-of-house operations, particularly those related to food and beverage service and customer relations;
- Implement human resource management strategies to increase motivation and productivity;
- Use basic accounting procedures for creating a financial plan or budget, cost controls, and forecasting or projecting sales; and
- Demonstrate a sense of professionalism and the management skills necessary for successfully operating within a food service facility.

## Required Courses

### Fall Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- CULA 105 - Food Service Sanitation Credit(s): 1 \*
- CULA 110 - Fundamentals of Cooking Credit(s): 5 \*
- CULA 111 - Catering: Fall Credit(s): 1 \*
- CULA 148 - Food and Beverage Service Credit(s): 3 \*
- CULA 198 - Internship: Hospitality Management Credit(s): 1 \*

### First Semester Total: 14

### Spring Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- CULA 111 - Catering: Spring Credit(s): 1 \*
- CULA 122 - Latin Cuisine Credit(s): 3 \*
- CULA 123 - American Regional Cuisine Credit(s): 3 \*
- CULA 165 - Baking and Pastry Credit(s): 5 \*
- CULA 220 - Purchasing and Cost Control Credit(s): 3 \*<sup>1</sup>

### Second Semester Total: 18

<sup>1</sup>M 065~ must be completed as a prerequisite before registering for CULA 220 if required placement test score was not met.

### Summer Semester

- CULA 111 - Catering: Summer Credit(s): 2 \*
- CULA 130 - Asian Cuisine Credit(s): 3 \*
- CULA 157 - Pantry and Garde Manger Credit(s): 3 \*
- CULA 210 - Nutritional Cooking Credit(s): 2 \*
- CULA 240 - Menu Planning Credit(s): 2 \*
- CULA 250 - Hospitality Supervision Credit(s): 3 \*

### Third Semester Total: 15

### Fall Semester

- CULA 111 - Catering: Fall Credit(s): 1 \*
- CULA 131 - World Cuisine Credit(s): 3 \*
- CULA 132 - European Cuisine Credit(s): 3 \*
- CULA 140 - Modernist Cuisine Credit(s): 3 \*
- CULA 152 - Culinary Practicum Credit(s): 1 \*
- CULA 198 - Internship: Hospitality Management Credit(s): 1 \*

### Fourth Semester Total: 12

### Spring Semester

- BMGT 210 - Small Business Entrepreneurship Credit(s): 3
- CULA 111 - Catering: Spring Credit(s): 1 \*
- CULA 198 - Internship: Hospitality Management Credit(s): 1 \*
- CULA 280 - Senior Practicum Credit(s): 3 \*
- CULA 299 - Capstone Credit(s): 3 \*
- Electives Credit(s): 3

### Fifth Semester Total: 14

### Total Credits: 73

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Before applying, students must first be accepted to Flathead Valley Community College, or, if currently a high school student, supply all application materials and a letter from a school counselor verifying readiness for graduation until such time an official transcript is supplied in May/June.
- Students must apply for select admission to this program. Applications are available after October 1 from the Admissions and Registration Office in Blake Hall, Room 111, and will be reviewed and accepted on an ongoing basis.
- The priority application deadline is March 30. However, applications will be accepted until June 1, if space is available.
- Admission to the program is based upon the following:
  1. Proof of a score of 17 or higher on the FVCC Reading Placement test OR an official copy of a transcript proving a "C-" or better in a 100-level or above college course requiring college-level reading.
  2. Proof of a score of 11 or higher on the FVCC Writing Placement test OR an official copy of a transcript proving a "C-" or better in BMGT 205, WRIT 095~, WRIT 101, or equivalent.
  3. Proof of a score of 55 (Level 1) or higher in Intro/Beginning Algebra on the FVCC Math Placement test OR an official copy of a transcript proving a "C-" or better in M 065~, its equivalent, or a higher math course.

*Students will be able to access placement test registration through the Student Portal and Eagle Online for Reading and Writing only. Students who cannot come to the FVCC campus to take the Pearson MyMathTest math placement test can either access this remotely with a test proctor, or use high school math placement alternatives (contact Carlin Hale at 406-756-3880 for more information).*
  4. Educational Performance in lieu of placement scores (see previous bullets).
  5. Experience in the culinary field, if any.
  6. Well-written essay (details provided within application packet).
  7. References from two people who are not relatives who have knowledge of the student's work ethic, maturity, and passion for culinary arts.

## Program Information

- Fees for this program are higher than average. Please see the Program Advisor for more details.
- Students must earn a "C-" or higher in every course in order to graduate from this program.

## Opportunities after Graduation

- Graduates will work in restaurants, resorts, schools, hotels and health care facilities. The Flathead Valley offers many job opportunities in the Culinary Arts industry.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Program Advisor.

## Student Support Center Advisor

Carlin Hale  
LRC 129  
(406) 756-3886  
chale@fvcc.edu

# Early Childhood Education, AAS

The Early Childhood Education program provides students with the theoretical and practical knowledge needed to create environments that will maximize the developmental and learning potential of all young children (birth to age 8) using developmentally appropriate practices as a foundation for program planning. Issues of diversity, inclusion and professionalism are intricately woven throughout all of the coursework. Students will have an opportunity to gain experience and knowledge through hands-on participation in early education settings, including but not limited to the FVCC Early Childhood Center (on-campus lab school). Upon completion of this program, students will

- Apply child development theory to practice;
- Observe, record, and assess child growth and development;
- Implement developmentally appropriate curriculum;
- Incorporate developmentally appropriate, trauma-informed, resilience-building, guidance strategies;
- Integrate health, safety, and nutrition practices according to local, state and national standards;
- Provide a respectful, diverse and inclusive program;
- Use interpersonal skills to develop respectful relationships with children and adults;
- Demonstrate professional and ethical standards; and
- Advocate for children, families and the profession.

## Transfer Articulation Agreement

Through a partnership with The University of Montana Western, students who complete this Early Childhood Education AAS program have the opportunity to transfer to The University of Montana-Western's Bachelor of Science in Early Childhood Education program with junior status. In order to qualify, students must maintain a 3.0 GPA in the courses designated below with a "T," earning a "B-" or higher in each course. Students may re-take these courses only one time.

## Required Courses

### First Year - Fall Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- EDEC 108 - Introduction to Early Childhood Education Credit(s): 3 T
- EDEC 245 - Early Childhood Developmental Themes Credit(s): 3 T
- EDU 270 - Instructional Technology Credit(s): 3
- PSYX 100A - Introduction to Psychology Credit(s): 4

### First Semester Total: 16

### Spring Semester

- EDEC 210 - Meeting the Needs of Families Credit(s): 4 1 T
- EDEC 235 - Creative Art for the Developing Child Credit(s): 2 \* 1 T
- EDEC 281 - Early Childhood Curriculum Design and Implementation I Credit(s): 3 \* 1 T
- EDEC 295x - Early Childhood Fieldwork/Practicum I Credit(s): 3 \* T
- SOCI 101A - Introduction to Sociology Credit(s): 3
- WRIT 101W - College Writing I Credit(s): 3 \*

### Second Semester Total: 18

## Second Year - Fall Semester

- EDEC 135 - Language and Literature for Young Children Credit(s): 3 \* T
- EDEC 230 - Positive Child Guidance Credit(s): 3 \* T
- EDEC 231 - Positive Child Guidance Lab Credit(s): 1 \* T
- EDEC 249 - Infant/Toddler Development and Group Care Credit(s): 4 T
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- PSYX 230A - Developmental Psychology Credit(s): 3 \*

### First Semester Total: 18

### Spring Semester

- EDEC 250 - Math and Science Curriculum for Early Childhood Credit(s): 3 \* 2 T
- EDEC 252 - Music and Movement for Young Children Credit(s): 2 \* 2 T
- EDEC 260 - Administration of Early Childhood Programs Credit(s): 3 \* 2 T
- EDEC 295y - Early Childhood Fieldwork/Practicum II Credit(s): 3 \* T
- HSTA 102B - American History II Credit(s): 4
- Electives Credit(s): 1-3

### Second Semester Total: 16-18

### Total Credits: 68-70

<sup>1</sup> Offered spring semester of odd years only.

<sup>2</sup> Offered spring semester of even years only.

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- Many EDEC courses are offered alternate spring semesters, with the exception of EDEC 295, which is offered every spring. Most EDEC fall courses are offered every fall. Please check with your advisor to ensure you are planning appropriately.

## Opportunities after Graduation

- The demand for well-educated early childhood educators continues to increase. Program graduates are qualified to practice in a variety of early education and care settings, including early childhood education programs, child care centers, family home care settings, preschools and public school classrooms as primary grade para-educators. Continued education and experience provides opportunities to become teacher trainers, early childhood consultants, early education specialists and program administrators. The AAS degree in Early Childhood Education also articulates into UM-Western's BS program in Early Childhood Education and/or Pre-K-3 Education.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Jori Bullemer

LRC 129

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[jbullemer@fvcc.edu](mailto:jbullemer@fvcc.edu)

### Faculty Advisor

Eliza Thomas, M.A.

BSS 120

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# Education: Elementary K-8 Transfer to The University of Montana - Missoula

## Associate of Arts Degree

### Suggested course of study for a transfer to The University of Montana - Missoula:

#### Transfer Articulation Agreement

The following 2 + 2 program of study is established to prepare students for acceptance into the UM Elementary Education program with junior standing. Students who complete the following program of study at FVCC will be prepared to apply for acceptance into the Teacher Education Program at UM. Students may transfer to the UM Missoula campus to complete the Bachelor's degree or complete it through the UM Distance Learning Cohort based at FVCC. A new cohort of distance learning students begins each fall on the FVCC campus for students who have completed FVCC's program of study and have been accepted into the University of Montana and the Teacher Education program. See your FVCC advisor for more information.

#### First Year - Fall Semester

- BIOB 126NL - General Science: Earth and Life Science Credit(s): 5  
(Equivalent to BIOB 226 at UM-Missoula)
- M 132M - Number and Operations for K-8 Teachers Credit(s): 3 \*
- WRIT 101W - College Writing I Credit(s): 3 \*  
OR
- WRIT 201W - College Writing II Credit(s): 3 \*
- Communications (C) Requirement Credit(s): 3  
OR
- Fine Arts (F) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3  
OR
- Fine Arts (F) Requirement Credit(s): 3

#### First Semester Total: 17

#### Spring Semester

- EDU 297 - Methods: K-8 Art Credit(s): 3  
(Equivalent to ARTZ 302 at UM-Missoula)
- HSTA 255B - Montana History Credit(s): 3
- M 133M - Geometry and Geometric Measurement for K-8 Teachers Credit(s): 3 \*
- NASX 105G - Introduction to Native American Studies Credit(s): 3
- PHSX 126NL - General Science: Physical Science Credit(s): 5 \*  
(Equivalent to PHSX 225 at UM-Missoula)

#### Second Semester Total: 17

#### First Year Total: 34

#### Second Year - Fall Semester

- EDU 297 - Methods: K-8 Music Credit(s): 3  
(Equivalent to MUSE 397 at UM-Missoula)
- GPHY 121GA - Human Geography Credit(s): 3  
OR
- GPHY 141GA - Geography of World Regions Credit(s): 3
- HEE 233 - Health Issues of Children and Adolescents Credit(s): 3 <sup>1</sup>
- LIT 110H - Introduction to Literature Credit(s): 3
- PSCI 210B - Introduction to American Government Credit(s): 3

#### First Semester Total: 15\*\*

#### Spring Semester

- EDU 231 - Literature and Literacy for Children Credit(s): 3  
(Equivalent to EDU 331 at UM-Missoula)
- HEE 202 - Instructional Strategies in Elementary Physical Education Credit(s): 3  
(Equivalent to HEE 302 at UM-Missoula)
- HSTA 101B - American History I Credit(s): 4  
OR
- HSTA 102B - American History II Credit(s): 4
- M 234 - Higher Mathematics for K-8 Teachers Credit(s): 3 \*
- THTR 239CF - Creative Drama and Dance for K-8 Credit(s): 3

#### Second Semester Total: 16\*\*

#### Second Year Total: 31

#### Total AA Credits: 65

<sup>1</sup> Students who plan to transfer to UM-Missoula may alternatively take HEE 330 at UM for 1 credit. Students planning to enroll in the FVCC Distance Learning cohort should take HEE 233 at FVCC.

\*Indicates prerequisite and/or corequisite needed. Check course description.

\*\* Students must apply to the School of Education during their final semester at FVCC: September 15 when finishing fall semester and February 15 when finishing spring semester.

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

#### Note:

EDU 201 Introduction to Education with Field Experience is not required for transfer to UM-Missoula, though may help students determine their career path.

EDU 222 Educational Psychology and Child Development is required at UM-Missoula. Students may take it at FVCC as time allows.

EDU 270 - Instructional Technology may be taken for UM's EDU 370 Integrating Technology into Education as time allows.

**Upper Division Courses to Complete through UM-Missoula**

Upon completing the first two years of study and earning an AA degree from FVCC, students will apply for acceptance into UM-Missoula's College of Education and Human Sciences and complete the following courses to finish the bachelor's of arts degree:

NOTE: Courses for each level are co-requisites; they must be taken concurrently. All courses in one level must be successfully completed prior to moving into the next level.

| <b>Level 1 Learning and Instruction</b>                    |            |
|--|------------|
| EDU 222 Educational Psychology and Child Development       | 3 credits  |
| EDU 338 Academic Interventions                             | 3 credits  |
| EDU 395 Clinical Experience: Level 1                       | 1 credits  |
| EDU 397 Methods: PK-4: Early Numeracy                      | 3 credits  |
| EDU 397 Methods: PK-3: Early Literacy                      | 3 credits  |
| <b>Level 2: Critical Thinking and Problem Solving</b>      |            |
| EDU 339 Methodss: PK-8 Language Arts                       | 3 credits  |
| EDU 346 Exceptionalities                                   | 3 credits  |
| EDU 370 Integrating Technology into Education              | 3 credits  |
| EDU 395 Clinical Experience: Level 2                       | 1 credit   |
| EDU 407 Ethics and Policy Issues                           | 3 credit   |
| ENST 472 General Science: Conservation Education           | 3 credits  |
| <b>Level 3: Pedogogy and Content Knowledge</b>             |            |
| EDU 340 Classroom Management                               | 3 credits  |
| EDU 451 Clinical Experience: Level 3                       | 1 credit   |
| EDU 497 Methods: Teaching and Assessing 5-8 Mathematics    | 3 credits  |
| EDU 497 Methods: Teaching and Assessing K-8 Social Studies | 3 credits  |
| EDU 497 Methods: Teaching and Assessing K-8 Science        | 3 credits  |
| EDU 497 Methods: Teaching and Assessing K-8 Reading        | 3 credits  |
| <b>Level 4 Student Teaching</b>                            |            |
| EDU 494 Reflective Practice and Applied Research           | 1 credit   |
| EDU 495 Student Teaching K-8                               | 14 credits |

**Advising Information:**

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| <b>Student Support Center Advisor</b> | <b>Faculty Advisor</b> | <b>Faculty Advisor</b> |
|---------------------------------------|------------------------|------------------------|
| Jori Bullemer                         | Eliza Thomas, M.A.     | Laura VanDeKop, M.S.   |
| LRC 129                               | BSS 120                | RH 144                 |
| (406) 756-3905                        | (406) 756-4865         | (406) 756-3998         |
| jbullemer@fvcc.edu                    | ethomas@fvcc.edu       | lvandekop@fvcc.edu     |
| u                                     |                        |                        |

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

## Education: Secondary Education - Mathematics transfer to Salish Kootenai College

In Montana, those desiring to become secondary teachers (grades 5-12) must pursue a bachelor degree in a certifiable major, often with a minor, from a four-year college or university. Most four-year institutions in Montana offer secondary teaching degrees but offerings for majors and minors vary from school to school, so students must carefully select their courses. Secondary education students can complete two years of study at FVCC in most majors.

### Associate of Science Degree

#### Suggested course of study for a transfer to Salish Kootenai College:

##### First Year - Fall Semester

- COMX 111C - Introduction to Public Speaking Credit(s): 3
- M 105M - Contemporary Mathematics Credit(s): 3 \*
- M 171M - Calculus I Credit(s): 5 \*
- WRIT 101W - College Writing I Credit(s): 3 \*
- Social Sciences (A) Requirement Credit(s): 3

##### First Semester Total: 17

##### Spring Semester

- EDU 222 - Educational Psychology and Child Development Credit(s): 3
- M 172M - Calculus II Credit(s): 5 \*
- M 221M - Introduction to Linear Algebra Credit(s): 4 \*
- WRIT 201W - College Writing II Credit(s): 3 \*
- Fine Arts (F) Requirement Credit(s): 3
- **OR**
- Humanities (H) Requirement Credit(s): 3

##### Second Semester Total: 18

##### Second Year - Fall Semester

- HEE 233 - Health Issues of Children and Adolescents Credit(s): 3
- M 273M - Multivariable Calculus Credit(s): 5 \*
- STAT 216M - Introduction to Statistics Credit(s): 4 \*
- Natural Science (N or NL) Requirement Credit(s): 3-4 <sup>1</sup>
- Social Sciences (B) Requirement Credit(s): 3-5

##### Third Semester Total: 18-21

##### Spring Semester

- M 242 - Methods of Proof Credit(s): 3 \*
- M 274M - Introduction to Differential Equations Credit(s): 4 \*
- NASX 232G - Montana Indians: Cultures, Histories, Current Issues Credit(s): 3
- PHSX 205NL - College Physics I Credit(s): 5 \*
- **OR**
- PHSX 220NL - Physics I (with Calculus) Credit(s): 5 \*
- Humanities (H) Elective Credit(s): 3

##### Fourth Semester Total: 19

##### Total Credits: 72-74

<sup>1</sup> SKC recommends one of the Natural Science electives be PHSX 205 or PHSX 220.

\*Indicates prerequisite and/or corequisite required. Check course description.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

#### Student Support Center Advisor

Russ Lamson

LRC 129

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rlamson@fvcc.edu

#### Faculty Advisor

Don Hickethier, Ph.D

RH 172

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dhickethier@fvcc.edu

The information on all transfer programs is subject to change. Students should see their advisor to explore possibilities not specifically listed in the program.

The Associate of Science (AS) degree requires 60 credits at FVCC, and the Bachelor of Science (BS) degree at Montana University System (MUS) colleges and universities requires 120 credits. FVCC students can usually earn as many as 75-85 credits in preparation for many transfer majors, thus reducing the number of credits required for the BS degree at MUS schools. Also, by earning the AS degree from FVCC, students will have satisfied the lower division General Education Core (see General Education Requirements for requirements) for all MUS institutions and will not be required to meet additional lower division general education core requirements upon transfer. The suggested course load in AS programs is rigorous and is recommended for only the most prepared students. A more moderate semester credit load can be achieved by taking general education core courses during summer terms or completing one or two additional semesters at FVCC before transfer.



# Electrical Apprentices, CTS

Completion of this program satisfies the Montana Department of Labor and Industry requirement for the educational component of the electrical apprenticeship program, and it is intended to be only for currently registered electrical apprentices. Please note that this program is not eligible for Federal financial aid. The program is scheduled for a succession of eight semesters, fall and spring, followed by one summer semester. In conjunction with the required work experience, this program provides students the training necessary to work in the field of electrical wiring in residential, commercial, and industrial applications. Upon completion of this program, students will:

- Read simple wiring diagrams;
- Read, interpret, and produce solutions to application problems at the introductory technical mathematics level;
- Recognize and then act using the skills needed in a situation requiring first aid and/or CPR;
- Relate, in detail, the NEC to residential wiring methods;
- Effectively use ammeters, voltmeters, ohmmeters, and phase detectors in testing and troubleshooting DC and AC motors;
- Describe the construction of a single-phase transformer including parts and relationships;
- Describe safety practices that relate to all types of rigging;
- Prepare a cost estimate for a residential, commercial, or industrial application;
- Employ appropriate procedures to safely and correctly install various electrical circuits and raceways; and
- Determine the proper wire and cable installations required by the NEC for various residential, commercial, and industrial applications.

## First Year - Fall Semester

- ELCT 100 - Introduction to Electricity Credit(s): 3

## First Semester Total: 3

### Spring Semester

- ELCT 116 - Math for Electricians Credit(s): 2

## Second Semester Total: 2

### Second Year - Fall Semester

- ELCT 133 - Basic Wiring Credit(s): 3 \*

## First Semester Total: 4

### Spring Semester

- ELCT 139 - Electric Code Study - Residential Credit(s): 3 \*

## Second Semester Total: 3

### Third Year

#### Fall Semester

- ELCT 130 - Electric Motors and Generators Credit(s): 3

## First Semester Total: 3

### Spring Semester

- CSTN 135 - Basic Rigging Credit(s): 1
- ELCT 225 - Transformers Credit(s): 2

## Second Semester Total: 3

### Fourth Year

#### Fall Semester

- ELCT 204 - Electrical Planning and Estimating Credit(s): 3 \*

## First Semester Total: 3

### Spring Semester

- ELCT 233 - Commercial Wiring Lab Credit(s): 3 \*
- ELCT 236 - Conduit, Raceways, and Code Calculations Lab Credit(s): 3 \*

## Second Semester Total: 6

### Summer Semester

- ELCT 255 - Journeyman Electrician's Exam Preparation Credit(s): 1

## Third Semester Total: 1

## Total Credits: 28

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- Because the students in this program are working apprentices, normal course prerequisites are waived.
- This program is approved by the Montana Department of Labor and Industry.

### Admission Guidelines

- This program differs from the Electrical Technology program in that only persons who are already working as electrical apprentices may register for the courses in this program. There is no other admission requirement.
- The courses in this program are open only to registered apprentices.

### Additional Costs

- Most of the courses in this program have a lab fee. At present, those fees total approximately \$445 for all courses. Check the FVCC course schedule for current course lab fees.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

#### Student Support Center Advisor

Will Richards

OT 204

(406) 756-4862

wrichards@fvcc.edu

### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

## Electrical Technology, CAS, AAS

Both the Associate of Applied Science (AAS) and Certificate of Applied Science (CAS) provide the training necessary to enter the field of electrical wiring in residential, commercial, and industrial construction sites. Upon successful completion of the first two semesters, the student has met the requirements to earn a CAS. Successful completion of all four semesters meets the requirement to earn an AAS degree. Graduates are eligible for advanced placement into a registered apprentice position. Upon completion of this program, students will

- Analyze, configure, troubleshoot, and assist in designing and measuring electrical and electronic circuits and systems;
- Relate the National Electrical Code to wiring designs and explain how that design ensures safety;
- Discuss the advantages and disadvantages of three-phase and single-phase systems;
- Determine the proper grounding techniques to employ for various electrical devices and installations;
- Communicate clearly and effectively in speaking and writing with peers, engineers, teams, and customers using appropriate technologies including audio, visual, and graphics;
- Synthesize the theory and operation of transformers with single and three-phase connections and alternating current machines; and
- Demonstrate the assembly and installation of photovoltaic systems.

### Required Courses

#### First Year - Fall Semester

- ELCT 110 - Basic Electricity I Credit(s): 4
- ELCT 120 - Basic Industrial Controls Credit(s): 2
- ELCT 133 - Basic Wiring Credit(s): 3
- ELCT 137 - Electrical Drafting Credit(s): 2
- ETEC 100 - Introduction to Maker Skills Credit(s): 3
- M 114 - Extended Technical Mathematics Credit(s): 3 \*

#### First Semester Total: 17

#### Spring Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ELCT 102 - Electrical Fundamentals II Credit(s): 4 \*
- ELCT 111 - Electric Meters and Motors Credit(s): 3
- ELCT 139 - Electric Code Study - Residential Credit(s): 3 \*
- ELCT 251 - Introduction to Photovoltaic Systems Credit(s): 4\*

#### Second Semester Total: 17

\*Indicates prerequisite and/or corequisite needed. Check course description.

### CAS Total Credits: 34

#### Second Year - Fall Semester

- ELCT 103 - Electrical Code Study/Codeology Credit(s): 3 \*
- ELCT 204 - Electrical Planning and Estimating Credit(s): 3 \*
- ELCT 205 - Electrical Design and Lighting Credit(s): 3
- ELCT 210 - Advanced Current Theory Credit(s): 5 \*
- ELCT 241 - Electric Motor Controls Credit(s): 3
- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1

#### First Semester Total: 18

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*<sup>1</sup>  
**OR**
- WRIT 101W - College Writing I Credit(s): 3 \*<sup>1</sup>
- ELCT 211 - AC Measurements Credit(s): 3 \*
- ELCT 233 - Commercial Wiring Lab Credit(s): 3 \*
- ELCT 236 - Conduit, Raceways, and Code Calculations Lab Credit(s): 3 \*
- ELCT 239 - Grounding and Bonding Fundamentals Credit(s): 3
- ELCT 247 - Medium and High Voltage Credit(s): 3

### Second Semester Total: 18

### AAS Total Credits: 70

<sup>1</sup>WRIT 101 is the preferred option.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- Recognized by the Montana Department of Labor as an apprentice compliant program of study. All provisions apply only to Montana registered apprentices and registered Montana sponsors.
- Based upon successful completion of the FVCC 2-year Electrical Technology program, a maximum of 3,000 OJT hours may be approved by the Registration Agency Program, provided the sponsor elects to grant the 3,000 OJT credit hours or a portion thereof to the apprentice based on demonstration of skills. If the one-year CAS has been completed, the number of OTJ credit hours is 1,500.
- Any work hours or related instruction credit granted - which may be as many as 15 courses for the AAS and as many as five courses for the CAS - toward the registered apprenticeship program requirements is within the purview of the sponsor and approved by the program based upon documentation.
- For apprenticeship information, contact the Montana Department of Labor Apprentice Training Board at (406) 444-3556.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

#### Student Support Center Advisor

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### Gainful Employment

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## Electronics Technician, CTS, CAS, AAS

This program is designed to give students the technical skills, as well as interpersonal skills, that will prepare them for placement into electronics technician positions. Students gain theoretical knowledge and hands-on experience with both basic and advanced electronics including circuits, controllers, and the machine to system interface. Upon completion of this program, students will:

- Analyze, configure, troubleshoot and assist in designing and measuring electrical and electronic circuits and systems;
- Read and describe the characteristics of basic circuitry and compute circuit capacity;
- Demonstrate wiring design and identify basic electrical components;
- Troubleshoot analog and digital circuits using standard and specialized test equipment;
- Program and troubleshoot PLC systems for basic system control;
- Describe how various industrial processes are coalesced using advanced PLC techniques;
- Demonstrate the use of electrical, electronic solid state, digital, and pneumatic transmitters in practical process control instrumentation; and
- Effectively communicate during problem solving and troubleshooting.

### Electronics Technician Tier I, CTS

#### First Year - Fall Semester

- ELCT 110 - Basic Electricity I Credit(s): 4 \*
  - ELCT 120 - Basic Industrial Controls Credit(s): 2
  - ELCT 133 - Basic Wiring Credit(s): 3 \*
  - ELCT 137 - Electrical Drafting Credit(s): 2
  - ETEC 100 - Introduction to Maker Skills Credit(s): 3
  - M 114 - Extended Technical Mathematics Credit(s): 3 \*
- OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*

#### First Semester Total: 17

### Electronics Technician Tier II, CTS

#### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*<sup>1</sup>
- OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
  - ELCT 102 - Electrical Fundamentals II Credit(s): 4 \*
  - ELCT 111 - Electric Meters and Motors Credit(s): 3
  - ETEC 130 - Panel Wiring and Soldering Credit(s): 2
  - PHSX 110 - Applied Physics Credit(s): 4 \*

#### Second Semester Total: 16

<sup>1</sup> This course may be substituted with WRIT 122, Introduction to Business Writing, which is offered at other colleges in the Montana University System.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### CAS Total Credits: 33

Upon completion of Tiers I and II, a student has met the requirements for a CAS, but may not receive both a Tier II CTS and a CAS.

### Electronics Technician Tier III, CTS

#### Second Year - Fall Semester

- ELCT 210 - Advanced Current Theory Credit(s): 5 \*
- ELCT 250 - Programmable Logic Controllers Credit(s): 4
- ETEC 245 - Digital Electronics Credit(s): 4 \*
- ETEC 250 - Solid State Electronics I Credit(s): 4 \*
- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1

#### First Semester Total: 18

### Electronics Technician Tier IV, CTS

#### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*<sup>1</sup>
- OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
  - ELCT 211 - AC Measurements Credit(s): 3 \*
  - ETEC 280 - Advanced Electronics Credit(s): 4 \*
  - ETEC 285 - Advanced Programmable Controllers Credit(s): 4 \*
  - ETEC 299 - Capstone: Electronics Credit(s): 3 \*

#### Second Semester Total: 17

<sup>1</sup>This course may be substituted with WRIT 122, Introduction to Business Writing, which is offered at other colleges in the Montana University System.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### AAS Total Credits: 68

Upon completion of Tiers I, II, III, and IV, a student has met the requirements for an AAS degree, but may not receive both a Tier IV CTS and an AAS degree.

#### Optional Course Offerings:

- CSCI 111 - Programming with Java I Credit(s): 4
- CSCI 113 - Programming with C++ I Credit(s): 4 \*

#### Program Information

- Each completed Tier's courses constitute a certificate in that Tier. A student may apply for graduation in Tier I, II, III, or IV. Or, a student may apply for graduation with a Certificate of Applied Science in Electronics Technician upon completion of Tiers I and II. Alternatively, a student may apply for graduation with an AAS degree in Electronics Technician upon completion of all four Tiers.
- If BMGT 205 is completed in Tier II, then COMX 115 must be completed in Tier IV. Students who wish to graduate with an AAS degree must complete both BMGT 205 and COMX 115.

#### Opportunities after Graduation

- Typical wages for electronics technicians are above average both state and nationally.

#### Advising Information:

For more information about this program, contact the Program Advisor.

#### Student Support Center Advisor

Will Richards  
OT 204  
(406) 756-4862  
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# Emergency Medical Technician (E.M.T.) Course

E.M.T. is considered the desired level of medical training by many Emergency Medical Services transport agencies. E.M.T.s bring emergency medical care to victims of emergencies to stabilize their condition and safely transport them to an appropriate care facility. With a combination of classroom work, skills lab, and practical experience, students prepare for the National Registry of Emergency Medical Technicians (NREMT) examinations.

## Emergency Medical Technician Course

- ECP 130 - Emergency Medical Technician Credit(s): 6

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Karrie Bolivar  
LRC 129  
(406) 756-3880  
kbolivar@fvcc.edu

#### Faculty Advisor

Ryan Pitts, B.S.N.  
BC 126-B  
(406) 756-3901  
rpitts@fvcc.edu

# Firearms Finishing, CTS

This certificate program is oriented toward metal finishing and work with gunstocks. This certificate will prepare the student for an entry-level position in the firearms industry or provide a building block toward owning a business as a gunsmith. The program contains both lecture and significant hands-on training designed to instill an understanding of metal finishing and stock finishing techniques. Practical application of knowledge in a safe and professional manner is stressed. Emphasis is placed upon the completion of several gunsmith projects using a combination of both hand and machine tools. The student will acquire the basic knowledge to get started customizing guns. Students who complete the program leave with a collection of specialty tools for the repair or customization of firearms. Upon completion of this program, students will:

- Demonstrate proficiency in bluing metal parts by producing finished projects;
- Demonstrate how to properly prepare gun parts and apply selected finish to industry standard;
- Demonstrate the ability to inlet a barreled action to a semi-inlet stock blank;
- Use appropriate procedures to weld assigned projects;
- Demonstrate the techniques required to repair damaged checkering;
- Bed a synthetic stock blank to a barreled action;
- Demonstrate how to properly fit a 1911 pistol for reliable function;
- Demonstrate how to make custom sights and scope mounts and correctly install them; and
- Demonstrate the basics of running a milling machine: facing, slotting, slitting, boring, fly-cutting.

## Required Courses

### Fall Semester

- FT 200 - Introduction to Stock Inletting and Bedding Credit(s): 3 \*
- FT 201 - Gun Bluing Credit(s): 3 \*
- FT 202 - Advanced Metal Finishing Credit(s): 3 \*
- MCH 134 - Introduction to Mills Credit(s): 4

### First Semester Total: 13

### Spring Semester

- FT 203 - Advanced Firearms Modification Credit(s): 3 \*
- FT 204 - Pistolsmithing Credit(s): 3 \*
- FT 205 - Checkering Credit(s): 3 \*
- FT 206 - Synthetic Stocks Credit(s): 3 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*

### Second Semester Total: 16

### Total Credits: 29

\*Indicates prerequisites and/or corequisites needed. Check course description.

## Admission Guidelines

- Prior to acceptance into the program, applicants must submit to and pass a background check to prove their eligibility to own and possess firearms.
- Application deadline is July 1.

## Program Information

- Loaded firearms are not permitted on campus.
- Students are expected to know and adhere to all firearms safety protocols as provided in required prerequisite course FT 100.
- Working knowledge of blueprint reading and precision measuring is recommended prior to enrolling.

## Additional Costs

- Students are expected to provide firearms and tools. See details on program information website.

## Opportunities after Graduation

- Firearms technology employment opportunities following graduation vary from self-employment to working for established firearms manufacturers. The growth of the firearms industry indicates an increase in the need for people skilled in the operation, modification, repair and manufacture of firearms. Employment opportunities may be enhanced by combining training in firearms technology with advanced machining training.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Will Richards

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# Firearms Technologies, AAS

This program provides a solid foundation in theory, design, function, and finishing of firearms. The finishing aspect is oriented toward metal finishing and work with gunstocks. This program prepares the student for an entry-level position in the firearms industry and provides a foundation for owning a business as a gunsmith. The program contains both lecture and significant hands-on training designed to instill an understanding of the design and function of today's firearms as well as an understanding of metal finishing and stock finishing techniques. Practical application of knowledge in a safe manner is stressed. Emphasis is placed on the completion of several projects using a combination of hand and machine tools. Students acquire the basic knowledge to begin customizing guns. Upon completion of this program, students will

- Use precision measuring tools such as micrometers, calipers, indicators, and various specialized gauges;
- Operate manual lathe machines to perform gunsmithing services or custom work;
- Diagnose and correct a variety of firearms malfunctions, thus restoring the firearm to a safe and useable condition;
- Explain the operation of various firearms systems;
- Articulate firearms accuracy and the many variables that affect it;
- Demonstrate proficiency in bluing metal parts by producing finished projects;
- Demonstrate how to inlet a barreled action to a semi-inlet stock blank;
- Demonstrate the techniques required to repair damaged checkering;
- Bed a synthetic stock blank to a barreled action; and
- Demonstrate how to make custom sights and scope mounts and correctly install them.

## Required Courses

### First Year - Fall Semester

- FT 100 - Introduction to Firearms Credit(s): 1 \* <sup>1</sup>
- FT 111 - Firearms Theory I Credit(s): 3 \*
- FT 120 - Bench Metal Techniques Credit(s): 3 \*
- FT 131 - Firearms Repair I Credit(s): 3 \*
- M 114 - Extended Technical Mathematics Credit(s): 3 \*
- MCH 132 - Introduction to Engine Lathes Credit(s): 4 \*

### First Semester Total: 17

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3
- FT 112 - Firearms Theory II Credit(s): 3 \*
- FT 125 - Machine Tools for the Gunsmith Credit(s): 4 \*
- FT 132 - Firearms Repair II Credit(s): 3 \*
- FT 140 - Precision Rifle Building Credit(s): 3 \*

### Second Semester Total: 16

### Second Year - Fall Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- FT 200 - Introduction to Stock Inletting and Bedding Credit(s): 3 \*
- FT 201 - Gun Bluing Credit(s): 3 \*
- FT 202 - Advanced Metal Finishing Credit(s): 3 \*
- MCH 134 - Introduction to Mills Credit(s): 4

### First Semester Total: 16

### Spring Semester

- FT 203 - Advanced Firearms Modification Credit(s): 3 \*
- FT 204 - Pistolsmithing Credit(s): 3 \*
- FT 205 - Checkering Credit(s): 3 \*
- FT 206 - Synthetic Stocks Credit(s): 3 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*

### Second Semester Total: 16

### Total Credits: 65

<sup>1</sup> FT 100 is mandatory and will be held the first three days of the semester.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Optional Course Offerings:

- MCH 125 - Introduction to CNC Lathe Operations Credit(s): 3 \*
- MCH 127 - Introduction to CNC Mill Operations Credit(s): 3 \*
- MCH 222 - Advanced CNC Mill Operations Credit(s): 3 \*
- MCH 224 - Advanced CNC Lathe Operations Credit(s): 3 \*

### Program Information

- Loaded firearms are not permitted on campus.
- Students are expected to know and adhere to all firearms safety protocols as provided in required course FT 100.
- Working knowledge of blueprint reading and precision measuring is recommended prior to enrolling.

### Admission Guidelines

- Prior to acceptance into the program, applicants must submit to and pass a background check to prove their eligibility to own and possess firearms.
- Application priority deadline is May 1.
- Final application deadline is July 1.

### Additional Costs

- Students are expected to provide firearms and tools.

### Opportunities after Graduation

- Firearms technology employment opportunities following graduation vary from self-employment to working for established firearms manufacturers. The growth of the firearms industry indicates an increase in the need for people skilled in the operation, modification, repair and manufacture of firearms. Employment opportunities may be enhanced by combining training in firearms technology with advanced machining training.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

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OT 204  
(406) 756-4862  
wrichards@fvcc.edu

# Firearms Technologies, CTS

This certificate program is designed to provide a solid foundation in theory, design, and function of firearms. This certificate will prepare the student for an entry-level position in the firearms industry or provide a building block toward owning a business as a gunsmith. This program contains both lecture and significant hands-on training designed to instill an understanding of the design and function of today's firearms. Practical application of knowledge in a safe and professional manner is stressed. Emphasis is placed upon the completion of several gunsmith projects from blueprints and schematics using a combination of both hand and machine tools. The student will acquire the basic knowledge to get started customizing guns. This program provides a clear understanding of firearms function, enabling graduates to assist with design or tolerance issues in a manufacturing environment. Students who complete the program leave with a collection of specialty tools for the repair or customization of firearms. Upon completion of this program, students will:

- Use precision measuring tools such as micrometers, calipers, indicators and various specialized gauges as they apply to firearms;
- Operate manual lathe machines, including common work holding set-ups to perform gunsmithing services or custom work;
- Prepare metal to a desired finished state;
- Diagnose and troubleshoot a variety of firearms along with the knowledge base of how to correct malfunctions, restoring the firearm to safe and reliable condition;
- Recognize and understand the operation of various firearms systems; and
- Understand firearms accuracy and the many variables that affect it.

## Required Courses

### Fall Semester

- FT 100 - Introduction to Firearms Credit(s): 1 \* <sup>1</sup>
- FT 111 - Firearms Theory I Credit(s): 3 \*
- FT 120 - Bench Metal Techniques Credit(s): 3 \*
- FT 131 - Firearms Repair I Credit(s): 3 \*
- MCH 132 - Introduction to Engine Lathes Credit(s): 4 \*

### First Semester Total: 14

### Spring Semester

- FT 112 - Firearms Theory II Credit(s): 3 \*
- FT 125 - Machine Tools for the Gunsmith Credit(s): 4 \*
- FT 132 - Firearms Repair II Credit(s): 3 \*
- FT 140 - Precision Rifle Building Credit(s): 3 \*

### Second Semester Total: 13

### Total Credits: 27

\*Indicates prerequisite and/or corequisite needed. Check course description.

<sup>1</sup> FT 100 is mandatory and will be held the first three days of the semester.

## Admission Guidelines

- Applicants must have the ability to own and possess firearms.
- Prior to acceptance into the program, applicants must submit to and pass a background check to prove their eligibility to own and possess firearms.
- Application Deadline: July 1.

## Program Information

- Loaded firearms are not permitted on campus.
- Students are expected to know and adhere to all firearms safety protocols as provided in required course FT 100.
- Working knowledge of blueprint reading and precision measuring is recommended prior to enrolling.

## Additional Costs

- Students are expected to provide firearms and tools. See details on program information website.

## Opportunities after Graduation

- Firearms technology employment opportunities following graduation vary from self-employment to working for established firearms manufacturers. The growth of the firearms industry indicates an increase in the need for people skilled in the operation, modification, repair and manufacture of firearms. Employment opportunities may be enhanced by combining training in firearms technology with advanced machining training.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Will Richards

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wrichards@fvcc.edu

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# Forestry Transfer to The University of Montana-Missoula

Students who intend to seek a career in Forestry can complete most of the first two pre-professional years of study at FVCC to ready themselves for the program at **The University of Montana - Missoula**. UM's College of Forestry and Conservation prepares graduates for professions as forest and land managers who deal with production of forest-based goods, recreation, timber, water, range, and wildlife issues.

Natural Resources Conservation and Management classes at FVCC emphasize interaction with practicing professionals, and students have ample opportunity to observe field management situations. Most courses have strong field trip components. There is an increasing emphasis on the understanding and use of high technology such as Global Positioning Systems (GPS) and Geographic Information Systems (GIS).

## Transfer Articulation Agreement

The following program of study has been established in conjunction with the W.A. Franke College of Forestry and Conservation at The University of Montana-Missoula (UM) to prepare students for transfer. Students who complete the following Associate of Science program of study at FVCC with a grade of "C-" or higher in every course, and are accepted into The University of Montana-Missoula, will enter with junior standing. Once matriculated at UM, FVCC students maintaining continuous enrollment under this agreement will be afforded the same treatment and protection as other UM students. See your advisor for more information about this transfer articulation agreement.

## Associate of Science Degree

### Suggested course of study for a transfer to The University of Montana - Missoula:

#### First Year - Fall Semester

- BIOB 160NL - Principles of Living Systems Credit(s): 4
- M 152M - Precalculus Algebra Credit(s): 3 \*
- NRSM 161 - Natural Resource Measurements I Credit(s): 5  
(Equivalent to FORS 202 at UM)
- WRIT 101W - College Writing I Credit(s): 3 \*
- Social Sciences (A) Requirement Credit(s): 3

#### First Semester Total: 18

#### Spring Semester

- ECNS 201B - Principles of Microeconomics Credit(s): 3
- ENSC 245NL - Soils Credit(s): 4  
(Equivalent to NRSM 210 at UM)
- STAT 216M - Introduction to Statistics Credit(s): 4 \*  
(Equivalent to FORS 201 at UM)
- Global Issues (G) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3

#### Second Semester Total: 17

#### Second Year - Fall Semester

- CHMY 121NL - Introduction to General Chemistry Credit(s): 4 \*
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- FORS 120 - Forestry Navigation Credit(s): 2  
(Equivalent to FORS 130 at UM)
- GPHY 284 - Introduction to GIS Science and Cartography Credit(s): 4  
(Equivalent to FORS 250 at UM)
- M 162M - Applied Calculus Credit(s): 4 \* <sup>1</sup>

#### First Semester Total: 18

#### Spring Semester

- FORS 230 - Forest Fire Management Credit(s): 3
- FORS 232 - Forest Insects and Diseases Credit(s): 3 \*
- FORS 251 - Photogrammetry and Remote Sensing Credit(s): 3 \*  
(Equivalent to FORS 351 at UM)
- WRIT 121C - Introduction to Technical Writing Credit(s): 3 \*  
**OR**
- WRIT 201W - College Writing II Credit(s): 3
- Fine Arts (F) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3

#### Second Semester Total: 15

#### Total Credits: 65 \*\*

<sup>1</sup> Take M 153 if not completing M 162 at FVCC.

\*Indicates prerequisite and/or corequisite needed. Check course description.

#### \*\*If time permits:

To further broaden their educational experience, students may consider taking the following courses:

- BIOO 235NL - Rocky Mountain Flora Credit(s): 3
- ENSC 272 - Water Resources Credit(s): 4
- PHSX 205NL - College Physics I Credit(s): 5 <sup>1</sup> \*
- SRVY 245 - GPS Mapping Credit(s): 2 \*
- WILD 270N - Wildlife Habitat and Conservation Credit(s): 3



### Upper Division Courses to Complete at UM-Missoula

Upon completing the first two years of study and earning an AS degree as outlined above, students will apply for admission to UM-Missoula and complete the following courses and credits to finish a Bachelor of Science degree in Forestry per the transfer articulation agreement:

| Course   | Title                                      | Credits |
|----------|--|---------|
| BIOO 105 | Introduction to Botany                     | 3       |
| FORS 241 | Dendrology                                 | 3       |
| FORS 320 | Forest Environment Economics               | 3       |
| FORS 330 | Forest Ecology                             | 3       |
| FORS 340 | Forest Product Manufacture                 | 3       |
| FORS 341 | Timber Harvesting and Roads                | 3       |
| FORS 349 | Practice of Silviculture                   | 3       |
| FORS 440 | Forest Stand Management                    | 3       |
| FORS 481 | Forest Planning                            | 3       |
| NRSM 385 | Watershed Hydrology                        | 3       |
| NRSM 422 | Natural Resource Policy and Administration | 3       |
|          | Professional Electives                     | 18      |

Additional requirements and regulations apply per the Bachelor of Science in Forestry department. Click here for more information: [B.S. Forestry: 4-year Plan](#).

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor                         | Faculty Advisor  | Faculty Advisor  |
|--|--|--|
| Russ Lamson  | Tim Eichner, M.S.  | Christina Relyea, Ph.D.                                |
| LRC 129<br>(406) 756-3885                              | RH 155<br>(406) 756-3898                                 | BSS 103<br>(406) 756-3946                              |
| <a href="mailto:rlamson@fvcc.edu">rlamson@fvcc.edu</a> | <a href="mailto:teichner@fvcc.edu">teichner@fvcc.edu</a> | <a href="mailto:crelyea@fvcc.edu">crelyea@fvcc.edu</a> |

The Associate of Science (AS) degree requires 60 credits at FVCC, and the Bachelor of Science (BS) degree at Montana University System (MUS) colleges and universities requires 120 credits. FVCC students may earn as many as 75-85 credits in preparation for some transfer majors, thus reducing the number of credits required for the BS degree at MUS schools. Also, by earning the AS degree from FVCC, students will have satisfied the lower division General Education Core (see General Education Requirements for requirements) for all MUS institutions and will not be required to meet additional lower division general education core requirements upon transfer. The suggested course load in AS programs is rigorous and is recommended for only the most prepared students. A more moderate semester credit load can be achieved by taking general education core courses during summer terms or completing one or two additional semesters at FVCC before transfer.

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

# Geospatial Technology, CTS

Knowledge of geospatial technology is an increasingly sought-after skill in industries ranging from natural resources to public health. This certificate program will develop skills needed to successfully use Geographic Information Systems (GIS) software and other related technologies in a professional setting. This program contains significant hands-on experiences in GIS, Global Positioning System (GPS) mapping, remote sensing, and unmanned aerial mapping systems, as well as individual capstone projects. This certificate will complement any major at FVCC and provide an opportunity for working professionals to develop geospatial skills required of their positions. Upon completion of this program, students will:

- Use a variety of GIS application programs to create and analyze geospatial data;
- Acquire geospatial data from GPS devices, existing Earth observation satellites, and unmanned aerial mapping systems;
- Design database structures to store and retrieve data;
- Present cartographic results in both print and web formats; and
- Implement independent projects which will include formulating spatial questions, identifying and acquiring necessary data, developing and implementing appropriate workflows, and summarizing results in both written and map formats.

## Fall Semester

- GPHY 150 - Introduction to Geospatial Technology and Land Information Credit(s): 2
- GPHY 250 - Web GIS Credit(s): 2
- GPHY 284 - Introduction to GIS Science and Cartography Credit(s): 4
- SRVY 248 - Unmanned Aerial Mapping Systems Credit(s): 2
- SRVY 290 - Undergraduate Research: Projects in GIS Credit(s): 2 \*

## First Semester Total: 12

## Spring Semester

- CSCI 111 - Programming with Java I Credit(s): 4  
**OR**
- CSCI 240 - Databases and SQL Credit(s): 3  
**OR**
- SRVY 280 - Land Surveying Computers Credit(s): 2 \*
- GPHY 286 - Advanced GIS Credit(s): 4 \*
- SRVY 245 - GPS Mapping Credit(s): 2 \*
- SRVY 275 - Analytic Photogrammetry and Remote Sensing Credit(s): 3 \*
- SRVY 290 - Undergraduate Research: Projects in GIS Credit(s): 2 \*

## Second Semester Total: 13-15

## Total Credits: 25-27

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Program Information

- Students employed in a professional setting may be able to satisfy the project requirements of the SRVY 290 credits within their current work responsibilities.
- Students in this program are expected to have a basic level of computer proficiency.
- Courses in this program include lab fees, approximately \$20 per course.

## Opportunities after Graduation

- The uses of geospatial technology are widespread and diverse, and as a result it is identified by the Department of Labor as a high-growth industry. Geospatial technology is used by anyone in need of understanding spatial relationships including the following professions: forestry, wildlife biology, environmental science, hydrology, planning, public health, criminal justice, homeland security, emergency management, business, and engineering, among many others. The national geospatial technology market is growing at an annual rate of almost 35 percent (Geospatial Information & Technology Association).

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

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### Faculty Advisor

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# Goldsmithing and 3D Jewelry Design, CAS, AAS

The Goldsmithing and 3D Jewelry Design program prepares students for careers as independent studio artists, designers, and studio technicians within the jewelry industry. Students will become proficient in computer modeling, fabrication, casting, stone setting, forming, repair, and design. Upon completion of this program, students will

- Fabricate jewelry;
- Design and produce jewelry using CAD/CAM;
- Cast jewelry in various forms;
- Utilize a variety of stone setting techniques;
- Perform a variety of surface treatments;
- Forge and form unique components using both anticlastic and synclastic forming techniques;
- Use a hydraulic press and die making for forming;
- Perform basic jewelry repair; and
- Exhibit a professional jewelry portfolio representing various aspects of the jewelry industry.

## Required Courses

### First Year - Fall Semester

- ARTJ 210F - Jewelry and Metalsmithing I Credit(s): 3
- ARTJ 231 - 3D Jewelry Design and Modeling I Credit(s): 4
- ARTJ 250 - Wax Modeling and Casting I Credit(s): 3
- ARTZ 106F - Visual Language-2-D Foundations Credit(s): 3
- M 094~ - Quantitative Reasoning Credit(s): 4 \*

### First Semester Total: 17

### Spring Semester

- ARTJ 211F - Jewelry and Metalsmithing II Credit(s): 3 \*
- ARTJ 232 - 3D Jewelry Design and Modeling II Credit(s): 4 \*
- ARTJ 251 - Wax Modeling and Casting II Credit(s): 3 \*
- ARTJ 260 - Stone Setting I Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*

### Second Semester Total: 16

### CAS Total Credits: 33\*\*

\*Indicates prerequisite and/or corequisite needed. Check course description.

\*\*Upon completion of the CAS program, students may choose to continue on to earn a Goldsmithing and 3D Jewelry Design, AAS degree.

### Second Year - Fall Semester

- ARTJ 212 - Jewelry and Metalsmithing III Credit(s): 3 \*
- ARTJ 220 - Forging and Smithing I Credit(s): 3 \*
- ARTJ 233 - 3D Jewelry Design and Modeling III Credit(s): 4 \*
- ARTJ 270 - Surface Embellishments I Credit(s): 3 \*
- ARTZ 105F - Visual Language-Drawing Credit(s): 3

### First Semester Total: 16

### Spring Semester

- ARTJ 213 - Jewelry and Metalsmithing IV Credit(s): 3 \*
- ARTJ 221 - Forging and Smithing II Credit(s): 3 \*
- ARTJ 234 - 3D Jewelry Design and Modeling IV Credit(s): 4 \*
- ARTJ 261 - Stone Setting II Credit(s): 3 \*
- ARTJ 280 - Jewelry Repair I Credit(s): 3 \*
- GDSN 274 - Portfolio Presentation Credit(s): 1 \*

### Second Semester Total: 17

### AAS Total Credits: 66

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Suggested Course Offering:

- BMGT 210 - Small Business Entrepreneurship Credit(s): 3

### Program Information

- All courses within this degree program must be taken for a letter grade. No course may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- Students considering transfer to a four-year college: some of the courses will transfer as electives only. See your advisor.

### Opportunities after Graduation

- This program prepares students for careers as independent studio artists, designers, and studio technicians within the jewelry industry.
- This program will prepare students for high-tech CAD/CAM positions in the jewelry industry.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Amber Paulson  
LRC 129  
(406) 756-3882  
apaulson@fvcc.edu

### Faculty Advisor

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### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Graphic Design, AAS

Specific skills learned in this program include graphic design methodologies, such as the design process, output production, and presentation. Photography, design, drawing and video editing are core competencies. The students will learn Adobe software: Photoshop, Illustrator, InDesign, and Premiere. In addition, students will spend the second year learning web design and development. Students will also have a solid foundation in creating marketing plans, and writing contracts. Upon completion of this program, students will

- Demonstrate skills, techniques, and manipulation of tools and equipment necessary for studio graphic design that meet industry standards;
- Interpret and incorporate formal elements of design into digital images;
- Know and understand the impact of graphic communications on society;
- Design and develop professional websites; and
- Create a digital and print portfolio reflecting knowledge, techniques, and creativity gained during the student's course of study.

## Required Courses

### First Year - Fall Semester

- ARTZ 105F - Visual Language-Drawing Credit(s): 3
- ARTZ 106F - Visual Language-2-D Foundations Credit(s): 3
- GDSN 130 - Typography Credit(s): 3 \*
- GDSN 148 - Digital Illustration I Credit(s): 3
- GDSN 250 - Graphic Design I Credit(s): 3

### First Semester Total: 15

### Spring Semester

- ARTZ 108F - Visual Language-3-D Foundations Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- **OR**
- WRIT 101W - College Writing I Credit(s): 3 \*
- GDSN 248 - Digital Illustration II Credit(s): 3 \*
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- PHOT 154F - Exploring Digital Photography Credit(s): 3

### Second Semester Total: 16

### Second Year - Fall Semester

- BMKT 225 - Marketing Credit(s): 3
- ECNS 201B - Principles of Microeconomics Credit(s): 3
- **OR**
- ECNS 202B - Principles of Macroeconomics Credit(s): 3
- GDSN 149 - Digital Imaging I Credit(s): 3
- GDSN 200 - Introduction to Desktop Publishing Credit(s): 3 \*
- MART 231 - Interactive Web I Credit(s): 4

### First Semester Total: 16

### Spring Semester

- GDSN 230 - Video Editing Credit(s): 4
- GDSN 247 - Digital Portfolio Preparation Credit(s): 4 \*
- GDSN 249 - Digital Imaging II Credit(s): 3 \*
- ITS 298 - Internship/Cooperative Education Credit(s): 3 \*
- **OR**
- Approved Elective Credit(s): 3
- MART 232 - Interactive Web II Credit(s): 4 \*

### Second Semester Total: 18

### Total Credits: 65

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Admission Guidelines

- Students in this program are expected to have a basic level of computer proficiency.

### Program Information

- An internship is optional for this program. Students must apply for internship placements for this program the prior semester. See Internships for more information and application deadlines.

### Additional Costs

- Students may choose to purchase the software and a drawing tablet for personal use at home to complete assignments.

### Opportunities after Graduation

- This program prepares students for a global market where they can start work in the industry or a freelance business offering services in illustration, graphic design, web design, 3D animation, or digital imaging.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Jori Bullemer  
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### Faculty Advisor

Dawn Rauscher, M.Ed.  
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# Graphic Design, CAS

Specific skills learned in this program include graphic design methodologies, such as the design process, output production and presentation. The certificate prepares students to gain competence with the industry standards for graphic design. The students will learn the Adobe software: Photoshop, Illustrator, and InDesign. Color, resolution, input and output, production process, photography, and drawing are core competencies. Upon completion of this program, students will

- Demonstrate skills, techniques, and manipulation of tools and equipment necessary for studio graphic design that meet industry standards;
- Interpret and incorporate formal elements of design into digital images;
- Know and understand the impact of graphic communications on society;
- Design and develop professional websites; and
- Compile a digital and print portfolio reflecting knowledge, techniques and creativity gained during the student's course of study.

## Required Courses

### Fall Semester

- GDSN 130 - Typography Credit(s): 3 \*
- GDSN 148 - Digital Illustration I Credit(s): 3
- GDSN 149 - Digital Imaging I Credit(s): 3
- GDSN 250 - Graphic Design I Credit(s): 3
- MART 231 - Interactive Web I Credit(s): 4

### First Semester Total: 16

### Spring Semester

- GDSN 200 - Introduction to Desktop Publishing Credit(s): 3 \*
- GDSN 247 - Digital Portfolio Preparation Credit(s): 4 \*
- GDSN 248 - Digital Illustration II Credit(s): 3 \*
- GDSN 249 - Digital Imaging II Credit(s): 3 \*
- M 094~ - Quantitative Reasoning Credit(s): 4 \*

### Second Semester Total: 17

### Total Credits: 33

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Students in this program are expected to have a basic level of computer proficiency.

## Opportunities after Graduation

- This program prepares students for a global market where they can find work as production artists, illustrators, graphic designers, photographers or web designers.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

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### Faculty Advisor

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## Gainful Employment

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# Health Care Office Management, AAS

(This program is also offered at the Lincoln County Campus.)

The duties of the health care office manager can vary greatly depending on the type, size and structure of the medical practice. The health care office manager must be knowledgeable in all aspects of medical office operations including billing, coding, collections, appointment scheduling and medical records maintenance. A successful office manager is efficient, organized, resourceful, and possesses strong verbal and written communication and interpersonal skills, as well as the ability to make good decisions. Upon completion of this program, students will

- Understand medical terminology;
- Possess knowledge of the human anatomy;
- Use interpersonal skills necessary to connect with coworkers and customers;
- Understand all aspects of a medical office including coding, scheduling, billing and EHR; and
- Demonstrate leadership skills.

## Required Courses

### First Year - Fall Semester

- AHMS 105 - Health Care Delivery Credit(s): 3
- AHMS 127 - Medical Document Formatting Credit(s): 2 \*
- AHMS 144 - Medical Terminology Credit(s): 3
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- OR
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4

### First Semester Total: 15

### Spring Semester

- AHMS 106 - Healthcare Professional Credit(s): 1
- AHMA 250 - Electronic Medical Procedures Credit(s): 3
- AHMS 108 - Health Data Content Structure Credit(s): 3
- AHMS 210 - Basic Medical Coding Credit(s): 3 \*
- AHMS 220 - Medical Office Procedures Credit(s): 4 \*
- BGEN 110 - Applied Business Leadership Credit(s): 3
- OR
- COMX 215 - Negotiations/Conflict Resolution Credit(s): 3

### Second Semester Total: 17

### Second Year - Fall Semester

- ACTG 101 - Accounting Procedures I Credit(s): 4
- AHMS 156 - Medical Billing Fundamentals Credit(s): 3
- AHMS 208 - Health Care Statistics Credit(s): 3 \*
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- CAPP 158 - MS Access Credit(s): 3

### First Semester Total: 17

### Spring Semester

- AHMS 175 - Medical Law and Ethics Credit(s): 3
- AHMS 252 - Computerized Medical Billing Credit(s): 2
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 235 - Management Credit(s): 3
- BMIS 270 - MIS Foundations for Business Credit(s): 3
- CAPP 156 - MS Excel Credit(s): 3

### Second Semester Total: 17

### Total Credits: 66

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- An internship is an option for this program. Students must apply for placements for this program the prior semester. See Internships for more information and application deadlines.
- Some classes may only be offered online.

### Opportunities after Graduation

- The Montana Department of Labor and Industry projected that employment in the medical office professions would grow by 16.9% from 2008-2018. This is much higher than the 11% growth rate projected for all occupations. The aging of the population will continue to drive employment increases in all occupations related to health care.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor | Faculty Advisor (Kalispell Campus) | Faculty Advisor (Lincoln County Campus) |
|--------------------------------|------------------------------------|---|
| Jori Bullemer                  | Brenda Rudolph, M.B.A.             | Chad Shilling, M.B.A.                   |
| LRC 129                        | BSS 106                            | LCC Room #105                           |
| (406) 756-3905                 | (406) 756-3858                     | (406) 293-2721, ext. 233                |
| jbullemer@fvcc.edu             | brudolph@fvcc.edu                  | cshilling@fvcc.edu                      |

# Heating, Ventilation, Air-conditioning and Refrigeration (HVAC) Apprentices, CTS

Completion of this program satisfies the Montana Department of Labor and Industry requirement for the educational component of the HVAC apprenticeship program. The program is intended for currently registered HVAC apprentices only and is scheduled for a succession of five semesters. In conjunction with the required work experience, this program provides students the training necessary to work in the field of heating, ventilation, air-conditioning, and refrigeration in residential and commercial applications. Upon completion of this program, students will:

- Differentiate among the use of ammeters, voltmeters, watt meters, and multi-meters in testing and trouble-shooting electrical components;
- Summarize the functional aspects of various electromechanical control systems;
- Explain the fundamentals of operating a boiler;
- Explain the significance of heating and cooling loads;
- Interpret detailed instructions for electrical circuits; and
- Explain the concepts of a refrigerant cycle diagram and label each of the basic components.

## First Year - Fall Semester

- ELCT 130 - Electric Motors and Generators Credit(s): 3
- HVC 101 - HVAC Fundamentals Credit(s): 2

## First Semester Total: 5

### Spring Semester

- ELCT 111 - Electric Meters and Motors Credit(s): 3
- HVC 120 - Boiler Operator Certification Credit(s): 2

## Second Semester Total: 5

### Summer Semester

- HVC 130 - HVAC Electrical Credit(s): 3
- HVC 140 - HVAC Systems I Credit(s): 3

## Third Semester Total: 6

### Second Year - Fall Semester

- HVC 230 - HVAC Electrical II Credit(s): 3 \*
- HVC 250 - HVAC Refrigeration I Credit(s): 3 \*

## First Semester Total: 6

### Spring Semester

- HVC 240 - HVAC Systems II Credit(s): 3 \*
- HVC 252 - HVAC Refrigeration II Credit(s): 3 \*

## Second Semester Total: 6

## Total Credits: 28

## Program Information

- This program is sponsored by local Refrigeration Service Engineers Society (RSES) employers.
- Students in this program must earn a "C-" or better in all HVC classes.

## Certifications

- NATE Certified Curriculum
- RSES membership program

## Opportunities after Graduation

- Graduates may work as HVAC technicians, refrigeration specialists or facility maintenance technicians. Growth in the construction industry has led to increased demand for workers in this area. Experience may lead to management and self-employment opportunities.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

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## Gainful Employment

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# Heavy Equipment Operator, CTS

This program will prepare the student to enter the equipment operations career field as an entry-level operator. The program contains instruction and "hands-on" operation experience on bulldozers, backhoes, track excavators, wheel loaders, Skidsteers, motor graders, rollers, tractors, water tankers, dump trucks, and equipment transports. Students will also gain familiarity in interpreting construction grade stakes, safety procedures, and equipment maintenance as they apply to Heavy Equipment Operation. Class "A" Commercial Driver's License (CDL) training and testing are an integral part of this program. Upon completion of this program, students will:

- Operate heavy equipment (dozer, grader, loader, excavator, backhoe, skidsteer, roller, tractor) and drive commercial trucks over 26,000 lbs. to National Center for Construction Education Research (NCCER) and Department of Transportation (DOT) standards in a job site environment;
- Maintain and service heavy equipment;
- Read and interpret grade and survey markings and stakes; and
- Apply critical thinking skills to evaluate and solve problems.

## Required Courses

### Fall Semester

- HEO 100 - Commercial Truck Driver Credit(s): 4  
OR
- HEO 120 - Heavy Equipment: Service and Operation Credit(s): 4
- HEO 105 - Introduction to Heavy Equipment Operator Credit(s): 8

### First Semester Total: 12

### Spring Semester

- HEO 110 - Heavy Equipment Operator II Credit(s): 12 \*
- WLDG 111 - Welding Theory I Practical Credit(s): 3

### Second Semester Total: 16

### Total Credits: 28

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Optional Course Offerings:

- HEO 198 - Heavy Equipment Operator Internship Credit(s): 10 \*
- WLDG 122 - Welding Theory III Practical Credit(s): 4 \*
- WLDG 185 - Welding Qualification Test Preparation Credit(s): 3 \*

## Admission Guidelines

- Students must satisfactorily pass a physical and drug screening medical exam.

## Program Information

- An internship is optional for this program.
- Students must apply for internship placements for this program the prior semester.
- This program is sponsored by the Montana Contractors' Association and is NCCER accredited.
- The courses in this program are offered fall, spring, and summer semesters. Students may enter the program at the beginning of any semester.
- Fees for this program are higher than average. Please see the program director for more details.

## Certifications

- The National Center for Construction Education and Research Department of Transportation (DOT) Commercial Driver's License, Class "A"
- First Aid/CPR Certification

## Opportunities after Graduation

- Today's construction industry offers various job opportunities. As the population grows, so does the demand for skilled construction, excavation workers and commercial truck drivers. From highway and road construction to residential housing, from industrial development to recreational facility and park maintenance, the chances of employment for someone skilled in heavy equipment operation are good.
- The employer can be a national construction firm or a local company, a private utility company or a city, county or State Department of Transportation. Whatever the case, one can expect stable employment with respectable wages.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

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## Gainful Employment

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# Industrial Machine Technology, CTS, CAS, AAS

## Industrial Machine Technology

The Industrial Machine Technology program provides instruction in the theory and operation of mills and lathes, both manual and CNC, other tools related to the machinist trade, and associated programming. Upon completion of this program, students will:

- Apply quantitative skills in conjunction with trade handbook information to solve problems;
- Effectively communicate during the problem solving process;
- Use tools and equipment to form and machine various materials in a manufacturing laboratory environment;
- Describe precision measurement and quality control procedures;
- Use various precision measuring tools including a coordinate measuring machine;
- Demonstrate advanced machining operations that are performed on CNC machines, and also Swiss CNC machines;
- Produce advanced programs using G code; and
- Demonstrate advanced techniques that are used on manual mills and lathes.

## Machinist Technician Tier I, CTS

### First Year - Fall Semester

- M 114 - Extended Technical Mathematics Credit(s): 3 \*  
**OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*
- MCH 101 - Introduction to Manufacturing Processes Credit(s): 1
- MCH 120 - Blueprint Reading and Interpretation for Machining Credit(s): 3
- MCH 129 - Machine Quality Control and Precision Measurements Credit(s): 3
- MCH 132 - Introduction to Engine Lathes Credit(s): 4 \*
- MCH 134 - Introduction to Mills Credit(s): 4

**First Semester Total: 18**

## Machinist Technician Tier II, CTS

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \* <sup>1</sup>  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- DDSN 135 - Solidworks Credit(s): 3
- MCH 102 - Introduction to Manufacturing Materials Credit(s): 2
- MCH 122 - Introduction to CAM Credit(s): 3
- MCH 125 - Introduction to CNC Lathe Operations Credit(s): 3 \*
- MCH 127 - Introduction to CNC Mill Operations Credit(s): 3 \*

**Second Semester Total: 17**

<sup>1</sup> This course may be substituted with WRIT 122, Introduction to Business Writing, which is offered at other colleges in the Montana University System.

**Industrial Machine Technology CAS Total Credits: 35**

Note: Upon completion of Tiers I and II, a student has met the requirements for a CAS, but may not receive both a Tier II Certificate and a CAS.

## Machinist Technician Tier III, CTS

### Second Year - Fall Semester

- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1
- MCH 199 - Capstone I: Machinist Credit(s): 2 \*
- MCH 220 - Geometric Dimensioning and Tolerancing Credit(s): 3 \*
- MCH 221 - Advanced Manual Mill Credit(s): 3 \*
- MCH 222 - Advanced CNC Mill Operations Credit(s): 3 \*
- MCH 225 - Machinery's Handbook Credit(s): 3
- MCH 226 - Advanced CAD/CAM Credit(s): 3 \*

**First Semester Total: 18**

## Machinist Technician Tier IV, CTS

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \* <sup>1</sup>  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- MCH 223 - Advanced Manual Lathe Credit(s): 3 \*
- MCH 224 - Advanced CNC Lathe Operations Credit(s): 3 \*
- MCH 227 - Swiss CNC and Multi-axis Systems Credit(s): 4 \*
- MCH 299 - Capstone II: Machinist Credit(s): 3 \*

**Second Semester Total: 16**

<sup>1</sup> This course may be substituted with WRIT 122, Introduction to Business Writing, which is offered at other colleges in the Montana University System.  
\* Indicates prerequisite and/or corequisite needed. Check course description.

**Industrial Machine Technology AAS Total Credits: 69**

Note: Upon completion of Tiers I, II, III and IV, a student has met the requirements for an AAS, but may not receive both a Tier IV CTS and an AAS.

## Gainful Employment

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**Optional Course Offering:**

- MCH 298 - Internship: Advanced Manufacturing Credit(s): 1 \*

**Admission Guidelines**

- It is recommended that students complete the Machinist Technician Tier I program before entering the Tier II program.

**Program Information**

- Both BMGT 205 and COMX 115 must be completed by students who want to graduate with an AAS degree.
- Each completed Tier's courses constitute a certificate in that Tier. A student may apply for graduation in Tier I, II, III, or IV. Or, a student may apply for graduation with a Certificate of Applied Science in Industrial Machine Technology upon completion of Tiers I and II. Alternatively, a student may apply for graduation with the AAS degree in Industrial Machine Technology upon completion of all four Tiers.
- An internship is optional for this program. Students must apply for internship placements for this program the prior semester. See internships for more information and application deadlines.

**Opportunities after Graduation**

- CNC machinists work in machinery and machine tool manufacturing, small arms manufacturing, and machine shops. Growth in the manufacturing industry and the need to replace an aging workforce is expected to provide opportunities for graduates.
- In Montana, employment of CNC machinists is projected to increase by 44% between 2010 and 2020. Both state and national projected employment growth exceeds the rate of overall projected employment growth.

**Advising Information:**

For more information about this program, contact the FVCC Student Support Center.

**Student Support Center Advisor**

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# Industrial Maintenance, CTS, CAS, AAS

Industrial maintenance refers to the career path of providing maintenance, troubleshooting and repair, and improvement of complex machines and automation systems to support manufacturing and other industries. The industrial maintenance field has experienced and is projected to grow at above average rates during the next 10 years. An industrial mechanic employs a wide range of skills including electrical and electronics, machining, welding, and hydraulics in order to maintain industrial systems. Upon completion of this program, students will:

- Identify characteristics of various motor types and proper employment of each type;
- Employ procedures to determine the electrical materials, equipment, and application of code and regulations to support various electrical installations for both commercial and industrial projects;
- Troubleshoot analog and digital circuits using standard and specialized test equipment;
- Employ mill and lathe systems in building designated projects;
- Proficiently weld on a single plate, and two connecting pieces of ferrous metals;
- Demonstrate proficiency in welding SMAW or GMAW in desired position;
- Explain the principles of hydraulics; and
- Identify hydraulic devices and symbols and explain their functions.

## Industrial Maintenance Tier I, CTS

### First Year - Fall Semester

- ELCT 100 - Introduction to Electricity Credit(s): 3
- ELCT 110 - Basic Electricity I Credit(s): 4 \*
- ELCT 137 - Electrical Drafting Credit(s): 2  
**OR**
- MCH 120 - Blueprint Reading and Interpretation for Machining Credit(s): 3  
**OR**
- WLDG 117 - Blueprint Reading and Welding Symbols Credit(s): 3
- M 114 - Extended Technical Mathematics Credit(s): 3 \*  
**OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*
- MCH 132 - Introduction to Engine Lathes Credit(s): 4 \*

### First Semester Total: 16-17

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Industrial Maintenance Tier II, CTS

### Spring Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- DDSN 135 - Solidworks Credit(s): 3  
**OR**
- ETEC 130 - Panel Wiring and Soldering Credit(s): 2
- ELCT 111 - Electric Meters and Motors Credit(s): 3
- MCH 127 - Introduction to CNC Mill Operations Credit(s): 3 \*
- WLDG 111 - Welding Theory I Practical Credit(s): 3

### Second Semester Total: 14-15

\*Indicates prerequisite and/or corequisite needed. Check course description.

## CAS Total Credits: 30-32

Note: Upon completion of Tiers I and II, a student has met the requirements for a CAS, but may not receive both a Tier II CTS and a CAS.

## Industrial Maintenance Tier III, CTS

### Second Year - Fall Semester

- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1
- ELCT 250 - Programmable Logic Controllers Credit(s): 4
- ETEC 245 - Digital Electronics Credit(s): 4 \*
- PPT 201 - Introduction to Hydraulic and Pneumatic Systems Credit(s): 4
- WLDG 185 - Welding Qualification Test Preparation Credit(s): 3 \*
- Electives from Optional Course Offerings Credit(s): 2-4\*\*

### First Semester Total: 18-20

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Industrial Maintenance Tier IV, CTS

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*  
**OR**
- WRIT 101W - College Writing I Credit(s): 3 \*
- ELCT 247 - Medium and High Voltage Credit(s): 3
- PPT 202 - Advanced Hydraulic and Pneumatic Systems Credit(s): 4 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*  
**OR**
- WLDG 210 - Pipe Welding Credit(s): 4 \*
- Electives from Optional Course Offerings Credit(s): 2-4\*\*

### Second Semester Total: 16-18

\*Indicates prerequisite and/or corequisite needed. Check course description.

## AAS Total Credits: 64-70

### Note:

Upon completion of Tiers III and IV, a student has met the requirements for the AAS, but may not receive both the Tier IV CTS and an AAS.

**\*\*Optional Course Offerings:**

- ELCT 102 - Electrical Fundamentals II Credit(s): 4 \*
- MCH 101 - Introduction to Manufacturing Processes  
Credit(s): 1
- MCH 102 - Introduction to Manufacturing Materials  
Credit(s): 2
- MCH 125 - Introduction to CNC Lathe Operations  
Credit(s): 3 \*
- MCH 129 - Machine Quality Control and Precision  
Measurements Credit(s): 3
- MCH 134 - Introduction to Mills Credit(s): 4
- WLDG 100 - Introduction to Welding Fundamentals  
Credit(s): 2
- WLDG 122 - Welding Theory III Practical Credit(s): 4 \*
- WLDG 145 - Fabrication Basics I Credit(s): 2 \*

**Program Information**

- Students who transfer from Electronics or Machining or Welding after their first year will have taken seven credits of math, communications, and workplace safety. They will need to make up 7-11 credits of coursework from the first year of Industrial Maintenance. The exceptions are ELCT 100 and ELCT 110, which are offered in the fall and summer semesters.
- Industries such as large-scale manufacturing including wood products, energy generation, petroleum refining, chemical processing, automotive, aviation/aerospace, rail, ship, and trucking all employ mechanical systems that require maintenance as well as repair. This program provides a student with the necessary instruction to meet the wide range of challenges encountered in these industries by maintenance personnel.
- Upon completion of Tiers I and II, a student has met the requirements for the Certificate of Applied Science (CAS), but may not receive both a Tier II Certificate of Technical Studies (CTS) and the CAS. Similarly, upon completion of Tiers I, II, III, and IV, a student has met the requirements for the AAS degree, but may not receive both the Tier IV CTS and the AAS degree.

**Opportunities after Graduation**

- Industrial maintenance is projected to grow 15-30% over the next 10 years in Montana.
- Industrial maintenance workers typically earn wages above the median.

**Advising Information:**

For more information about this program, contact the FVCC Student Support Center.

**Student Support Center Advisor**

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# Information Technology and Security, AAS

The Information Technology and Security program deals with the application of computers, networks and security to business problems. The program provides in-depth study of the use of computer applications, systems design and analysis, and the application of the computer as a functional tool within an organization and techniques and tools that can be used to keep these assets safe. Upon completion of this program, students will

- Configure, use, apply security and troubleshoot desktop and network operating systems;
- Understand and apply network theory and security principles;
- Use computer and network hardware and apply troubleshooting techniques;
- Explain and use virtualization and cloud services; and
- Display the professionalism necessary for working successfully in information technology.

## Required Courses

### Fall Semesters

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- CAPP 156 - MS Excel Credit(s): 3
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- CSCI 100 - Introduction to Programming Credit(s): 3  
**OR**
- CSCI 111 - Programming with Java I Credit(s): 4
- ITS 164 - Networking Fundamentals Credit(s): 3<sup>1</sup>
- ITS 210 - Network Operating System-Desktop Credit(s): 3<sup>3</sup>
- ITS 212 - Network Operating System-Server Admin Credit(s): 3<sup>1</sup>
- ITS 218 - Network Security Credit(s): 3
- ITS 280 - Computer Repair and Maintenance Credit(s): 3<sup>3</sup>
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- MART 231 - Interactive Web I Credit(s): 4

### Spring Semesters

- CSCI 240 - Databases and SQL Credit(s): 3
- ITS 216 - Network Operating System-Directory Services Credit(s): 2 <sup>3\*</sup>
- ITS 221 - Project Management Credit(s): 3
- ITS 224 - Introduction to Linux Credit(s): 3<sup>4</sup>
- ITS 235 - IT Design Lab Credit(s): 2
- ITS 258 - Routing and Switching Credit(s): 4 <sup>3\*</sup>
- ITS 271 - Securing Desktops/Mobile Devices Credit(s): 3 <sup>4\*</sup>
- ITS 273 - Securing Networks Credit(s): 3 <sup>3\*</sup>
- ITS 275 - Border/Perimeter Network Security Credit(s): 3 <sup>3\*</sup>
- ITS 277 - Software Assurance and File System Internals Credit(s): 3 <sup>4\*</sup>
- ITS 298 - Internship/Cooperative Education Credit(s): 3 \*

## Total Credits: 67-68

<sup>1</sup> Course offered in 2019 and 2021.

<sup>2</sup> Course offered in 2020 and 2021.

<sup>3</sup> Course offered in 2020 and 2022.

<sup>4</sup> Course offered in 2021 and 2023.

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Students are expected to have fundamental knowledge of the computer. If not, students must take CAPP 131.
- Students should be aware that this program of study requires extensive analytical thinking.

## Program Information

- All required courses within this degree program must be taken for a letter grade. Only electives may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- An internship is required for this program. Students must apply for internship placements the prior semester. See internships for more information and application deadlines.
- After completion of the program, and with additional study, students will have the knowledge to sit for the following certification exams:
  - A+ Certification
  - Network+ Certification
  - CCNA (Cisco Certified Network Associate)
  - MOS (Microsoft Office Specialist) certification in Excel

## Opportunities after Graduation

- In the ever-growing Information Technology industry, graduates will have opportunities for employment as computer support specialists, helpdesk personnel, or systems analysts, providing end-user support, troubleshooting, and maintaining local area network systems. Graduates may work with large or small employers in IT departments in almost any industry.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

### Faculty Advisor

Phil MacGregor, Ed.D.  
BSS 104  
(406) 756-3865  
pmacgreg@fvcc.edu

# Integrated Agriculture and Food Systems, AAS

The Integrated Agriculture and Food Systems program prepares students to develop and manage their own farm business, or to pursue careers in agricultural and horticultural science, sales, or production. While enrolled in the program, students learn the fundamentals of crop production, soil management, and farm business operation. The program focuses on the integration of food and farming in small-scale systems that enhance the well-being of the environment and communities. Through laboratory courses, field trips, and internships on the FVCC campus farm and in the community, the Integrated Agriculture and Food Systems program provides students with a hands-on, multidisciplinary experience in agriculture and food systems. Upon completion of this program, students will

- Describe the components and complexities of our modern food system;
- Demonstrate knowledge of crop and soil management practices;
- Identify, diagnose, and manage pests and diseases of crop plants;
- Consider the whole-farm implications of their management decisions;
- Safely and effectively operate farm machinery and equipment;
- Describe various marketing opportunities in small and large-scale agriculture; and
- Identify the necessary steps to start and operate a new business.

## Required Courses

### First Year - Fall Semester

- AGSC 202u - Practical Farm Production and Equipment: Fall Credit(s): 4
  - BIOB 110N - Plant Science Credit(s): 3
  - BMGT 205C - Professional Business Communication Credit(s): 3 \*
- OR**
- WRIT 101W - College Writing I Credit(s): 3 \*
  - SFBS 146 - Introduction to Sustainable Food and Bioenergy Systems Credit(s): 3
  - Elective Credit(s): 3

### First Semester Total: 16

### Spring Semester

- AGSC 202y - Practical Farm Production and Equipment: Spring Credit(s): 4
- AGSC 298 - Internship: Agricultural Enterprise Credit(s): 3 \*
- AGSC 298 - Internship: Campus Farm Credit(s): 3
- ENSC 245NL - Soils Credit(s): 4

### Second Semester Total: 14

### Second Year - Fall Semester

- AGSC 200 - Soil Nutrient Management Credit(s): 3 \*
- AGSC 230 - Agricultural Pest Management Credit(s): 4
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- CULA 105 - Food Service Sanitation Credit(s): 1 \*
- M 095~ - Intermediate Algebra Credit(s): 4 \*

### First Semester Total: 15

### Spring Semester

- AGSC 241 - Field Crop Production Credit(s): 3 \*
- AGSC 265 - Building Community Food Systems Credit(s): 3
- ANSC 100N - Introduction to Animal Science Credit(s): 3
- BMGT 210 - Small Business Entrepreneurship Credit(s): 3
- Elective Credit(s): 3

### Second Semester Total: 15

### Total Credits: 60

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- An internship is required for this program. Students must apply for internship placements for this program the prior semester. See Internships for more information and application deadlines.

### Opportunities after Graduation

- Graduates can expect to find employment in a variety of agricultural jobs, including as plant/soil/animal science technicians, in agricultural sales/marketing, or as farm managers. Small-scale farming is one of the fastest growing sectors in agriculture, which presents opportunities for graduates to be self-employed farmers.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center of the Faculty Advisor.

#### Student Support Center Advisor

Russ Lamson  
LRC 129  
(406) 756-3885  
rlamson@fvcc.edu

#### Faculty Advisor

Heather Estrada, Ph.D.  
RH 108  
(406) 756-4182  
hestrada@fvcc.edu

# Medical Assistant, AAS (Moratorium)

**This program is in moratorium and is not accepting new students at this time.**

Medical Assistants are the only allied health professionals specifically trained to work in ambulatory settings such as physicians' offices, clinics, and group practices. These multi-skilled personnel can perform administrative and clinical procedures. Physicians value this unique versatility and view medical assistants as vital partners in the medical office. Upon successful completion of this program, students will have the knowledge and skills to perform:

- Computer applications such as scheduling appointments, updating patient demographics, correspondence, coding, billing and insurance;
- Patient reception, arranging for hospital admissions, laboratory services, and referrals;
- Professional communication when working with patients and staff in a medical office;
- Accurate patient medical histories and vital signs, prepare patients for examinations, assist with surgical treatments, collect and prepare laboratory specimens, perform basic laboratory tests, and electrocardiograms;
- Preparation, administration and documentation of medications and vaccines using safe practices, as directed by a licensed physician and authorizing prescription refills as directed;
- Triage in the office by messaging or telephone calls;
- Safe blood drawing using correct techniques;
- Removal of sutures and changing dressings;
- Medical and surgical aseptic techniques; and
- Patient education and health coaching.

## Required Courses

### First Year - Fall Semester

- AHMS 144 - Medical Terminology Credit(s): 3
- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

### First Semester Total: 16

### Spring Semester

- AHMA 201 - Medical Assisting Clinical Procedures I Credit(s): 4 \*
- AHMA 202 - Medical Assisting Clinical Procedures I Lab Credit(s): 1
- AHMA 205 - Medical Assisting Clinical Approaches I Credit(s): 1 \*
- AHMS 175 - Medical Law and Ethics Credit(s): 3
- AHMS 220 - Medical Office Procedures Credit(s): 4 \*

### Second Semester Total: 16

### Summer Semester

- BGEN 122 - Applied Business Math Credit(s): 3 \*
- CAPP 154 - MS Word Credit(s): 3
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3

### Third Semester Total: 12

### Second Year - Fall Semester

- AHMA 203 - Medical Assisting Clinical Procedures II Credit(s): 4 \*
- AHMA 204 - Medical Assisting Clinical Procedures II Lab Credit(s): 1
- AHMA 206 - Medical Assisting Clinical Approaches II Credit(s): 1 \*
- AHMA 220 - Phlebotomy Credit(s): 3 \*
- AHMA 230 - Advanced Medical Office Procedures Credit(s): 4 \*

### First Semester Total: 17

### Spring Semester

- AHMA 280 - Medical Assisting Exam Preparation Credit(s): 1
- AHMA 298 - Medical Assisting Externship Credit(s): 4 \*

### Second Semester Total: 6

### Total Credits: 67

<sup>1</sup> Medical Assistant program students should register for section 01 of this course.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Strongly Recommended Courses:

- ACTG 101 - Accounting Procedures I Credit(s): 4
- AHMS 210 - Basic Medical Coding Credit(s): 3 \*
- AHMS 252 - Computerized Medical Billing Credit(s): 2
- BIOM 250NL - Microbiology for Health Sciences Credit(s): 4 \*
- CAPP 116 - Short Courses: MS Excel Credit(s): 1
- CAPP 131 - Basic MS Office Credit(s): 2
- COMX 111C - Introduction to Public Speaking Credit(s): 3
- ECP 100 - First Aid and CPR Credit(s): 2
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4

### Admission Guidelines

- Contact the program director for advising.
- Applications for formal acceptance into the Medical Assistant AAS program are accepted once a year. Applications are available after October 1 on the FVCC Medical Assistant program website or can be picked up from the program director (BC 119) and must be completed and returned by the first Friday in November. The Medical Assistant program has a maximum of 12 students in each graduating class.

### Program Information

- The Medical Assistant program demands high academic and personal standards. Students considering this degree should familiarize themselves with the requirements.
- All requirements for the Medical Assistant program are stated in the Medical Assistant Handbook located on the FVCC Medical Assistant Program website or can be picked up from the program director.
- All AHMA classes above AHMA 101 must have program director's signature for admission and must be taken consecutively starting spring semester.
- Students are required to earn a "C" (2.0) or above in all non-medical assisting courses.
- Students are required to earn a "B-" (2.7) or above in all medical assisting courses.
- Students are responsible for at least \$250 of additional costs to cover uniforms, personal medical supplies, insurance and immunizations. Required current immunization costs will depend on each individual vaccine history.
- AHMA 298 is an externship class which involves 180 hours of unpaid work experience in various medical offices in the community. It is highly recommended that students have their own health insurance before starting the externship.

- All students are required to have a criminal background/registered sexual offender check done at the time of application to the program. Any discrepancies may result in denial of acceptance into the program. Any changes in a conviction record and/or pending criminal charges which occur between the initial completion of the Background Information/Screen and program completion must be provided in writing to the program director within five working days from the date of notification. Failure to provide such information within the aforementioned timeframe can result in immediate dismissal from the program.
- Any student who exhibits unsuitable performance and/or behavior may be denied the right to complete the program.
- American Disabilities Act (ADA) Statement  
Students with recognized disabilities or other physical limitations that may affect their performance as a medical assistant, are responsible for identifying themselves as soon as possible to the Advocate for Students with Disabilities and to the program director. Course standards will not be lowered, but various accommodations are available. A minimum of six (6) weeks will be required to develop and provide appropriate accommodations, so students who qualify should contact Disability Services as soon as possible. It is the college's goal to assist students in their individual educational plans.
- Program Accreditation  
The FVCC Medical Assistant program is accredited by the Medical Assistant Education Review Board (MAERB) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE).  
Commission on Accreditation of Allied Health Education Programs  
25400 U.S. Highway 19 North, Suite 158  
Clearwater, FL 33756  
[www.caahep.org](http://www.caahep.org)
- Certifications  
Medical Assistant graduates are eligible to take the CMA (AAMA) Certification Examination administered by the Certifying Board of the American Association of Medical Assistants.  
Medical Assistant graduates are eligible to take the ASCP Board of Certification, Phlebotomy Technician, PBT (ASCP) national examination.  
Basic Life Support (BLS) CPR certification.

## Opportunities after Graduation

- Medical Assisting is one of the nation's fastest growing careers, according to the United States Bureau of Labor Statistics.
- Certified Medical Assistants are in high demand due to the surge of technological advances in outpatient medical facilities and the growing number of aging Americans.
- Certified Medical Assistants are able to obtain additional certifications including Electrocardiography Technician, Phlebotomy Technician and Specialty Certified Medical Assistant in various medical fields. Some CMA's become medical office managers.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Karrie Bolivar  
LRC 129  
(406) 756-3880  
[kbolivar@fvcc.edu](mailto:kbolivar@fvcc.edu)

### Faculty Advisor

Chris Degenhardt, CMA (AAMA)  
BC 123B  
(406) 756-4582  
[cdegenha@fvcc.edu](mailto:cdegenha@fvcc.edu)



# Medical Assistant, CAS

Medical Assistants are the only allied health professionals specifically trained to work in ambulatory settings such as physicians' offices, clinics, and group practices. These multiskilled personnel can perform administrative and clinical procedures. Physicians value this unique versatility and view medical assistants as vital partners in the medical office. Upon completion of this program, students will have the knowledge and skills to perform:

- Computer applications such as scheduling appointments, updating patient demographics, correspondence, coding, billing and insurance;
- Patient reception, arranging for hospital admissions, laboratory services, and referrals;
- Professional communication when working with patients and staff in a medical office;
- Accurate patient medical histories and vital signs, prepare patients for examinations, assist with surgical treatments, collect and prepare laboratory specimens, perform basic laboratory tests, and electrocardiograms;
- Preparation, administration and documentation of medications and vaccines using safe practices as authorized by a licensed physician;
- Triage in the office by messaging or telephone calls;
- Safe blood drawing and specimen collection using correct techniques;
- Removal of sutures and changing dressings;
- Medical and surgical aseptic techniques; and
- Patient education and health coaching.

## Required Courses

### Fall Semester

- AHMA 201 - Medical Assisting Clinical Procedures I Credit(s): 4 \*
- AHMA 202 - Medical Assisting Clinical Procedures I Lab Credit(s): 1
- AHMA 205 - Medical Assisting Clinical Approaches I Credit(s): 1 \*
- AHMS 144 - Medical Terminology Credit(s): 3
- AHMS 220 - Medical Office Procedures Credit(s): 4 \*
- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4 \*

### First Semester Total: 17

### Spring Semester

- AHMA 203 - Medical Assisting Clinical Procedures II Credit(s): 4 \*
- AHMA 204 - Medical Assisting Clinical Procedures II Lab Credit(s): 1
- AHMA 206 - Medical Assisting Clinical Approaches II Credit(s): 1 \*
- AHMA 230 - Advanced Medical Office Procedures Credit(s): 4 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*

### Second Semester Total: 16

### Summer Semester

- AHMA 280 - Medical Assisting Exam Preparation Credit(s): 1
- AHMA 298 - Medical Assisting Externship Credit(s): 4 \*

### Third Semester Total: 5

### Total Credits: 38

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Strongly Recommended Courses:

- AHMA 220 - Phlebotomy Credit(s): 3 \*
- AHMA 221 - Phlebotomy Clinical Training Credit(s): 2 \*
- AHMA 250 - Electronic Medical Procedures Credit(s): 3
- AHMS 175 - Medical Law and Ethics Credit(s): 3
- BIOH 113 - Human Form and Function II Credit(s): 4 \*

## Program Information

- The Medical Assistant program demands high academic and personal standards. Students considering this certificate should familiarize themselves with the requirements.
- All requirements for the Medical Assistant program are stated in the Medical Assistant Handbook located on the FVCC Medical Assistant Program website.
- All AHMA courses in the program must have program director's signature for admission and must be taken consecutively starting fall semester.
- Students are required to earn a "C" (2.0) or above in all non-medical assisting courses.
- Students are required to earn a "B-" (2.7) or above in all medical assisting courses.
- Students are responsible for at least \$300 of additional costs to cover uniforms, personal medical supplies, immunizations and criminal background check. Required current immunization costs will depend on each individual vaccine history.
- AHMA 298 Medical Assisting Externship class involves 180 hours of unpaid work experience in various medical offices in the community. It is highly recommended that students have their own health insurance before starting the externship.
- All students are required to have a criminal background/registered sexual offender check done at the time of application to the program. Any discrepancies may result in denial of acceptance into the program. Any changes in a conviction record and/or pending criminal charges, which occur between the initial completion of the Background Information/Screen and program completion, must be provided in writing to the program director within five working days from the date of notification. Failure to provide such information within the aforementioned timeframe can result in immediate dismissal from the program.
- Any student who exhibits unsuitable performance and/or behavior may be denied the right to complete the program.
- American Disabilities Act (ADA) Statement: Students with recognized disabilities or other physical limitations that may affect their performance as a medical assistant are responsible for identifying themselves as soon as possible to Disability Services and to the program director. Course standards will not be lowered, but various accommodations are available. A minimum of six weeks will be required to develop and provide appropriate accommodations, so students who qualify should contact Disability Services as soon as possible. It is the college's goal to assist students in their individual educational plans.

### Admission Guidelines

- Contact the program director for advising.
- Applications for formal acceptance into the Medical Assistant CAS program are accepted once a year.
- Applications are available after March 1 and must be completed and returned by the last day of spring semester.
- The Medical Assistant program has a maximum of 12 students in each graduating class.
- Students wishing to enter the Medical Assistant program must be proficient in keyboarding and typing.
- In order to be considered for acceptance into the Medical Assistant program, the student must have:
- Applied to and been admitted by Flathead Valley Community College;
- A high school diploma or equivalency (GED or HiSET) and be 18 years of age by the first day of classes;
- Met minimum placement requirements for math (score: 1) and writing (score: 2), or successful completion of developmental courses; and
- Completed a comprehensive background check and proof of immunizations listed in the applications packet.

### Program Accreditation

The Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) accredits Flathead Valley Community College upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
25400 US Highway 19 N., Suite 158  
Clearwater, FL 33763, (727) 210-2350  
[www.caahep.org](http://www.caahep.org)

### Certifications

- Medical Assistant graduates are eligible and prepared to take the CMA (AAMA) National Certification Examination administered by the Certifying Board of the American Association of Medical Assistants.

### Opportunities after Graduation

- According to the Bureau of Labor Statistics, employment of medical assistants is projected to grow 29 percent from 2016 to 2026, much faster than the average for all occupations because of the increasing demand for medical assistants.
- Certified Medical Assistants are in high demand due to the surge of technological advances in outpatient medical facilities and the growing number of aging Americans.
- Certified Medical Assistants are able to obtain additional certifications including Electrocardiography Technician or Specialty Certified Medical Assisting.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Karrie Bolivar  
LRC 129  
(406) 756-3880  
[kbolivar@fvcc.edu](mailto:kbolivar@fvcc.edu)

#### Faculty Advisor

Chris Degenhardt, CMA (AAMA)  
BC 123B  
(406) 756-4582  
[cdegenha@fvcc.edu](mailto:cdegenha@fvcc.edu)

### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Medical Coding, AAS

(This program is also offered at the Lincoln County Campus.)

Health information coding is the transformation of verbal descriptions of diseases, injuries, and procedures into alphanumeric designations. Currently, reimbursement of hospital and physical claims for patients depends entirely on the assignment of codes. Coding is one of the fastest growing professions in the United States. Upon completion of this program, students will

- Demonstrate the professional work habits expected in the medical coding profession including confidentiality and ethical practices;
- Apply medical terminology, anatomy and physiology, and disease process knowledge to seek the appropriate code;
- Complete insurance forms (HCFA) using ICD-10-CM, CPT and HCPCS codes;
- Demonstrate the ability to communicate orally and in writing;
- Abstract code data from medical records; and
- Demonstrate effective leadership skills.

## Required Courses

### First Year - Fall Semester

- AHMS 105 - Health Care Delivery Credit(s): 3
- AHMS 144 - Medical Terminology Credit(s): 3
- AHMS 175 - Medical Law and Ethics Credit(s): 3
- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4 \*
- CAPP 131 - Basic MS Office Credit(s): 2
- Elective Credit(s): 1

### First Semester Total: 16

### Spring Semester

- AHMA 250 - Electronic Medical Procedures Credit(s): 3
- AHMS 108 - Health Data Content Structure Credit(s): 3
- AHMS 210 - Basic Medical Coding Credit(s): 3 \*
- BIOH 113 - Human Form and Function II Credit(s): 4 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*

### Second Semester Total: 16

### Second Year - Fall Semester

- AHMS 219 - Intermediate Medical Coding Credit(s): 4 \*
- AHMS 156 - Medical Billing Fundamentals Credit(s): 3
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- **OR**
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- BMIS 211 - Introduction to Business Decision Support Credit(s): 4
- Elective Credit(s): 2

### First Semester Total: 16

### Spring Semester

- AHMS 220 - Medical Office Procedures Credit(s): 4 \*
- AHMS 250 - Advanced Medical Coding Credit(s): 4 \*
- AHMS 252 - Computerized Medical Billing Credit(s): 2
- BGEN 110 - Applied Business Leadership Credit(s): 3
- CAPP 156 - MS Excel Credit(s): 3

### Second Semester Total: 16

### Total Credits: 64

\*Indicates prerequisite or corequisite needed. Check course description.

## Optional Course Offering:

- AHMS 198 - Internship Credit(s): 3 \*

## Program Information

- An internship is an option for this program.
- Students must apply for placements for this program the prior semester. See Internships for more information and application deadlines.
- Students in the Medical Coding program must receive a "C-" or better in AHMS 210 to receive this degree.
- All courses within this degree program must be taken for a letter grade. No courses may be taken on a Satisfactory/Unsatisfactory (S/U) basis.
- Students who complete this degree program should be ready to sit for the Certified Coding Associate (CCA) examination.
- Some classes may only be offered online.

## Opportunities after Graduation

- Rapid growth in the health services industry as a whole and the expansion of the medical community in the area should fuel growth within this occupation. Positions for Health Information Technicians in Montana are projected to experience an 18% growth increase from 2008-2018.
- Students are encouraged to take the CCA / CCS or AAPC Exams.
- Apprenticeship opportunities may be available for this program. See the Faculty Advisor for more information.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor                             | Faculty Advisor (Kalispell Campus)                       | Faculty Advisor (Lincoln County Campus)                    |
|--|--|--|
| Jori Bullemer  | Brenda Rudolph, M.B.A.                                   | Chad Shilling, M.B.A.                                      |
| LRC 129  | BSS 106  | LCC Room 105   |
| (406) 756-3905   | (406) 756-3858   | (406) 293-2721 ext. 233                                    |
| <a href="mailto:jbullemer@fvcc.edu">jbullemer@fvcc.edu</a> | <a href="mailto:brudolph@fvcc.edu">brudolph@fvcc.edu</a> | <a href="mailto:cshilling@fvcc.edu">cshilling@fvcc.edu</a> |

# Medical Laboratory Technology, AAS

The MLT program will prepare graduates for entry into technician-level positions in a clinical laboratory environment in hospitals, physicians' offices, commercial laboratories, biotechnology, research laboratories, pharmaceutical companies, technical services and sales, or veterinary laboratories in the areas of hematology, blood bank, microbiology, and clinical chemistry. After completing all academic and clinical requirements of the program, students will be eligible to sit for the national certification exam and apply for state licensure. Upon completion of this program, students will

- Demonstrate the expertise to prepare and identify specimens;
- Culture microorganisms to determine their identity and sensitivity to antibiotics;
- Conduct blood cell counts, analyze body fluids to determine biological and chemical components;
- Type, cross match and prepare blood for transfusions; and
- Exercise safety precautions and quality control throughout the laboratory.

## Required Courses

### First Year

(Required Prerequisite Courses)

#### Fall Semester

- AHMA 220 - Phlebotomy Credit(s): 3 \*
- AHMT 101 - Introduction to Medical Laboratory Technology Credit(s): 2
- BIOB 160NL - Principles of Living Systems Credit(s): 4
- CHMY 121NL - Introduction to General Chemistry Credit(s): 4 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

#### First Semester Total: 16

#### Spring Semester

- AHMA 221 - Phlebotomy Clinical Training Credit(s): 2 \*
- BIOM 250NL - Microbiology for Health Sciences Credit(s): 4 \*
- CHMY 123NL - Introduction to Organic Biochemistry Credit(s): 4 \*
- COMX 111C - Introduction to Public Speaking Credit(s): 3  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*  
**OR**
- M 140M - College Math for Healthcare Credit(s): 3 \*  
**OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*

#### Second Semester Total: 16

## Second Year

(Program Courses)

### Fall Semester

- AHMT 201 - Hematology and Coagulation Credit(s): 6 \*
- AHMT 205 - Urinalysis and Body Fluids Credit(s): 3 \*
- AHMT 210 - Immunology and Serology Credit(s): 3 \*
- AHMT 295v - Clinical I: Medical Laboratory Clinical Credit(s): 5 \*

#### First Semester Total: 17

### Spring Semester

- AHMT 230 - Immunohematology Credit(s): 3 \*
- AHMT 240 - Clinical Chemistry Credit(s): 3 \*
- AHMT 295x - Clinical II: Medical Laboratory Clinical Credit(s): 8 \*

#### Second Semester Total: 14

### Summer Semester

- AHMT 235 - Clinical Microbiology Credit(s): 4 \*
- AHMT 295y - Clinical III: Medical Laboratory Clinical Credit(s): 5 \*

#### Third Semester Total: 9

#### Total Credits: 72

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Students must apply for select admission to the MLT program. This should occur the spring semester during which the applicant is completing the second semester of prerequisites.
- Applications are available after March 1 and must be completed and returned no later than the last Friday in April.
- Admission to the program is based upon the following:
  - High school diploma or GED
  - Evidence of academic achievement in the prerequisite courses taken prior to application
  - Completion of all prerequisite courses before the end of spring semester
  - An interview
- Students admitted into the program are required to have a background check and proof of health insurance.

## Program Information

- Prior to applying to the program, students must have completed or be in the process of completing the first year of prerequisite courses by the end of Spring Semester. Students may be advised to take CHMY 105 in preparation for CHMY 121; preparation math courses for M 115; and preparation writing courses for WRIT 101.
- A grade of "C" or higher is required for ALL prerequisite courses.
- Once a student is officially accepted or admitted into the MLT program, each AHMT course must be passed with a grade of at least a "C" for the student to continue in the program. If any course grade is less than a "C" the student must withdraw from the MLT program. Remediation will be attempted after filling out an Action Plan Form to formulate a plan for improving performance in technical MLT courses.
- Program Accreditation: The Medical Laboratory Technology program is seeking accreditation through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Once the program achieves "serious applicant" status, graduates will be eligible to sit for the national ASCP certification examination.

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119  
(773) 714-8880, [info@naaccls.org](mailto:info@naaccls.org)

- Additional Costs: Students enrolled in courses with a laboratory component can expect additional lab fees.

## Opportunities after Graduation

- According to the US Department of Labor, Bureau of Labor Statistics, this field is expected to grow 16% from 2014-2024 nationally.
- For Montana from 2014-2017 an increase of 4.5 % or 20 jobs annually is predicted.
- From 2014-2024 a 18.5 % increase is predicted in Montana.

## Advising Information:

For more information about this program, contact the Faculty Advisor.

| Faculty Advisor  | Program Coordinator  | Program Director  |
|--|--|---|
| Janice Alexander,<br>Ph.D.<br>RH 107<br>(406) 756-3948<br><a href="mailto:jalexand@fvcc.edu">jalexand@fvcc.edu</a> | Denise Pacovsky,<br>MLS (ASCP)<br><a href="mailto:dpacovsky@fvcc.edu">dpacovsky@fvcc.edu</a> | Terry Kotrla, MS,<br>MT (ASCP) BB<br><a href="mailto:tkotrla@fvcc.edu">tkotrla@fvcc.edu</a> |

# Natural Resources Conservation and Management, AAS

The Natural Resources Conservation and Management program prepares students to work as technicians collecting and interpreting environmental information. This program is designed to develop practical skills in measuring forest and water resources, field navigation and surveying, insect and disease identification, soil health, recreation management, and using geospatial technology to document and understand our world. Successful graduates have obtained jobs for both government agencies and private companies, including timber cruisers, silviculture technicians, recreation specialists, wildland firefighters, field conservationists, and fire lookout staff. The US Forest Service is the number one employer of program graduates. Upon completion of this program, students will

- Understand the complex biological, physical and human interactions as they relate to natural resources and land management;
- Demonstrate strong math and computer skills;
- Use various measuring instruments and accurately record data;
- Summarize, analyze and present results from collected data to supervisors and interested parties;
- Identify many trees, shrubs, forbs and grasses occurring in Montana;
- Use compasses, GPS receivers and maps to navigate within the public land survey system and locate ownerships and establish sample points;
- Use GPS and GIS techniques to analyze and present data within the context of land use and management;
- Understand how soil and water health impact ecosystems;
- Identify many insect, disease and fire hazard situations and their relationships to ecology and sustainability; and
- Understand various federal, state and local laws that govern land use and management.

## Required Courses

### First Year - Fall Semester

- FORS 120 - Forestry Navigation Credit(s): 2
- FORS 153 - Forest Resource Calculations Credit(s): 3 \*
- FORS 260 - Chainsaw & Crosscut Saw Operations and Maintenance Credit(s): 1
- NRSM 101 - Natural Resource Conservation Credit(s): 3
- NRSM 161 - Natural Resource Measurements I Credit(s): 5
- WRIT 101W - College Writing I Credit(s): 3 \*

### First Semester Total: 17

### Spring Semester

- CAPP 116 - Short Courses: MS Excel Credit(s): 1
- ENSC 245NL - Soils Credit(s): 4
- ENSC 272 - Water Resources Credit(s): 4
- FORS 152 - Sustainable Silviculture Credit(s): 4
- SRVY 120 - Surveying in Natural Resources Credit(s): 2

### Second Semester Total: 15

### Second Year - Fall Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ENST 285 - Environmental Policy and Impact Analysis Credit(s): 3
- FORS 272 - Inventory of Natural Resources Credit(s): 4 \*
- GPHY 284 - Introduction to GIS Science and Cartography Credit(s): 4
- PTRM 201 - Recreation Management Credit(s): 2

### First Semester Total: 16

### Spring Semester

- ECP 102 - Wilderness First Aid Credit(s): 1
- FORS 230 - Forest Fire Management Credit(s): 3
- FORS 232 - Forest Insects and Diseases Credit(s): 3
- FORS 251 - Photogrammetry and Remote Sensing Credit(s): 3 \*
- FORS 262 - Stock Packing Skills Credit(s): 1
- SRVY 245 - GPS Mapping Credit(s): 2 \*
- WILD 270N - Wildlife Habitat and Conservation Credit(s): 3

### Second Semester Total: 16

### Total Credits: 64

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Opportunities after Graduation

- Many employment opportunities are with federal, state and county governmental agencies. Employment opportunities also exist within private industry. Consulting firms, which contract with government and private entities, also hire technicians. Many employers prefer applicants who have a good overall knowledge of collecting and interpreting data about natural resources and have an associate's degree in Natural Resources Conservation and Management.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor                | Faculty Advisor                               | Faculty Advisor                               |
|---|---|---|
| Russ Lamson                                   | Tim Eichner, M.S.                             | Christina Relyea, Ph.D.                       |
| LRC 129<br>(406) 756-3885<br>rlamson@fvcc.edu | RH 155<br>(406) 756-3898<br>teichner@fvcc.edu | BSS 103<br>(406) 756-3946<br>crelyea@fvcc.edu |

# Nondestructive Testing, CAS

The Nondestructive Testing program is designed to provide students experience in nondestructive test methods, visual inspection, liquid penetrant, magnetic particle, eddy current, ultrasonic and radiographic testing. Upon completion of this program, students will:

- Demonstrate safe practices for nondestructive testing;
- Summarize the rules and regulations of radiation safety and characteristics of x-ray and gamma radiation;
- Illustrate electromagnetic principles and use the equipment;
- Discuss ultrasonic theory and apply ultrasonic techniques;
- Summarize magnetic particle testing formulas, methods, applications, limitations, material sensitivity, and equipment calibration;
- Summarize liquid penetrant formulas, methods, applications and limitations; and
- Follow a written procedure that has been created from a Code or Standard.

## Required Courses

### Fall Semester

- EWLD 110 - Introduction to Nondestructive Testing Credit(s): 3
  - EWLD 113 - Ultrasonic Testing I Credit(s): 2 \*
  - EWLD 115 - Eddy Current Testing Credit(s): 3 \*
  - EWLD 121 - Radiographic Testing I Credit(s): 2
  - M 114 - Extended Technical Mathematics Credit(s): 3 \*
- OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*
  - WLDG 111 - Welding Theory I Practical Credit(s): 3

### First Semester Total: 16

### Spring Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- EWLD 111 - Liquid Penetrant and Magnetic Particle Testing Credit(s): 3 \*
- EWLD 114 - Ultrasonic Testing II Credit(s): 3 \*
- EWLD 122 - Radiographic Testing II Credit(s): 3 \*
- EWLD 125 - AWS D1.1 Code Book Credit(s): 2 \*

### Second Semester Total: 14

### Total Credits 30

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Recommended Course Offering:

- WLDG 185 - Welding Qualification Test Preparation Credit(s): 3 \*

## Admission Guidelines

- Visual acuity should be correctable to 20-20 with capability of differentiating contrast among colors and shades.

## Program Information

- Students who successfully complete the Certificate of Applied Science program will have achieved the educational requirements necessary to take the ASNT Level II National Certification exam. ASNT also requires documented work experience as part of the application for the Level II exam.

## Opportunities after Graduation

- Career opportunities offer a wide range of possibilities as an inspector in the fabrication and manufacturing industries, steel construction, mining, energy, petroleum, aviation, bridge construction, and other production areas.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Will Richards

OT 204

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wrichards@fvcc.edu

## Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Nursing: Practical Nursing, CAS

(This program may be offered at Lincoln County Campus dependent upon sufficient enrollment and resources.)

The focus of the practical nursing curriculum is to provide education leading to basic knowledge of the biological, physical, behavioral, psychological, and sociological sciences and of nursing procedures. This program uses standardized procedures in the observation and care of the ill, injured, and infirm, in the maintenance of health, in action to safeguard life and health, and in the administration of medications and treatments. Upon completing of this program, students will:

- Implement health promotion and disease prevention that is cost effective, comprehensive and coordinated;
- Engage patient and families as partners in evidenced-based, ethical care, while respecting individual preference;
- Integrate current research findings, expert opinion, clinical reasoning, and patient preferences in implementing a plan of care;
- Demonstrate cooperation, coordination, and communication among team members, patients, and community populations to improve quality and enhance patient safety;
- Recognize and assist in ongoing assessment of patient and systems with the goal of providing the highest level of patient care and outcomes;
- Participate in utilization of technology as a member of the care team, to gather data, manage information, and improve communication to support clinical decisions;
- Recognize basic safety principles and utilizes safety enhancing technology to reduce risk of harm to self and others.

## Required Prerequisites (Any Semester)

- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4
- WRIT 101W - College Writing I Credit(s): 3 \*

## First Semester Total: 14

## Second Semester (spring)

- NRSNG 130 - Fundamentals of Nursing Credit(s): 3 \*
- NRSNG 131 - Fundamentals of Nursing Laboratory Credit(s): 3 \*
- NRSNG 135 - Pharmacology for Practical Nurses Credit(s): 3 \*
- NRSNG 136 - Pharmacology for Practical Nurses Laboratory Credit(s): 1 \*
- NRSNG 152 - Gerontology and Community Nursing Credit(s): 2 \*
- NRSNG 153 - Gerontology and Community Nursing Clinical Credit(s): 2 \*

## Second Semester Total: 14

## Third Semester (summer)

- NRSNG 140 - Adult Health Nursing Credit(s): 4 \*
- NRSNG 141 - Adult Health Nursing Clinical Credit(s): 2 \*
- NRSNG 142 - Nursing Care of Women and Children Credit(s): 3 \*
- NRSNG 143 - Nursing Care of Women and Children Clinical Credit(s): 1 \*
- NRSNG 148 - Leadership Issues for Practical Nurses Credit(s): 2 \*
- NRSNG 149 - Leadership Issues for Practical Nurses Clinical Credit(s): 1 \*

## Third Semester Total: 13

## Total Credits: 41

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Applications for formal acceptance into the practical nursing program are accepted once a year. Applications are available at [fvcc.edu/nursing](http://fvcc.edu/nursing). In order to be considered for acceptance into the practical nursing program, the student must have:
- Completed or be currently enrolled in and complete all of the following required prerequisite courses with a grade of "C" or higher ("C-" will not be accepted) BIOH 104, M 120, PSYX 100, and WRIT 101;
- Selective GPA of at least 2.50 (out of 4.0 scale) in the prerequisite courses;
- Completion of the human biology course must be within five years of admission date. Individuals may request evaluation by the nursing program director for a possible exception;
- Please see Nursing Program Information Packet at [fvcc.edu/nursing](http://fvcc.edu/nursing) for more information;
- Must be in certificate status at FVCC with all records required on file;
- Signed application and \$20 non-refundable processing fee receipt; and
- Once offered placement, students must provide proof of current personal health insurance policy (FVCC Student Health Center does not meet this requirement.), complete a background check, and provide proof of immunizations required to finalize the acceptance process.

## Program Information

- This is a demanding program. Individuals will be required to actively participate in and subscribe to the legal and ethical tenets of the discipline while enrolled as a student and as a graduate.
- Once a student has applied and been accepted into the practical nursing program, each course can only be attempted once and must be passed with a grade of at least a "C+" for the student to continue in the program.
- The practical nursing program is approved by the Montana State Board of Nursing.
- Graduates of this program are eligible to apply to take the National Council of State Board of Nursing's Examination for Practical Nurses (NCLEX-PN). After passing the test, the Montana Board of Nursing grants licensure to practice as a Licensed Practical Nurse in the State of Montana.

## Opportunities after Graduation

- There is an immediate need for practical nurses in a variety of health care facilities in the Flathead Valley. Employment includes clinics, dialysis centers, and long term care.



**Nursing Program Director:**

Myrna Ridenour, MSN, RN  
BC 102-A  
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mridenour@fvcc.edu

**Advising Information:**

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| <b>Student Support Center Advisor</b> | <b>Faculty Advisor</b>      | <b>Faculty Advisor</b>          |
|---------------------------------------|-----------------------------|---------------------------------|
| Karrie Bolivar                        | Erika DeCree,<br>B.S., R.N. | Sarah Wangerin,<br>B.S.N., R.N. |
| LRC 129                               | BC 102-C                    | BC 102-D                        |
| (406) 756-3880                        | (406) 756-3628              | (406) 756-3943                  |
| kbolivar@fvcc.edu                     | edecree@fvcc.edu            | swangerin@fvcc.edu              |

**For general information, contact:**

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**Gainful Employment**

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Nursing: Registered Nursing, ASN

The Registered Nursing program prepares graduates to function as members and leaders of health care teams in various health care environments. Upon completion of the Associate of Science (ASN)-Registered Nursing curriculum, students will

- Develop and lead programs of health promotion and disease prevention that is cost effective, comprehensive and coordinated;
- Engage patient and families as partners in evidenced-based, ethical care, while respecting individual preference;
- Analyze and integrate current research findings, expert opinion, clinical reasoning, and patient preferences in developing and implementing plan of care;
- Promote and lead cooperation, coordination, and communication among team members, patients, and community populations to improve quality and enhance patient safety;
- Provide ongoing assessment and analysis of patients and systems with the goal of providing the highest level of patient care and outcomes;
- Demonstrate the ability to utilize technology to gather and analyze data, manage information, and improve communication among team members and across systems to support clinical decisions; and
- Participate as a team member to design, promote, and model effective use of technology to reduce the risk of harm to self and others.

## *Transfer Articulation Agreement:*

Graduates of this program have the opportunity to continue their studies online to earn a Bachelor's of Science Degree for Registered Nurses (BSN) at Montana Tech. See below for more information about this transfer articulation agreement.

## **Required Prerequisites (Any Semester):**

- BIOH 201NL - Human Anatomy and Physiology II Credit(s): 4 \*
- CHMY 121NL - Introduction to General Chemistry Credit(s): 4 \*
- M 140M - College Math for Healthcare Credit(s): 3 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

## **Prerequisites Total: 14**

### **First Year - Fall Semester**

- BIOH 211NL - Human Anatomy and Physiology II Credit(s): 4 \*
- NRSNG 230 - Nursing Pharmacology Credit(s): 3 \*
- NRSNG 231 - Nursing Pharmacology Lab Credit(s): 2 \*
- NRSNG 232 - Foundations of Nursing Credit(s): 3 \*
- NRSNG 233 - Foundations of Nursing Laboratory Credit(s): 3 \*

## **First Semester Total: 15**

### **Spring Semester**

- NRSNG 234 - Adult Nursing I Credit(s): 3 \*
- NRSNG 235 - Adult Nursing I Clinical Credit(s): 2 \*
- NRSNG 236 - Health and Illness of Maternal Nursing Credit(s): 2 \*
- NRSNG 237 - Health and Illness of Maternal Nursing Clinical Credit(s): 1 \*
- NRSNG 256 - Nursing Pathophysiology Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4

## **Second Semester Total: 15**

### **Second Year - Fall Semester**

- NRSNG 244 - Adult Nursing II Credit(s): 3 \*
- NRSNG 245 - Adult Nursing II Clinical Credit(s): 2 \*
- NRSNG 246 - Health and Illness of Child and Family Nursing Credit(s): 2 \*
- NRSNG 247 - Health and Illness of Child and Family Nursing Clinical Credit(s): 1 \*
- NRSNG 254 - Mental Health Concepts Credit(s): 3 \*
- NRSNG 255 - Mental Health Concepts Clinical Credit(s): 1 \*
- SOCI 101A - Introduction to Sociology Credit(s): 3

## **Third Semester Total: 15**

### **Spring Semester**

- BIOM 250NL - Microbiology for Health Sciences Credit(s): 4 \*
- NRSNG 259 - Adult Nursing III Credit(s): 3 \*
- NRSNG 260 - Adult Nursing III Lab Credit(s): 1 \*
- NRSNG 261 - Adult Nursing III Clinical Credit(s): 2 \*
- NRSNG 266 - Managing Client Care for the RN Credit(s): 2 \*
- NRSNG 267 - Managing Client Care for the RN Clinical Credit(s): 2 \*

## **Fourth Semester Total: 14**

### **Total Credits: 73**

\*Indicates prerequisite and/or corequisite needed. Check course description.

## **Admission Guidelines**

- Applications for formal acceptance into the ASN program are accepted once a year. Applications are available at <http://fvcc.edu/nursing>. In order to be considered for acceptance into the ASN program, the student must have:
- Completed or be currently enrolled in and all of the required prerequisite courses with a grade of "B-" or higher in BIOH 201, and "C" or higher in CHMY 121, M 140, and WRIT 101. A grade of "C-" is not acceptable;
- A selective GPA of 2.75 (out of 4.0 scale) in the prerequisite courses;
- Completed BIOH 201 and CHMY 121 within five years of acceptance into the Nursing program Individuals may request evaluation by the Nursing Program Director for a possible exception;
- See Nursing Program Information Packet at [fvcc.edu/nursing](http://fvcc.edu/nursing) for more information;
- Degree status at FVCC with all required records on file; and
- Submitted a signed application and \$20 non-refundable processing fee receipt.
- Once offered placement, students must provide proof of current health insurance (FVCC Student Health Center does not meet this requirement), complete a background check, and provide proof of required immunizations to finalize the acceptance process.

## **Program Information**

- This is a demanding program. Individuals will be required to actively participate in and subscribe to the legal and ethical tenets of the discipline while enrolled as a student and as a graduate.
- The focus of the ASN curriculum is to offer education leading to the knowledge that supports the RN to provide direct care to clients, individuals or groups.
- Completion of the ASN degree does not guarantee FVCC's or the Montana University System's general education core is fulfilled.
- Once a student has applied and been accepted into the ASN program, each course can only be attempted once and must be passed with a grade of B- for the student to continue in the program.

- Graduates of the program are eligible to apply to take the National Council of State Boards of Nursing's examination for Registered Nurses (NCLEX-RN). After passing the test, the Montana Board of Nursing grants licensure to practice as a Registered Nurse in the state of Montana.
- The ASN program is approved by Montana State Board of Nursing.
- The Flathead Valley Community College Associate Degree Nursing program holds pre-accreditation status from the National League for Nursing Commission for Nursing Education Accreditation, located at 2600 Virginia Avenue, NW, Washington, DC, 20037. Holding pre-accreditation status does not guarantee that initial accreditation by NLN CNEA will be received.

### Opportunities after Graduation

- Individuals who successfully complete the ASN program and pass the NCLEX-RN exam will find many employment opportunities available to them in a wide variety of health care settings in Northwest Montana and other locations.
- A graduate of the program may choose to continue their education by pursuing a Bachelor's or Master's degree in nursing.

### Transfer Articulation Agreement

Students who complete the Associate of Science (ASN) - Registered Nursing program have the opportunity to take advantage of a transfer articulation agreement established with Montana Tech. Graduates of the FVCC ASN program who transfer to Montana Tech are guaranteed 72 semester credits toward a post-licensure Bachelor's of Science Degree for Registered Nurses (BSN). After earning the ASN from FVCC and obtaining an RN license, students must take the following MT Tech prerequisites:

|   |           |
|---|-----------|
| STAT 216M - Introduction to Statistics                                  | 4 credits |
| AHMS 175 - Medical Law and Ethics<br>(Equivalent to PHL 325 at MT Tech) | 3 credits |
| PSYX 230A - Developmental Psychology                                    | 3 credits |
| WRIT 201W - College Writing II  | 3 credits |
| Humanities Elective   | 3 credits |

Once the prerequisites are complete, students can apply for admission to Montana Tech and acceptance into the BSN program. Students will complete the following courses online through Montana Tech to earn the BSN.

| Fall Semester Courses                   |           |
|---|-----------|
| NRSG 361 Global Nursing                 | 3 credits |
| NRSG 324 EBP                            | 3 credits |
| NRSG 325 Advanced Health Assessment     | 3 credits |
| Spring Semester Courses                 |           |
| NRSG 326 Complex Health Care Needs      | 3 credits |
| NRSG 344 Family                         | 3 credits |
| NRSG 320 Informatics                    | 3 credits |
| NRSG 322 Health Promotion and Education | 3 credits |
| Summer Semester Courses                 |           |

|                                  |                   |
|----------------------------------|-------------------|
| NRSG 301 Community Health        | 5 credits         |
| NRSG 302 Community Health        | 1 credit          |
| NRSG 363 Leadership & Management | 5 credits         |
| NRSG 364 Leadership & Management | 1 credit          |
| <b>Total Credits at MT Tech</b>  | <b>33 credits</b> |

See your advisor for more information about this transfer articulation agreement.

### Nursing Program Director:

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 BC 102-A  
 (406) 756-3997  
 mridenour@fvcc.edu

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

### Student Support Center Advisor

Karrie Bolivar  
 LRC 129  
 (406) 756-3880  
 kbolivar@fvcc.edu

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### For general information, contact:

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 cfabel@fvcc.edu

# Paramedicine, AAS

Paramedicine is a career focusing on pre-hospital emergency medical care. A degree in this area will improve knowledge as well as marketability in a highly competitive field. Upon completion of this program, students will:

- Be eligible to sit for the NREMT written and practical examinations at the paramedic level.

## Required Courses

### Pre-Paramedicine Requirements:

- AHMS 144 - Medical Terminology Credit(s): 3
- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4 \*
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- OR
- COMX 215 - Negotiations/Conflict Resolution Credit(s): 3
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

### Pre-Paramedicine Total: 16

### Fall Semester

- ECP 200 - Transition to Paramedic Care Credit(s): 3 \*
- ECP 201 - Paramedic Fundamentals Credit(s): 3 \*
- ECP 202 - Paramedic Fundamentals Lab Credit(s): 1 \*
- ECP 204 - Medical Emergencies I Credit(s): 3 \*
- ECP 205 - Medical Emergencies I Lab Credit(s): 1 \*
- ECP 216 - Hospital Clinical I Credit(s): 5 \*

### First Semester Total: 16

### Spring Semester

- ECP 230 - Trauma Credit(s): 3 \*
- ECP 231 - Trauma Lab Credit(s): 1 \*
- ECP 234 - Medical Emergencies II Credit(s): 3 \*
- ECP 235 - EMS Operations Credit(s): 3 \*
- ECP 236 - Medical II/EMS Operations Lab Credit(s): 1 \*
- ECP 246 - Hospital Clinical II Credit(s): 6 \*

### Second Semester Total: 17

### Summer Semester

- ECP 206 - EMS Case Studies Credit(s): 3 \*
- ECP 250 - NREMT Exam Preparation Credit(s): 2 \*
- ECP 251 - NREMT Exam Preparation Lab Credit(s): 2 \*
- ECP 295 - Field Experience: Clinical III Credit(s): 8 \*

### Third Semester Total: 15

### Total Credits: 64

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

Placement/Acceptance in the Paramedic core training courses are subject to the following conditions/limitations:

Candidates must have a valid NREMT certification, and be able to obtain Montana state EMT licensure prior to beginning ECP core paramedic courses.

Applicants who do not meet the requirement of holding a valid NREMT certification may enroll in ECP 130 to meet this program requirement. ECP 130 is offered all semesters.

- Applications are available February 1 and must be completed and returned no later than March 31. The priority application deadline is February 15.
- Placement in the paramedic core training is not guaranteed within two years.
- A maximum of 12 students will be accepted to begin the Paramedic (ECP) course series.
- Candidates must pass an entrance examination and screening process including an interview by members of the paramedic advisory committee.
- Candidates are subject to extensive background checks by the college, clinical sites, field internship sites, the National Registry of EMTs (NREMT) and the Montana Board of Medical Examiners (MT BOME).
- Compliance with all clinical and field internship site policies regarding Health Insurance Portability and Accountability Act (HIPAA) is mandatory.
- Placement is competitively based.
- Due to a class size limitation of 12 students, acceptance into the paramedic core courses is based on an application process and is competitive. This may result in a student needing more than two years to complete their degree requirements.

## Program Information

- A field experience is required for this program.
- Paramedicine is a demanding program whose graduates maintain high academic and professional standards.
- Students in the paramedicine program must achieve at a minimum a "C-" or better grade in all non-core courses. Any grade of less than a "C-" will require retaking the course.
- Any course in the "ECP" series will require a grade of "B-" or better. Students must maintain an 80% grade average throughout the course of the core study to continue in the program.
- Students wishing to enroll in any ECP course, with the exception of ECP 130, must have submitted an application and received a letter of acceptance from the program director.
- Fees for this program are higher than average. Please see the program director for more details.
- The Paramedicine AAS program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).  
Commission on Accreditation of Allied Health Education Programs  
1361 Park Street  
Clearwater, FL 33756  
(727) 210-2350  
[www.caahep.org](http://www.caahep.org)

### **Additional Costs**

- ECP 200, ECP 206, ECP 235, and ECP 250 are on-line courses and additional fees apply.
- The student is responsible for the purchase of their apparel for the clinical/field portion of the program.
- Students in the paramedicine program must comply with Kalispell Regional Healthcare clinical policy agreement standards (which includes vaccinations/immunizations or appropriate lab work to ensure adequate protection from communicable diseases).

### **Opportunities after Graduation**

- Most career EMTs and paramedics work in metropolitan areas; however, there are also job opportunities in smaller cities, towns and rural areas. EMTs and paramedics are employed in a number of industries, including emergency medical services agencies (EMS), local governments, and hospitals. Employment for EMTs and paramedics is expected to increase 23.1% between 2012 and 2022, according to the U.S. Department of Labor. Job prospects should be good, particularly in cities and private ambulance services.

### **Advanced Placement Policy**

- The FVCC paramedic program provides advanced placement for qualified students. Advanced placement is any process where the program formally recognizes prior learning of a student and applies that recognition toward meeting the program requirements. Advanced placement is applied on a case-by-case basis and allows a student to "place out" of specified program didactic, laboratory, clinical or field internship placements. This may shorten the time for completion of the program and is often thought of as an alternative pathway to program completion and eligibility for the National Registry at the paramedic level. These types of students often include physicians, registered nurses, licensed or certified Advanced EMT's and licensed or certified paramedics.
- All students completing the program must demonstrate they have met ALL program requirements. Therefore, documentation of any student completing via an advanced placement policy must show how all of the program minimum didactic, laboratory, clinical or field requirements have been achieved through this process.
- All students, including those in advanced placement, completing the program are considered graduates and will be included in all outcomes reporting.
- Students wishing to obtain credit for prior experiential learning/work experience must meet all requirements found in the FVCC catalog under the section titled "Transfer and Grading."
- Evaluation of prior learning/advanced placement is requested by the student and evaluated by the Paramedicine Program Director for the final decision on acceptance or denial of the request.

### **Advising Information:**

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### **Student Support Center Advisor**

Karrie Bolivar  
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#### **Faculty Advisor**

Ryan Pitts, B.S.N.  
BC 126-B  
(406) 756-3901  
rpitts@fvcc.edu

## Payroll Accounting, CAS

This program will prepare students for entry-level positions in the field of payroll. It also provides opportunity for additional knowledge to be gained by those employed in bookkeeping, accounts payable, accounts receivable, billing or office assistance. Upon completion of this program, students will:

- Process payroll transactions in accordance with current payroll reporting requirements;
- Apply flexible solutions to accounting problems using spreadsheets;
- Communicate payroll information effectively within a business environment; and
- Understand types of business organizations.

### Required Courses

#### Fall Semester

- ACTG 201 - Principles of Financial Accounting Credit(s): 4
- BGEN 122 - Applied Business Math Credit(s): 3 \*
- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- BMGT 215 - Human Resource Management Credit(s): 3
- CAPP 156 - MS Excel Credit(s): 3

#### First Semester Total: 16

#### Spring Semester

- ACTG 124 - Payroll Accounting Applications Credit(s): 3
- ACTG 180 - Payroll Accounting Credit(s): 2 \*
- ACTG 202 - Principles of Managerial Accounting Credit(s): 4 \*
- ACTG 207 - Advanced Accounting on Microcomputers Credit(s): 2 \*
- BFIN 205 - Personal Finance Credit(s): 3

#### Second Semester Total: 14

#### Total Credits: 30

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- All courses within this certificate must be taken for a letter grade. No course may be taken on a Satisfactory/Unsatisfactory (S/U) basis.

### Opportunities after Graduation

- This certificate will prepare students for entry-level payroll positions. Opportunities for advancement will grow with increased skills and experience.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Jori Bullemer

LRC 129

(406) 756-3905

[jbullemer@fvcc.edu](mailto:jbullemer@fvcc.edu)

#### Faculty Advisor

Ronnie Laudati, M.B.A.

BSS 127

(406) 756-3990

[rlaudati@fvcc.edu](mailto:rlaudati@fvcc.edu)

### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Personal Trainer, CAS

Personal Trainers are responsible for safe and effective exercise prescription in health and fitness club settings. Thorough understanding of anatomy, muscle function, exercise prescription, basic nutrition and fitness assessment provide personal trainers with the knowledge to safely structure exercise programs for clients. Upon completion of this program, students will

- Motivate clients in exercise and healthy life choices;
- Create safe and effective exercise programs;
- Understand how the body works to create muscle and metabolize fat;
- Become knowledgeable in fitness assessment techniques; and
- Develop relationships with other fitness professionals for lifelong learning.

### Required Courses

#### Fall Semester

- BIOH 104NL - Basic Human Biology with Lab Credit(s): 4 \*
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ECP 120 - Emergency Medical Responder Credit(s): 3
- HEE 220 - Introduction to Physical Education Credit(s): 3 <sup>1</sup>
- HTH 110 - Personal Health and Wellness Credit(s): 3 <sup>1</sup>

#### First Semester Total: 16

#### Spring Semester

- KIN 201 - Basic Exercise Prescription Credit(s): 3 <sup>2</sup>
- KIN 203 - Functional Training Credit(s): 2 <sup>2</sup>
- KIN 215 - Fitness Assessment Techniques Credit(s): 3 <sup>2</sup>
- M 090~ - Introductory Algebra Credit(s): 4 \*
- NUTR 221N - Basic Human Nutrition Credit(s): 3

#### Second Semester Total: 15

#### Total Credits: 31

<sup>1</sup>This course is only offered fall semester.

<sup>2</sup>This course is only offered spring semester.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Program Information

- Graduates of this program will be prepared to sit for a national certification exam through the American Council on Exercise (ACE), American College of Sports Medicine (ACSM), National Strength and Conditioning Association (NSCA) or Aerobics and Fitness Association of America (AFAA).

### Opportunities after Graduation

- Fitness facilities require the expertise of proficient personal trainers. This is a growing industry with many job opportunities.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Karrie Bolivar  
LRC 129  
(406) 756-3880  
kbolivar@fvcc.edu

#### Faculty Advisor

Lori Elwell, M.A.  
BC 123D  
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### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

## Phlebotomy Courses

The impact that the laboratory has on a patient's episode of care begins with the process of obtaining specimens for diagnostic testing. It is the intent of these courses to provide the approved collection and specimen handling practices compliant with all governing agency policies and regulations. Adhering to the training from these courses, as well as institutional specific policies and guidelines, will render viable specimens that produce accurate laboratory results.

Students will participate as both patient and phlebotomist during the two phlebotomy courses offered at FVCC: AHMA 220 - Phlebotomy and AHMA 221 - Phlebotomy Clinical Training. Admission into AHMA 220 requires department consent. Visit <https://fvcc.edu/programs/health-care/phlebotomy/> and complete the "Interested" form section to be added to the course waitlist. Prerequisites for AHMA 221 are successful completion of AHMA 220 with a "C" or better within the past three semesters, application process, and department consent. Application process includes background check and immunization verification.

Upon successful completion of both courses students establish eligibility to sit for the American Society for Clinical Pathology (ASCP) or American Medical Technologists (AMT) national certifying exams.

### Phlebotomy Course

These courses are offered in the fall and spring semesters.

- AHMA 220 - Phlebotomy Credit(s): 3 \*
- AHMA 221 - Phlebotomy Clinical Training Credit(s): 2 \*

### For more information:

Contact Sam Kujala at [skujala@fvcc.edu](mailto:skujala@fvcc.edu) or at (406) 756-4364.



# Physical Therapist Assistant, AAS

Physical Therapist Assistants (PTAs) provide physical therapy services under the direction and supervision of a licensed physical therapist. PTAs help people of all ages who have medical or health-related conditions that limit their ability to move or perform functional activities in their daily lives. PTAs work in a variety of settings including hospitals, outpatient clinics, home health, extended care facilities, schools, and sports facilities. Upon successful completion of this program, students will

- Follow a plan of care established by a physical therapist and carry out physical therapy interventions in a safe, ethical and competent manner at entry-level;
- Demonstrate effective written, oral and nonverbal communication skills with patients, families/caregivers, health care providers, peers, third-party payers and the public;
- Recognize the need for continued personal and professional growth to ensure competence in current practices of physical therapy and a commitment to lifelong learning;
- Demonstrate behavioral expectations as established by the APTA in the Values-Based Behaviors for the Physical Therapist Assistant (January 2011);
- Participate as an effective member of the health care team and educate the health care community on the respective roles of the PT and PTA; and
- Show a personal commitment of health and wellness and dedication to serve to the profession of physical therapy and the community.

## First Year

### Required Prerequisite Courses:

- AHMS 144 - Medical Terminology Credit(s): 3
- AHPT 105 - Introduction to Physical Therapist Assisting Credit(s): 3 <sup>1</sup>
- BIOH 201NL - Human Anatomy and Physiology I Credit(s): 4 \*
- BIOH 211NL - Human Anatomy and Physiology II Credit(s): 4 \*
- COMX 111C - Introduction to Public Speaking Credit(s): 3  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- M 115M - Probability and Linear Mathematics Credit(s): 3 \*  
**OR**
- M 140M - College Math for Healthcare Credit(s): 3 \*
- PSYX 230A - Developmental Psychology Credit(s): 3 \* <sup>2</sup>
- WRIT 101W - College Writing I Credit(s): 3 \*

### Prerequisite Total: 26

<sup>1</sup>AHPT 105 is offered spring semester only.

## Second Year - Fall Semester

- AHPT 101 - Physical Therapist Assisting I/Lab Credit(s): 5 \*
- AHPT 205 - Anatomy and Kinesiology for the PTA Credit(s): 6 \*
- AHPT 206 - Pathophysiology for the Physical Therapist Assistant Credit(s): 3 \*
- AHPT 210 - Clinical Experience I Credit(s): 3 \* <sup>1</sup>
- AHPT 218 - Therapeutic Exercise for the PTA Credit(s): 2 \*

### First Semester Total: 19

### Spring Semester: Interim Session

- AHPT 280 - Special Topics for the PTA Credit(s): 1 \*

### Spring Semester

- AHPT 201 - Physical Therapist Assisting II/Lab Credit(s): 5 \*
- AHPT 213 - Neurorehabilitation for the PTA Credit(s): 6 \*
- AHPT 215 - Introduction to Orthopedics Credit(s): 4 \*
- AHPT 220 - Clinical Experience II Credit(s): 4 \* <sup>1</sup>

### Second Semester Total: 20

### Summer Semester

- AHPT 225 - Seminar and Project in Physical Therapist Assisting Credit(s): 3 \*
- AHPT 295 - Clinical: Experience III Credit(s): 4 \* <sup>1</sup>

### Third Semester Total: 7

### Total Credits: 72

<sup>1</sup>AHPT 210, AHPT 220 and AHPT 295 include a 4-8 week clinical at an approved location.

<sup>2</sup>PSYX 100 is an acceptable substitution.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Admission Guidelines

- Students must apply for select admission to the PTA program.
- Applications may be printed off of the FVCC PTA Program website or picked up in the Admissions Office or in the PTA Program Director's office, BC 123-C, beginning the second week in January and must be returned no later than the second Friday in May. Once applicants have met all the program criteria, selected students will be interviewed by PTA faculty. Students will be informed of their admission status into the PTA program by the second Friday in June.
- Admission to the program is based upon the following:
  1. High school diploma or GED/HiSET
  2. Successful completion of the prerequisite first-year courses (a minimum grade of "C" must be earned in each class with an overall GPA of at least a 2.75)
  3. Clinical observation hours (minimum of 30 hours with at least 10 hours in an inpatient setting)
  4. An interview
  5. Essay
  6. A background check, drug screen and proof of medical health insurance at the student's expense
  7. Documentation of immunization
  8. Two professional references

### Program Information

- Prior to applying to the program, students must have completed or be in the process of completing the first year of prerequisite courses by the end of spring semester. Students may be advised to take BIOB 101; BIOB 160; or CHMY 121 in preparation for BIOH 201; prerequisite math courses in preparation for M 115 or M 140; and a prerequisite writing class in preparation for WRIT 101.
- Students having completed Human Anatomy and Physiology I and II courses more than five years ago will require program permission to be considered as an applicant.
- A grade of "C" or higher is required for ALL non-PT prerequisite courses.
- Once a student is officially accepted into the PTA program, each AHPT course must be passed with a grade of at least a "C+" for the student to continue in the program. If any course grade is less than a "C+" the student must withdraw from the PTA program (a "C" will not be accepted in technical PTA courses). Remediation will be attempted after filling out an Action Plan form to formulate a plan for improving performance in technical PTA courses. A failing grade will require that the course be repeated, and re-enrollment for courses being repeated will be on a space-available basis. Because PTA technical courses are offered only once per year, this could mean students must wait until the following year to petition for readmission to the program.
- The Physical Therapist Assistant Program at Flathead Valley Community College is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (1111 North Fairfax Street, Alexandria, VA, 2314; phone: (703) 706-3245; email: accreditation@pata.org).
- Graduates of this program will be eligible and prepared to take the National Physical Therapist Assistant Licensing Exam.

### Additional Costs

- Once accepted into the PTA program at FVCC, students may incur costs associated with travel to various locations required for internships, which may be outside of the Flathead Valley.
- In addition, students will be assigned a program fee of \$300 per semester which covers durable lab items, licensure test, prep course, and miscellaneous clinical/lab program costs.

### Opportunities after Graduation

- According to the Bureau of Labor Statistics, employment is expected to grow much faster than average because of increasing demand for physical therapy services. Job prospects for physical therapist assistants are expected to be very good. Overall employment of physical therapist assistants and aides is projected to grow 30 percent from 2016 to 2026, much faster than the average for all occupations.

### Advising Information:

For more information, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor | Faculty Advisor   | Faculty Advisor      |
|--------------------------------|-------------------|----------------------|
| Karrie Boliver                 | Janice Heil, M.A. | Julie Robertson, DPT |
| LRC 129                        | BC 123-C          | BC 123-D             |
| (406) 756-3880                 | (406) 756-3373    | (406) 756-3620       |
| kbolivar@fvcc.edu              | jheil@fvcc.edu    | jrobertson@fvcc.edu  |

# Pre-Social Work Transfer to The University of Montana - Missoula

## Pre-Social Work

An Associate of Arts degree with an emphasis in Pre-Social Work prepares the student for transfer to a university for a major in Pre-Social Work, Social Work. The student will be prepared to enter the academic rigors of upper division courses.

Opportunities in the broad spectrum of social work include employment in mental health centers, mental institutions, welfare agencies, employment services, rehabilitation, parole, aftercare, outreach, and various social service agencies both private and public. The student is encouraged to work closely with their advisor in the selection of electives to ensure the maximum level of transferability. Graduates of this transfer program will qualify for an Associate of Arts degree and will be prepared to transfer to **The University of Montana - Missoula**, majoring in social work. Upon successful completion of the social work program, students will be ready to seek employment in social work or seek entry into a graduate school of social work.

### Transfer Articulation Agreement

Students interested in the Bachelor of Social Work program at The University of Montana - Missoula can take nearly 80 lower division credits at FVCC. A cohort of accepted students start the distance learning program in the fall of each year. Students will be required to go to UM to meet with other members of the cohort and professors at least once or twice each semester. The courses in this program are sequential in nature so a student must attend each semester with that cohort or drop back into the next cohort. Students must apply and be accepted to the UM Social Work program a semester prior to enrolling in upper division classes whether they are attending UM campus or continuing at FVCC with the UM/FVCC partnership.

At least five of the eight out-of-department courses plus the UM Social Work equivalent courses (HS 100, HS 210 and HS 250) must be completed or in process prior to applying. Often the senior-year internship may be completed in the Flathead Valley.

## Associate of Arts Degree

### Suggested course of study for a transfer to The University of Montana - Missoula:

#### First Year

- BIOB 101NL - Discover Biology Credit(s): 4 <sup>3</sup>
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- ECNS 101B - Economic Way of Thinking Credit(s): 3 <sup>3</sup>
- HS 100A - Introduction to Human Services/Social Work Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4 <sup>3</sup>
- SOCI 101A - Introduction to Sociology Credit(s): 3 <sup>3</sup>
- WRIT 101W - College Writing I Credit(s): 3 \*
- Fine Arts (F) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3

**First Year Total: 29**

## Second Year

- HS 210 - Case Management Credit(s): 2 \*
- HS 250 - Interviewing/Crisis Intervention Credit(s): 4 \*
- PSCI 210B - Introduction to American Government Credit(s): 3 <sup>3</sup>
- PSYX 230A - Developmental Psychology Credit(s): 3 \* <sup>3</sup>
- PSYX 233 - Fundamentals of Psychology of Aging Credit(s): 3 <sup>3</sup>
- SOCI 220GA - Race, Gender and Class Credit(s): 3 <sup>3</sup>
- Electives Credit(s): 6 <sup>1</sup>
- Humanities (H) Requirement Credit(s): 3
- **OR**
- Fine Arts (F) Requirement Credit(s): 3
- Mathematics (M) Requirement Credit(s): 3
- Natural Science (NL or N) Requirement Credit(s): 3 <sup>2</sup>

**Second Year Total: 33**

**Total Credits: 62**

<sup>1</sup> PSYX 264 is a highly recommended elective that doesn't directly transfer for a specific class but will prepare the student for future classes.

<sup>2</sup> PSYX 250 is preferred.

<sup>3</sup> These courses are the eight out-of-department courses.

\*Indicates prerequisite and/or corequisite needed. Check course description.

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

## Upper Division Courses to Complete through UM-Missoula

Upon completing the first two years of study and earning an AA degree from FVCC, students will apply for acceptance into UM-Missoula's School of Social Work and complete the following courses to finish the degree.

|  |            |
|--|------------|
| SW 100S Introduction to Social Welfare           | 3 credits  |
| SW 200 Introduction to Social Work Practice      | 4 credits  |
| SW 300 Human Behavior and the Social Environment | 3 credits  |
| SW 310 Social Welfare Policy and Services        | 3 credits  |
| SW 350 Social Work Intervention Methods I        | 3 credits  |
| SW 360 Social Work Intervention Methods II       | 4 credits  |
| SW 400 Social Work Research                      | 3 credits  |
| SW 410 Social Work Ethics                        | 3 credits  |
| SW 487 Practicum Seminar I                       | 2 credits  |
| SW 488 Practicum Seminar II                      | 2 credits  |
| SW 495 Field Work Practicum                      | 10 credits |
| Electives  | 18 credits |

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

# Programming and Game Development, AAS

This program prepares students for entry into the field of software programming and game development. It provides students with a foundation in Java, windows programming, and mobile application programming. Game development includes game theory, game programming, and a course in virtual/augmented reality. It should be noted that game platforms and technologies are often used in other non-gaming applications. Both the areas of programming and game development complement each other in terms of problem solving, programming, software analysis, software development, and practical applications. These skills are in demand by the software development community and this program is designed to meet those demands. Upon completion of this program, students will

- Program Java SE applications;
- Program Windows applications;
- Program Android mobile applications;
- Understand foundation game design theory; and
- Program 2D and 3D games.

## Required Courses

### First Year - Fall Semester

- CSCI 111 - Programming with Java I Credit(s): 4 \*
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- MART 231 - Interactive Web I Credit(s): 4
- WRIT 101W - College Writing I Credit(s): 3 \*

### First Semester Total: 15

### Spring Semester

- CSCI 113 - Programming with C++ I Credit(s): 4 \*
- CSCI 121 - Programming with Java II Credit(s): 4 \*
- CSCI 122 - Game Design Theory Credit(s): 3
- CSCI 240 - Databases and SQL Credit(s): 3

### Second Semester Total: 14

### Second Year - Fall Semester

- CSCI 206 - .NET Applications Credit(s): 4 \*
- CSCI 208 - Game Programming I Credit(s): 4 \*
- CSCI 238 - Standards-based Mobile Applications Credit(s): 4 \*
- Electives Credit(s): 3-4<sup>1</sup>

### First Semester Total: 15-16

### Spring Semester

- BGEN 204 - Business Fundamentals Credit(s): 3
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- CSCI 209 - Game Programming II Credit(s): 4 \*
- Elective Credit(s): 6-8<sup>2</sup>

### Second Semester Total: 16-18

### Total Credits: 60-63

<sup>1</sup>Choose elective courses from the "Group 1 Electives" list below.

<sup>2</sup>Choose elective courses from the "Group 2 Electives" list below. Students must select courses with enough credits to meet the 60-credit program minimum.

\*Indicates prerequisite/corequisite needed. Check course description.

## Group 1 Electives:

Please note which semester elective courses are offered and plan accordingly.

- ARTJ 231 - 3D Jewelry Design and Modeling I Credit(s): 4
- DDSN 135 - Solidworks Credit(s): 3
- EMEC 103 - CAE I - Engineering Graphics Communication Credit(s): 3
- ETEC 100 - Introduction to Maker Skills Credit(s): 3

## Group 2 Electives:

Please note which semester elective courses are offered and plan accordingly.

- CSCI 132 - Basic Data Structures and Algorithms Credit(s): 4 \*
- **and**
- CSCI 232 - Data Structures and Algorithms Credit(s): 4 \*
- CSCI 210 - Web Programming Credit(s): 4 \*
- **and**
- CSCI 220 - Virtual/Augmented Reality Credit(s): 4 \*
- EGEN 102 - Introduction to Engineering Computer Applications Credit(s): 3 \*
- GPHY 150 - Introduction to Geospatial Technology and Land Information Credit(s): 2
- GPHY 250 - Web GIS Credit(s): 2
- GPHY 284 - Introduction to GIS Science and Cartography Credit(s): 4
- GPHY 286 - Advanced GIS Credit(s): 4 \*
- ITS 164 - Networking Fundamentals Credit(s): 3
- ITS 224 - Introduction to Linux Credit(s): 3
- MART 232 - Interactive Web II Credit(s): 4 \*
- MART 234 - Emerging Web Technologies Credit(s): 3 \*

## Advising Information:

For more information, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Jori Bullemer  
LRC 129  
(406) 756-3905  
jbullemer@fvcc.edu

### Faculty Advisor

Jim Goudy, M.S.  
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jgoudy@fvcc.edu

# Radiologic Technology, AAS

Radiologic Technologists are skilled in creating images of the human body with the use of ionizing radiation. The radiologic technologist student is trained in diagnostic x-ray procedures and fluoroscopy, digital radiography, surgery, trauma and pediatrics, with plenty of hands-on practical experience. They are also educated in patient care, x-ray equipment physics, and are responsible for radiation safety. Upon completion of this program, students will

- Perform as a vital member of the medical team by providing high quality, diagnostic images;
- Excel in providing patient care, and demonstrate knowledge about current radiation standards;
- Possess the potential to continue education in computed tomography, nuclear medicine, mammography, MRI, interventional radiography, or radiation therapy; and
- Be qualified to work as a radiologic technologist upon passing the state registry exam and applying for state licensure.

## Required Courses

### Required prerequisite courses:

- AHMS 144 - Medical Terminology Credit(s): 3
- BIOH 201NL - Human Anatomy and Physiology I Credit(s): 4 \*
- BIOH 211NL - Human Anatomy and Physiology II Credit(s): 4 \*
- M 095~ - Intermediate Algebra Credit(s): 4 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

### Prerequisite Total: 18

#### First Year - Fall Semester

- AHXR 101 - Patient Care in Radiology Credit(s): 2 \*
- AHXR 110 - Radiographic Procedures I Credit(s): 2 \*
- AHXR 115 - Radiographic Principles I Credit(s): 2 \*
- AHXR 195 - Radiographic Clinical: I Credit(s): 4 \*

### First Semester Total: 10

#### Spring Semester

- AHXR 108 - Introduction to Radiologic Physics Credit(s): 3 \*
- AHXR 111 - Radiographic Procedures II Credit(s): 2 \*
- AHXR 116 - Radiographic Principles II Credit(s): 2 \*
- AHXR 195y - Radiographic Clinical: II Credit(s): 5 \*

### Second Semester Total: 12

#### Summer Semester

- AHXR 295 - Radiographic Clinical: III Credit(s): 8 \*

### Third Semester Total: 8

#### Second Year - Fall Semester

- AHXR 210 - Radiographic Procedures III Credit(s): 2 \*
- AHXR 225 - Radiobiology/Radiation Protection Credit(s): 2 \*
- AHXR 295v - Radiographic Clinical: IV Credit(s): 8 \*

### First Semester Total: 12

#### Spring Semester

- AHXR 211 - Radiographic Procedures IV Credit(s): 2 \*
- AHXR 270 - Radiographic Registry Review Credit(s): 2 \*
- AHXR 295y - Radiographic Clinical: V Credit(s): 8 \*

### Second Semester Total: 12

### Total Credits: 72

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Recommended Course Offering:

- BIOH 113 Credit(s): 4

## Admission Guidelines

- Students must apply for select admission to this program.
- Applications are available after January 15 and must be completed and returned by the last working day in February.
- Admission to the program is based upon the following:
  1. High school diploma or GED/HiSET;
  2. Evidence of academic achievement in the five prerequisite courses (a minimum of "C" must be earned in each class);
  3. Observation in an imaging department and/or work experience in healthcare;
  4. A well-written essay;
  5. Positive references; and
  6. An interview.
  7. Students admitted into the program are required to have a background check, proof of current CPR license, and medical health insurance at the student's expense. In addition, applicants with a felony after age 18 will not be accepted into the program.

## Program Information

- When applying to the Radiologic Technology program, students must have completed or be in the process of completing the following classes OR their equivalent by the end of spring semester: AHMS 144, BIOH 201 and BIOH 211, M 095~, WRIT 101. Students may be advised to take BIOB 101 or BIOB 160 in preparation for BIOH 201, prerequisite math courses in preparation for M 095~ and prerequisite writing course in preparation for WRIT 101. A grade of "C" or higher is required for ALL prerequisite courses.
- BIOH 201 and BIOH 211 completed five or more years ago will require program permission for transfer credit.
- Students who have already taken a 100 or higher level of math (excluding M 114, M 115 and STAT 216 ) are exempt from taking M 095~. Students with an appropriate score on the placement test are also exempt from M 095~ but must take a math class at a higher level (excluding M 114, M 115 and STAT 216).
- Admitted students may contact the Financial Aid Office to learn about scholarship opportunities, including the Ellen and John MacMillan Endowed and the Dustin Petersen Memorial.
- Students in the Radiologic Technology program must earn a "C" or better in ALL classes in the two-year program.
- Graduates of this program will be eligible and prepared to take the registry examination administered by the American Registry of Radiologic Technologists (ARRT).
- Graduates must apply for licensure with the state of Montana prior to employment.

## Opportunities after Graduation

- Employment is projected to grow most rapidly in medical offices, clinics and diagnostic imaging centers. Radiologic technologists have the opportunity for advancement with experience and specialization in areas such as radiation treatment, ultrasound and nuclear medicine.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Program Advisor.

### Student Support Center Advisor Program Advisor

Karrie Bolivar  
LRC 129  
(406) 756-3880  
kbolivar@fvcc.edu

Colleen Bench  
Kalispell Regional Healthcare  
(406) 751-5767  
cbench@krmc.org

## Substance Abuse Counseling, AA

This program is designed to meet the academic requirement for the State of Montana's Licensed Addiction Counselor. This program provides the student with the most up-to-date knowledge in the field of addictions. Upon completion of this program, students will

- Understand addiction
- Understand a variety of models and theories of addiction and other problems related to substance abuse.
- Describe the behavioral, psychological, physical health, and social effects of psychoactive substances on the user and significant others.
- Understand treatment
- Describe the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems.
- Recognize the importance of family, social networks, and community systems in the treatment and recovery process.
- Apply knowledge
- Understand the established diagnostic criteria for substance use disorders and describe treatment modalities and placement criteria within the continuum of care.
- Provide treatment services appropriate to the personal and cultural identity and language of the client.
- Demonstrate professionalism
- Understand the importance of self-awareness in one's personal, professional, and cultural life.
- Understand the addiction professionals' obligations to adhere to ethical and behavioral standards of conduct in the helping relationship.

### Required Courses

#### First Year

- BIOB 101NL - Discover Biology Credit(s): 4  
**OR**
- BIOB 160NL - Principles of Living Systems Credit(s): 4
- CAS 140 - Addiction and Diversity Credit(s): 1
- CAS 242 - Fundamentals of Substance Abuse and Addictions Credit(s): 3 \*
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- PSYX 100A - Introduction to Psychology Credit(s): 4
- PSYX 150 - Drugs and Society Credit(s): 3
- WRIT 101W - College Writing I Credit(s): 3 \*
- Fine Arts (F) Requirement Credit(s): 3
- Humanities (H) Requirement Credit(s): 3 <sup>1</sup>
- Mathematics (M) Requirement Credit(s): 3
- Social Sciences (B) Requirement Credit(s): 3 <sup>2</sup>

**First Year Total: 33**

#### Second Year

- CAS 248 - Substance Abuse Counseling II Credit(s): 3 \*
- CAS 250 - Assessment and Case Management Processes Credit(s): 4 \*
- CAS 252 - Gambling and Gaming Disorders in Substance Abuse Counseling Credit(s): 2 \*
- CAS 254 - Co-occurring Disorders in Substance Abuse Counseling Credit(s): 2 \*
- HS 210 - Case Management Credit(s): 2 \*
- HS 250 - Interviewing/Crisis Intervention Credit(s): 4 \*
- HS 279 - Legal, Ethical, and Professional Issues in Human Services Credit(s): 3 \*
- PSYX 240A - Fundamentals of Abnormal Psychology Credit(s): 3 \*
- PSYX 250NA - Fundamentals of Biological Psychology Credit(s): 3 \*
- PSYX 264 - Fundamentals of Group Dynamics for Substance Abuse Counselors Credit(s): 3 \*
- SOCI 220GA - Race, Gender and Class Credit(s): 3
- Humanities (H) Requirement Credit(s): 3  
**OR**
- Fine Arts (F) Requirement Credit(s): 3 <sup>1</sup>

**Second Year Total: 35**

**Total Credits: 68**

<sup>1</sup>Recommend PHL 110 and SPNS 101 for a total of 8 credits.

<sup>2</sup> Recommend ECNS 101 or PSCI 210.

\*Indicates prerequisite and/or corequisite needed. Check course description.

**Recommended electives as course loads and time permit:**

- PSYX 230A - Developmental Psychology Credit(s): 3 \*
- PSYX 260A - Fundamentals of Social Psychology Credit(s): 3 \*
- SOCI 101A - Introduction to Sociology Credit(s): 3

#### Program Information

- After graduating with this option, the student must complete 1,000 hours of supervised work experience in a state-licensed substance abuse program in order to apply for the Montana Licensed Addiction Counselor's test. This requirement is subject to change.

#### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Carlin Hale

LRC 129

(406) 756-3886

chale@fvcc.edu

# Surgical Technology, AAS

The Flathead Valley Community College Surgical Technology Associate of Applied Science (AAS) degree is a 70-credit program designed to develop skills in all phases of operating room procedures and techniques, including clinical experience in the operating room. Graduates of the program are ready to begin their career in the field as entry-level Surgical Technologists.

In addition to operating room techniques, surgical procedures, surgical instruments and equipment; students study surgical microbiology, surgical pharmacology, medical terminology, anatomy and physiology, asepsis (sterile technique), preparation of the patient for surgery and the physical conditions that make it necessary for a person to have surgery.

The associate's degree program in Surgical Technology is designed to provide students with the knowledge and technical skills required to obtain entry-level employment in the field of Surgical Technology. To achieve this goal, the curriculum prepares students in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains, while studying areas in general and specialty surgical procedures, principles of anesthesia, anatomy and physiology, medical terminology and surgical technology techniques. Additional coursework in general education assists the graduates in growing professionally and in developing the ability to assume leadership roles.

Upon completion of this program, students will have the attitude, knowledge, and skills necessary to enter the profession of surgical technology. The specific goals are as follows:

- Consistently demonstrate the necessary training to assume responsibilities in the operating room, including aseptic technique, instrument setup, assisting the surgeon, anticipating the surgeon's needs, and assisting with post-operative care.
- Correlate the knowledge of anatomy, physiology, pathophysiology, and microbiology to their role as a Surgical Technologist.
- Implement safe practice techniques in regards to perioperative routines, patient transportation, positioning, and emergency procedures.
- Integrate principles of surgical asepsis as part of the perioperative experience.
- Apply knowledge, skills, and demonstrate ability to perform as a surgical technologist in the cognitive, psychomotor, and affective learning domains.
- Provide to the community professional, competent, and knowledgeable individuals who can provide surgeons and the surgical team quality assistance as a Surgical Technologist utilizing ethical standards and integrity.
- Display professionalism, be prepared to be a lifelong learner, and value the professional attributes of the Surgical Technologist.
- Possess the necessary didactic and clinical skills needed to pass the certification exam and enter into the job arena as a competent entry-level Surgical Technologist.

The prerequisite courses are to be completed before applying to the program but do not have to be taken in one semester.

## Required Courses

### Pre-surgical Technology Courses

- AHMS 144 - Medical Terminology Credit(s): 3
- AHST 101 - Introduction to Surgical Technology Credit(s): 3
- BIOH 201NL - Human Anatomy and Physiology I Credit(s): 4 \*
- BIOH 211NL - Human Anatomy and Physiology II Credit(s): 4 \*
- COMX 111C - Introduction to Public Speaking Credit(s): 3  
**OR**
- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- M 120 - Mathematics with Health Care Applications Credit(s): 3 \*
- PSYX 100A - Introduction to Psychology Credit(s): 4
- WRIT 101W - College Writing I Credit(s): 3 \*

### Pre-surgical Technology Total: 27

### Surgical Technology Curriculum

#### Spring Semester

- AHST 116 - Surgical Techniques I with Lab Credit(s): 6 \*
- AHST 201 - Surgical Procedures I Credit(s): 4 \*
- BIOM 250NL - Microbiology for Health Sciences Credit(s): 4 \*

#### First Semester Total: 14

#### Fall Semester

- AHST 202 - Surgical Procedures II Credit(s): 5 \*
- AHST 216 - Surgical Techniques II Credit(s): 3 \*
- AHST 250 - Surgical Clinical I Credit(s): 4 \*
- BIOH 113 - Human Form and Function II Credit(s): 4 \*

#### Second Semester Total: 16

#### Spring Semester

- AHST 207 - Professional Development and Leadership Credit(s): 3 \*
- AHST 255 - Advanced Surgical Clinical Credit(s): 10 \*

#### Third Semester Total: 13

#### Total Credits: 70

\*Indicates prerequisite and/or corequisite needed. Check course description.

## Admission Guidelines

- Students must apply for select admission to the Surgical Technology program.
- Applications may be printed off of the FVCC Surgical Technology Program website or picked up in the Admissions Office or in the Surgical Technology Program Director's office, BC 123-A; must be returned no later than the first Friday in October. Once applicants have met all the program criteria, selected students will be interviewed by Surgical Technology faculty. Students will be informed of their admission status into the Surgical Technology program by the second Friday in November.
- Admission to the program is based upon the following:
  1. High school diploma or GED/HiSET;
  2. Successful completion of the prerequisite courses (a minimum grade of "C" (2.0) must be earned in each class with an overall GPA of at least a 2.75);
  3. Surgical observation (Contact Program Director to discuss how this is accomplished);
  4. An interview;
  5. Essay;
  6. Documentation of Immunization (before the fall semester, after admittance);
  7. Evidence of CPR certification (before the fall semester, after admittance); and
  8. Two professional references.

The above requirements associated with costs will be at the personal expense of the student, in addition to tuition and books.

## Program Information

- Upon completion of the prerequisite courses, specific surgical technology (AHST) courses total three semesters. Surgical technology specific courses include both classroom (didactic) and hands-on training (clinical) intended to prepare students to assist in surgical operations.
- Application deadline for the spring Surgical Technology Program is the first Friday in October. Late and incomplete applications will not be considered.
- Many students need preliminary math, biology and English courses before being accepted into the required courses. These courses may increase the total number of program credits. Students should review their math, English and biology placement scores before planning their full program schedules.
- This program has been designed in accordance with the 6th Ed. Core Curriculum for Surgical Technology and functions within the current standards and guidelines set forth by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC-STSA), sponsored by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).
- Only students who have attended CAAHEP and ABHES accredited program are eligible to take the national certification exam administered by the National Board of Surgical Technology and Surgical Assisting (NBSTSA). Passing the national examination qualifies the individual as a Certified Surgical Technologist (CST®). The Association of Surgical Technologists (AST) recommends that all surgical technologists obtain this certification.
- Students in the Surgical Technology program must earn a grade of "C" (2.0) or better in ALL classes in the program.
- Students enrolled in any of the AHST courses, are required to maintain an 80% grade average in each AHST course, in order to progress through the program.
- This is a demanding program. Graduates will have maintained high academic and professional standards.
- Human Anatomy and Physiology I and II completed five or more years ago will require program director's permission.

- Additional Costs: Once accepted into the Surgical Technology program at FVCC, students may incur costs associated with travel to various locations required for clinical rotations, one of which may be outside of the Flathead Valley. In addition, students will be assessed lab fees per semester which covers durable lab items, certification exam, prep exam, AST membership dues and miscellaneous clinical/lab program fees.

## Opportunities after Graduation

- Surgical Technologists are in demand. The federal Bureau of Labor Statistics projects faster-than-average employment growth (employment increase of 15% or more) over the period 2014-2024.
- Hospitals will continue to be the primary employer of Surgical Technologists, although much faster employment growth is expected in offices of physicians and in outpatient care centers, including ambulatory surgical centers. Job opportunities will be best for technologists who are certified.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Program Advisor.

### Student Support Center Advisor

Karrie Bolivar

LRC 129

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# Surveying, AAS

This program is designed to prepare students to enter the land surveying profession as surveying technicians, instrument persons, drafters, and/or office technicians. The philosophy of the program is that all students are potentially seeking their professional land surveyor's license. Success in the surveying program requires an above average proficiency in math and strong English skills. Graduates of the Surveying program will:

- Be able to function in field work activities including operating current instrumentation, searching for field evidence, taking and reducing field notes, and staking construction projects and boundary monumentation;
- Be able to function in office activities including calculator operations, computer data entry and analysis, manual and computer drafting of various survey-related drawings, and records research;
- Possess sufficient background knowledge and skills to enter a geographic information system entry-level position; and
- Possess sufficient theoretical and practical surveying knowledge to sit for the Land Surveyor Intern exam.

## Required Courses

### First Year - Fall Semester

- CAPP 131 - Basic MS Office Credit(s): 2 <sup>3</sup>
- M 095~ - Intermediate Algebra Credit(s): 4 \*
- M 123 - Surveying Mathematics I Credit(s): 2 \* <sup>1</sup>
- SRVY 152 - Surveying Graphics Credit(s): 2
- SRVY 241 - Introduction to Surveying for Land Surveyors I Credit(s): 5 \*
- WRIT 101W - College Writing I Credit(s): 3 \*

### First Semester Total: 18

### Spring Semester

- M 124 - Surveying Mathematics II Credit(s): 3 \* <sup>1</sup>
- PHSX 110 - Applied Physics Credit(s): 4 \* <sup>2</sup>
- OR
- PHSX 126NL - General Science: Physical Science Credit(s): 5 \* <sup>2</sup>
- SRVY 242 - Introduction to Surveying for Land Surveyors II Credit(s): 5 \*
- SRVY 255 - Surveying Calculations Credit(s): 3 \*
- SRVY 262 - Public Land Survey System Credit(s): 3 \*

### Second Semester Total: 18-19

### Second Year - Fall Semester

- COMX 111C - Introduction to Public Speaking Credit(s): 3
- SRVY 248 - Unmanned Aerial Mapping Systems Credit(s): 2
- SRVY 268 - CAD for Surveying Profession Credit(s): 4 \*
- SRVY 270 - Legal Principles in Surveying I Credit(s): 5 \*
- SRVY 283 - GIS for Survey Analysis Credit(s): 4

### Third Semester Total: 18

### Spring Semester

- SRVY 246 - Introduction to GPS for Surveyors Credit(s): 2 \*
- SRVY 247 - Survey-grade GPS Control and Analysis Credit(s): 3 \*
- SRVY 265 - Surveying Laws and Land Division Credit(s): 3 \*
- SRVY 271 - Legal Principles in Surveying II Credit(s): 2 \*
- SRVY 273 - Route Surveying Credit(s): 2 \*
- SRVY 275 - Analytic Photogrammetry and Remote Sensing Credit(s): 3 \*
- SRVY 280 - Land Surveying Computers Credit(s): 2 \*

### Fourth Semester Total: 17

### Total Credits: 71-72

<sup>1</sup>Another math sequence, which includes coursework through Calculus, may be substituted.

<sup>2</sup>Another physical science class may be substituted with advisor approval.

<sup>3</sup>Advisor may waive this course requirement with proof of competence in MS Office.

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Additional Professional Development Program Offering:

- SRVY 290 - Undergraduate Research Credit(s): 1 \*

### Program Information

- This program meets the educational requirements for licensing set by the Montana Board of Professional Engineers and Professional Land Surveyors.
- Success in the surveying program requires an above average proficiency in math and strong English skills. A minimum grade of "C-" must be achieved in all required surveying and math courses.
- Out-of-state students from Alaska, Arizona, Colorado, Hawaii, Idaho, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming are eligible to apply for reduced tuition under the terms of the Western Undergraduate Exchange (WUE). Contact the Admissions Office at (406) 756-3851 for details.
- Students lacking a proficient background in algebra, geometry, trigonometry, and/or English, will be advised to complete the survey degree program in three years.

### Opportunities after Graduation

- Upon completion of this degree, the Land Surveyor Intern (LSI) exam can be taken. In Montana, an additional six years of experience under the supervision of a licensed surveyor is required before the actual licensing (LS) exam can be taken. Students seeking to become licensed in other states should verify specific state educational and experience requirements.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

### Student Support Center Advisor

Russ Lamson  
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# Theatre Arts Transfer to Central Washington University

## Associate of Arts Degree

### Transfer Articulation Agreement

The following course of study has been jointly established to prepare students to transfer to Central Washington University (CWU) to earn either a Bachelor of Arts degree in Theatre Studies or a Bachelor of Fine Arts in Theatre Arts. Students who complete the Associate of Arts degree at FVCC will transfer to CWU with junior standing and the guarantee that CWU's General Education Basic & Breadth requirements have been satisfied. Students must earn a grade of "C" or higher in all classes in order to qualify for this agreement. See your advisor for more information about this transfer articulation agreement.

### Suggested course of study for a transfer in Theatre Arts:

#### First Year

- M 105M - Contemporary Mathematics Credit(s): 3 \*
- THTR 101FH - Introduction to Theatre Credit(s): 3  
(Equivalent to TH 107 at CWU)
- THTR 102F - Introduction to Theatre Design Credit(s): 3  
(Equivalent to TH 140 at CWU)
- THTR 106 - Theatre Production I: Run Crew Credit(s): 1  
(Equivalent to TH 301 at CWU)
- THTR 120F - Introduction to Acting I Credit(s): 3  
(Equivalent to TH 144 at CWU)
- THTR 205 - Theatre Workshop II Credit(s): 2  
(Equivalent to TH 393 at CWU)
- THTR 239CF - Creative Drama and Dance for K-8 Credit(s): 3
- WRIT 101W - College Writing I Credit(s): 3 \*
- Global Issues (G) Requirement Credit(s): 3
- Natural Science (NL) Requirement Credit(s): 3
- Social Sciences (A) Requirement Credit(s): 3

**First Year Total: 30**

#### Second Year

- COMX 111C - Introduction to Public Speaking Credit(s): 3
- THTR 106 - Theatre Production I: Run Crew Credit(s): 1  
(Equivalent to TH 301 at CWU)
- THTR 121F - Introduction to Acting II Credit(s): 3 \*  
(Equivalent to TH 145 at CWU)
- THTR 202 - Stagecraft I: Lighting and Costumes Credit(s): 3
- THTR 203 - Stagecraft II: Scenery and Props Credit(s): 3  
(Equivalent to TH 267 at CWU)
- THTR 205 - Theatre Workshop II Credit(s): 2  
(Equivalent to TH 393 at CWU)
- THTR 235H - Dramatic Literature Credit(s): 3  
(Equivalent to TH 380 at CWU)
- THTR 275 - Beginning Directing II Credit(s): 3
- WRIT 201W - College Writing II Credit(s): 3 \*
- Natural Science (NL or N) Requirement Credit(s): 3
- Social Sciences (B) Requirement Credit(s): 3

**Second Year Total: 30**

**Total Credits: 60**

\*Indicates prerequisite and/or corequisite needed. Check course description.

*The information on all transfer programs is subject to change. Students should see their advisor to explore other possibilities not specifically listed in the program.*

### Courses to complete at CWU after transfer:

After completing the FVCC AA course of study above, students will apply for admission into CWU and complete the following classes, as well as additional theatre electives based on specialization.

|                                     |           |
|-------------------------------------|-----------|
| TH 166 - Theory of Play Production  | 3 credits |
| TH 261 - Costume Technology         | 3 credits |
| TH 268 - Lighting Technology        | 3 credits |
| TH 363 - Theatre History I          | 4 credits |
| TH 364 - Theatre History II         | 4 credits |
| TH 365 - Theatre History III        | 4 credits |
| TH 488 - Introduction to Dramaturgy | 3 credits |
| TH 495 - Senior Research Project    | 3 credits |

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or a Faculty Advisor.

| Student Support Center Advisor | Faculty Advisor             | Faculty Advisor       |
|--------------------------------|-----------------------------|-----------------------|
| Amber Paulson                  | Rich Haptonstall,<br>M.F.A. | Joe Legate,<br>M.F.A. |
| LRC 129                        | AT 256                      | AT 255                |
| (406) 756-3882                 | (406) 756-3962              | (406) 756-3906        |
| apaulson@fvcc.edu              | rhaptonstall@fvcc.edu       | jlegate@fvcc.edu      |

# Web Technology, AAS

While enrolled in the Web Technology program, students will learn the creative and technical skills necessary to design and develop professional websites. The Web Technology program is ideal for individuals interested in website production and management. Upon completion of this program, students will:

- Identify qualities of good web page design by evaluating color, layout, navigation, and content;
- Create quality websites using a mix of HTML, CSS, and Wordpress;
- Design and develop interactive media using HTML5;
- Create interactive web documents using JavaScript, a client-side scripting language;
- Gain knowledge of network protocols and operating systems found within a network structure;
- Gain the knowledge and skills to design and build databases for web applications;
- Integrate server-side programming and database technologies to create dynamic web applications; and
- Demonstrate marketing and managing techniques while working in a team environment to analyze, design, develop, and evaluate a website for a client.

## Required Courses

### First Year - Fall Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- OR
- WRIT 101W - College Writing I Credit(s): 3 \*
- BMKT 225 - Marketing Credit(s): 3
- CSCI 111 - Programming with Java I Credit(s): 4 \*
- GDSN 149 - Digital Imaging I Credit(s): 3
- MART 231 - Interactive Web I Credit(s): 4

### First Semester Total: 17

### Spring Semester

- BMKT 130 - Search Engine Marketing Credit(s): 3
- CSCI 211 - Client Side Programming Credit(s): 4
- CSCI 240 - Databases and SQL Credit(s): 3 \*
- M 094~ - Quantitative Reasoning Credit(s): 4 \*
- MART 232 - Interactive Web II Credit(s): 4 \*

### Second Semester Total: 18

### Second Year - Fall Semester

- COMX 111C - Introduction to Public Speaking Credit(s): 3
- CSCI 210 - Web Programming Credit(s): 4 \*
- ECNS 201B - Principles of Microeconomics Credit(s): 3
- OR
- ECNS 202B - Principles of Macroeconomics Credit(s): 3
- ITS 164 - Networking Fundamentals Credit(s): 3
- MART 234 - Emerging Web Technologies Credit(s): 3 \*

### First Semester Total: 16

### Spring Semester

- CSCI 213 - Web Programming Techniques: PHP II Credit(s): 4 \*
- GDSN 247 - Digital Portfolio Preparation Credit(s): 4 \*
- ITS 221 - Project Management Credit(s): 3
- ITS 298 - Internship/Cooperative Education Credit(s): 3 \*
- OR
- Approved Elective Credit(s): 3

### Second Semester Total: 14

### Total Credits: 65

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Admission Guidelines

- Students are expected to have sufficient computer skills.

### Program Information

- Program emphasis is on developing skills in three areas of website responsibilities: content development, business management and technical operations.
- All required courses within this degree program must be taken for a letter grade.
- An internship is optional for this program. Students must apply for internship placements for this program the prior semester. See Internships for more information and application deadlines.

### Opportunities after Graduation

- Designing, developing and maintaining websites.
- Managing web technology projects or businesses.
- Continuing education in the areas of Computer Science, Graphic Design, Business, or Information Technology.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center or the Faculty Advisor.

#### Student Support Center Advisor

Jori Bullemer  
LRC 129  
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jbullemer@fvcc.edu

#### Faculty Advisor

Dawn Rauscher, M.Ed.  
BSS 105  
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# Welding and Fabrication Technology, CAS, AAS

The Welding and Fabrication Technology curriculum is designed to provide students training and experience in welding and fabrication as it pertains to assembly, manufacturing, energy, robotics, and structural construction. The program provides education and training in common cutting and welding processes, CNC plasma cutting, OXYFUEL, SMAW, GMAW, GTAW, and FCAW processes, structural and pipe and plate welding, blueprint reading, communications, and quantitative problem solving. Upon completion of this program, students will

- Describe and demonstrate safe use of each type of welding equipment;
- Select and demonstrate various joining processes;
- Estimate type, quantity, cost, and weight of a welded fabrication from blueprint information;
- Demonstrate proper setup, adjustment, and use of typical cutting and welding equipment;
- Demonstrate proficiency in OXYFUEL, SMAW, GMAW, AND FCAW processes;
- Visually inspect and document proper applications of welding processes;
- Demonstrate techniques and devices for minimizing part distortion during welding;
- Apply advanced fabrication techniques including: design, layout, fixturing and production welding that is commonly found throughout Fabrication Shops; and
- Develop and schedule the sequence to complete a fabrication project from start to finish including blueprints, estimating, quality control, and any coating requirements.

## Required Courses

### First Year- Fall Semester

- EWLD 110 - Introduction to Nondestructive Testing  
Credit(s): 3
- M 114 - Extended Technical Mathematics Credit(s): 3 \*  
**OR**
- M 152M - Precalculus Algebra Credit(s): 3 \*
- WLDG 100 - Introduction to Welding Fundamentals  
Credit(s): 2
- WLDG 111 - Welding Theory I Practical Credit(s): 3
- WLDG 117 - Blueprint Reading and Welding Symbols  
Credit(s): 3
- WLDG 145 - Fabrication Basics I Credit(s): 2 \*

### First Semester Total: 16

### Spring Semester

- COMX 115C - Introduction to Interpersonal Communication  
Credit(s): 3
- DDSN 114 - Introduction to CAD Credit(s): 3  
**OR**
- DDSN 135 - Solidworks Credit(s): 3
- WLDG 122 - Welding Theory III Practical Credit(s): 4 \*
- WLDG 146 - Fabrication Basics II Credit(s): 3 \*
- WLDG 185 - Welding Qualification Test Preparation  
Credit(s): 3 \*

### Second Semester Total: 16

### CAS Total Credits: 32

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Second Year - Fall Semester

- BMGT 205C - Professional Business Communication  
Credit(s): 3 \* <sup>1</sup>  
**OR**
- WRIT 101W - College Writing I Credit(s): 3 \* <sup>1</sup>
- COLS 115 - Workforce Preparation for Occupational Trades  
Credit(s): 1
- WLDG 119 - Welding Certification II Credit(s): 2 \*
- WLDG 210 - Pipe Welding Credit(s): 4 \*
- WLDG 220 - Welding Fabrication I Credit(s): 4 \*

### First Semester Total: 14

<sup>1</sup>WRIT 101 is the preferred course.

### Optional Course Offerings

- MCH 132 - Introduction to Engine Lathes Credit(s): 4 \*
- MCH 134 - Introduction to Mills Credit(s): 4

### Spring Semester

- ELCT 105 - Electrical Circuitry Credit(s): 2
- EWLD 125 - AWS D1.1 Code Book Credit(s): 2 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*
- WLDG 222 - Welding Fabrication II Credit(s): 4 \*
- WLDG 280 - Weld Testing Certification Credit(s): 4 \*

### Second Semester Total: 16

### AAS Total Credits: 62

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Note:

While the Associate of Applied Science (AAS) degree is the preferred path to a successful career in Welding and Fabrication, students may earn a 20-credit Certificate of Technical Studies (CTS) in Welding Technology that will give students the minimum welding skills needed to be employable, including at least two AWS certifications: Welding Technology, CTS.

### Program Information

- After completing the program, students should be qualified for the following certifications:
- AWS D 1.1 in 3/8" Plate Certification
- AWS D 1.1 in Unlimited Thickness Certification
- AWS D 1.1 Pipe Certification
- Fees for this program are higher than average. Please see the program director for more details.

### Opportunities after Graduation

- Career opportunities offer a wide range of possibilities as a welding technician in the fabrication and manufacturing industries, steel construction, nondestructive testing and weld inspection, mining, energy, petroleum, bridge construction and other production areas.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

#### Student Support Center Advisor

Will Richards

OT 204

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### Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Welding and Inspection Technology, AAS

The Welding and Inspection Technology curriculum is designed to provide students experience in welding and inspection technology as it pertains to assembly, manufacturing, energy, structural construction and nondestructive testing. Nondestructive testing involves the inspection of material or a welding object in a manner that will not impair its future usefulness using one of the NDT test methods, visual inspection, liquid penetrant, magnetic particle, eddy current, ultrasonic and radiographic testing. This program provides education and training in common cutting and welding processes, AWS welding standards, OXYFUEL, SMAW, GMAW, GTAW, and FCAW processes, structural, pipe and plate welding, nondestructive testing and inspection, blueprint reading and communications and math competencies. Upon completion of this program, students will

- Describe and demonstrate safe and proper use of each type of welding equipment;
- Select and demonstrate various joining processes;
- Read and interpret welding blueprints using a systemic process;
- Estimate type, quantity, cost, and weight of a welded fabrication from information on a blueprint;
- Demonstrate proper transport, setup, adjustment and use of all cutting and welding equipment;
- Use current industry technology to test and repair welding related equipment;
- Demonstrate proficiency in OXYFUEL, SMAW, GMAW, GTAW, and FCAW processes;
- Recognize, inspect and document proper applications of welding processes;
- Demonstrate techniques and devices for controlling heat effects during welding;
- Consistently use equipment safely in the performance of nondestructive testing;
- Demonstrate proficiency in the use of nondestructive testing equipment and the processes; and
- Use current AWS, ASME, and ASNT codes, welding procedures and recommended practices.

## First Year - Fall Semester

- EWLD 110 - Introduction to Nondestructive Testing Credit(s): 3
- M 114 - Extended Technical Mathematics Credit(s): 3 \*
- WLDG 100 - Introduction to Welding Fundamentals Credit(s): 2
- WLDG 111 - Welding Theory I Practical Credit(s): 3
- WLDG 117 - Blueprint Reading and Welding Symbols Credit(s): 3
- WLDG 145 - Fabrication Basics I Credit(s): 2 \*

## First Semester Total: 16

### Spring Semester

- COMX 115C - Introduction to Interpersonal Communication Credit(s): 3
- DDSN 114 - Introduction to CAD Credit(s): 3
- **OR**
- DDSN 135 - Solidworks Credit(s): 3
- EWLD 111 - Liquid Penetrant and Magnetic Particle Testing Credit(s): 3 \*
- WLDG 122 - Welding Theory III Practical Credit(s): 4 \*
- WLDG 185 - Welding Qualification Test Preparation Credit(s): 3 \*

## Second Semester Total: 16

## Second Year - Fall Semester

- BMGT 205C - Professional Business Communication Credit(s): 3 \*
- **OR**
- WRIT 101W - College Writing I Credit(s): 3 \*
- EWLD 113 - Ultrasonic Testing I Credit(s): 2 \*
- EWLD 115 - Eddy Current Testing Credit(s): 3 \*
- EWLD 121 - Radiographic Testing I Credit(s): 2
- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1
- WLDG 119 - Welding Certification II Credit(s): 2 \*
- WLDG 210 - Pipe Welding Credit(s): 4 \*

## First Semester Total: 17

### Spring Semester

- EWLD 114 - Ultrasonic Testing II Credit(s): 3 \*
- EWLD 122 - Radiographic Testing II Credit(s): 3 \*
- EWLD 125 - AWS D1.1 Code Book Credit(s): 2 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*
- WLDG 280 - Weld Testing Certification Credit(s): 4 \*

## Second Semester Total: 16

## Total Credits: 65

\*Indicates prerequisite and/or corequisite needed. Check course description.

### Optional Course Offering:

- MCH 122 - Introduction to CAM Credit(s): 3

### Program Information

- After completing the program, students should be qualified for the following certifications:
- AWS D 1.1 in 3/8" Plate Certification
- AWS D 1.1 in Unlimited Thickness Certification
- AWS D 1.1 Pipe Certification
- ASNT Level II Education Requirements for Certification. ASNT also requires documented work experience.
- First Aid/CPR Certification
- Fees for this program are higher than average. Please see the program director for more details.

### Opportunities after Graduation

- Career opportunities offer a wide range of possibilities as a welding technician in the fabrication and manufacturing industries, steel construction, nondestructive testing and weld inspection, mining, energy, petroleum, bridge construction and other production areas.

### Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Will Richards

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# Welding Technology, CTS

The Welding Technology Certificate of Technical Studies is designed to provide students the minimum welding skills needed to be employable, including at least two AWS certifications. Upon successful completion of the program, students will:

- Describe and demonstrate safe use of each type of welding equipment;
- Select and demonstrate various joining processes;
- Demonstrate proper setup, adjustment, and use of typical cutting and welding equipment;
- Demonstrate proficiency in OXYFUEL, SMAW, GMAW, AND FCAW processes;
- Visually inspect and document proper applications of welding processes; and
- Demonstrate techniques and devices for minimizing part distortion during welding.

## Required Courses

### Fall Semester

- WLDG 111 - Welding Theory I Practical Credit(s): 3
- WLDG 117 - Blueprint Reading and Welding Symbols Credit(s): 3
- WLDG 145 - Fabrication Basics I Credit(s): 2 \*

### First Semester Total: 8

### Spring Semester

- COLS 115 - Workforce Preparation for Occupational Trades Credit(s): 1
- WLDG 122 - Welding Theory III Practical Credit(s): 4 \*
- WLDG 136 - GMAW/GTAW Welding and Certification Credit(s): 4 \*
- WLDG 185 - Welding Qualification Test Preparation Credit(s): 3 \*

### Second Semester Total: 12

### Total Credits: 20

## Program Information

- To earn this certificate, students must earn at least two American Welding qualifications as part of the WLDG 185 course curriculum.
- After completing the program, students should be qualified for the following certifications:
- 3/8" (mild steel)
- Unlimited Thickness (mild steel)
- Limited Pipe (mild steel)
- Fees for this program are higher than average. Please see your advisor for more details.

## Opportunities after Graduation

- Career opportunities offer a wide range of possibilities as a welding technician in various production areas.

## Advising Information:

For more information about this program, contact the FVCC Student Support Center.

### Student Support Center Advisor

Will Richards

OT 204

(406)756-4862

wrichards@fvcc.edu

## Gainful Employment

*For occupational information, tuition and fees, and other gainful employment disclosures, visit our website at [fvcc.edu/gainfulemployment.html](http://fvcc.edu/gainfulemployment.html).*

# Course Numbering

- The Montana University System utilizes a common course numbering (CCN) system for all undergraduate courses. <https://ccn.mus.edu/search/>
- All public colleges and universities in Montana use the same subject abbreviations or rubric (the letter codes that indicate the course subject), numbers and titles for courses taught on more than one campus.
- Most FVCC rubrics and numbers have changed. However, course content has not changed as a result of this process.
- The course number (e.g., WRIT 101) indicates the department (Writing) and the level of the course.
- Courses numbered 100 or higher assume college level reading ability.
- Courses numbered from:
  - 100 to 199 are freshman level
  - 200 to 299 are sophomore level
- The “~” after courses numbered under 100 indicates these courses are usually nontransferable but may apply towards an AAS degree at FVCC. Courses numbered under 100 may not be eligible for financial aid.

## CCN Rubric Numbering Schemes

For all rubrics, the following numbering scheme is standard for the x90s deciles:

|     |  |
|-----|--|
| x90 | Undergraduate Research                         |
| x91 | Special Topics                                 |
| x92 | Independent Study                              |
| x93 | Study Abroad                                   |
| x94 | Seminar/Workshop                               |
| x95 | Field Work/Practicum/Clinical/Student Teaching |
| x96 | Service Learning                               |
| x97 | Education Methods Courses                      |
| x98 | Internship/Cooperative Education               |
| x99 | Capstone/Senior Thesis                         |

## General Education Indicators

Course numbers followed by the letters listed below represent courses to be used to satisfy the general education core.

- C = Communications
- F = Fine Arts
- G = Global Issues
- H = Humanities
- N = Natural Science (Non-conventional Lab)
- L = Natural Science (Lab)
- M = Mathematics
- A = Social Sciences Group A
- B = Social Sciences Group B
- W = Writing



# Course Descriptions

## Activities: General (ACT)

### ACT 106 - Beginning Conditioning and Fitness

Credit(s): 1

Students will work with the instructor to develop a personalized workout comprised of a combination of cardiovascular work and weight training. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

### ACT 112 - Curling

Credit(s): 1

This course focuses on the basic fundamentals of curling. Topics include the history of the sport, how the sport is played and score is kept, how to throw the stone, and how and why to sweep in front of the stone. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall Semester)

### ACT 114 - Beginning Rock Climbing

Credit(s): 1

This course introduces the student to movement on rock and to the techniques and safety systems to set up your own short climbs, top-rope climbing systems. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### ACT 150 - Beginning Yoga

Credit(s): 1

The purpose of this course is to introduce students to Hatha Yoga physical exercise. The Yoga postures exercise every part of the body, stretching and toning the muscles and joints, the spine and the entire skeletal system. Postures also work on the internal organs, glands and nerves. By releasing physical and mental tension, they also liberate vast resources of energy as well as maintaining the balance between the mind and the body. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### ACT 156 - Beginning Aikido

Credit(s): 1

This is an introductory course in the traditional Japanese martial art of Aikido. By using basic techniques of centering, grounding, and balance (in mind and body), one learns that the non-violent approach to conflict is the safest and most effective approach. The principles of Aikido are transferable to personal and professional effectiveness for daily life. In addition, the physical training in Aikido naturally leads to improved general health, flexibility, core strength, and awareness. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### ACT 169 - Beginning Tennis

Credit(s): 1

This course is an introduction to the game of tennis for beginning or novice tennis players. Emphasis will include instruction on rules and etiquette, proper use of equipment, basic strokes, basic shots, serves, returns, and game strategies (singles and doubles). This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

### ACT 200 - Core Align

Credit(s): 1

This course combines modalities to improve students' core strength and overall fitness level. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### ACT 213 - Ice Skating

*Formerly ACT 191z Ice Skating*

Credit(s): 1

This course uses the Learn to Skate USA Adult Basic Skills curriculum to build confidence with all fundamental ice skating skills. Students may choose to progress to more specialized areas of ice skating such as free skating, ice dancing, or adult hockey leagues. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### ACT 230 - Intermediate Yoga

Credit(s): 1

*Prerequisite(s):* ACT 150 or instructor's consent.

This course explores the principles, philosophy, history, and practices of yoga. Students will learn how to use yoga as a transformative tool by applying yoga principles to life experiences. Topics include the origins of different practices, principles of alignment and energetic actions, and asana poses used to facilitate the process of self-reflection. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### ACT 269 - Intermediate Tennis

Credit(s): 1

This course is an extension of ACT 169 with special emphasis on developing and enhancing the tennis skills and strategies of intermediate and advanced players. Instruction will include a review of rules and etiquette, as well as improving strokes, shots, serves, returns, and game strategies (singles and doubles). This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

**ACT 283 - Logger Sports**

Credit(s): 1

This course introduces the safe and proper use of crosscut saws, axes and chain saws as they are used in intercollegiate Logger Sports competition. Emphasis is placed on equipment maintenance, safety of use and proper techniques for competition. The last third of the term, students will compete in Logger Sports contests throughout the Northwest. This course may be repeated for a total of two credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**Accounting (ACTG)****ACTG 101 - Accounting Procedures I**

Credit(s): 4

A practical course in the foundations of accounting, this course emphasizes the complete accounting cycle for a sole proprietorship service business as well as the cycle for a merchandising firm. This course covers receivables and payables as well as banking transactions and payroll. (Fall Semester)

**ACTG 102 - Accounting Procedures II**

Credit(s): 4

*Prerequisite(s):* ACTG 101 or instructor's consent.

A continuation of ACTG 101, this course covers notes payable and receivable, valuation of receivables, inventories, plant and equipment, the voucher system, accounting for partnerships and corporations, financial statement analysis, and cash flow statements. (Spring Semester)

**ACTG 124 - Payroll Accounting Applications**

Credit(s): 3

This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms and journal and general ledger transactions. Emphasis is placed on using software applications for calculation of wages, social security, income and unemployment taxes; generating appropriate payroll tax forms and reports; and journalizing/posting transactions. (Spring Semester)

**ACTG 150 - Accounting on Microcomputers**

Credit(s): 3

*Prerequisite(s):* ACTG 101 or ACTG 201 or equivalent.

This course provides students with a realistic approach to computerized accounting principles using QuickBooks Pro. Students will learn QuickBooks functions while completing accounting problems using this software. (Spring Semester)

**ACTG 180 - Payroll Accounting**

Credit(s): 2

*Prerequisite(s):* ACTG 101 or ACTG 201.

This course is an introduction to payroll accounting including relevant federal and state income tax laws and labor laws, pension plans, worker's compensation, unemployment insurance and necessary records and reports. (Spring Semester)

**ACTG 201 - Principles of Financial Accounting**

Credit(s): 4

An introduction to the theory and application of accounting, this course covers double entry accounting, the accounting cycle, merchandising operations, control accounts and subsidiary ledgers, internal control, cash, short-term investments, accounts receivable, merchandise inventory, plant assets, current liabilities, long-term liabilities, payroll, financial statement disclosures and partnership accounting. (Fall and Spring Semesters)

**ACTG 202 - Principles of Managerial Accounting**

Credit(s): 4

*Prerequisite(s):* a grade of "C" or better in ACTG 201.

A continuation of ACTG 201, this course includes corporate organization, dividends, retained earnings, earnings per share, long-term liabilities, long-term investments and consolidations, statement of cash flows, analysis and interpretation of financial statements, accounting for manufacturing operations, job order costing, process costing, cost-volume-profit relationships, business segments and departmental reporting, planning, and budgeting. (Fall and Spring Semesters)

**ACTG 205 - Computerized Accounting**

Credit(s): 2

*Prerequisite(s):* ACTG 202, BMIS 211, CAPP 156, or instructor's consent.

This course provides the students with knowledge in the use of spreadsheets in analyzing financial data and preparing financial reports. Advanced features of spreadsheets will be covered. (Fall Semester)

**ACTG 207 - Advanced Accounting on Microcomputers**

Credit(s): 2

*Prerequisite(s):* ACTG 101 or ACTG 201 and previous computer experience.

This course is designed to teach students how to use computerized accounting software. Students will convert a manual accounting system to a commercial computerized accounting system. The course includes both converting an existing company into a computerized accounting system as well as creating a new company. (Spring Semester)

**ACTG 210 - Cost Accounting**

*Formerly: ACTG 210 Cost and Advanced Accounting*

Credit(s): 4

*Prerequisite(s):* ACTG 202.

This course is designed to enable students to use relevant accounting data and techniques in making management decisions. It covers types of costs and their relationships, budgets, break even computations, costing systems, and cost allocations. (Spring Semester)

**ACTG 211 - Income Tax Fundamentals**

Credit(s): 4

*Prerequisite(s):* ACTG 201.

This course is designed to introduce the basic principles of federal taxation for the sole proprietor, partnership, or corporation. It includes income determination, deductions, sales of properties, depreciation and its recapture, nontaxable exchanges, dividends, corporate liquidations and S Corporations. (Fall Semester)

### **ACTG 231 - Applied Accounting**

Credit(s): 2

*Prerequisite(s):* ACTG 101 or ACTG 201.

This course applies terminology, concepts, and techniques learned in accounting to computerized accounting software packages. It also covers setting up inventory, creating invoices, customizing forms, creating reports and graphs, payroll, processing payments, and using all other accounts. (Fall Semester)

### **ACTG 241 - Intermediate Financial Accounting I**

Credit(s): 4

*Prerequisite(s):* ACTG 202.

This course is aimed at those students wishing to pursue accounting: environmental and conceptual framework of financial accounting, review of the accounting process and financial statements, time value of money, cash and receivables, advanced inventory issues, advanced problems in long-term assets, and intangible assets. (Fall Semester)

### **ACTG 298 - Internship**

Credit(s): 3

*Prerequisite(s):* completion of 30 semester credits with a grade point average of 2.0 or better and submission of an internship application.

This course offers a supervised, structured learning experience at an approved business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real-world workplace issues. Typically, a student completes 45 hours on-site per one lecture credit. Additionally, students participate in activities and class time beyond the hours spent at the job site. (All Semesters)

## **Agricultural Sciences (AGSC)**

### **AGSC 200 - Soil Nutrient Management**

Credit(s): 3

*Prerequisite(s):* ENSC 245.

This course covers the principles of soil nutrient management as they relate to plant nutrition and crop production. The role of soil physical, biological and chemical processes in soil quality will be emphasized. Students will learn how to conduct and interpret soil tests, become familiar with various soil amendments, and gain experience in application procedures. (Fall Semester)

### **AGSC 202z - Practical Farm Production and Equipment: Fall**

Credit(s): 4

This course is designed to teach students the fundamentals of organic vegetable and herb production in the fall months. Students will work in greenhouse and field settings, applying crop production principles on the campus farm. Topics covered will include pest management, harvesting, fall seeding, marketing, planning, decision-making, and record keeping. (Fall Semester)

### **AGSC 202y - Practical Farm Production and Equipment: Spring**

Credit(s): 4

This course is designed to teach students the fundamentals of organic vegetable and herb production in the spring months. Students will work in groups and independently in greenhouse and field settings, applying learned crop production principles to growing food on the campus farm. Topics covered will include variety selection, seeding and plant propagation, seedbed preparation, pest management, planning, farm management, and record keeping. (Spring Semester)

### **AGSC 230 - Agricultural Pest Management**

Credit(s): 4

This course will provide comprehensive coverage of the classification, growth, structure, life cycles, identification and control of selected weeds, insects, and diseases of major agricultural crops. Principles of and practical approaches to integrated pest management will be emphasized, including crop scouting, diagnosis, decision-making, non-chemical and chemical control of specific pests, and pesticide safety. (Fall Semester)

### **AGSC 241 - Field Crop Production**

Credit(s): 3

*Prerequisite(s):* BIOB 110.

This course is a study of modern agronomic field crop production practices as they relate to crop growth, yield, and quality. Topics covered include environmental effects of crop development, plant breeding, nutrient and water management, cultural practices, pest management, harvest and postharvest handling, and current issues in crop management. (Spring Semester)

### **AGSC 265 - Building Community Food Systems**

Credit(s): 3

This course examines the connections between farming, food, and society at global, national, and regional levels, with a focus on community food system transformation. Students will think critically about food system components and gain experience in building community food systems through collaborative projects aimed at increasing community access to regionally produced food. (Spring Semester)

### **AGSC 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s):* instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **AGSC 298z - Internship: Agricultural Enterprise**

Credit(s): 3

*Prerequisite(s):* completion of 15 semester credits with a grade point average of 2.0 or better and advisor's consent. This course offers a supervised, structured learning experience at an approved agricultural business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real world workplace issues. Students will participate in activities and class time beyond the hours spent at the job site. Typically, a student completes 45 site hours per credit earned. (All Semesters)

**AGSC 298y - Internship: Campus Farm**

Credit(s): 3

This course offers a supervised, structured learning experience at an approved business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real-world workplace issues. Typically, a student completes 45 hours on-site per one lecture credit. Additionally, students participate in activities and class time beyond the hours spent at the job site. (All Semesters)

**Allied Health (AH)**

**AH 117:** see AHMS 106

**AH 155:** see AHMS 116

**AH 230:** see AHMA 250

**Allied Health: Athletic Training (AHAT)****AHAT 210 - Prevention and Care of Athletic Injuries**

Credit(s): 3

This course presents an introduction to the field of athletic training. It presents the foundations of sports trauma, including the recognition and classification of sport injuries, as well as the prevention, evaluation and management of those injuries. Teaching is done through a combination of lecture and hands on (lab) techniques. (Spring Semester)

**Allied Health: Medical Assisting (AHMA)****AHMA 201 - Medical Assisting Clinical Procedures I**

Credit(s): 4

*Prerequisite(s):* acceptance into the Medical Assistant program.

Students develop a basic knowledge of medical assistant skills required for completing the Medical Assistant CAS program. The student will learn how to perform vital signs, use electronic medical records, prepare exam rooms and patients, and assist during an exam. The student will learn medical office skills that apply to pediatrics, obstetrics, and gynecology. This course emphasizes the high standard of ethical principles, confidentiality, and professionalism required to progress to AHMA 203. (Fall Semester)

**AHMA 202 - Medical Assisting Clinical Procedures I Lab**

Credit(s): 1

*Corequisite(s):* AHMA 201.

This course is a continuation of AHMA 201 with an emphasis on performing medical assistant clinical skills. (Fall Semester)

**AHMA 203 - Medical Assisting Clinical Procedures II**

Credit(s): 4

*Prerequisite(s):* a grade of "B-" (2.7) or above in AHMA 201, AHMA 202, and AHMA 205.

This course is designed to allow the student to advance the knowledge and skills required for completing the Medical Assistant CAS program. The student is trained in urinalysis, administering injections, performing phlebotomy, handling specimens, and principles of radiology. Throughout the course an emphasis is placed on courteous treatment of the patient, professionalism in the medical office, attention to detail, and accurate documentation in the electronic health record. (Spring Semester)

**AHMA 204 - Medical Assisting Clinical Procedures II Lab**

Credit(s): 1

*Corequisite(s):* AHMA 203.

This course is a continuation of AHMA 203 with an emphasis on performing medical assistant clinical skills. (Spring Semester)

**AHMA 205 - Medical Assisting Clinical Approaches I**

Credit(s): 1

*Corequisite(s):* AHMA 201, AHMA 202.

This online course will present clinically-related case studies to students to encourage development of their critical thinking skills. The cases will be based on patient information related to material covered in AHMA 201. Online resources will be utilized to identify appropriate patient preparation for procedures. (Fall Semester)

**AHMA 206 - Medical Assisting Clinical Approaches II**

Credit(s): 1

*Prerequisite(s):* AHMA 201, AHMA 202, and AHMA 205.

*Corequisite(s):* AHMA 203 and AHMA 204.

This course is intended to reinforce student preparation for on-site clinical experiences by researching case studies and applying critical thinking skills. Case studies will be based on patient information related to material covered in AHMA 203. (Spring Semester)

**AHMA 220 – Phlebotomy**

Credit(s): 3

*Prerequisite(s):* prior approval. See course schedule for contact information.

The profession of phlebotomy is taught through lecture, student laboratory, and clinical experiences. The course will focus on skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Topics include vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults. Collection of specimens from children and infants is discussed. Emphasis will be placed on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology. Students will learn the theory and principles of CLIA-waived laboratory tests. Students will complete a minimum of 40 hours classroom/lab training. Clinical hours will be completed via AHMA 221. (All Semesters)

## **AHMA 221 - Phlebotomy Clinical Training**

Credit(s): 2

*Prerequisite(s):* a grade of "C" or better in AHMA 220 within the past three semesters, application process, and department consent.

This course includes 100 hours of clinical practice in specimen collection on adults, children, and infants. Emphasis is placed on infection control and prevention, proper patient identification, labeling of specimens, quality assurance, specimen handling, processing, and accessioning. The course is designed to allow students to develop the skills, knowledge, and attitude required to function in a professional manner in the health care setting. Students must perform a minimum of 100 successful venipunctures and eight successful skin punctures. Students who successfully complete AHMA 220 and AHMA 221 will be eligible to sit for the American Society for Clinical Pathology (ASCP) Phlebotomy Technician national examination. (Fall and Spring Semesters)

## **AHMA 230 - Advanced Medical Office Procedures**

Credit(s): 4

*Prerequisite(s):* AHMS 220.

An advanced course intended to train medical assisting students in the administrative procedures currently used in medical offices including, but not limited to, coding, processing of insurance claims, and EMR. Students will also be taught introductory skills of becoming a medical scribe while using current technology. (Spring Semester)

## **AHMA 250 - Electronic Medical Procedures**

*Formerly AH 230 Electronic Health Records*

Credit(s): 3

The purpose of this course is to build a comprehensive understanding and comfort level with the electronic health record that will apply directly in the clinical workplace. (Spring Semester)

## **AHMA 280 - Medical Assisting Exam Preparation**

Credit(s): 1

A course intended to prepare medical assistant students and/or currently practicing medical assistants for a national exam: the American Association of Medical Assistant (AAMA) Certification. (Summer Semester)

## **AHMA 298 - Medical Assisting Externship**

Credit(s): 4

*Prerequisite(s):* a grade of "B-" (2.7) or above in AHMA 203, AHMA 204, AHMA 206, AHMA 230, and instructor's consent.

This is the capstone course for the Medical Assistant CAS program and is designed to provide on-site clinical experience in a physician's office or a clinic setting. It provides opportunities to apply learned skills in various clinical and administrative procedures under the supervision of a medical doctor and office staff. (Summer Semester)

## **Allied Health: Medical Support (AHMS)**

### **AHMS 105 - Health Care Delivery**

Credit(s): 3

The purpose of this course is to familiarize the student with the history and development of today's health care system in the United States. The lessons will provide an overview of the development of different types of facilities, the "continuum of care" concept that is the basis for modern health care, and examine the quality management process. Reimbursement mechanisms and managed care concepts that affect health care delivery are also included. (Fall Semester)

### **AHMS 106 – Health Care Professional**

*Formerly: AH 117 Medical Setting Customer Care and Privacy*

Credit(s): 1

This course is designed for health care workers to understand the importance of professionalism and the need to perform in a professional, ethical, legal and competent manner in a medical office setting. (Spring Semester)

### **AHMS 107 - Career Essentials for Health Sciences**

Credit(s): 0

Career Essentials for Health Sciences focuses on the foundation knowledge and skills students will need prior to entry into their desired health science program. It also provides the basics to best understand and work as an employee in health care settings. Emphasis is on types of health care delivery systems and regulations, communication skills, patient-centered care, teamwork, worker behaviors and attitudes, legal and ethical responsibilities, self-care, and safe quality practice. (All Semesters)

### **AHMS 108 - Health Data Content Structure**

Credit(s): 3

This course offers an in-depth analysis of data mobility including the hardware infrastructure (wires, wireless, and devices supporting them), the ISO stack, standards, Internet protocols, federations and grids, the NHIN and other nationwide approaches. (Fall and Spring Semesters)

### **AHMS 116 - Basic Medical Records**

*Formerly AH 155 Essentials of Electronic Health Records*

Credit(s): 2

This course provides a basic introduction to the history, theory, and potential benefits of electronic health records. This course will provide a hands-on experience using an EHR that can be applied directly to the health care workplace. (Fall Semester)

### **AHMS 127 - Medical Document Formatting**

Credit(s): 2

This course will assist students in understanding fundamental concepts and techniques related to formatting medical documents. These techniques will increase productivity and accuracy and create professional looking documents for the medical office. (Fall Semester)

### **AHMS 144 - Medical Terminology**

Credit(s): 3

This course is a systemic approach to scientific terminology in order to prepare students to function properly in fields related to the medical profession. Familiarity with word elements and competent use of a medical dictionary are emphasized. (All Semesters)

### **AHMS 156 - Medical Billing Fundamentals**

Credit(s): 3

The most common commercial, managed care and federal health insurance plans in the U.S. will be discussed. Billing processes and procedures as well as legal, regulatory, and ethical issues in health insurance will also be covered. (Fall Semester)

### **AHMS 175 - Medical Law and Ethics**

Credit(s): 3

This course is designed to prepare the medical office assistant for a variety of legal situations that arise in the medical office setting. This course will stress the importance of medical office personnel having knowledge of the law, personal protection, patient protection, physician protection, the duties of the physician, responsibility and standard of care. The course will also examine the difference between civil and criminal law, contracts, malpractice, and the economic impacts. This course will also offer a comprehensive vocabulary of legal terms. Case law will be examined in groups. (Spring Semester)

### **AHMS 198 - Internship**

Credit(s): 3

*Prerequisite(s):* AHMS 105, AHMS 144, AHMS 210, AHMS 252, BIOH 104, BIOH 113, BMGT 205, CAPP 106.

Students will be required to complete 150 hours of supervised training in medical coding through on-the-job training in an approved business or organization. Hours will be arranged to fit students' and employers' schedules. (All Semesters)

### **AHMS 208 - Health Care Statistics**

Credit(s): 3

*Prerequisite(s):* M 120.

This course is designed to introduce statistical computation at the introductory level for use in health care facilities. Students will learn to extract information and perform statistical analysis to be used in making decisions for the health care facility. (Intermittently)

### **AHMS 210 - Basic Medical Coding**

Credit(s): 3

*Prerequisite(s):* AHMS 144.

This course will cover the introduction and basic coding information for CPT, HCPCS, and ICD-10-CM coding sets. The focus is learning guidelines and assigning CPT, HCPCS, and ICD-10-CM codes to a wide range of abbreviated coding scenarios covering different body systems and medical specialties. Complete source documents will be used periodically. AHIMA's Standards of Ethical Coding will be reviewed. Basic billing and reimbursement issues will be discussed. (Coding will be taught for the physician reimbursement, not the facility, so ICD-10-CM codes will not be covered. These are covered in the intermediate coding classes.) (Fall and Spring Semesters)

### **AHMS 219 - Intermediate Medical Coding**

Credit(s): 4

*Prerequisite(s):* a grade of "C-" or better in AHMS 210.

This course is a continuation of AHMS 210. Students will continue coding using the current Diagnosis and Procedures manuals applying to medical cases and simulations. (Fall Semester)

### **AHMS 220 - Medical Office Procedures**

Credit(s): 4

*Prerequisite(s):* sophomore standing in the Health Care Office Management or Medical Assistant program or instructor's consent.

This course is designed for students pursuing medical field careers. A comprehensive course in administrative office procedures, telephone skills, medical law, employment law, appointment scheduling, office facilities, communication, and electronic medical records. (Fall Semester)

### **AHMS 250 - Advanced Medical Coding**

Credit(s): 4

*Prerequisite(s):* AHMS 210, AHMS 219.

This capstone course provides students the opportunity to code from medical files using ICD-10-CM and CPT codes as necessary, complete appropriate insurance forms, and place the necessary codes on the 3M encoder software system. This course will help students bridge the gap between theoretical class work and practical application. (Spring Semester)

### **AHMS 252 - Computerized Medical Billing**

Credit(s): 2

This course is designed to provide hands-on training to the student seeking employment in the medical office. It will cover the fundamentals of ICD-10, SPT, and HCPCS coding and would be appropriate for the beginner or intermediate level office staff as well. (Spring Semester)

### **AHMS 298y - Internship: Office Technology**

Credit(s): 3

*Prerequisite(s):* CAPP 154 and completion of 30 semester credits with a grade point average of 2.0 or better. Must have consent of internship coordinator and advisor.

This course offers a supervised, structured learning experience at an approved business/organization. Students will receive training related to their field of study, enhance their academic learning and gain exposure to the workplace. Prior to placement at an internship site, students will attend an internship orientation to learn the application and internship process. (All Semesters)

### **Allied Health: Medical Laboratory Technology (AHMT)**

#### **AHMT 101 - Introduction to Medical Laboratory Technology**

Credit(s): 2

This course is intended for students interested in the profession of Medical Laboratory Technology. It will introduce students to descriptions of different departments, laboratory equipment, safety, ethics, and medical-legal aspects of the clinical laboratory. Students will also learn basic laboratory skills such as use of the microscope, capillary puncture, pipetting and preparing dilutions. (Fall and Spring Semesters)

### **AHMT 201 - Hematology and Coagulation**

*Formerly AHMT 201 Hematology and AHMT 215 Coagulation*

Credit(s): 6

*Prerequisite(s):* admission to the Medical Laboratory Technology program.

*Corequisite(s):* AHMT 205, AHMT 210, AHMT 295v.

This course presents the origin of the various types of blood cells with emphasis on the red and white cells. Students will learn about human hematological disorders and classify these based on clinical laboratory findings. This course also includes blood coagulation with emphases on the theory, procedures, and practical applications and provides an overview of the coagulation process, disorders, and laboratory evaluations associated with the disorders. Laboratory experiences will emphasize the morphology and identification of common human blood cells and various procedures used in the hematology and hemostasis departments as well as both manual and semi-automated methods of assessing blood clotting. (Fall Semester)

### **AHMT 205 - Urinalysis and Body Fluids**

Credit(s): 3

*Prerequisite(s):* admission to the Medical Laboratory Technology program.

*Corequisite(s):* AHMT 201, AHMT 210, AHMT 295v.

This course introduces various properties and constituents of urine and body fluid other than blood. It emphasizes the physical, chemical, and microscopic examination of urine and body fluids, such as cerebrospinal fluid, serous and synovial fluids, semen, and feces. Students will interpret the results and correlate these clinical values to health and disease states. (Fall Semester)

### **AHMT 210 - Immunology and Serology**

Credit(s): 3

*Prerequisite(s):* admission to the Medical Laboratory Technology program.

*Corequisite(s):* AHMT 201, AHMT 205, AHMT 295v.

This course introduces the basic principles of antigen and antibody reactions. It compares and contrasts the different immunological procedures and describes the mechanisms that protect the body from disease and infection. Students will study the principles of serological procedures used in the identification of plasma proteins and the diagnosis of blood borne diseases. (Fall Semester)

**AHMT 215:** see AHMT 201

### **AHMT 230 - Immunoematology**

Credit(s): 3

*Prerequisite(s):* AHMT 201, AHMT 205, AHMT 210, AHMT 295v with a minimum score of 75% in both the lecture and laboratory portions of each course.

*Corequisite(s):* AHMT 240, AHMT 295x.

The course emphasizes the study of blood group antigens and antibodies of the ABO, Rh, and other blood group systems. Topics include donor screening, pre-transfusion testing procedures, detection of antigen/antibody reactions, which may affect transfusion, erythroblastosis fetalis, and neonatal and obstetrical transfusion practice. Particular emphasis is also placed on serological and transfusion service procedure used in the laboratory, including the processing and storing of the various blood components for transfusion. (Spring Semester)

### **AHMT 235 - Clinical Microbiology**

Credit(s): 4

*Prerequisite(s):* AHMT 201, AHMT 205, AHMT 210, AHMT 230, AHMT 295v, AHMT 295x, and BIOM 250 with a minimum grade of 75% in both the lecture and laboratory portions of each course.

*Corequisite(s):* AHMT 295y.

This course connects the morphology and behavior of microorganisms to clinically significant situations. It includes the study and laboratory applications of antibiotic susceptibility methods and molecular techniques used in clinical microbiology. It also includes the pre-analytical phase of specimen collection and preparation and causative agents of various pathophysiological states. (Summer Semester)

### **AHMT 240 - Clinical Chemistry**

Credit(s): 3

*Prerequisite(s):* AHMT 201, AHMT 205, AHMT 210, AHMT 295v with a minimum grade of 75% in both the lecture and laboratory portion of each course.

*Corequisite(s):* AHMT 230, AHMT 295x.

This course includes the theoretical and fundamental instrumentation methodologies, including practical concepts associated with testing procedures used in the chemistry department. These include important aspects of acid-base balance, electrolytes, carbohydrates, proteins, lipids, metabolites, hormones, and toxins as they relate to laboratory analysis. Emphasis is placed on major organ functions and the appropriate assays, analysis of various body fluids, and laboratory findings to indicate disease processes. Included are applications of general laboratory principles, laboratory math, quality control, and variables affecting laboratory results. (Spring Semester)

### **AHMT 295v - Clinical I: Medical Laboratory Clinical**

Credit(s): 5

*Prerequisite(s):* admission to the Medical Laboratory Technology program.

*Corequisite(s):* AHMT 201, AHMT 205, AHMT 210.

This course allows students to apply information and skills learned in AHMT 201, AHMT 205, and AHMT 210 in a clinical setting in order to develop professionalism and proficiency. (Fall Semester)

### **AHMT 295x - Clinical II: Medical Laboratory Clinical**

Credit(s): 8

*Prerequisite(s):* AHMT 201, AHMT 205, AHMT 210, AHMT 295v with a minimum grade of 75% in both the lecture and laboratory portions of each course.

*Corequisite(s):* AHMT 230, AHMT 240.

This course is a health-related, work-based learning experience allowing students to apply laboratory skills in both on-site and off-site environments. Students will have direct supervision by clinical professionals. Experiences will include Urinalysis/Body Fluids, Hematology, and Clinical Chemistry. (Spring Semester)

### **AHMT 295y - Clinical III: Medical Laboratory Clinical**

Credit(s): 5

*Prerequisite(s)*: AHMT 201, AHMT 205, AHMT 210, AHMT 230, AHMT 240, AHMT 295v, AHMT 295x with a minimum grade of 75% in both the lecture and the laboratory portions of each course.

*Corequisite(s)*: AHMT 235.

This course is a health-related, work-based learning experience allowing students to apply specialized occupational theory, skills, and concepts especially in the area of Immunohematology (Blood Bank) and clinical microbiology. (Summer Semester)

### **Allied Health: Physical Therapy (AHPT)**

#### **AHPT 101 - Physical Therapist Assisting I/Lab**

Credit(s): 5

*Prerequisite(s)*: AHPT 105.

*Corequisite(s)*: AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

This is the first of two sequential skills and procedures courses in the PTA program. The following topics are covered: basic principles and procedures of physical therapy; basic care skills and application techniques; use of assistive devices; architectural and environment barriers; wound care and debridement techniques; definition and measurement of vital signs and application to emergency situations; documentation; incorporation of medical terminology and abbreviations; basic principles of tissue inflammation and edema management; introduction to pain theories, conditions, and assessment; physiological principles, indications/contraindications, and application of physical agents discussed in lecture; and the PTA's role in discharge planning and the importance of communication with the PT. (Fall Semester)

#### **AHPT 105 - Introduction to Physical Therapist Assisting**

Credit(s): 3

This course is designed to give the student an overview of the Physical Therapy profession by providing a historical perspective, as well as an understanding of its philosophy in relation to the professional organization; an overview of the roles of the Physical Therapy staff members in the clinical settings as well as members of the health care team in various delivery systems; development of interpersonal communication skills relating to the profession; and an understanding of the commitment of the graduate to continued personal and professional development. This course provides an overview of ethical and legal issues relating to the role of the PTA in health care delivery. It includes such topics as financing of physical therapy; regulations governing PTA's; code of ethics; the purpose of documentation and types of medical records; an introduction to evidence-based practice and professional literature; and scope of PT and PTA practice. (Spring Semester)

#### **AHPT 201 - Physical Therapist Assisting II/Lab**

Credit(s): 5

*Prerequisite(s)*: AHPT 101, AHPT 105, AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

*Corequisite(s)*: AHPT 213, AHPT 215, and AHPT 220.

This is the second in the series of procedures and application courses. The following topics are covered: theoretical principles and application of cardiopulmonary rehab, industrial rehab, ergonomics, gait analysis and training; prosthetic and orthotic application and treatment; breathing exercises and strategies, airway clearance techniques; biofeedback, topical applications, electrotherapy, ultrasound; light therapies; procedure and application of cervical and lumbar traction; theory and application of massage/manual therapy. Students will accurately document the treatment and patient's response within various related case studies as well as present research to the class about a selected therapeutic modality using peer-reviewed journals. (Spring Semester)

#### **AHPT 205 - Anatomy and Kinesiology for the PTA**

Credit(s): 6

*Prerequisite(s)*: AHPT 105.

*Corequisite(s)*: AHPT 101, AHPT 206, AHPT 210, and AHPT 218.

This course is designed to provide the student with an understanding of the human musculoskeletal system relative to the biomechanical elements of normal and abnormal human motion as well as osteology and arthrology in relation to muscle action and joint mechanics. The study and skills of goniometry, manual muscle testing, and palpation will also be covered. (Fall Semester)

#### **AHPT 206 - Pathophysiology for the Physical Therapist Assistant**

Credit(s): 3

*Prerequisite(s)*: AHPT 105.

*Corequisite(s)*: AHPT 101, AHPT 205, AHPT 210, and AHPT 218.

This course introduces students to the pathophysiology; etiology; clinical signs and symptoms; and management of selected pathological and injury-related disorders treated in physical therapy. Pathologies discussed include disorders of the following systems: immune, endocrine, integumentary, cardiovascular, respiratory, hematologic, musculoskeletal, hepatic, gastrointestinal, renal and urologic, and nervous. The course includes student presentations on disorders pertinent to physical therapy as well as discussions on specific case studies applying the Guide for Conduct of the Physical Therapist Assistant and the International Classification of Functioning, Disability and Health, and how they apply to the treatment of certain diseases. (Fall Semester)

#### **AHPT 210 - Clinical Experience I**

Credit(s): 3

*Prerequisite(s)*: AHPT 105.

*Corequisite(s)*: AHPT 101, AHPT 205, AHPT 206, and AHPT 218.

The purpose of this clinical affiliation is to provide the student with an opportunity to apply skills and techniques learned in AHPT 101, AHPT 205, AHPT 206, and AHPT 218 under the appropriate supervision of the clinical instructor. This course will include a four-week clinical rotation at an approved site. (Fall Semester)



### **AHPT 213 - Neurorehabilitation for the PTA**

Credit(s): 6

*Prerequisite(s):* AHPT 101, AHPT 105, AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

*Corequisite(s):* AHPT 201, AHPT 215, and AHPT 220.

This course is an introduction to neuroanatomy and neurophysiology in relationship to neurological pathologies of the brain and spinal cord commonly treated by physical therapy. Through this course the student is also introduced to neurological development: normal vs. abnormal - birth through adult; disease processes and outcomes; and neurophysiological routines used for treatment. Students will become familiar with general guidelines for completing a sensory assessment utilizing testing protocol. Principles and treatment of specific neurological disabilities are also presented. (Spring Semester)

### **AHPT 215 - Introduction to Orthopedics**

Credit(s): 4

*Prerequisite(s):* AHPT 101, AHPT 105, AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

*Corequisite(s):* AHPT 201, AHPT 213, and AHPT 220.

This course introduces students to pediatric and adult musculoskeletal pathologies and management of orthopedic and surgical problems commonly seen by physical therapy. Course content will include basic biomechanics and mechanisms of orthopedic injuries and disease; survey of surgical repair with emphasis on rehabilitation; evaluation techniques and treatments used by physical therapists; use of manual muscle testing for orthopedic pathologies; theoretical application of therapeutic exercise programs and equipment commonly used for treatment of various orthopedic conditions and surgical procedures. (Spring Semester)

### **AHPT 218 - Therapeutic Exercise for the PTA**

Credit(s): 2

*Prerequisite(s):* AHPT 105.

*Corequisite(s):* AHPT 101, AHPT 205, AHPT 206, and AHPT 210.

This course introduces the physical therapist assistant student to topics such as exercise physiology, exercise prescription tailored to the individual, general therapeutic exercise, aquatic therapy, relaxation techniques, and establishing a home exercise program. Current health practices and theory will be addressed in relation to nutrition/wellness within special populations emphasizing preventative practice. Students will become familiar with contraindications for exercise training in persons with various system or musculoskeletal disabilities and will understand how to progress an individual through a therapeutic exercise program established by a physical therapist. (Fall Semester)

### **AHPT 220 - Clinical Experience II**

Credit(s): 4

*Prerequisite(s):* AHPT 101, AHPT 105, AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

*Corequisite(s):* AHPT 201, AHPT 213, and AHPT 215.

This is the second of three full-time clinical experiences. The students will continue to build on their clinical experiences from AHPT 210 and previous coursework. This course will include a six-week clinical rotation at an approved site. (Spring Semester)

### **AHPT 225 - Seminar and Project in Physical Therapist Assisting**

Credit(s): 3

*Prerequisite(s):* AHPT 101, AHPT 105, AHPT 201, AHPT 205, AHPT 206, AHPT 213, AHPT 215, AHPT 218, and AHPT 220.

*Corequisite(s):* AHPT 295.

This concentrated course is designed to integrate skills and techniques from previous clinical experiences and from the coursework presented throughout the PTA program. It focuses on presentation of comprehensive treatment plans utilizing all treatment skills and techniques learned during the previous semesters. The students will be expected to prepare and present a case study that will follow the patient through the continuum of care. Students will be required to relate sociological, physical, and psychological aspects of illness and injury to their projects. Preparation for the state's licensure exam is covered in this course, including the Practice Exam and Assessment Tool (PEAT) and/or Scorebuilders. Students will also develop a professional portfolio providing evidence of competency, self-assessment and career goals. (Summer Semester)

### **AHPT 280 - Special Topics for the PTA**

Credit(s): 1

*Prerequisite(s):* AHPT 101, AHPT 105, AHPT 205, AHPT 206, AHPT 210, and AHPT 218.

*Corequisite(s):* AHPT 213, AHPT 215, AHPT 201, and AHPT 220.

This online course is designed so that student physical therapist assistants (PTA) will learn the theory and application of specialized areas of physical therapist assistant practice. This course will explore the mechanism of action, adverse effects, and physical therapy implications of drugs used to treat conditions commonly encountered by the physical therapist assistant. In addition, this course will explore the essential information physical therapist assistants need to be able to accurately recognize patients' medical imaging studies in order to better understand the nature of their pathology or injury. Emphasis will be placed on radiography, CT scan, and MRI images related to various conditions commonly seen in physical therapy. This course will also explore important issues related to reimbursement and the importance of research and evidence-based practice. (Spring Semester)

### **AHPT 295 - Clinical: Experience III**

Credit(s): 4

*Prerequisite(s):* AHPT 101, AHPT 201, AHPT 205, AHPT 206, AHPT 210, AHPT 213, AHPT 215, AHPT 218, and AHPT 220.

*Corequisite(s):* AHPT 225.

This is the third of three full-time clinical experiences during which the student develops proficiency in physical therapy procedures, understanding of clinical responsibilities and supervisory relationships with a minimum competence necessary to graduate as an entry-level physical therapist assistant and become an active participant of the health care team. This course will include a six-week clinical rotation at an approved site. (Summer Semester)

## **Allied Health: Surgical Technician (AHST)**

### **AHST 101 - Introduction to Surgical Technology**

Credit(s): 3

This course provides an introduction to the field of surgical technology, emphasizing history, roles, education of the surgical technologist, work environment, career opportunities, attributes for success, legal and ethical concerns, hospital administration and organization, professional behaviors including utilizing the therapeutic-self, and engaging in effective interpersonal relations and interactions. Students will be introduced to the importance of obtaining certification and joining the national organization. (Fall Semester)

### **AHST 116 - Surgical Techniques I with Lab**

Credit(s): 6

*Prerequisite(s):* AHST 101, BIOH 211.

*Corequisite(s):* AHST 201, BIOM 250.

This course introduces knowledge and techniques essential to the surgical technologist in preparation of the patient for surgical procedures. It emphasizes instrumentation, preparation and use of equipment and supplies, prepping, draping and positioning, and various roles of the surgical technologist and circulator in surgery. It also provides an introduction to the physical organization of the surgical suite. (Spring Semester)

### **AHST 201 - Surgical Procedures I**

Credit(s): 4

*Prerequisite(s):* AHST 101, BIOH 211.

*Corequisite(s):* AHST 116, BIOM 250.

This course emphasizes procedures in general, obstetric/gynecologic, ENT, oral maxillofacial, orthopedic, laparoscopic and diagnostic procedures. (Spring Semester)

### **AHST 202 - Surgical Procedures II**

Credit(s): 5

*Prerequisite(s):* AHST 201.

*Corequisite(s):* AHST 216, AHST 250, BIOH 113.

This course emphasizes procedures in ophthalmic, plastic/reconstructive, genitourinary, cardiothoracic, and peripheral vascular neurosurgery. (Fall Semester)

### **AHST 207 - Professional Development and Leadership**

Credit(s): 3

*Prerequisite(s):* AHST 202, AHST 216.

*Corequisite(s):* AHST 255.

This course provides discussion of topics of special interest to surgical technologists, including resume writing, simulated job interview, case scenarios, and review for the National Certification Exam. Students are also required to complete the Program Assessment Exam conducted by the Association of Surgical Technologists. (Spring Semester)

### **AHST 216 - Surgical Techniques II**

Credit(s): 3

*Prerequisite(s):* AHST 116, AHST 201.

*Corequisite(s):* AHST 202, AHST 250, and BIOH 113.

A continuation of AHST 116, this course presents a study of basic patient care and advocacy in the peri-operative setting as performed by the surgical technologist, emphasizing medical terminology, pharmacological and anesthesia applications, environmental and workplace safety, basic math, weights and measurements, robotics, electricity, and physics, syringes/hypodermic needles, and sterilization methods. In addition, students will present a PowerPoint presentation on a surgical procedure. (Fall Semester)

## **AHST 250 - Surgical Clinical I**

Credit(s): 4

*Prerequisite(s):* AHST 116, AHST 201.

*Corequisite(s):* AHST 202, AHST 216, and BIOH 113.

This first clinical course provides prearranged scheduled experiences in the operating room for the student surgical technologist. Experiences will begin observational, progressing to hands-on as skills develop. (Fall Semester)

## **AHST 255 - Advanced Surgical Clinical**

Credit(s): 10

*Prerequisite(s):* AHST 202, AHST 216.

*Corequisite(s):* AHST 207.

Students will be scrubbing in a hospital operating room. This clinical will prepare students to perform in the role of first scrub. Students will assist in a variety of surgeries and related duties. Students will apply their knowledge of surgical techniques, procedures, equipment, instruments, and supplies along with increasingly developing their skills to more complex procedures. This class will also have rotations in Central Processing, Same Day Surgery, and Endoscopy. (Spring Semester)

## **Allied Health: Radiologic Technology (AHXR)**

### **AHXR 101 - Patient Care in Radiology**

Credit(s): 2

*Prerequisite(s):* instructor's consent.

This course is designed to introduce the student to the basic concepts of the radiologic profession. Topics covered include equipment operation/manipulation, introduction into the clinical environment, and information pertaining to patient care and applicable ethical and legal considerations. Department policies and procedures are also presented so the students will have optimum resources to be successful through their training. Presented in lecture format and supported by clinical orientation. (Fall Semester)

### **AHXR 108 - Introduction to Radiologic Physics**

Credit(s): 3

*Prerequisite(s):* appropriate placement test score, a grade of "B-" or better in M 095~.

This course is an introduction to the basic physics of ionizing electromagnetic radiation with specific applications to diagnostic x-ray radiography. Topics include the principles, concepts, and practices of scientific measurement, the basic principles of atomic and molecular structure, matter, work, energy, power, electricity including electrostatics, electrodynamics, and electromagnetism, the production of ionizing electromagnetic radiation, its properties, its interaction with matter, and fundamentals of radiation dosimetry. (Spring Semester)

### **AHXR 110 - Radiographic Procedures I**

Credit(s): 2

*Prerequisite(s):* instructor's consent.

This course is an introduction to the anatomy, positioning protocols, and techniques used for routine imaging of the chest, abdomen, extremities and spine. It also includes an overview of related pathology. (Fall Semester)

### **AHXR 111 - Radiographic Procedures II**

Credit(s): 2

*Prerequisite(s):* AHXR 110, instructor's consent.

This course is designed to build on the knowledge and experience gained from AHXR 110. There is a continuation of the study of anatomy, positioning protocols, and techniques used to image bony anatomy. It also presents an introduction into fluoroscopic procedures and contrast media. (Spring Semester)

### **AHXR 115 - Radiographic Principles I**

Credit(s): 2

*Prerequisite(s):* instructor's consent.

This course is an introduction to the operation of imaging equipment, with a focus on the design of an x-ray tube and x-ray production based on technical factors. It also covers image quality characteristics with film review and critique. (Fall Semester)

### **AHXR 116 - Radiographic Principles II**

Credit(s): 2

*Prerequisite(s):* AHXR 115, instructor's consent.

This course is a continuation of AHXR 115 in learning about imaging equipment operation. It focuses on the physics and function of tomographic, fluoroscopic and mobile x-ray units. Introduction to conventional versus digital imaging equipment is also presented. (Spring Semester)

### **AHXR 195 - Radiographic Clinical: I**

Credit(s): 4

*Prerequisite(s):* instructor's consent.

This first clinical course provides orientation to the imaging department, with concentration on department dynamics and workflow. Students have an opportunity to apply what they have learned in the classroom as they rotate through preassigned areas. Roles progress from observational to more hands-on as skills increase. (Fall Semester)

### **AHXR 195y - Radiographic Clinical: II**

Credit(s): 5

*Prerequisite(s):* AHXR 195, instructor's consent.

This second clinical course gives students the opportunity to apply and practice material learned in lecture courses. Experience includes assisting the radiologist during fluoroscopy procedures, supporting surgeons through imaging in the operation room, as well as refining techniques and positioning of all protocols covered in the AHXR 110 and AHXR 111 courses. (Spring Semester)

### **AHXR 210 - Radiographic Procedures III**

Credit(s): 2

*Prerequisite(s):* AHXR 110.

This course is designed to prepare students for observation and supervised participation in correlative modalities within the imaging department. Material includes circulatory and nervous system anatomy and physiology pertinent to the additional modalities, as well as the basic concepts of image production and evaluation in CT, MRI, ultrasound, nuclear medicine, mammography, interventional radiography and the cardiac lab. (Fall Semester)

### **AHXR 211 - Radiographic Procedures IV**

Credit(s): 2

*Prerequisite(s):* AHXR 115, AHXR 116.

This course provides the student with an in-depth study of pathologic conditions pertaining to radiology in lecture format. Lessons include pathology related to each general bone grouping, a dedicated look at pediatric-specific pathology, and a review of specialized modalities best suited for analysis of each disease type. (Spring Semester)

### **AHXR 225 - Radiobiology/Radiation Protection**

Credit(s): 2

*Prerequisite(s):* AHXR 116.

This course provides a comprehensive background on the interaction of x-radiation with matter, including biological effects at the molecular, cellular and organ system levels. Students are taught radiation protection to ensure safe use of x-rays during diagnostic imaging procedures, along with radiation quantities and units, monitoring methods, and regulatory limits for exposure. (Fall Semester)

### **AHXR 270 - Radiographic Registry Review**

Credit(s): 2

*Prerequisite(s):* AHXR 210, AHXR 225, AHXR 295v.

This course is a comprehensive review of all program material in preparation for the national registry exam for radiologic technology, including anatomy and positioning, patient care, principles and equipment physics, and radiation protection. Format consists of review assignments, computerized review material, and "mock" registry style exams followed with class evaluation and discussion. A majority of this course is also designated for self-study. (Spring Semester)

### **AHXR 295 - Radiographic Clinical: III**

Credit(s): 8

*Prerequisite(s):* AHXR 195y.

This course rotates students through various preassigned shifts and clinical sites. Experience is gained by performing exams under the supervision of staff technologists during early morning, midday, late evening, and weekend shifts. Sites are multiple and varied providing the students with diversity in patient conditions and types of exams. (Summer Semester)

### **AHXR 295v - Radiographic Clinical: IV**

Credit(s): 8

*Prerequisite(s):* AHXR 295.

The fourth semester clinical is designed to complement AHXR 210, with rotation of students through the modalities studied in lecture. Initially students observe and receive instruction, then gradually begin to participate in the performance of exams under the direct supervision of staff technologists. When not assigned to these specialized modalities, students continue to perform exams in the diagnostic imaging area and other clinical rotations with limited supervision and increased independence. (Fall Semester)

**AHXR 295y - Radiographic Clinical: V**

Credit(s): 8

*Prerequisite(s):* AHXR 295v.

This final clinical course provides students the opportunity to perform independently as a technologist with support available from a staff technologist or the clinical instructor at all times. Rotations continue to include the specialized modalities, with hands-on participation in preparation for possible specialization and future advanced training. (Spring Semester)

**Administrative Management (AMGT)****AMGT 298x - Internship**

Credit(s): 3

*Prerequisite(s):* CAPP 154 and completion of 30 semester credits with a grade point average of 2.0 or better; Submission of an internship application is required. This course offers a supervised, structured learning experience at an approved business/organization. Students will receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students will receive assistance in developing application materials and finding worksites meeting learning and legal criteria from the Career Advisor. (All Semesters)

**Animal Science (ANSC)****ANSC 100N - Introduction to Animal Science**

Credit(s): 3

This course covers basic principles of animal genetics, nutrition, live animal evaluation, reproduction, and their application to the production of beef and dairy cattle, sheep, swine, horses, and poultry. (Spring Semester)

**Anthropology (ANTY)****ANTY 101A - Anthropology and the Human Experience**

Credit(s): 3

This course is designed to introduce the student to the concepts and terms used in the study of man as a cultural and physical being. It addresses the basic divisions of anthropology - physical and cultural anthropology, including ethnology, linguistics and prehistoric archaeology. (Fall Semester)

**ANTY 210 - Introduction to Physical Anthropology**

Credit(s): 3

This course will cover introductory principles of human evolution and primate studies, human variation, hominid paleontology, and related contemporary issues in physical anthropology (i.e., disease and human adaptations, applied science in forensics, etc.). (Intermittently)

**ANTY 220G - Culture and Society**

Credit(s): 3

*Prerequisite(s):* ANTY 101 is advised.

An introduction to social and cultural anthropology, this course emphasizes key concepts and the comparison of distinctive cultures, social, economic, and political systems, language, religions, esthetics and cultural change. The study of archaeology, ethnology and linguistics will be introduced. (Spring Semester)

**Art: Art History (ARTH)****ARTH 200FGH - Art of World Civilization I**

Credit(s): 3

This class is a survey of the history of painting, architecture, sculpture, and other arts of Western Civilization - Ancient to Middle Ages. (Fall Semester)

**ARTH 201FGH - Art of World Civilization II**

Credit(s): 3

This class is a survey of the history of painting, architecture, sculpture, and other arts of Western Civilization - Renaissance to Modern. (Spring Semester)

**ARTH 225FG - Art and Architecture of Venice**

Credit(s): 3

*Corequisite(s):* ARTH 226, ARTH 227.

This course examines the art and architecture of Italy. Students will explore the works of the artists and architects of Italy with specific attention given to Venice from the 4<sup>th</sup> century onward. The class will consist of a series of excursions to historic sites, important architectural structures, and museums. Emphasis will be on the recognition of the unique character that is found in the Italian style. (Intermittently)

**ARTH 226 - History and Culture of Venice**

Credit(s): 2

*Corequisite(s):* ARTH 225, ARTH 227.

This course examines the evolution of both the physical and cultural aspects of Venice, Italy. This course begins with an exploration of the geography of the islands that comprise the city and the lagoon that surrounds it. Visiting historic sites will allow students first-hand insights into the story of Venice. Most of the lectures will be conducted outside of the classroom. Students will study the history of Venice from 400 BCE to the present with an emphasis on the evolution of cultural and technological elements of modern Venetian life. (Intermittently)

**ARTH 227FG - History of Theatre in Venice**

Credit(s): 3

*Corequisite(s)*: ARTH 225, ARTH 226.

This course is a study of Italian theatrical history as it relates to Venice and the surrounding area. It will trace drama from its origins in Greek Dionysian religious festivals and consequent usurpation by the Romans through the development of the very specifically Italian forms, *commedia del arte* and grand opera. The location and timing of this course will provide students with a unique, first-hand experience in Italian theatrical culture. Ruins of the ancient Roman amphitheatre at Concordia Sagittaria and the exquisitely preserved Teatro Olimpico in Vicenza, designed by Andrea Palladio, the oldest extant indoor theatre in the world, with its lovingly maintained original scenery in forced perspective from its initial performance of *Oedipus Rex* in 1584, will give students physical contact with historical theatrical practices. And access to La Fenice, the recently renovated Venetian opera house originally completed in 1792, as well as performances there, offers the opportunity to expose students to an art form that has uniquely Italian origins. Also, the dates of the course encompass the traditional Italian pre-Lenten celebration of *carnevale* when visitors and residents alike don elaborate and historically authentic costumes and masks, when squares and alleys are filled with street performers of all stripes, including *commedia del arte* troupes performing works by the masters of 16th century comedy on rude stages with no amplification and historically accurate costumes and props, culminating in an elaborately staged pageant, all of which will immerse the students in a three-dimensional world of theatre that no solely academic curriculum could hope to provide. (Spring Semester)

**ARTH 228FGH - History of Early Italian Renaissance**

Credit(s): 3

This course aims to introduce students to the development of style and meaning in Italian 14th century art. Painting, sculpture and architecture will be the main disciplines explored. (Spring Semester)

**Art: Jewelry (ARTJ)****ARTJ 210F - Jewelry and Metalsmithing I**

Credit(s): 3

This course is an introduction to the tools, techniques, and materials of the professional jeweler/metalsmith with emphasis on the design and production of jewelry objects. (Fall Semester)

**ARTJ 211F - Jewelry and Metalsmithing II**

Credit(s): 3

*Prerequisite(s)*: ARTJ 210.

A continuation of ARTJ 210, this course provides further introduction of the tools, techniques, and materials of the professional jeweler/metalsmith. Emphasizes working more 3-dimensionally with greater complexity. (Spring Semester)

**ARTJ 212 - Jewelry and Metalsmithing III**

Credit(s): 3

*Prerequisite(s)*: ARTJ 211.

This course is an in-depth investigation into the tools, techniques, and materials of the professional jeweler. Emphasis will be on the mechanics, ergonomics, and engineering of complex jewelry projects. (Fall Semester)

**ARTJ 213 - Jewelry and Metalsmithing IV**

Credit(s): 3

*Prerequisite(s)*: ARTJ 212.

A continuation of ARTJ 212, this course provides a further in-depth investigation into the tools, techniques, and materials of the professional jeweler/metalsmith. Emphasis will be on business and production methods of the independent studio artist. (Spring Semester)

**ARTJ 220 - Forging and Smithing I**

Credit(s): 3

*Corequisite(s)*: ARTJ 210.

Forging and smithing are ancient hammer and anvil based techniques that take advantage of the plastic qualities of metal. This course concentrates on hammer formed jewelry items utilizing non-ferrous metals such as copper, brass, silver, and gold. The course will introduce the student to the following topics: forging and raising techniques, hammers, anvils, forming stakes, tool maintenance. (Fall Semester)

**ARTJ 221 - Forging and Smithing II**

Credit(s): 3

*Prerequisite(s)*: ARTJ 220.

This course is designed to explore the use of the hydraulic press in jewelry and vessel construction. Emphasis will be in die making involved in the processes. (Spring Semester)

**ARTJ 231 - 3D Jewelry Design and Modeling I**

Credit(s): 4

This is a jewelry foundational course designed to teach the student how to design in a 3D CAD/CAM software environment and to further take those designs and create finished wax models on prototyping CNC mills. Manufacturing issues and techniques that will be found in a production setting will be explored. (Fall Semester)

**ARTJ 232 - 3D Jewelry Design and Modeling II**

Credit(s): 4

*Prerequisite(s)*: ARTJ 231.

This is an advanced jewelry course designed to continue teaching the student how to design in a 3D CAD/CAM software environment and to further take those designs and create finished wax models on prototyping CNC mills. Manufacturing issues and techniques that will be found in a production setting will be explored. (Spring Semester)

**ARTJ 233 - 3D Jewelry Design and Modeling III**

Credit(s): 4

*Prerequisite(s)*: ARTJ 232.

This upper level jewelry course is designed to further the education of students who have completed the first and second semester of the CAD/CAM programs. The class will focus on more complex design and milling projects including making galleries, sculpting tools, two and three sided projects, two-color metal projects, and design and milling of metal molds. (Fall Semester)

**ARTJ 234 - 3D Jewelry Design and Modeling IV**

Credit(s): 4

*Prerequisite(s)*: ARTJ 233.

This advanced CAD/CAM jewelry course is designed to expand skills acquired in the first three semesters of the jewelry CAD/CAM programs. The class will focus on the completion of complex custom designs from inception to ready-for-market pieces. Additionally, students will integrate the preparation of portfolio, marketing, and human relations skills in a simulated jewelry business environment. (Spring Semester)

**ARTJ 250 - Wax Modeling and Casting I**

Credit(s): 3

This course is an introduction to casting tools, techniques, and materials of the professional jeweler/metalsmith.

Emphasis will be on the design and production of custom pieces. (Fall Semester)

**ARTJ 251 - Wax Modeling and Casting II**

Credit(s): 3

*Prerequisite(s)*: ARTJ 250.

A continuation of ARTJ 250, this course provides an in-depth investigation into casting tools, techniques and materials of the professional jeweler/metalsmith. Emphasis will be on design and production of multiples. (Intermittently)

**ARTJ 260 - Stone Setting I**

Credit(s): 3

*Prerequisite(s)*: instructor's consent.

In this course, students build basic stone setting skills by learning tool assembly and shaping, and how to set stones in a round, oval and pear-marquis head setting. (Spring Semester)

**ARTJ 261 - Stone Setting II**

Credit(s): 3

*Prerequisite(s)*: instructor's consent.

Students build stone setting skills by completing head settings and assembling tools for channel, flush, pave' and gypsy settings. (Spring Semester)

**ARTJ 270 - Surface Embellishments I**

Credit(s): 3

*Prerequisite(s)*: ARTJ 210.

This course concentrates on textural and chromatic surface treatments for all non-ferrous metals including silver and gold. Included among the topics covered will be reticulation, acidetching, enameling, fusing, hammer and punch treatments, patination, roller printing, and media blasting among others. These are all vital techniques which are, due to their proliferation and technical nature, beyond the scope of basic jewelry classes. (Fall Semester)

**ARTJ 280 - Jewelry Repair I**

Credit(s): 3

*Prerequisite(s)*: ARTJ 210, ARTJ 211.

This comprehensive course teaches students the skills necessary for basic jewelry repair. Students are expected to identify various precious metals as well as cleaning, refurbishing and polishing jewelry. In addition, students learn to size rings, repair broken jewelry and replace stones in damaged pieces. Specifics include: precious metal terminology, cleaning and polishing for repair, soldering techniques for heads and shanks, ring sizing and reshanks, hinge and catch repair, broken chains, diamond removal and tightening, prong work and re-tipping, estimating price quotes. (Intermittently)

**Art: Visual Arts (ARTZ)****ARTZ 101 - Art Fundamentals**

Credit(s): 3

This course focuses on the introduction to the craft, materials and conceptual concerns of two- and three-dimensional visual arts. No prior art experience is expected. (All Semesters)

**ARTZ 105F - Visual Language-Drawing**

Credit(s): 3

This course, a presentation to art students with varying degrees of talent and exposures to instruction, is designed to help each student develop his or her own unique style. Considerable emphasis is placed upon the perception of the draftsman and problems arising from the representation of three-dimensional objects on two-dimensional planes. Exercises using a variety of media and papers will occupy a great portion of this course. Class problems and assignments are planned to meet the individual needs of all students. Uniformity is not the aim. The major aim is the exposure to, and subsequent assimilation of, basic drawing "tools." (Fall and Spring Semesters)

**ARTZ 106F - Visual Language-2-D Foundations**

Credit(s): 3

A foundational course designed to present basic concepts, this course focuses on organization, structure, and composition of form through the use of basic design elements, such as line, shape, and value, and emphasizes design development, which is related to two-dimensional art. (Fall Semester)

**ARTZ 108F - Visual Language-3-D Foundations**

Credit(s): 3

This course is a continuation of ARTZ 106, a foundational course designed to present basic concepts, studying organization, structure and composition of forms through the use of basic design elements. Emphasis is on three-dimensionality. (Spring Semester)

### **ARTZ 130 - Introduction to Ceramics**

Credit(s): 1

This introductory short course is designed for students interested in learning the fundamentals of wheel throwing and trimming clay, as well as glazing pottery. The course is designed for students who are not sure they can commit to a full semester course. This course may be repeated for a total of two credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **ARTZ 210 - Professional Practices**

Credit(s): 3

This course covers the initial development of visual portfolio, photographing and exhibiting artwork, artist statement, and other preparation for transfer to a BFA program in visual arts. Students will also be prepared for graduate exhibition opportunities as well as for entry into the professional business of art. (Spring Semester)

### **ARTZ 211 - Drawing I: Life Drawing**

Credit(s): 3

*Prerequisite(s):* ARTZ 105.

This is a course designed for the more advanced student. It is expected that prospective students will understand and be capable of demonstrating basic techniques and applications of media. The course is committed to the drawing of the human figure. The first sessions are dedicated to the physiology of the body, the skeletal structure first and then the muscular organization. It is a course aimed at encouraging the student to develop his or her own way of assimilating previous drafting knowledge with the intricacies of the human form. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **ARTZ 212 - Drawing Studio: Personal Style**

Credit(s): 3

*Prerequisite(s):* ARTZ 105.

This course is aimed at students with varying degrees of ability who have successfully completed a beginning drawing program and wish to pursue drawing beyond the basic level. Exercises involving a broader variety of media, their application, and effects will be given emphasis. A portraiture component is included. Class problems and assignments will have enough flexibility to meet the individual needs of all students. The major aim of this course is to encourage the development of each student's unique approach to drawing - a personal style. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

### **ARTZ 221F - Painting I**

Credit(s): 3

This elementary painting course seeks to acquaint students with the basic tools of the painter, focusing on technique and materials. Each assignment is tailored to both satisfy the need for individual expression and to present a vehicle for the practice of new techniques. (Fall and Spring Semesters)

### **ARTZ 222u - Painting Studio: Oil**

Credit(s): 3

A continuation of study for the aspiring painter, this course allows time for practical experience with brush at the easel, combined with periods of open discussion, lecture sharing and critique. The focus of this class is help and direction for the individual student in developing a unique and personal expression. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **ARTZ 222v - Painting Studio: Portrait**

Credit(s): 3

This course is designed for both beginning and more advanced students to develop the skills necessary to complete an oil portrait of a live model. Progressing from the large and less complicated structures of the human head, neck, and torso to the finer and more complex structures, the student will learn the significant topographical anatomy and employ the concepts of composition, design, perspective, color, light and shadow, character and narrative to establish a "likeness." Each student will be encouraged to develop his or her own style. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

### **ARTZ 222y - Painting Studio: Composition**

Credit(s): 3

*Prerequisite(s):* ARTZ 221.

This course is a continuation of ARTZ 221 where the basic tools of the painter are now focused more on composition and color experimentation. It is expected that the student will exercise more personal preference and choice in both subject matter and expression. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

### **ARTZ 222z - Painting Studio: Oil Painting Human Figure**

Credit(s): 3

Inspired by figure painting masters of the past and present, this course is designed for the student or professional who is ready to take their drawing and painting skills to a new level. The student will be exposed to a wide variety of *Alla Prima* painting techniques while they accumulate a basic understanding of artistic anatomy. Each session of this class will be a direct painting experience from the live model. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

### **ARTZ 224F - Watercolor I**

Credit(s): 3

A study of the history, materials, techniques and presentation of transparent watercolor, this course considers a variety of subject matter. Summer classes will be conducted "en plein air" (outdoors) weather permitting. (All Semesters)

**ARTZ 225 - Watercolor Studio: Transparent**

Credit(s): 3

*Prerequisite(s)*: ARTZ 224 or instructor's consent.

An in-depth continuation of ARTZ 224, this course is a study of the history, materials, techniques, and presentation of transparent watercolor with a variety of subject matter considered. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

**ARTZ 231F - Ceramics I**

Credit(s): 3

This is an introductory ceramics course which will include the history, development, and aesthetics of ceramic vessels and sculpture. Students will learn basic technical aspects of building clay, working with glazes, and the firing of ceramic objects. Emphasis will be placed on problem solving and the development of ideas. (Fall and Spring Semesters)

**ARTZ 232s - Ceramics Studio: Personal Techniques**

Credit(s): 3

*Prerequisite(s)*: ARTZ 231 or instructor's consent.

This course encourages students to develop personal techniques in clay and develop a portfolio of work. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

**ARTZ 232u - Ceramics Studio: Tools and Techniques**

Credit(s): 3

This course is a comprehensive introduction to sculptural ceramic processes and equipment. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**ARTZ 232v - Ceramics Studio: Wheel Throwing**

Credit(s): 3

This course is designed for all levels of students interested in developing pottery throwing skills including wheel throwing, trimming clay and glazing techniques. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring)

**ARTZ 232y - Ceramics Studio: Tile Making**

Credit(s): 3

This course is a tile making class with emphasis on the various techniques used to produce and install tile murals, as well as an exploration of a variety of historical and contemporary techniques used to create tile. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

**ARTZ 252y - Sculpture Studio: 3D Computer Modeling and Printing**

Credit(s): 3

This course is a lecture/lab that focuses on the use of 3D printing systems and their potential in producing elements of sculptural works. Students will learn how to design, lay out and produce three dimensional works and explore the possibilities of using CAD software as viable terrain for creative thought. Students will be encouraged to incorporate mixed media into their projects and resolve their pieces as finished works of art. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

**ARTZ 271 - Printmaking I**

Credit(s): 3

*Prerequisite(s)*: ARTZ 105.

This is an introductory course in the art and technique of Intaglio and collagraph. Basic plate preparation, experimentation with a variety of grounds and tones, and the use of the press will be covered. (Fall and Spring Semesters)

**Astronomy (ASTR)****ASTR 110N - Introduction to Astronomy**

Credit(s): 3

This course is an introduction to the history of astronomy, tools of the astronomer, the solar system, stellar bodies and phenomena, and the origin and evolution of the universe. (Fall Semester)

**Biochemistry (BCH)****BCH 280N - Biochemistry**

Credit(s): 3

*Prerequisite(s)*: a grade of "C" or better in CHMY 221.

*Corequisite(s)*: CHMY 223.

This course involves the study of cell organization; carbohydrate and lipid structure and function; protein and nucleic acid structure and function; mechanisms of enzyme function and inhibition; enzyme kinetics; energy and its relationship to biochemical processes; major metabolic pathways for carbohydrates, lipids, and amino acids; DNA replication, transcription, and translation; and regulation of gene function. (Spring Semester)

**BCH 281L - Biochemistry Lab**

Credit(s): 2

*Prerequisite(s)*: a grade of "C" or better in CHMY 221.

*Corequisite(s)*: BCH 280.

This laboratory course is designed to be taken concurrently with BCH 280 and is a project-based course that models biochemistry research. Course involves the following: 1. Purification of enzyme from natural sources utilizing high-speed centrifugation, IEX, and affinity chromatography. 2. Characterization of enzyme by gel electrophoresis, Bradford assay, and specific substrate assay. 3. Analysis of enzyme function by kinetic study. (Spring Semester)



## **Business: Finance (BFIN)**

### **BFIN 205 - Personal Finance**

Credit(s): 3

This is an introductory course in personal finance and will expose the student to the issues and importance of personal finance. This course introduces the concepts and applications of personal finance and the importance of personal finance in both business and everyday living. The focus is on explaining the process of financial planning and the logic behind it and why it is important to the potential small business person or to the individual. (Fall and Spring Semesters)

### **BFIN 260 - Principles of Finance**

Credit(s): 4

*Prerequisite(s)*: ACTG 101, ACTG 102 or ACTG 201; ECNS 201.

A study of the principles of finance, this course emphasizes the application and integration of financial concepts in decision making. (Spring Semester)

## **Business: General (BGEN)**

### **BGEN 110 - Applied Business Leadership**

Credit(s): 3

This course will examine how leaders are developed. Personalities will be examined using the Myers-Briggs Type Indicator and how this personality contributes to team dynamics. This course will also examine different leadership styles and how the student can become a good leader. (Spring Semester)

### **BGEN 122 - Applied Business Math**

Credit(s): 3

*Prerequisite(s)*: M 065~.

This course reviews the use of basic mathematical concepts as they apply to business. Includes calculations of cash reconciliations, payroll, discounts, interest, taxes, depreciation, inventory, time value of money, and other business applications. (All Semesters)

### **BGEN 204 - Business Fundamentals**

Credit(s): 3

This course focuses on improving students' communication and critical thinking skills in the context of understanding the holistic nature of business. Students will explore the importance of a healthy interdependence between business and society and how the various functions of business (management, marketing, accounting, finance and technology) interact and support each other for operational success. (Fall and Spring Semesters)

### **BGEN 235 - Business Law**

Credit(s): 4

This course provides an introduction to law and its role in the business environment. The course will introduce the court system, litigation and arbitration, law of agency, contracts and torts, product liability, forms of domestic and international businesses and the related liabilities, employee rights, consumer protection, principles of antitrust and debtor/creditor relationships. Where appropriate, references to Montana law will be made. (Fall and Spring Semesters)

## **BGEN 298 - Internship**

Credit(s): 3

*Prerequisite(s)*: completion of 30 semester credits with a grade point average of 2.0 or better. Submission of an internship application.

This course offers a supervised, structured learning experience at an approved business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real-world workplace issues. Typically, a student completes 45 hours on-site per one lecture credit. Additionally, students participate in activities and class time beyond the hours spent at the job site. (All Semesters)

## **BGEN 299 - Capstone**

Credit(s): 3

*Prerequisite(s)*: completion of 30 or more semester credits of the Business Administration AAS or Small Business Management AAS programs.

This course integrates the various functional areas of business to help the student develop a unified understanding of business planning, strategy, and application. The course transfers theoretical class work to the practical applications of the business world. (Spring Semester)

## **Biology: General (BIOB)**

### **BIOB 101NL - Discover Biology**

Credit(s): 4

This course, designed for non-biology majors, is a survey of organization and complexity of living organisms, including biological macromolecules, cell structure and function, metabolism and nutrition, reproduction, development, heredity, and the diversity of living organisms and their ecological relationships. General education credit can be earned for either BIOB 101 or BIOB 160, but not both. Laboratory work is included. (All Semesters)

### **BIOB 105NL - Introduction to Biotechnology**

Credit(s): 3

This course is an introduction to the rapidly-expanding field of biotechnology and its applications to human and veterinary medicine, agriculture, biofuels, bioremediation, and bioinformatics. Laboratory exercises will include basic laboratory safety, measurement methods, microbial cell culture, bacterial transformation, and other core skills used in the biotechnology laboratory. Laboratory included. (Fall Semester)

### **BIOB 110N - Plant Science**

Credit(s): 3

The course introduces basic plant science principles including anatomy, physiology, growth, and the response of plants to their environment. The history, role, and importance of cultivated plants in society will be examined throughout. (Fall Semester)

### **BIOB 126NL - General Science: Earth and Life Science**

Credit(s): 5

This course explores topics in biological and earth sciences for prospective elementary school teachers and non-scientists. Topics are presented through lectures, laboratory exercises, and field trips. (Fall Semester)

**BIOB 160NL - Principles of Living Systems**

Credit(s): 4

An introduction to the principles of biology, this course includes the chemical basis of life, the cell, metabolism, homeostasis, reproduction, development and heredity. Laboratory work included. (All Semesters)

**BIOB 170N - Principles of Biological Diversity**

Credit(s): 3

*Prerequisite(s)*: BIOB 160 or Biology Department's consent. A survey of the major categories of living organisms including study of their structure, adaptations, evolution, and ecology. (Spring Semester)

**BIOB 171L - Principles of Biological Diversity Laboratory**

Credit(s): 2

*Prerequisite(s)*: BIOB 160 or Biology Department's consent. *Corequisite(s)*: BIOB 170.

A laboratory study of the major categories of living organisms including study of their structure, adaptations, evolution, and ecology. (Spring Semester)

**BIOB 205 - Methods in Biotechnology**

Credit(s): 3

*Prerequisite(s)*: BIOB 105 or Biology Department's consent. This course is an introduction to the theory and practice of biotechnology methods including recombinant DNA technology, nucleic acid and protein isolation and analysis, mammalian cell culture, and immunological methods. Laboratory included. (Spring Semester)

**BIOB 260NL - Cellular and Molecular Biology**

Credit(s): 5

*Prerequisite(s)*: BIOB 160 or Biology Department's consent. This course is an introduction to the biology of the cell, and includes the nature of organization of the cell, growth, basic bioenergetic and enzyme function, cell environment, membrane structure and function, the chemical and physical mechanisms of metabolism in plants and animals, and the work performed by cells. Laboratory included. (Spring Semester)

**BIOB 272N - Genetics and Evolution**

Credit(s): 4

*Prerequisite(s)*: BIOB 160 or Biology Department's consent. This course covers principles and mechanisms of inheritance and evolution and includes analysis of variability at individual and population levels, chromosomal changes, population genetics, macroevolution, speciation, extinction and molecular evolution. (Fall Semester)

**BIOB 275N - General Genetics**

Credit(s): 4

*Prerequisite(s)*: BIOB 160 or Biology Department's consent. This course covers principles and mechanisms of inheritance and gene expression, analysis of variability at individual and population levels and chromosomal changes and speciation. (Fall Semester)

**BIOB 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent. This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Biology: Ecology (BIOE)****BIOE 172N - Introductory Ecology**

Credit(s): 3

*Corequisite(s)*: BIOE 173 is advised. A study of the principles of ecology with emphasis on ecosystems, this course considers the impact of human activities on the ecosystem. (Fall Semester)

**BIOE 173L - Introductory Ecology Laboratory**

Credit(s): 1

*Prerequisite(s)*: BIOE 172.*Corequisite(s)*: BIOE 172.

An introduction to field techniques and ecosystem analysis, this course considers the impact of human activities on the ecosystem. (Fall Semester)

**BIOE 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Biology: Human (BIOH)****BIOH 104NL - Basic Human Biology with Lab**

Credit(s): 4

*Prerequisite(s)*: placement into WRIT 101, a "C+" or better in WRIT 095~, or instructor's consent.

This course familiarizes students with the fundamental concepts in the systematic organization and functioning of the human body. Anatomical features and physiological processes of each system are studied as they contribute to the overall homeostasis of the body. Laboratory studies include anatomy (bones, muscles, brains, vessels, and heart) and physiology (membrane transport, blood, blood pressure, respiration, reflexes and the senses). (Fall and Spring Semesters)

**BIOH 113 - Human Form and Function II**

Credit(s): 4

*Prerequisite(s)*: BIOH 104, or BIOH 201 and BIOH 211.

Pathophysiology (the study of disease) is a close examination of the disease process in the human body. The course will build on the topics explored in the prerequisite courses (BIOH 104, BIOH 201, BIOH 211). Body systems will be covered in greater depth, and the focus will be on the interrelationships between systems. Topics in this course include how the body's normal structure and function can be altered, how the body responds to these disruptions in structure and function (i.e. cause and effect), and current approaches to the treatment of these disruptions. (Fall Semester)

**BIOH 201NL - Human Anatomy and Physiology I**

Credit(s): 4

*Prerequisite(s)*: BIOB 101 or BIOB 160 or CHMY 105 or CHMY 121 or instructor's consent.

This course is an introduction to anatomical methodology and physiological mechanisms. Students become familiar with the systematic organization of the human body at both the micro- and macro-structural levels, the normal functions of each organ in a particular system, and the interrelationships between structure and function. Specifically covered in this semester are an introduction to histology and the integumentary, skeletal, nervous, muscular, and endocrine systems. Laboratory included. (Fall and Spring Semesters)

**BIOH 211NL - Human Anatomy and Physiology II**

Credit(s): 4

*Prerequisite(s)*: BIOH 201 or instructor's consent.

In this continuation of BIOH 201, students are presented with a systematic exposure to the structural and functional workings of the cardiovascular, lymphatic, respiratory, digestive, excretory, and reproductive systems. Laboratory included. (Fall and Spring Semesters)

**BIOH 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Biology: Micro (BIOM)****BIOM 108 - Introduction to Food and Beverage Fermentation**

Credit(s): 3

This course gives an introduction to fermentation and fermented products. Topics include products and basic methodologies used in fermentation. Ingredients, techniques, fermentation management, storage and sanitation are discussed. (Fall Semester)

**BIOM 208 - Applied Brewing Microbiology**

Credit(s): 3

*Prerequisite(s)*: a grade of "C" or better in BIOM 108 and admission to the Brewing Science and Brewery Operations program or instructor's consent.

This course will provide brewers with a theoretical and practical background in the microbiology of brewing. Emphasis will be placed on yeast, yeast handling, identification of beer-spoilage organisms using standard microbiological techniques. (Spring Semester)

**BIOM 250NL - Microbiology for Health Sciences**

Credit(s): 4

*Prerequisite(s)*: BIOB 160 or BIOH 201 or Biology Department's consent.

Introduction to the causative agents, epidemiology, prevention, and treatment of infectious diseases. Laboratory included. (Fall and Spring Semesters)

**BIOM 251L - Microbiology for Health Sciences Lab**

Credit(s): 1

*Corequisite(s)*: BIOM 250, BIOM 260 are recommended.

The laboratory study of microorganisms, their characteristics and activities. (Fall and Spring Semesters)

**BIOM 260N - General Microbiology**

Credit(s): 3

*Prerequisite(s)*: BIOB 160 or Biology Department's consent.

A survey of the morphology, physiology, and classification of bacteria and other microorganisms, this course considers the applied aspects of microbiology. (Spring Semester)

**BIOM 261L - General Microbiology Lab**

Credit(s): 2

*Corequisite(s)*: BIOM 260.

This course is an introduction to fundamental techniques for isolation, manipulation, and identification of microorganisms. Laboratory activities will relate to topics covered in BIOM 260. (Intermittently)

**BIOM 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Biology: Organismal (BIOO)****BIOO 115N - Practical Botany**

Credit(s): 3

An introduction to the principles of botany, this course covers plants, their structure, growth and taxonomy as related to manipulation and utilization with emphasis on the identification and uses of local native plants. (Spring Semester)

**BIOO 215N - Field Botany**

Credit(s): 3

This course is an introduction to plant associations, including identification of plants emphasizing native flora with consideration of their environment. Field work may include hiking up to two miles on rugged, steep terrain. (Fall and Summer Semesters)

**BIOO 217 - Tropical Flora of Costa Rica**

Credit(s): 3

*Prerequisite(s)*: instructor's consent.

This course offers an introduction to the fundamental principles of tropical botany, ecology, ethnobotany, and conservation in a tropical setting. Various habitats will be visited including montane cloud, alpine paramo, and lowland wet forests. Field orientation at each site will include the identification of significant plant species, an understanding of species interactions, and the ability to conceptualize various habitat types. Students will learn the major families and genera of tropical plants in a phylogenetic context. This course is designed to develop the field skills needed for taxonomic and floristic studies. Students should expect to participate in moderate daily hikes and an abundance of time learning outdoors. (Intermittently)

**BIOO 220NL - General Botany**

Credit(s): 4

This course offers a thorough overview of the fundamental principles of plant biology from evolutionary, morphological, and physiological perspectives. Emphasis will be placed on comparative morphology, anatomy, reproduction and physiology as students survey the major groups of land plants. (Fall Semester)

**BIOO 235NL - Rocky Mountain Flora**

Credit(s): 3

Based on identification of native Montana flora, this course includes methods of collection, preservation, and nomenclature of local flora. Laboratory included. (Spring Semester)

**BIOO 262 - Introduction to Entomology**

Credit(s): 3

*Prerequisite(s)*: BIOB 160 or equivalent or instructor's consent.

A survey of the basic structure and ecological roles of insects, this course includes identification of the major orders and families of insects. Laboratory work included. (Intermittently)

**BIOO 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Business: Management (BMGT)****BMGT 205C - Professional Business Communication**

Credit(s): 3

*Prerequisite(s)*: WRIT 095~ or appropriate placement test score, or instructor's consent.

This course is designed to increase competency as a communicator. The course will review basic communication skills including listening, written, and oral. Study principles and techniques of business letters, memos, and reports using the direct, indirect and persuasive approaches. Emphasis will be on communicating for employment: resume, application letter, and interview. There will be some emphasis on oral communication, conducting meetings, intercultural communications business technology and internet communication. (All Semesters)

**BMGT 210 - Small Business Entrepreneurship**

Credit(s): 3

This course is a practical, down-to-earth approach to planning, organizing, and managing a small business. While based on current research, theory, and practice, the material is presented from a "how-to" perspective, with many practical examples and applications from the business world. (Fall and Spring Semesters)

**BMGT 215 - Human Resource Management**

Credit(s): 3

This course explores human resources in a globally competitive business environment, the legal context of employment decisions, diversity, securing human resources, developing human resources, compensation, labor management relations, and protecting and evaluating human resources. The class is designed to familiarize participants with current human resource practices and laws that apply to human resource careers regardless of their field. (Fall and Spring Semesters)

**BMGT 235 - Management**

Credit(s): 3

This course is a comprehensive introduction to management theory, research and practice. It integrates classical and modern concepts of management for a solid grounding in management principles which is essential to successfully guiding today's small or large, profit or not-for-profit organizations in a rapidly changing environment. (Fall and Spring Semesters)

**BMGT 237 - Human Relations in Business**

Credit(s): 3

An introduction to the human side of organizations and to people in the world at work, this course examines such elements as leadership, organizational behavior, and the future of organizations. Discrimination, communications, and organizational change will be covered as well. (Fall and Spring Semesters)

**Business: Management Information Systems (BMIS)****BMIS 211 - Introduction to Business Decision Support**

Credit(s): 4

A project and problem-solving oriented course that focuses on the implementation of spreadsheets and databases in common business problems. Other topics discussed will include operating systems and word processing. (All Semesters)

**BMIS 270 - MIS Foundations for Business**

Credit(s): 3

This course introduces the development, use, and management of computer-based information systems. (Intermittently)

**Business: Marketing (BMKT)****BMKT 130 - Search Engine Marketing**

Credit(s): 3

Search engine marketing includes an introduction to the structure and function of search engine marketing; analysis of consumer markets and online habits; production, planning, and development of online identity; social responsibility; search engine algorithms and values; and creating the source code. (Spring Semester)

**BMKT 131 - Introduction to Social Media Marketing**

Credit(s): 3

*Prerequisite(s)*: BMKT 225.

This course will introduce students to the world of social networking as a marketing tool for any business. Students will become familiar with Facebook, Twitter, LinkedIn, and other social networking venues available. Students will also explore the tools available for Web 2.0. (Spring Semester)

**BMKT 132 - Writing for Web Marketing**

Credit(s): 3

*Prerequisite(s)*: BMKT 225.

This course will introduce students to the art of writing documents for web viewing. (Spring Semester)

**BMKT 225 - Marketing**

Credit(s): 3

This course is an introduction to the structure and function of marketing inclusive of the analysis of consumer and industrial markets. Students study the four primary elements of marketing - product, place, price and promotion, and use these to develop a comprehensive marketing plan. The material also includes consideration of ethics and social responsibility as related to the marketing function. (Fall and Spring Semesters)

**Brewing Science: (BREW)****BREW 101 - Brewing Methods I**

Credit(s): 5

*Prerequisite(s)*: admission to the Brewing Science and Brewery Operations program and instructor's consent.

*Corequisite(s)*: CHMY 121.

This course provides an overview of the brewing process and best practices within the brewery, with an emphasis on safety, sanitation, and the transformations of raw materials required for brewing - namely malt, hops, water and yeast. (Fall Semester)

**BREW 102 - Brewing Methods II**

Credit(s): 5

*Prerequisite(s)*: a grade of "C" or better in BREW 101, admission to the Brewing Science and Brewery Operations program, and instructor's consent.

*Corequisite(s)*: BREW 150.

This course will introduce students to the practical aspects of brewing on a commercial scale. In this second-level course, students will become familiar with keg cleaning and maintenance, CIP operations, wort production, fermentation tracking, and basic yeast handling, with an emphasis on safety and sanitation. (Spring Semester)

**BREW 131 - Beer Styles and Sensory Evaluation I**

Credit(s): 2

*Prerequisite(s)*: a grade of "C" or better in BREW 102 and BREW 150; admission to the Brewing Science and Brewery Operations program and instructor's consent.

This course provides an introduction to the range of established and emerging brew styles. Students will learn about each style and sub-category, and analyze the methods used to create them. This course also provides an introduction to the critical evaluation and judging of a beer's sensory properties. Students will learn the vocabulary associated with judging, and will develop their ability to detect defects in beer and identify a wide range of beer flavors. (Fall Semester)

**BREW 132 - Beer Styles and Sensory Evaluation II**

Credit(s): 2

*Prerequisite(s)*: BREW 131, admission to the Brewing Science and Brewery Operations program, and instructor's consent.

This course will build on concepts learned in BREW 131. Students will identify off flavors and major styles in blind tasting panels, will be exposed to less common and obscure styles and defects in beer, while reinforcing the main flavors and flaws found in beer. Students will learn about contemporary style movements, addressing the historical roots of those styles, as well as the basics of beer pairings with food. Students should be prepared to take a Beer Steward Certification course if they choose to do so, upon the completion of the Styles and Sensory Analysis series and other related coursework. (Spring Semester)

**BREW 141 - The Business of Brewing**

Credit(s): 2

*Prerequisite(s)*: admission to the Brewing Science and Brewery Operations program and instructor's consent.

This course covers the basic business practices needed for starting and managing a brewery inclusive of regulatory considerations, forms of ownership, human resources, marketing and finance. (Spring Semester)

**BREW 149 - Beer Packaging and Draught Technology**

Credit(s): 1

*Prerequisite(s)*: admission to the Brewing Science and Brewery Operations program and instructor's consent.

The basic methods of bottling, canning, and kegging beer will be discussed, with an emphasis on product shelf life and quality. Students will be introduced to small-scale filling lines (legacy fillers), and large-scale filling lines (volumetric fillers). The technologies required for draught beer dispense will be introduced, including short-draw and long-draw systems. (Fall Semester)

**BREW 150 - Brewhouse Processes**

*Formerly: BREW 152 Beer Packaging*

Credit(s): 4

*Prerequisite(s)*: admission to the Brewing Science and Brewery Operations program and instructor's consent.

*Corequisite(s)*: CHMY 123.

This course provides an overview of brewhouse operations as they apply to wort production. This includes the principles and practices of milling, mashing, wort separation, kettle boil, hop separation, and wort cooling. With each process, a quantitative and qualitative approach to methods of analysis will be discussed and practiced. Students will become familiar with the calculations and chemical reactions associated with the individual steps of wort production. (Spring Semester)

**BREW 151 - Cellar Processes**

Credit(s): 3

*Prerequisite(s)*: a grade of "C" or better in BREW 102 and BREW 150, admission to the Brewing Science and Brewery Operations program, and instructor's consent.

*Corequisite(s)*: BREW 199.

This course provides an overview of cellar operations, including yeast pitching, fermentation, dry hopping, maturation, clarification, carbonation and stabilization. Topics include methods of secondary fermentation and aging, different filters and their operation, carbonation methods, and physical stability techniques. (Fall Semester)

**BREW 152:** see BREW 149

### **BREW 199 - Capstone I: Brewing Methods III**

Credit(s): 5

*Prerequisite(s):* a grade of "C" or better in BREW 102 and BREW 150; admission to the Brewing Science and Brewery Operations program, and instructor's consent.

*Corequisite(s):* BREW 151.

In this third-level brewing and first-level capstone course, students will use their knowledge of chemistry and microbiology while gaining experience in quality assurance and control. They will use skills obtained in their previous year of classroom and laboratory learning to operate the campus brewery. (Fall Semester)

### **BREW 222 - Environmental Sustainability in Brewing**

Credit(s): 1

*Prerequisite(s):* a grade of "C" or better in BREW 102, admission to the Brewing Science and Brewery Operations program, and instructor's consent.

This course deals with aspects of environmental sustainability in brewery design and operation. Topics include wastewater consumption and disposal, waste reduction, utility usage, and brewery design considerations for sustainable development. (Spring Semester)

### **BREW 298 - Internship: Professional Brewing**

Credit(s): 1-2

*Prerequisite(s):* admission to the Brewing Science and Brewery Operations program and instructor's consent.

This course offers a supervised, structured learning experience at an approved brewery. Students will receive training in brewery operations, enhance their academic learning, and gain exposure to the workplace. Prior to placement at an internship site, students will attend an internship orientation to learn the application and internship process. This course may be repeated for a total of four credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **BREW 299 - Capstone II: Brewing Methods IV**

Credit(s): 6

*Prerequisite(s):* a grade of "C" or better in BREW 151 and BREW 199, admission to the Brewing Science and Brewery Operations program, and instructor's consent.

This course will further reinforce concepts learned in the program through practical brewing experience in the brewery. In this capstone course, students will apply knowledge and skills gained in the program to design, formulate, and brew their own beer product. An emphasis is on providing customer service, and collaborating with colleagues and coworkers. (Spring Semester)

## **Computer Applications (CAPP)**

### **CAPP 103 - QuickBooks Fundamentals**

Credit(s): 2

*Prerequisite(s):* ACTG 101 or equivalent.

This course provides a step-by-step introduction to the terminology, concepts, and techniques used in QuickBooks Pro. It 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 serviced-based and merchandising-based businesses. (All Semesters)

### **CAPP 106 - Short Courses: Computer Applications**

Credit(s): 1

An introduction to computers and their capabilities for those people with no prior experience, this course is a straightforward, hands-on approach to provide people with basic skills to pursue additional computer courses. Basic concepts of word processing, spreadsheets, database, and presentation software are presented. (Fall and Spring Semesters)

### **CAPP 116 - Short Courses: MS Excel**

Credit(s): 1

This course is intended to help develop the skills necessary to work with spreadsheets. Topics include entering and manipulating different types of data, formatting basics, using functions to analyze information, making decisions with IF functions and formulas, sorting and filtering information and creating charts, Microsoft's Excel for Windows will be used as the teaching tool. (Fall and Spring Semesters)

### **CAPP 118 - Short Courses: MS Access**

Credit(s): 1

This course is intended to help develop the skills necessary to work with databases. Topics include creating tables, queries, forms, and reports. Microsoft's Access for Windows will be used as the teaching tool. (Intermittently)

### **CAPP 120 - Introduction to Computers**

Credit(s): 3

This course takes as its starting point the proposition that technology is central to the modern world as one of the primary tools impacting communication, learning, and advancement. Students will learn the driving principles behind computer systems, become familiar with influencing computer hardware, software, and network technology. Students will examine the management of information and material in word processors, spreadsheets, and databases, as well as the implication and safeguards for that information. The ethical implications of computing, such as security, privacy, patriot act, identity theft, and the social implications of information sharing will be given particular consideration. (Fall and Spring Semesters)

### **CAPP 131 - Basic MS Office**

Credit(s): 2

A course designed to introduce people with little computer experience to the expanding world of computing. Beginning and intermediate concepts in word processing, database, spreadsheets, and presentation software will be explored utilizing a hands-on approach. (Fall and Spring Semesters)

### **CAPP 154 - MS Word**

Credit(s): 3

This is a course in word processing using Microsoft Word or the current industry standard. The course includes creating, retrieving, and editing documents, as well as an introduction to some advanced features such as mail merge, graphics, WordArt, macros, and tables. (All Semesters)

### **CAPP 156 - MS Excel**

Credit(s): 3

A comprehensive look at the features and processing capabilities of spreadsheet software, topics in this course include developing and editing spreadsheets, creating efficient formulas, applying proper formatting, using "what if " functions and tools, macro development, and spreadsheet management. (Fall and Spring Semesters)

**CAPP 158 - MS Access**

Credit(s): 3

This course is a comprehensive study of relational databases using Microsoft Access. Topics include database theory, creation of tables, forms, reports, queries, and switchboards while utilizing the most recent version of Microsoft Access. (Intermittently)

**Chemical Addiction Studies (CAS)****CAS 140 - Addiction and Diversity**

Credit(s): 1

Addiction affects all members of society. Because of this, the substance abuse counselor must be knowledgeable of cultural, ethnic needs, and differences of the mosaic society where he or she is practicing. This course is designed to provide a working knowledge of the diversity needed for addiction counseling in a multicultural society. (Intermittently)

**CAS 242 - Fundamentals of Substance Abuse and Addictions**

Credit(s): 3

*Prerequisite(s)*: PSYX 100 or PSYX 150 or instructor's consent.

This course is an introduction to the field of addiction counseling. It focuses on current therapeutic trends, strategies, and modalities used in the treatment of addictions. Relapse and prevention strategies, along with treatment of special populations, will also be covered. (Fall Semester)

**CAS 248 - Substance Abuse Counseling II**

Credit(s): 3

*Prerequisite(s)*: CAS 242.

The purpose of this course is to present the student with advanced knowledge in the counseling process and specifically will address substance abuse. The objective is to increase the student's knowledge of counseling strategies. (Spring Semester)

**CAS 250 - Assessment and Case Management Processes**

Credit(s): 4

*Prerequisite(s)*: CAS 242 or PSYX 100 or instructor's consent.

This course will introduce the student to assessment and evaluation procedures used in addiction counseling. The student will be able to understand, describe, administer, and interpret the various testing and evaluation tools used in addiction counseling. (Spring Semester)

**CAS 252 - Gambling and Gaming Disorders in Substance Abuse Counseling**

Credit(s): 2

*Prerequisite(s)*: CAS 242 or PSYX 100 or instructor's consent.

This course will introduce the student to gambling and gaming addictions. Content will include etiology, subtypes, stages, diagnostic criteria, theories associated with gambling and gaming addiction, and methods for assessment and treatment. Prevention and the impact on work and family relationships will also be considered. (Fall Semester)

**CAS 254 - Co-occurring Disorders in Substance Abuse Counseling**

Credit(s): 2

*Prerequisite(s)*: CAS 242 or PSYX 100 or PSYX 240 or instructor's consent.

This course will examine the presence of both addiction and mental illnesses in individuals needing mental health and substance abuse treatment. Content will include an understanding of the most common co-occurring disorders, as well as assessment and treatment planning. (Fall Semester)

**Chemistry (CHMY)****CHMY 105NL - Explorations in Chemistry**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score; or a grade of "C" or better in M 065~ within the past two years; or Chemistry Department consent.

An investigation of chemistry, including software and other tools, laboratory methods, and problem solving skills. Topics in this course include the scientific method and its role in the continued development of chemistry; physical and chemical changes; chemical reactions; atoms, elements, and the periodic table; units of measure; dimensional analysis; uncertainty and propagation of error; states of matter; chemical bonding; writing and balancing chemical equations; naming chemical substances; and solving stoichiometry and limiting reactant problems. Laboratory included. (All Semesters)

**CHMY 121NL - Introduction to General Chemistry**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score on chemistry placement exam, or grade of "B-" or better in CHMY 105 within past two years, or Chemistry Department consent.

An investigation of chemistry, including software and other tools, laboratory methods, and problem solving skills, topics in this course include the scientific method and its role in the continued development of chemistry; physical and chemical changes; chemical reactions; atoms, elements, and the periodic table; units of measure; dimensional analysis; uncertainty and propagation of error; states of matter; chemical bonding; writing and balancing chemical equations; naming chemical substances; and solving stoichiometry and limiting reactant problems. Laboratory included. (All Semesters)

**CHMY 123NL - Introduction to Organic Biochemistry**

Credit(s): 4

*Prerequisite(s)*: appropriate score on the chemistry placement exam, or a grade of "C" or better in CHMY 121 or CHMY 141 within the past two years, or Chemistry Department consent.

This course is an introduction into functional group organic chemistry and important biochemical structures, concepts, and processes. It covers major biological molecules including carbohydrates, lipids, proteins, and nucleic acids. Includes laboratory. (Fall and Spring Semesters)

**CHMY 141NL - College Chemistry I**

Credit(s): 5

*Prerequisite(s)*: appropriate score on the chemistry placement exam; or a grade of "C" or better in CHMY 121 within the past two years; or Chemistry Department consent.

Intended for science majors, this is the first of a two-semester course sequence of the general principles of modern chemistry, emphasizing the experimental nature of the science of chemistry and a more mathematical intensive approach, with emphasis on critical and analytical thought. Topics covered include stoichiometry, atomic structure, bonding, states of matter, and chemical reactivity. Laboratory included. (Fall Semester)

**CHMY 143NL - College Chemistry II**

Credit(s): 5

*Prerequisite(s)*: a grade of "C" or better in CHMY 141.

Intended for science majors, this is the second of a two-semester course sequence of the general principles of modern chemistry, emphasizing the experimental nature of the science of chemistry and a more mathematical intensive approach, with emphasis on critical and analytical thought. Topics covered include solutions, equilibria, kinetics, acids and bases, thermodynamics, electrochemistry, coordination compounds, organic and biochemical compounds. Laboratory included. (Spring Semester)

**CHMY 170 - Applied Brewing Chemistry**

Credit(s): 3

*Prerequisite(s)*: admission to the Brewing Science and Brewery Operations program and a grade of "C" or better in CHMY 123, or Chemistry Department consent.

This course examines applications of chemistry to all steps of beer production, including malting, mashing, wort boiling, fermentation, and post-fermentation conditioning. Water quality, pH, enzymes, temperature, pressure, and properties of gases and liquids as applied to beer production processes and beer quality will be examined. Course includes laboratory covering monitoring and analysis techniques of the beer production process. (Fall Semester)

**CHMY 221NL - Organic Chemistry I**

Credit(s): 5

*Prerequisite(s)*: a grade of "C" or better in CHMY 143.

This is the first semester of a one-year sequence with emphasis on fundamental concepts of structure, nomenclature, properties and reaction mechanisms of organic compounds and an introduction to biochemical molecules. Laboratory included. (Fall Semester)

**CHMY 223NL - Organic Chemistry II**

Credit(s): 5

*Prerequisite(s)*: a grade of "C" or better in CHMY 221.

This is the second semester of a one-year sequence with emphasis on fundamental concepts of structure, nomenclature, properties and reaction mechanisms of organic compounds and an introduction to biochemical molecules. Laboratory included. (Spring Semester)

**CHMY 280NL - Forensic Science I**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score in math or a grade of "C" or better in M 090~ or M 094~; and appropriate placement test score in writing or a grade of "C" or better in WRIT 095~.

A presentation of the techniques, skills, and limitations of the modern crime laboratory, including ancillary services, this course covers topics such as crime scene processing, pathology, anthropology, odontology, types of physical evidence, trace evidence (glass, soil, hair, paint), impression evidence (tools, tires, shoes, bite marks, serial numbers), friction ridge examination, firearms, and questioned documents. Laboratory work included. (Fall Semester)

**CHMY 282NL - Forensic Science II**

Credit(s): 4

*Prerequisite(s)*: a grade of "C" or better in CHMY 280.

This course is a presentation of the techniques, skills, and limitations of the modern crime laboratory, including ancillary services, and an introduction to instrumentation, including GC, GCMS, FTIR, and electrophoresis. Topics include toxicology, controlled substances, biological fluids and stains, DNA, fire and explosion investigation, and vehicular accident reconstruction. Includes guest speakers, field trips and laboratory work. (Spring Semester)

**CHMY 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**CHMY 290x - Undergraduate Research: Chemical Oceanography**

Credit(s): 3

*Prerequisite(s)*: CHMY 291, Special Topics: Chemical Oceanography, and instructor's consent.

This is a field course offered as part of an international studies experience in French Polynesia. The course gives students direct experience with an authentic scientific research environment. Student projects are carried out in coral reef environments, and the projects address important aspects of tropical marine water chemistry known to be crucial to coral reef ecosystems. In addition to the chemical sciences, this course incorporates participation in Polynesian food preparation, Polynesian arts including weaving, dance and music, visits to archaeological sites, and lectures by Tahitian elders. (Intermittently)



## **Criminal Justice: Law Enforcement (CJLE)**

### **CJLE 109C - Police Report Writing**

Credit(s): 3

This course will introduce students to the vocabulary and style of writing used in the criminal justice fields. Students will learn to write clear, concise and persuasive arrest reports, policy proposals, and other documents typically used in the criminal justice system. (Spring Semester)

### **CJLE 200 - Reserve Officer Training**

Credit(s): 5

*Prerequisite(s)*: instructor's consent.

This course covers 90 hours of instruction, approximately 60 hours lecture and 30 hours lab. Topics covered include police ethics and professionalism, criminal law, evidence and laws of arrest, communications, and report writing. Portions of the course will be conducted through practical applications. These include police patrol, defensive tactics and crowd control tactics, and firearms training. The course is not a substitute for the Montana Police Academy, but will give prospective reserve officers a minimum amount of instruction necessary to function as a reserve officer. The course covers areas of instruction mandated by requirements outlined in MCA 7-32-14: Qualifications for Appointment as a Reserve Officer. Actual appointment as a reserve officer is at the discretion of individual agencies. (Intermittently)

### **CJLE 210 - Comprehensive Investigative Interviewing**

Credit(s): 3

*Prerequisite(s)*: instructor's consent or Criminal Justice majors.

Students will be introduced to techniques that will increase their ability to conduct efficient and productive interviews of witnesses, victims, and suspects. The course will cover techniques used during contact stops, calls for service and investigative interviews. Proper use of questioning, interview strategies and active listening techniques will also be discussed. (Fall Semester)

## **Criminal Justice (CJUS)**

### **CJUS 121A - Introduction to Criminal Justice**

Credit(s): 3

This course introduces the student to the functions and practices of the agencies that make up the criminal justice system: police, courts, and corrections. The various stages in the criminal justice process are the focus. Ideological and organizational factors influencing decision-making throughout the criminal justice system are examined. (Fall and Spring Semesters)

### **CJUS 171 - Introduction to Judicial Function**

Credit(s): 1

*Corequisite(s)*: CJUS 231.

The structure and organization of local, state and federal court systems and the roles and responsibilities of the key figures in the trial process are explored. Various problems faced by the judiciary are also addressed. (Fall Semester)

## **CJUS 200 - Principles of Criminal Law**

Credit(s): 3

This course is an introduction to substantive criminal law, with appropriate examples from particular crimes. Historical development of substantive criminal law and its role in society is also covered. (Fall Semester)

### **CJUS 220 - Introduction to Corrections**

Credit(s): 3

Institutional correctional systems at local, state and federal levels and community-based corrections, including probation and parole, are studied. The demographics of the prison population along with an examination of the inmate subculture and issues pertaining to special populations are also explored. (Spring Semester)

### **CJUS 227 - Introduction to Policing**

Credit(s): 3

This course examines the police as a component of the criminal justice system, providing an overview of law enforcement agencies at the local, state, and federal levels, as well as an examination of their history and investigative responsibilities. Current issues and trends in law enforcement will be examined. (Spring Semester)

### **CJUS 230 - Police Organization**

Credit(s): 3

Covers the basic structure of law enforcement and the historical development of police departments, as applied to federal, state and municipal agencies. Examines current police practices and timely issues, such as police community relations, civil liability and ethics. (Spring Semester)

### **CJUS 231 - Criminal Evidence and Procedure**

Credit(s): 2

*Corequisite(s)*: CJUS 171.

A practical approach to criminal procedure that emphasizes the relationship between law and procedure is the focus. Up-to-date analysis of U.S. Supreme Court decisions affecting criminal procedures is reviewed. (Fall Semester)

### **CJUS 298 - Internship**

Credit(s): 3

*Prerequisite(s)*: completion of 30 semester credits with a grade point average of 2.0 or better. Submission of an internship application.

This course offers a supervised, structured learning experience at an approved business/organization. Students will receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. (All Semesters)

## **College Success (COLS)**

### **COLS 102 - College Success Strategies**

Credit(s): 1

*Formerly ID 101*

In this seminar course, students will explore academic and career opportunities within the various programs of study at FVCC. Students will reflect on their values, interests, strengths, and how these impact the formation of their goals: academic and professional. Students will also be introduced to academic success strategies and methods to ensure a more successful transition to FVCC academics. (Fall and Spring Semesters)

### **COLS 105 - College 101: Summer Experience**

Credit(s): 1

*Formerly ID 105*

*Prerequisite(s)*: enrollment in Running Start Summer Experience Program.

College 101: Summer Experience provides pre-collegiate students with academic success strategies for college, and resources for exploring educational and career opportunities. Students will participate in service learning and experiential activities and reflect on their values, skills, and leadership-styles. Students will create an academic and career action plan preparing them to enter college full-time. (Summer Semester)

### **COLS 106 - Financial Literacy for College: Summer Experience**

Credit(s): 1

*Formerly ID 106*

*Prerequisite(s)*: COLS 105 and enrollment in Running Start Summer Experience program.

This course provides pre-collegiate students with financial success strategies for college, and exposure to college costs, financial aid, and scholarship processes. Students will participate in community service learning and experiential activities and evaluate how their personal values may impact their college and financial choices. (Summer Semester)

### **COLS 110 - Professionalism 101: From College to Career**

Credit(s): 1

*Formerly ID 110*

This course will prepare TRIO students to reach their career goals. Students will learn valuable professional skills including job and internship research, creating professional profiles, resume development, cover letter formatting, interview skills, negotiating salary and understanding benefits. Student will also reflect on their strengths and developing their skills and abilities for professional careers. The course prepares students entering the workforce directly after FVCC, as well as connects transfer students to career resources at four-year colleges and universities. (Fall and Spring Semesters)

### **COLS 115 - Workforce Preparation for Occupational Trades**

Credit(s): 1

*Formerly ID 115*

This course prepares Occupational Trades students to enter the workforce by teaching professionalism necessary for success in their chosen industries. Students create a working resume and cover letter, as well as learn interviewing and salary negotiation techniques. Topics covered include networking and communication, time management, and professional appearance. (Fall Semester)

## **COLS 120 - Academic Communication Skills**

Credit(s): 3

*Formerly IDS 120*

This course is designed to develop critical speaking, reading, and writing strategies. It focuses on increasing reading comprehension, rhetorical knowledge, conventions, critical thinking, and study skills. Students will engage in diverse applied writing, speaking, and listening opportunities. Students will be able to monitor positive and negative comprehension signals and apply appropriate strategies to correct incomplete comprehension. (Fall and Spring Semesters)

## **Communication (COMX)**

### **COMX 111C - Introduction to Public Speaking**

Credit(s): 3

This course focuses on preparation, presentation, and criticism of speeches. Emphasis is on the development of public speaking techniques through constructive criticism. (All Semesters)

### **COMX 115C - Introduction to Interpersonal Communication**

Credit(s): 3

This course is a study of and practice in communication skills in professional life and in daily relationships. (All Semesters)

### **COMX 215 - Negotiations/Conflict Resolution**

Credit(s): 3

This introductory course will focus on concepts, skills, and strategies for effective resolution of conflicts through negotiation. Emphasis will be placed on the application of concepts learned through the use of simulated exercises and case studies which allow students to apply, practice, and evaluate negotiation skills. (Fall and Spring Semesters)

### **COMX 217CF - Oral Interpretation of Literature**

Credit(s): 3

The techniques, practice, and performance of effective oral reading will be the subject of this course. Poetry, drama, children's literature, stories, speeches, and articles will be analyzed, practiced, and performed before the class. (Fall and Spring Semesters)

### **COMX 220 - Introduction to Organizational Communication**

Credit(s): 3

This course introduces theory and research on communication in organizations. Focus is on topics such as productivity, power, culture, socialization, technology and globalization covering a wide range of organizations including corporations, government, educational institutions, non-profit agencies and media organizations. (Fall and Spring Semesters)

## **Creative Writing (CRWR)**

### **CRWR 110F - Beginning Fiction**

Credit(s): 3

This introductory writers' workshop focuses on the critique and revision of students' short fiction. Contemporary literary short stories, short shorts and parables will be emphasized. Students will study fiction elements and techniques, including character sketches, beginnings, dialogue, point of view, plot, authorial distance, significant detail, scene, characterization, and endings. (Fall and Spring Semesters)

### **CRWR 111F - Beginning Poetry**

Credit(s): 3

This course focuses on the reading and writing of poetry with emphasis on the techniques of imaginative writing and critical appraisal. (All Semesters)

### **CRWR 210 - Introduction Fiction Workshop**

Credit(s): 3

This intermediate course focuses on critique and revision of students' short fiction or on chapters of students' novels. Students will be expected to finish three stories of literary quality. (Fall and Spring Semesters)

### **CRWR 211 - Introduction Poetry Workshop**

Credit(s): 3

An advanced course in the writing of poetry, this course considers special problems in this area as well as refinement of the student's skill. (All Semesters)

### **CRWR 212F - Introduction Nonfiction Workshop**

Credit(s): 3

Study the art of nonfiction through reading and responding to contemporary nonfiction and the writing of original nonfiction works. Focus is on creative expression, writing technique and nonfiction forms. Students begin with writing exercises and brief essays, advancing to longer forms as the semester progresses. (Spring Semester)

## **Computer Science/Programming (CSCI)**

### **CSCI 100 - Introduction to Programming**

Credit(s): 3

*Prerequisite(s):* basic keyboarding skills (30wpm) are recommended.

This course is an introduction to elementary programming techniques. A wide range of programs will be written by the student and run on a computer. Students learn the techniques of looping, functions and subroutines, arrays, variables and data types, user input/output, file input/output, and appropriate programming practices common to most languages. (Intermittently)

### **CSCI 107 - The Joy and Beauty of Computing**

Credit(s): 3

This course examines the computing field and how it impacts the human condition and introduces exciting ideas and influential people. It provides a gentle introduction to computational thinking using the Python programming language. (Fall Semester)

### **CSCI 111 - Programming with Java I**

Credit(s): 4

*Prerequisite(s):* basic keyboarding skills (30wpm) are recommended.

This is a foundation course in computer science using the high-level, object-oriented concepts in programming using Java. Topics covered are data types, arrays, basic programming constructs, iteration, decision statements, sequences, methods, exception handling, classes, objects, methods, encapsulation, data hiding, inheritance and polymorphism. (Fall and Spring Semesters)

### **CSCI 113 - Programming with C++ I**

Credit(s): 4

*Prerequisite(s):* one programming class.

This course covers computer programming in C++. Topics covered are data types, arrays, basic programming constructs, iteration, decision statements, sequences, methods, exception handling, pointers, classes, objects, methods, encapsulation, data hiding, inheritance and polymorphism. (Spring Semester)

### **CSCI 121 - Programming with Java II**

Credit(s): 4

*Prerequisite(s):* CSCI 111.

This is a continuation of CSCI 111. Topics include error handling and debugging techniques, recursion, abstract data types, creating programs with multiple files and libraries, and creating straight forward GUI's that involve event driven programming and threaded programs. (Spring Semester)

### **CSCI 122 - Game Design Theory**

Credit(s): 3

*Prerequisite(s):* basic programming skills recommended, but not required.

This course provides students with a foundation of the game development process including important historical elements, content creation strategies, production techniques, and future game design. The course covers game development history, platforms, goals and genres, player elements, story and character development, gameplay, levels, interface, audio, development team roles, game development process, and marketing and maintenance. (Spring Semester)

### **CSCI 127 - Joy and Beauty of Data**

Credit(s): 3

This course provides a gentle introduction to the exciting world of big data and data science. Students expand their ability to solve problems with Python by learning to deploy lists, files, dictionaries and object-oriented programming. Data science libraries are introduced that enable data to be manipulated and displayed. (Fall and Spring Semesters)

### **CSCI 132 - Basic Data Structures and Algorithms**

Credit(s): 4

*Prerequisite(s):* CSCI 111.

An examination of advanced Java and basic data structures and their application in problem solving. Data structures include stacks, queues and lists. An introduction to algorithms employing the data structures to solve various problems including searching and sorting, and recursion. Understanding and using Java class libraries. The laboratory uses Java. Introduces Big-O Notation. (Fall Semester)

### **CSCI 206 - .NET Applications**

Credit(s): 4

*Prerequisite(s)*: CSCI 100 or CSCI 111.

This course covers advanced desktop and web application features of the .NET framework. Students will learn Exception Handling, Collections, Linq, Generics, Multithreading, .NET ADO.NET, ADO.NET Entity Framework, ASP.NET Web Forms and MVC, and Object Oriented Programming. Students will use C# language and Microsoft SQL Server for all projects. (Fall Semester)

### **CSCI 208 - Game Programming I**

Credit(s): 4

*Prerequisite(s)*: CSCI 111.

This is an introductory course in game programming. The course introduces physics engines, sound engines, graphic engines, creating and editing primitives, textures and meshes, lighting concepts, properties and techniques, and creating terrain and other related topics through the use of the Unreal Gaming Engine or other production platform. (Fall Semester)

### **CSCI 209 - Game Programming II**

Credit(s): 4

*Prerequisite(s)*: CSCI 208.

This course builds on skills learned in Game Programming I and covers advanced material construction, working with volumes, applying physics to objects, understanding particle systems, creating user interfaces, introduction to sound, introduction to animation, and creating cinematic sequences. The course will use the Unreal Gaming Engine or another production platform. (Spring Semester)

### **CSCI 210 - Web Programming**

Credit(s): 4

*Prerequisite(s)*: CSCI 211.

This course uses PHP to create dynamic data-driven web pages. The emphasis will be on fundamentals of PHP and its syntax for the purpose of linking site pages to databases for queries, data manipulation, and updates. Topics include design and creation of server-side databases for interactive use by web pages; the use of SQL to search, filter, and add data driven by the user; and creation and population of forms and reports with query results. (Fall Semester)

### **CSCI 211 - Client Side Programming**

Credit(s): 4

This course introduces JavaScript for use in web pages. JavaScript is a popular scripting language that is widely supported in web browsers and other web tools that adds interactive functions to HTML pages. Topics covered are data types and operators, functions and events, the browser object model, form validation, cookie creation, and animation using Dynamic HTML. (Spring Semester)

### **CSCI 213 - Web Programming Techniques: PHP II**

Credit(s): 4

*Prerequisite(s)*: CSCI 210.

This course addresses the intermediate and advanced features of PHP. An emphasis is placed on object-oriented design and reuse, error handling, frameworks, managing sessions, carts, testing, and performance considerations. (Spring Semester)

### **CSCI 220 - Virtual/Augmented Reality**

Credit(s): 4

*Prerequisite(s)*: CSCI 111.

This is an introductory class in virtual and augmented reality. The class will examine the basic theories and concepts of virtual and augmented reality, physiological and ergonomics aspects of perception and motion, hardware, interaction, modeling, authoring, and programming. The class will involve projects which may include Google Cardboard, the Unreal Game Platform or other vr/ar platforms and hardware. (Spring Semester)

### **CSCI 232 - Data Structures and Algorithms**

Credit(s): 4

*Prerequisite(s)*: CSCI 132.

This course covers advanced data structures and programming techniques and their application. Topics include trees, balanced trees, graphs, dictionaries, hash tables, and heaps. The efficiency and correctness of algorithms are examined. Projects are coded in JAVA. (Spring Semester)

### **CSCI 238 - Standards-based Mobile Applications**

Credit(s): 4

*Prerequisite(s)*: CSCI 111.

This is an introductory course in developing mobile applications utilizing industry standard languages, tools, and frameworks. Applications will be created using standards-based HTML 5, Cascading Style Sheets, and JavaScript along with frameworks to assist in the deployment to different mobile platforms. Frameworks such as PhoneGap, Cordova or other suitable platforms will be utilized to gain access to platform devices and sensors. (Fall Semester)

### **CSCI 240 - Databases and SQL**

Credit(s): 3

This course focuses on the concepts of relational databases. Topics include entity relationship diagrams, design process and normalization, table creation, records and typed fields, primary and foreign keys, and a thorough coverage of Structured Query Language (SQL) to create, query and change a relational database. (Intermittently)

### **CSCI 290 - Undergraduate Research**

Credit(s): 1-3

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of 12 credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **CSCI 298 - Internship**

Credit(s): 3

*Prerequisite(s)*: completion of 30 semester credits with a grade point average of 2.0 or higher, including at least six credits in the student's major area of study. Admission only with consent of internship coordinator and advisor. This course offers a supervised, structured learning experience at an approved business/organization. Students will receive training related to their field of study, enhance their academic learning and gain exposure to the workplace. Prior to placement at an internship site, students will attend an internship orientation to learn the application and internship process. (Fall and Spring Semesters)

## **Construction Trades (CSTN)**

### **CSTN 135 - Basic Rigging**

Credit(s): 1

This course introduces techniques and safety associated with the use of rope, chain, hoists, scaffolds, and ladders. It also includes an introduction to industrial rigging, including slings of various types, hoists and cranes, and related safe operating practices. (Spring Semester)

### **CSTN 195y - Field Experience: Building Trades**

Credit(s): 3

This course will provide hands-on experience in plan reading and delineate the role of building design, building site planning, and site preparation as it relates to the actual construction of a house. Students will have the opportunity to explore safe and proper use of hand and power tools, construction based math, basic surveying, site preparation, basic concrete work, plan reading, frame and finish carpentry, along with employability job skills. All aspects of job site and workplace safety related to residential construction will be practiced and evaluated. (Intermittently)

## **Culinary Arts (CULA)**

### **CULA 105 - Food Service Sanitation**

Credit(s): 1

*Prerequisite(s):* instructor's consent.

This course provides a thorough understanding of sanitation as it relates to the production, service, and management of a food service facility. It covers microorganisms, food borne illness, their causes and preventions, and food service workers' responsibilities in maintaining safety and public health. This class meets the necessary requirements of the National Restaurant Association's ServSafe Sanitation Certification. (Fall Semester)

### **CULA 110 - Fundamentals of Cooking**

Credit(s): 5

*Corequisite(s):* CULA 105.

This is an introduction to the fundamental concepts, skills, and techniques in basic cookery. Students focus on ingredients and the preparation of stocks, broths, glazes, soups, and sauces. Basic cooking techniques for vegetables, starches, meats, fish, and poultry are introduced. (Fall Semester)

### **CULA 111r - Catering: Fall**

Credit(s): 1

*Prerequisite(s):* CULA 105 and CULA 110.

*Corequisite(s):* CULA 105 and CULA 110.

This course provides practical work experience in catering for both on and off-premise, college-sanctioned events during the fall semester. Students are provided with an opportunity to showcase their knowledge and skills in culinary, baking, pastry, and management. This course may be repeated for a total of two credits. Student's receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall Semester)

### **CULA 111u - Catering: Spring**

Credit(s): 1

*Corequisite(s):* CULA 105, CULA 110.

This course provides practical work experience in catering for both on and off-premise, college-sanctioned events during the spring semester. Students are provided with an opportunity to showcase their knowledge and skills in culinary, baking, pastry, and management. This course can be repeated for a total of two credits. Students receiving financial aid or veterans benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

### **CULA 111v - Catering: Summer**

Credit(s): 2

*Prerequisite(s):* instructor's consent.

This course provides practical work experience in catering for both on and off-premise, college-sanctioned events during the summer semester. Students are provided with an opportunity to showcase their knowledge and skills in culinary, baking, pastry, and management. (Summer Semester)

### **CULA 122 - Latin Cuisine**

Credit(s): 3

*Prerequisite(s):* CULA 110, Serve Safe Certificate.

This course emphasizes both the influences and ingredients that create the unique character of selected Latin cuisines. Students prepare, taste, serve, and evaluate traditional, regional dishes of Mexico, South America and the Caribbean Islands. Importance will be placed on ingredients, flavor profiles, preparations, and techniques representative of these cuisines. (Spring Semester)

### **CULA 123 - American Regional Cuisine**

Credit(s): 3

*Prerequisite(s):* CULA 105, CULA 110, Serve Safe Certificate.

This course explores the cuisines of the United States. Students are introduced to the products and ingredients that are indigenous to regions and gain hands-on experience preparing foods. (Spring Semester)

### **CULA 130 - Asian Cuisine**

Credit(s): 3

*Prerequisite(s):* CULA 105, CULA 110, Serve Safe Certificate.

Students prepare, taste, serve, and evaluate traditional regional dishes of Asia. Emphasis is placed on ingredients, flavor profiles, preparations, and culinary techniques representative of the various Asian cultures. (Summer Semester)

### **CULA 131 - World Cuisine**

Credit(s): 3

*Prerequisite(s):* CULA 105, CULA 110, Serve Safe Certificate.

This course examines the influences and ingredients that create the unique character of selected world cuisines. Students prepare, taste, serve, and evaluate traditional regional dishes of Spain, Middle East, Turkey, Greece, Africa and India. Emphasis is on ingredients, flavor profiles, preparations, and techniques representative of these cuisines. (Summer Semester)

**CULA 132 - European Cuisine**

Credit(s): 3

*Prerequisite(s)*: CULA 105, CULA 110, Serve Safe Certificate.

This course emphasizes both the influences and ingredients that create the unique character of selected Classical European Cuisines. Students prepare, taste, serve, and evaluate traditional, regional dishes of British Isles, Italy, France, Germany, Austria, Switzerland, and Scandinavian countries. Emphasis is placed on ingredients, flavor profiles, preparations, and techniques representative of these cuisines. (Fall Semester)

**CULA 140 - Modernist Cuisine**

Credit(s): 3

*Prerequisite(s)*: CULA 105, CULA 157, Serve Safe Certificate.

This course celebrates the culinary styles, restaurants, restaurateurs, and chefs who are in the current industry spotlight. Their style, substance, and quality are discussed and examined. During the hands-on production aspect of the course, students are exposed to specialty produce and products. (Fall Semester)

**CULA 148 - Food and Beverage Service**

Credit(s): 3

*Prerequisite(s)*: instructor's consent.

A comprehensive review of food and beverage service in various outlets. This course will address the principles and procedures of operating successfully in a food and/or beverage facility. Students will also be provided with information and tools to help them understand and apply strategies for improving guest relations inter-relationships between front and back of house staff, and developing labor and revenue control systems. (Fall Semester)

**CULA 152 - Culinary Practicum**

Credit(s): 1

*Prerequisite(s)*: CULA 105, CULA 110, and Serve Safe Certificate.

Students are introduced in the operation of a foodservice business. Students apply culinary skills, gaining experience to enter and become successful in the foodservice industry. Students gain practical, hands-on experience in a restaurant setting. Students focus on food preparation and service of the meals to the guest. (Fall Semester)

**CULA 157 - Pantry and Garde Manger**

Credit(s): 3

*Prerequisite(s)*: CULA 105, CULA 110, Serve Safe Certification.

This course introduces skills, organization, equipment and responsibilities of the "cold kitchen." Students are introduced to and prepare cold hors d'oeuvres, sandwiches, and salads, as well as basic charcuterie items while focusing on the total utilization of product. Reception foods and buffet arrangements are presented. (Summer Semester)

**CULA 165 - Baking and Pastry**

Credit(s): 5

*Corequisite(s)*: CULA 105.

This course is a combination of lecture, demonstration, and hands-on production to provide an introduction to baking and pastry techniques. Special focus is placed on the study of ingredient functions, product identification, and weights and measures as applied to baking and pastry techniques. Instruction is provided on the preparation of yeast-raised dough mixing methods, roll-in doughs, pie doughs, basic cake mixing methods, fillings, icings, pastry cream, and finishing techniques. (Spring Semester)

**CULA 198 - Internship: Hospitality Management**

Credit(s): 1

*Prerequisite(s)*: CULA 105.

*Corequisite(s)*: CULA 105.

Students are introduced in the operation of a foodservice business. Students apply culinary skills, gaining experience to enter and become successful in the foodservice industry. Students gain practical, hands-on experience in a restaurant setting. Students focus on food preparation and timing to prepare for restaurant and hotel employment. This course may be repeated for a total of three credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall Semester)

**CULA 210 - Nutritional Cooking**

Credit(s): 2

*Prerequisite(s)*: CULA 105, CULA 110, and Serve Safe Certificate.

This course introduces students to the basic elements of nutrition, discusses nutritional menu planning, development of healthy recipes, and describes marketing nutrition in the hospitality industry. As consumer demands for healthful eating continue to increase, professionals in food service must have a thorough knowledge of nutrition to best meet and exceed those needs. The characteristics, functions and food sources of the major nutrients and the procedures used to maximize nutrient retention in preparation and storage of foods will be examined. Students will apply the principles of nutrient needs throughout the life cycle to menu planning and food production. (Summer Semester)

**CULA 220 - Purchasing and Cost Control**

Credit(s): 3

*Prerequisite(s)*: appropriate math placement test score or a grade of "S" or "C" or better in M 065~.

Students explore both the purchasing procedures for foodservice operations and the planning and control processes in the food and beverage industries. Topics include menu pricing, cost-volume profit analysis, and food, beverage, and labor costs. Focus is on inventory control, production projections, cost determination and analysis, income control, training and other costs associated with labor. (Spring Semester)

### **CULA 240 - Menu Planning**

Credit(s): 2

*Prerequisite(s):* instructor's consent.

This course is an introduction to the fundamentals of menu construction. Emphasis is placed on the importance of the menu in creating a successful business. Throughout the semester, students will examine and analyze various models and learn how changes to the menu can markedly increase/decrease sales, create interest, meet individual tastes and nutritional needs, and be used as an important sales and marketing tool. (Fall Semester)

### **CULA 250 - Hospitality Supervision**

Credit(s): 3

*Prerequisite(s):* instructor's consent.

A continuation of CULA 148, this course addresses the function of management/supervision as it pertains to the hospitality industry. Topics include: history, growth and development of food and beverage service, theories in supervision, organizational and strategic tools for increasing motivation and productivity, human resource management, financial planning and marketing. Beverage management is explored in-depth with an emphasis on discussion of the basic production processes for distillation and fermentation, distinguishing wines by grape and/or fruit, origin/growing region, and production process; evaluation of the relationship between food and beverages; and procedures for operating beverage service and for implementing internal control systems. (Spring Semester)

### **CULA 271 - Artisan Breads**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

This course provides an introduction to the fundamental concepts, skills, and techniques of hearth breads and the production of a working bakery. Emphasis is on ingredient functions, product identification, and weights and measures as they apply to artisan breads. Topics include yeast-raised dough mixing methods, pre-fermentation, sponges, and sourdoughs. Students produce and deliver various bread products on a daily basis, much like a true working bakeshop. (Spring Semester)

### **CULA 272 - Chocolates and Confections**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

Students are introduced to the fundamental concepts, skills, and techniques of chocolates and confections. Special significance is placed on the study of ingredient functions, product identification, and weights and measures as applied to confections. Lectures and demonstrations teach chocolate tempering and candy production. (Spring Semester)

### **CULA 273 - European Tortes**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

An introduction to the fundamental concepts, skills and techniques of European cakes and tortes. Special significance is placed on the study of ingredient functions, product identification and weights and measures as applied to pastry. Lectures and demonstrations teach cake mixing methods, filling, and techniques on finishing classical tortes with various ingredients such as marzipan, ganache and glazes. (Spring Semester)

### **CULA 280 - Senior Practicum**

Credit(s): 3

*Prerequisite(s):* CULA 152, CULA 220, CULA 240.

Students participate in the operation of a prosperous foodservice business. Students apply professional skills and gain experience necessary to enter and become successful in the foodservice industry. Students gain practical, hands-on experience in a restaurant setting by developing, costing, and marketing their food/menu concept. Students will focus on quality food preparation and timing to prepare for restaurant and hotel employment. (Spring Semester)

### **CULA 281 - Plated Desserts**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

This is an exploration of the techniques of plated desserts for a la carte service and banquets. Students are introduced to creams, custards, puddings, and related sauces. Students prepare cakes and icings, properly handle chocolates, and apply a variety of decorating styles and techniques. Students also prepare a variety of desserts, including crêpes, cobblers, soufflés, ice creams, and sorbets. Emphasis is on the proper use of chocolates, decorating techniques, and traditional and modern plate, table, and buffet presentations. (Fall Semester)

### **CULA 282 - Wedding Cakes**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

An introduction to the fundamental concepts, skills, techniques and theories of construction associated with wedding cakes. Lectures and demonstrations will introduce fondant, various buttercreams, gum paste, and decorating techniques to produce a variety of specialty-decorated cakes. (Fall Semester)

### **CULA 283 - Centerpieces**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

Students are introduced to the fundamental concepts, skills, and techniques that apply when creating centerpieces with chocolate, sugar, and pastillage. (Fall Semester)

### **CULA 298x - Internship: Catered Desserts**

Credit(s): 3

*Prerequisite(s):* admission to the Advanced Baking and Pastry Certificate program or program director's consent.

Students apply baking and pastry skills in a real and practical hospitality environment focusing on skills required for the successful operation of a foodservice facility. Students focus on baking and pastry items in preparation to prepare for bakery, patisserie, restaurant and/or hotel employment. This course may be repeated for a total of six credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **CULA 299 - Capstone**

Credit(s): 3

*Prerequisite(s)*: CULA 220, CULA 240.

*Corequisite(s)*: BMGT 210.

This course stresses the importance of personal assessment, self-expression, and individual outcomes. Weekly assessments include creativity, skill strengths, and competency values. This course is taken in the student's final semester and includes the graduate practical culinary examination and portfolio review. (Spring Semester)

### **Dance (DANC)**

#### **DANC 194 - Seminar/Workshop**

Credit(s): 3

The focus of this course is to instruct the student in the awareness of the body used in the theatre performance style. This is done through understanding, practicing, and executing the basic technical moves of this form of dance. The vocabulary of stops and moves are taught carefully so that the student can learn, appreciate, and understand how the body and muscles work together for a fluid and strong performance. (Intermittently)

### **Drafting Design (DDSN)**

#### **DDSN 114 - Introduction to CAD**

Credit(s): 3

This is a systems-oriented class designed to introduce students to the concepts, techniques, and applications of PC based computer aided drafting. The class will provide students with the competencies required to create, edit, and output drawings in both digital and printed format. Command structures, coordinate drawing, text dimensions and fill structures will be covered. (Fall and Spring Semesters)

#### **DDSN 135 - Solidworks**

Credit(s): 3

This course presents the fundamental skills and concepts to build parametric model parts and assemblies and make simple drawings of those parts and assemblies. This course is designed as a process-based training approach emphasizing the processes and procedures necessary to complete a particular task. By utilizing case studies to illustrate these processes, the student learns the necessary commands, options, and menus in the context of completing a design task within SOLIDWORKS. An introduction to the transferability and compatibility of SOLIDWORKS, MASTERCAM, GIBSCAM, and Pro-Engineer software is provided. The course also includes an introduction to 3D printing. (Spring Semester)

### **Economics (ECNS)**

#### **ECNS 101B - Economic Way of Thinking**

Credit(s): 3

A critical study of social issues using the constructs of incentives and the role of markets and government policy, this course provides a framework of analytical tools useful in the analysis of contemporary social issues. The normative ramifications of government regulation and deregulation, market power, welfare policies, changing economic structures both in the U.S. and globally, and the implications of reliance on free markets to determine resource allocation and pricing are discussed in the context of economic analysis. (Fall and Spring Semesters)

#### **ECNS 201B - Principles of Microeconomics**

Credit(s): 3

This course is an introduction to the fundamental principles and concepts of individual, business, and government behavior, including basic economic analysis of choice and its consequences, and supply and demand. Additional analysis of the costs of production and theories of business firm output and pricing decisions, labor and wage determination, income distribution, politics, health care and environmental issues will be addressed. (Fall and Spring Semesters)

#### **ECNS 202B - Principles of Macroeconomics**

Credit(s): 3

This course is an introduction to the fundamental principles and concepts of national economies, including basic economic analysis of choice and its consequences and supply and demand. The problems and proposed solutions of national economies are addressed, including unemployment and inflation, national income accounting, economic growth, fiscal and monetary policy, business cycle theories and international trade. (Fall and Spring Semesters)

#### **ECNS 210 - The Economics of Health Care**

Credit(s): 3

This course applies microeconomic tools to the study of health care systems. The unique features of health care as a commodity are explored as well as the demand for health and medical care services, the economic incentives behind the behavior of medical care providers, and the functioning of health insurance markets in the provision of health care services. The role of government in the provision and financing of health care is also explored, and current proposals for health care reform are analyzed. (Intermittently)

#### **ECNS 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of four credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)



## **Emergency Care Provider (ECP)**

### **ECP 100 - First Aid and CPR**

Credit(s): 2

Procedures and techniques of immediate emergency care for injury or sudden illness are covered. This includes first aid for minor injuries, rescue breathing, CPR, and other life-saving techniques. CPR certification is available. (Fall and Spring Semesters)

### **ECP 102 - Wilderness First Aid**

*Formerly ECP 119 Wilderness First Aid*

Credit(s): 1

This course covers basic emergency medical and trauma scenarios typically encountered in remote, austere or wilderness environments. This includes common medical emergencies such as diabetes, seizures, asthma, anaphylaxis and cardiac arrest and trauma emergencies such as soft tissue wounds, head and spine injuries, musculoskeletal injuries and shock. The course consists of in-depth discussions and hands-on training with splinting, bleeding control, wound management and Cardiopulmonary Resuscitation (CPR). Also discussed are legalities within wilderness medicine and how emergencies can be addressed in a wilderness environment. This includes topics such as evacuation, litter construction, backcountry communications, and decision-making. Successful course completion results in the award of Wilderness First Aid certification that is valid for 2 years. Certification can be renewed through any wilderness medicine training organization that offers Wilderness First Aid training. (All Semesters)

### **ECP 120 - Emergency Medical Responder**

Credit(s): 3

Emergency Medical Responder (EMR) is considered the desired level of medical training by many first responder agencies. The course focuses on skill development in the primary responsibilities of the EMR: providing emergency medical care to victims of emergencies and stabilizing their condition prior to transport to an appropriate facility. This course is a combination of classroom work and skills lab. Upon successful completion of the course, students are eligible to sit for the National Registry of Emergency Medical Technicians (NREMT) certification examinations. All aspects of authorization/certification are the responsibility of the student. (Intermittently)

### **ECP 130 - Emergency Medical Technician**

Credit(s): 6

Emergency Medical Technician (EMT) is considered the desired level of medical training by many Emergency Medical Transport agencies. The course focuses on skill development in the primary responsibilities of the EMT, which are to bring emergency medical care to victims of emergencies, to stabilize their condition, and to transport them safely and expeditiously to an appropriate facility. The course is a combination of classroom work, skills lab, and practical experience. Upon successful completion of the course, graduates are eligible to sit for the National Registry of Emergency Medical Technicians (NREMT) certification examinations. All aspects of authorization/certification are the responsibility of the student. (Fall and Spring Semesters, Summer Semester as needed)

## **ECP 200 - Transition to Paramedic Care**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an opportunity for the EMT 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 issues, communications and documentation, anatomy and physiology review, pharmacology and emergency medications, and current issues that impact the emergency medical services profession. (Fall Semester)

### **ECP 201 - Paramedic Fundamentals**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course prepares the paramedic student in the basic knowledge and skills needed in the pre-hospital environment. Topics covered include initial patient assessment and management, airway management and ventilation, pathophysiology of shock, emergency pharmacology, and respiratory emergencies. (Fall Semester)

### **ECP 202 - Paramedic Fundamentals Lab**

Credit(s): 1

*Prerequisite(s):* program director's consent.

This course prepares the paramedic student in the psychomotor and manipulative skills necessary to effectively manage the tasks in ECP 201. (Fall Semester)

### **ECP 204 - Medical Emergencies I**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an in-depth study in the pathophysiology and management of cardiovascular disease and related emergencies. Students will also study obstetrical, neonatal, and pediatric emergencies. (Fall Semester)

### **ECP 205 - Medical Emergencies I Lab**

Credit(s): 1

*Prerequisite(s):* program director's consent.

This course teaches the psychomotor skills required to manage cardiovascular disease and related emergencies. Students will also develop the psychomotor skills required to manage obstetrical, neonatal, and pediatric emergencies. (Fall Semester)

### **ECP 206 - EMS Case Studies**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an opportunity to study and manage trauma and medical emergencies from a case study perspective. Trauma topics include shock; head, spinal, thoracic, and abdominal trauma; burns; and environmental emergencies. Medical topics include respiratory, cardiac, and neurologic emergencies; endocrinology, hematology, infectious diseases, and anaphylaxis. (Summer Semester)

**ECP 216 - Hospital Clinical I**

Credit(s): 5

*Prerequisite(s):* program director's consent.

This course provides the opportunity to apply, in a clinical setting, the didactic knowledge and skills developed in the classroom and lab. This course 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, development of communication skills, introduction to various skills necessary for patient care and the development of safety practices. (Fall Semester)

**ECP 230 - Trauma**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an intensive look at the pathophysiology and management of trauma, to include assessment of the trauma patient; management of head, chest, abdominal, spinal, and orthopedic injuries; management of the multi-trauma patient; management of special airway problems; management of environmental emergencies; and current trends in trauma management. (Spring Semester)

**ECP 231 - Trauma Lab**

Credit(s): 1

*Prerequisite(s):* program director's consent.

This course allows the student to develop the necessary psychomotor skills to successfully manage a trauma patient, to include assessment of the trauma patient; management of head, chest, abdominal, spinal, and orthopedic injuries; management of the multi-trauma patient; management of special airway problems; management of environmental emergencies; and current trends in trauma management. (Spring Semester)

**ECP 234 - Medical Emergencies II**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an intensive look at the pathophysiology and management of medical emergencies, to include the nervous and endocrine systems, the acute abdomen, anaphylaxis, toxicology and substance abuse, behavioral and geriatric emergencies, infectious diseases, and hematology. (Spring Semester)

**ECP 235 - EMS Operations**

Credit(s): 3

*Prerequisite(s):* program director's consent.

This course provides an in-depth look at EMS transport operations; incident management and multiple casualty incidents; vehicle extrication and special rescue; hazardous materials, terrorism, disaster response; and crime scene awareness. Students will also complete studies in National Incident Management Systems (NIMS) and Incident Command Systems (ICS). (Spring Semester)

**ECP 236 - Medical II/EMS Operations Lab**

Credit(s): 1

*Prerequisite(s):* program director's consent.

This course provides instruction in the psychomotor components related to medical emergencies, such as EMS transport operations, incident management and multiple casualty incidents, vehicle extrication and special rescue, hazardous materials, terrorism, disaster response, and crime scene awareness. Students will also complete studies in National Incident Management Systems (NIMS) and Incident Command Systems (ICS). (Spring Semester)

**ECP 246 - Hospital Clinical II**

Credit(s): 6

*Prerequisite(s):* program director's consent.

This course is a continuation of the clinical skills started in ECP 216. It provides students the opportunity to apply, in a clinical setting, the didactic knowledge and skills developed in the classroom and lab. This course serves as the final stage in assisting the student to become an employable EMS provider. Clinical skills addressed include electrocardiology, care of the critical patient, assessment and management of acute and chronic disease, pediatric care, obstetrical and neonatal care, and behavioral intervention techniques. (Spring Semester)

**ECP 250 - NREMT Exam Preparation**

Credit(s): 2

*Prerequisite(s):* program director's consent.

This course prepares the paramedic student for the national registry paramedic exam. It is a review of the cognitive and affective behaviors taught throughout the fall and spring semesters of the paramedic program. (Summer Semester)

**ECP 251 - NREMT Exam Preparation Lab**

Credit(s): 2

*Prerequisite(s):* program director's consent.

This course prepares the paramedic student for the national registry paramedic psychomotor exam. It is a review of the psychomotor skills taught throughout the fall and spring semesters of the paramedic program. (Summer Semester)

**ECP 295 - Field Experience: Clinical III**

Credit(s): 8

*Prerequisite(s):* program director's consent.

This course provides the opportunity to apply, in the field, the didactic knowledge and skills developed in the classroom and lab. This course serves as the final field experience in assisting the student to become an employable EMS provider. Cognitive, psychomotor, and affective 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 and medical emergencies management, attitude, professionalism, assertiveness, and team leader qualities. (Summer Semester)

**ECP 298y - Internship: Paramedicine**

Credit(s): 2

*Prerequisite(s):* ECP 295 and program director's consent.

This course offers a supervised, structured learning and observational experience in a pre-hospital emergency medical care setting with an approved business/organization. Students will receive training related to their field of study, enhance their academic learning and gain an exposure to this field. (Summer Semester)

## **Early Childhood Education (EDEC)**

### **EDEC 108 - Introduction to Early Childhood Education**

Credit(s): 3

This course provides an overview of early childhood history, practice and relevant issues. It will focus on program philosophies and the importance of developmentally appropriate practices in early childhood settings. Students will learn of the unique needs of young children and families. Students will also learn about the professional opportunities in the field of early childhood education. (Fall Semester)

### **EDEC 135 - Language and Literature for Young Children**

Credit(s): 3

*Prerequisite(s)*: EDEC 108 or instructor's consent.

This course will explore when and how to use books and language to meet specific needs, and how to create an environment that encourages and promotes the emergence of literacy in young children. (Fall Semester)

### **EDEC 210 - Meeting the Needs of Families**

Credit(s): 4

This course includes the development of child advocacy skills through awareness of the child's role in the family and society. Students will increase their understanding of diverse family structures and techniques to encourage parent-teacher partnerships. Students will learn about existing community resources and develop the ability to access resources to meet the needs of children and families. (Spring Semester)

### **EDEC 230 - Positive Child Guidance**

Credit(s): 3

*Prerequisite(s)*: EDEC 108, EDEC 245, or instructor's consent.

*Corequisite(s)*: EDEC 231.

This course focuses on developing skills in using positive guidance techniques such as I messages, reflecting feelings, natural and logical consequences, providing choices, conflict resolution, developing positive behavioral interventions, self-concept development and enhancement, as well as children's pro-social skills. (Fall Semester)

### **EDEC 231 - Positive Child Guidance Lab**

Credit(s): 1

*Corequisite(s)*: EDEC 230.

This course emphasizes practical application of guidance strategies for promoting pro-social behaviors with individuals and groups of children through direct participation with children in a supervised lab setting. (Fall Semester)

### **EDEC 235 - Creative Art for the Developing Child**

Credit(s): 2

*Prerequisite(s)*: EDEC 108.

This course focuses on the development of children's art and ways to implement developmentally appropriate art activities in learning environments for young children. It focuses on children's spontaneous art experiences as enhancers of creativity and self-esteem. (Spring Semester of Even Years)

## **EDEC 245 - Early Childhood Developmental Themes**

Credit(s): 3

This course will explore themes in early childhood: attachment, separation, autonomy, accomplishment, and failure. A foundation in which individual developmental needs of children can be assessed by parents and teachers will be provided. Early childhood themes will be looked at in the context of the dominant culture child, the bi-cultural child, and the child with disabilities. Students will be introduced to the techniques of observing, recording, and interpreting the behavior of children. Students will examine research, theories, issues, and stages in a social/political context. Students will learn the importance of parents as children's first and most important teachers. (Fall Semester)

## **EDEC 249 - Infant/Toddler Development and Group Care**

Credit(s): 4

This course provides students with the developmental foundation to apply theories, issues, and research in program planning for infants and toddlers. Students will be required to observe (at consistent intervals) and document infants and toddlers in group settings, utilizing the FVCC Early Childhood Center. Students will plan inclusive environments for infants and toddlers and learn about the importance of understanding families in a cultural context. (Fall and Summer Semesters)

## **EDEC 250 - Math and Science Curriculum for Early Childhood**

Credit(s): 3

*Prerequisite(s)*: EDEC 108 or instructor's consent.

This course will focus on developmentally appropriate activities that construct scientific and mathematical knowledge in meaningful and long lasting ways for children using their spontaneous ideas and creativity. (Spring Semester)

## **EDEC 252 - Music and Movement for Young Children**

Credit(s): 2

*Prerequisite(s)*: EDEC 108 or instructor's consent.

This course is designed to increase the understanding of children's rhythmic movement capabilities and the interaction of play in the development of cognitive, social, emotional and physical domains. Emphasis is on how teachers can use movement as a way of learning for young children. (Spring Semester)

## **EDEC 260 - Administration of Early Childhood Programs**

Credit(s): 3

*Prerequisite(s)*: EDEC 108 or instructor's consent.

The student will learn the principles and practices of administration and supervision of programs for young children. Areas covered include types of schools, maintenance and operation of the physical plant, regulatory agencies and legal requirements, personnel policies and practices, records, accounting, and communication procedure. (Every Other Spring Semester)

## **EDEC 281 - Early Childhood Curriculum Design and Implementation I**

Credit(s): 3

*Prerequisite(s)*: EDEC 108 or instructor's consent.

The student will learn and explore methods and materials for planning and implementing an integrated program for young children, including methods of planning developmentally appropriate activities to enhance children's development. Emphasis is on designing an environment for learning related to curriculum goals. (Spring Semester)

**EDEC 295x - Early Childhood Fieldwork/Practicum I**

Credit(s): 3

*Prerequisite(s)*: EDEC 108 or instructor's consent.

This course provides close supervision at approved, quality early childhood education sites. Students will apply child development, curriculum and guidance knowledge while implementing and evaluating learning experiences in all areas of learning. Conducting group times, handling routines of the classroom and responding to the individual and group needs will be required. (Spring Semester)

**EDEC 295y - Early Childhood Fieldwork/Practicum II**

Credit(s): 3

*Prerequisite(s)*: EDEC 108, EDEC 230, EDEC 245, EDEC 281, EDEC 295x, or instructor's consent.

This course provides close supervision at approved, quality early childhood education sites. Students will apply child development, curriculum and guidance knowledge while implementing and evaluating learning experiences in all areas of learning. Students will work closely with families. Students will observe, assess and plan programs for individual children. (Spring Semester)

**Education (EDU)****EDU 101 - Teaching and Learning**

Credit(s): 3

A critical analysis of public education and the role of classroom teachers in today's public schools. This course examines how public schools developed and changed over the last 100 years and how teachers' roles have evolved accordingly. Current challenges facing teachers, societal expectations of teachers and public schools, as well as the expectations of teacher candidates and teachers are discussed. (Fall and Spring Semesters)

**EDU 201 - Introduction to Education with Field Experience**

Credit(s): 3

An introduction to public education and its place in society, this course is a preview of the teaching profession: preparation, rewards, development, structure, support, and control of schools in America. Numerous educational topics will be introduced including effective schools research, philosophies of education, career goals, and Gallup Poll results. A minimum of 45 hours of classroom observation are required. (Fall and Spring Semesters)

**EDU 222 - Educational Psychology and Child Development**

Credit(s): 3

This course examines the classroom practices that impact elementary-aged children's learning, motivation, and development within an educational, familial, and societal context. Topics include physical, cognitive, and psychosocial developmental growth of children. (Fall Semester)

**EDU 231 - Literature and Literacy for Children**

Credit(s): 3

This course consists of a survey of children's books with an emphasis on their use in the K-8 classroom. The history and current genres of children's literature will also be covered. Students will become aware of selection criteria, award-winning books, and strategies for sharing books with students. (Spring Semester)

**EDU 270 - Instructional Technology**

Credit(s): 3

The purpose of this course is to teach pre-service educators how to use and manage technology in educational settings and communicate methods and reasons for using technology. This course focuses on the computer and its educational applications for pre-service teachers. An emphasis is placed on integrating computer tools into class instruction. (Fall and Spring Semesters)

**EDU 297 - Methods: K-8 Art**

Credit(s): 3

This course is designed to provide the student with an introduction to theory and methods used in elementary art instruction. (Fall and Spring Semesters)

**EDU 297y - Methods: K-8 Music**

Credit(s): 3

This course is designed for elementary education students only. The course will acquaint (or reacquaint) students with music fundamentals, music theory, and methods for teaching or supervising music in the elementary classroom. (Fall and Spring Semesters)

**Engineering: Electrical (EELE)****EELE 101 - Introduction to Electrical Fundamentals**

Credit(s): 3

*Corequisite(s)*: M 152.

This course provides a hands-on introduction to a number of different areas in Electrical and Computer Engineering, the applications of these technologies to solve real-world problems, and the potential impacts on society in general. It incorporates lectures, laboratory experiences, and programming exercises that introduce students to the fundamentals of electrical and computer engineering. Topics include Kirchhoff's and Ohm's Laws, using meters and oscilloscopes, time-varying signals in electric circuits, resistors, capacitors, series and parallel circuits, introduction to digital circuits, introduction to programming, problem solving including computer applications, technical communications, and teamwork. (Fall Semester)

**EELE 201 - Circuits I for Engineering**

Credit(s): 4

*Prerequisite(s)*: EELE 101, M 172, PHSX 222.

An introductory course which covers Ohm's Law, Kirchhoff's Laws, nodal and mesh analysis method, network theorems, capacitors, inductors, RC-RL response, complex frequency, phasors, steady state AC circuits, and three phase circuits. (Intermittently)

**EELE 261 - Introduction to Logic Circuits**

Credit(s): 4

*Prerequisite(s)*: M 152.

This course introduces the concepts of classical digital logic design including number systems, interfacing, Boolean algebra, combinational logic design, and finite state machines. This course also covers Hardware Description Languages for the structural design and simulation of digital systems. Modern digital design of combinational logic and state machines is covered using VHDL and a logic synthesizer. This course contains a laboratory experience where students design and implement logic circuits using discrete parts and programmable logic devices. (Fall Semester)

**Engineering: General (EGEN)****EGEN 102 - Introduction to Engineering Computer Applications**

Credit(s): 3

*Prerequisite(s)*: M 171.

This course introduces engineering students to some of the computer tools that they can use in analyzing problems that arise in the various fields of engineering. Excel spreadsheets help engineers solve their problems quickly and easily. MathCAD and MATLAB are mathematics software that incorporate numeric computation, symbolic computation and scientific visualization. (Fall Semester)

**EGEN 105 - Introduction to General Engineering**

Credit(s): 1

Topics in engineering including its practice, communications, ethics, education, history, disasters, mechanics, electricity and computers. (Fall Semester)

**EGEN 111 - Engineering Communications**

Credit(s): 3

This course provides an introduction to the fundamentals of communicating through engineering graphics, including hand sketching and computer aided design. Students will learn to create sketches and prepare 2-D and 3-D drawings utilizing conventional drawing equipment and methods, as well as with AutoCAD and Civil 3D software. Drawing standards, fits and tolerances, and dimensioning is included. (Spring Semester)

**EGEN 201 - Engineering Mechanics: Statics**

Credit(s): 4

*Prerequisite(s)*: M 172 and PHSX 220.

This course covers vector treatment of static mechanics in two and three dimensions; discrete and distributed force systems; analysis of trusses, beams and cables; coulomb friction on surfaces, screws and belts; the distributive properties of areas and volumes; and the methods of virtual work and stationary potential energy. (Fall Semester)

**EGEN 202 - Engineering Mechanics: Dynamics**

Credit(s): 4

*Prerequisite(s)*: EGEN 201.

This course covers engineering dynamics. For particles, kinematics and kinetics, energy and momentum methods are included. For rigid bodies, relative motion, plane motion, energy and impulse-momentum methods, dynamics of general motion, and vibrations are included. (Spring Semester)

**EGEN 205 - Mechanics of Materials**

Credit(s): 4

*Prerequisite(s)*: EGEN 201.

The principles of engineering mechanics are applied to deformable bodies, including stress, strain, Hooke's Law, thermal stress, torsion, combined stresses, stress transformations, deflection of beams, and columns. (Spring Semester)

**EGEN 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**Electrical Technology (ELCT)****ELCT 100 - Introduction to Electricity**

Credit(s): 3

This is an introductory class in electrical fundamentals. A practical approach will be used for the study of electricity including Ohm's Law; power; series and parallel circuits; direct and alternating current. A strong emphasis will be placed on diagrams and troubleshooting. (Fall Semester)

**ELCT 102 - Electrical Fundamentals II**

Credit(s): 4

*Prerequisite(s)*: ELCT 110.

This course will introduce the student to alternating current. The electrical properties and their effects on the circuit will be examined. Basic trigonometric skills will be utilized to perform calculations for analyzing various electrical circuits. (Spring Semester)

**ELCT 103 - Electrical Code Study/Codeology**

Credit(s): 3

*Prerequisite(s)*: ELCT 139.

This course is a study of the National Electrical Code. Wiring design and protection, wiring methods and materials, and equipment for general use are covered. (Fall Semester)

**ELCT 105 - Electrical Circuitry**

Credit(s): 2

This is an introductory electrical course in alternating and direct current that emphasizes practical applications. Topics covered are Ohm's and Kirchhoff's laws, series and parallel circuits, and wiring diagrams. In addition, wire sizes and proper installation of trailer, ornamental, and outdoor lighting circuits are covered. (Spring Semester)

**ELCT 110 - Basic Electricity I**

Credit(s): 4

This is an introductory course in electrical fundamentals, covering basic circuits and the theory of fundamental concepts of electricity. A practical approach will be used to introduce the student to various electrical properties and equipment which produces those properties. (Fall and Summer Semesters)

**ELCT 111 - Electric Meters and Motors**

Credit(s): 3

This course is a practical hands-on course using ammeters, voltmeters, watt meters, and multimeters in testing and troubleshooting electric motors, components and wiring systems. The course also includes a study of single and three-phase AC motors, their construction features and operating characteristics. This lecture/laboratory class emphasizes electric motor terminology, identification of motor types, enclosures, mounts, motor selection, connections, maintenance, testing and troubleshooting. Students are also introduced to motor loads, protection, controls, and devices used to connect motors to their loads such as pulleys, V-belts, gear boxes and couplings. (Spring Semester)

**ELCT 116 - Math for Electricians**

Credit(s): 2

This course presents basic mathematical topics as they relate to the electrical apprenticeship program. The topics covered are dimensional arithmetic, percents, solving single linear equations, proportions and fractional equations, basic geometry, basic right triangle and basic oblique triangle trigonometry, and sine and cosine functions. (Intermittently)

**ELCT 120 - Basic Industrial Controls**

Credit(s): 2

This course covers an introduction to basic industrial control methods with programmable logic controller emphasis. The topics presented in this course provide a foundation for the further study in the industrial control branch of knowledge. (Fall Semester)

**ELCT 130 - Electric Motors and Generators**

Credit(s): 3

This course provides a comprehensive overview of DC and AC motor types, application, and control. Operation and construction of DC motors will include series plus shunt and compound types. AC single phase capacitor and split phase start motors plus AC three phase motors are featured. Motor construction of stators, armatures, commutators, and brushes plus motor maintenance and loading effects for optimal operation including DC compounding test is included. Basic motor control troubleshooting principles are discussed in detail, including safe and efficient use of multimeters, high voltage insulation testers, and safe voltage lockout. Students are introduced to solid state and mechanical motor control technology involving relays, silicon control relays, diodes, and solid state motor controllers. Correct safety procedures in compliance with the National Electrical Code® and NFPA 70E® will be emphasized. (Fall Semester)

**ELCT 133 - Basic Wiring**

Credit(s): 3

This course is a complete residential wiring class. It covers all phases of wiring, including OCPDs, branch circuits, feeders, grounding, electrical services, and transformers, as well as wiring methods and materials. The course uses the 2011 NEC codebook, plus updates, for every installation in a residence. A blueprint of a residential home is used as the means of relating the NEC to how a home is wired. (Fall Semester)

**ELCT 137 - Electrical Drafting**

Credit(s): 2

This course will have students develop techniques of communicating through the use of mechanical drawings; electrical drawings; heating, ventilation and air conditioning drawings. Basic blueprint reading and sketching are included as well as an introduction to CAD. (Fall Semester)

**ELCT 139 - Electric Code Study - Residential**

Credit(s): 3

*Prerequisite(s):* ELCT 133.

This course is a study of the current NEC requirements pertaining to residential wiring. Code calculations for single and multiple family dwellings are emphasized. Blueprint reading is included. Lab work covers actual wiring of all devices which are used in a residence. The course also covers commercial and industrial applications. (Spring Semester)

**ELCT 204 - Electrical Planning and Estimating**

Credit(s): 3

*Corequisite(s):* ELCT 103 or instructor's consent.

This course is an applied course in the planning and cost estimation of electrical installations and rehabs for both commercial and residential applications. The course will use current catalog and electrical supply information to determine rough cost estimates based on blueprint or electrical drawings, as well as using customer requirements to determine the plan and cost estimates for new and old work. (Fall Semester)

**ELCT 205 - Electrical Design and Lighting**

Credit(s): 3

This is a class discussion course dealing with electrical material and equipment sizing, layout and application, applicable wiring codes, regulations and rules and characteristics of common electrical distribution systems as used in industrial plants and commercial building locations. Included is a study of short-circuit current, current limiting and coordination, power factor correction and electrical rates. This course includes the study of modern illumination principles, calculation procedures and equipment for lighting installations. Also included are discussions of building construction, heat loss calculations and electric heating equipment selection. (Fall Semester)

**ELCT 210 - Advanced Current Theory**

Credit(s): 5

*Prerequisite(s):* EELE 101 or ELCT 102.

This course is a study of three-phase alternating current circuits and single and three-phase transformers and machines. The theory and operation of three-phase wye and delta circuits and the relationship of voltage, current and power in these circuits. The use of phasor algebra in the solution of alternating current problems is stressed as are the characteristics and use of electrical instruments such as voltmeters, ammeters, ohmmeters, and watt meters. Students learn the theory and operation of transformers with single and three-phase connections and are introduced to alternating current machines. (Fall Semester)

**ELCT 211 - AC Measurements**

Credit(s): 3

*Prerequisite(s):* ELCT 102.

This lecture/lab course consists of a series of experiments to investigate the characteristics of single-phase and three-phase electrical circuits. The connections and testing of transformers in both single-phase and three-phase configurations are stressed. Students also learn the operation of three-phase motors from conventional sources and phase converters with an emphasis on efficiency, operating characteristics and connections. (Spring Semester)

**ELCT 225 - Transformers**

Credit(s): 2

This course presents students with the basic construction, operation, and maintenance principles of single-phase and three-phase transformers. Transformer construction, including core types, coil wiring ratios, tank dynamics, and cooling features involving details of magnetism, induction, and flux density will be presented. This course introduces transformer types: auto tap changer, isolation, and step up/step down, reactor, buck-boost, and current transformers; transformer operating principles featuring transformer electromagnetic coupling; transformer maintenance testing of power factor, impedance, power loss (watts loss), oil, and turns ratio. The destructive effects of harmonic distortion, improper cooling, overloading, and improper transformer connecting are highlighted along with a basic introduction to power generation and short circuit analysis. Practical information of NEMA® and ANSI® standards on insulation materials and safety will be featured. (Spring Semester)

**ELCT 233 - Commercial Wiring Lab**

Credit(s): 3

*Prerequisite(s):* ELCT 133.

*Corequisite(s):* ELCT 236.

This course is an extension of ELCT 133 with lectures emphasizing commercial wiring methods. Students will perform laboratory work consisting of actual installation of various raceways, as well as connecting of special equipment used in commercial and industrial applications, all in accordance with the National Electrical Code. (Spring Semester)

**ELCT 236 - Conduit, Raceways, and Code Calculations Lab**

Credit(s): 3

*Prerequisite(s):* ELCT 133.

*Corequisite(s):* ELCT 233.

This course includes laboratory work with Code application relating to conduit bending, as well as National Electrical Code calculations for wire and cable installation. Students will perform lab work consisting of actual installation of conduit, wire and cable. (Spring Semester)

**ELCT 239 - Grounding and Bonding Fundamentals**

Credit(s): 3

This course is a combination lecture/lab series of grounding theory, as well as characteristics of grounded and non-grounded systems. Labs include proper grounding practices, various grounding applications, tools and materials usage and methods of compressions and exothermic application and installations. (Spring Semester)

**ELCT 241 - Electric Motor Controls**

Credit(s): 3

This course is a lecture/lab course oriented 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. (Fall Semester)

**ELCT 247 - Medium and High Voltage**

Credit(s): 3

This course is a lecture/lab course which covers medium and high voltage electrical theory, conductors, insulators, overcurrent devices, testing, termination, safety precautions and safety equipment. (Spring Semester)

**ELCT 250 - Programmable Logic Controllers**

Credit(s): 4

This course is an introduction to the concepts involved with programmable logic controllers (PLCs). The applications, operations, and programming of PLCs will be covered with an emphasis on programming. (Fall Semester)

**ELCT 251 - Introduction to Photovoltaic Systems**

Credit(s): 4

*Prerequisite(s):* ELCT 100 or instructor's consent.

This course introduces students to the new career opportunities in the exploding green market of photovoltaic systems. Students learn to construct, install, and control a working photovoltaic system. This course focuses on grid-direct photovoltaic systems, but covers material crucial to understanding all types of systems. In addition, the economics and viability of photovoltaic as compared to other energy systems will be studied. (Spring Semester)

**ELCT 252 - Fundamentals of Battery-Based Photovoltaic Systems**

Credit(s): 4

*Prerequisite(s):* ELCT 110 or instructor's consent.

This is a lecture/lab course designed to build a firm foundation of basic principles and technologies of solar photovoltaic energy systems. This course focuses on battery-based photovoltaic systems, including the purpose, applications, and design criteria for different types of charge controllers, batteries, and battery-based inverters. Emphasis is placed on system design and installation, including site and resource assessment, load analysis, and cost analysis. (Spring Semester)

**ELCT 255 - Journeyman Electrician's Exam Preparation**

Credit(s): 1

This course will prepare students to successfully take the electrical journeyman licensing examination. There will be a review of topics that were covered in previous courses in the apprentice curriculum. Practice exams will be introduced and discussed with the purpose of assisting students in understanding how questions are worded, and how to best study for the journeyman examination. (Summer Semester)

## Engineering: Mechanical (EMEC)

### EMEC 103 - CAE I - Engineering Graphics

#### Communication

Credit(s): 3

This course leads students to an understanding of engineering drawing, an essential means of communication in engineering. It includes an introduction to the basic use of both AutoCAD and SolidWorks, which are commonly used in mechanical engineering. Topics will include 2D and 3D modeling or parts, creation of simple engineering drawings, and construction of assemblies in SolidWorks. (Spring Semester)

### EMEC 250 - Mechanical Engineering Materials

Credit(s): 3

*Prerequisite(s)*: CHMY 121 or CHMY 141.

This course will introduce students to the fundamentals of materials science and engineering. It covers the chemistry and internal structure of solid materials, and the relationship of structure to material properties. Students will gain a fundamental understanding of materials science, particularly the effects of composition and structure (subatomic, atomic, micro-, and macro-structures) on the material properties (including mechanical, thermal, electrical, magnetic, optical, and deteriorative properties) of metals, ceramics, polymers and composites. Students will also develop an awareness of modern materials challenges and opportunities. (Fall Semester)

## Environmental Sciences (ENSC)

### ENSC 105NL - Environmental Science

Credit(s): 4

Provides an overview of environmental science including: science, public policy and economics, ecosystems and ecological responses, and managing biological and physical resources (water, soil, forests, rangelands, air wildlife, minerals, etc.). Upon completion of this course, a student should have a strong foundation to make sound environmental decisions. Includes lab and a service component. (Spring Semester)

### ENSC 245NL - Soils

Credit(s): 4

This course is an introduction to chemical, physical, and biological properties of soil and soil's relationship to other natural resources. Interactions will be emphasized between soils and the larger forest, range, agricultural, wetland, and other freshwater ecosystems. (Spring Semester)

### ENSC 272 - Water Resources

Credit(s): 4

This course is an introduction to the physical, chemical, and biological properties of water and water's relationship to other natural resources within an ecosystem context. Issues of water quality and quantity will be examined as they relate to human use and other natural resources. (Spring Semester)

### ENSC 290 - Undergraduate Research

Credit(s): 1-3

*Prerequisite(s)*: instructor's consent.

Undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of 12 credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

## Environmental Studies (ENST)

### ENST 285 - Environmental Policy and Impact Analysis

Credit(s): 3

This course is designed to impart an understanding of the Environmental Impact Assessment (EIA) process to those interested in land management. (Fall Semester)

## Electronics Technology (ETEC)

### ETEC 100 - Introduction to Maker Skills

Credit(s): 3

This is an introductory course in designing and making an electro-mechanical project. Skills in building electronic/mechanical objects are learned and practiced by building a specific project. Skills are useful for individuals that wish to make things in the FVCC maker-space lab. Specific skills using machining tools, 3D design, 3D printing, electronics, micro-controllers and programming are covered. This course is may be repeated for a total of nine credits. Students receiving financial aid or veterans' benefits should contact the Financial Aid Office before repeating this course. (Fall Semester)

### ETEC 130 - Panel Wiring and Soldering

Credit(s): 2

This course will introduce the student to the physical assembly and wiring of electrical/industrial control panels. The course will teach the fundamentals of torque and soldered connections for compliant installation of wires, cables, and components. The basics of electrical schematics and wiring diagrams will be taught in relation to wiring control panels. (Spring Semester)

### ETEC 245 - Digital Electronics

Credit(s): 4

*Prerequisite(s)*: ELCT 110.

This course explores digital electronic circuits and devices that make up a computer system. Topics include binary and hexadecimal number systems, Boolean algebra and digital logic theory, simple logic circuits, combinatorial logic, and sequential logic. Analog-to-digital and digital-to-analog interfaces are covered. Includes lab exercises. (Fall and Summer Semesters)

### ETEC 250 - Solid State Electronics I

Credit(s): 4

*Prerequisite(s)*: ELCT 110.

This is an introduction to semiconductor technologies used in solid state electronics with an emphasis on diodes and transistors. Lab exercises reinforce and illustrate lecture topics. (Spring Semester)

### ETEC 280 - Advanced Electronics

Credit(s): 4

*Prerequisite(s)*: ETEC 245, ETEC 250.

Topics include design of various amplifiers and their frequency response, op-amps, filters, oscillators, and voltage regulators. Lab exercises include designing actual circuits and creating simulations which reinforce lecture topics and provide practical hands-on experience. (Spring Semester)



**EETEC 285 - Advanced Programmable Controllers**

Credit(s): 4

*Prerequisite(s):* ELCT 250.

This is an advanced course in programmable controllers that emphasizes programming circuits using relay type instructions, timers, counters, data manipulation, arithmetic functions, and other advanced techniques. (Spring Semester)

**EETEC 299 - Capstone: Electronics**

Credit(s): 3

*Prerequisite(s):* enrollment in the Electronics Technician Tier IV program.

This course provides opportunities for the student to arrange to complete special projects using knowledge gained in previous coursework. All projects must be approved by the instructor. (Spring Semester)

**Engineering: Mechanical Engineering Technology (ETME)****ETME 215 - Manufacturing Processes**

Credit(s): 3

*Prerequisite(s):* EMEC 250 or instructor's consent.

This course provides an overview of the concepts, theory, operation, and application of manufacturing processes with an emphasis on the production of durable goods from engineering materials. The student will apply quantitative analysis techniques to the solution of manufacturing problems, as well as gain an understanding of the appropriate processes to specify while designing products for manufacture. (Spring Semester)

**Engineering: Welding (EWLD)****EWLD 110 - Introduction to Nondestructive Testing**

Credit(s): 3

This course is an introduction to nondestructive weld inspection, theory and practices. All six processes will be introduced: liquid penetrate, magnetic particle, eddy current, ultrasonic, and radiographic, with visual inspection and AWS, ASME, and ASNT codes and standards being emphasized. (All Semesters)

**EWLD 111 - Liquid Penetrant and Magnetic Particle Testing**

Credit(s): 3

*Prerequisite(s):* WLDG 111.

This course is a theoretical study and practical application of the nondestructive testing techniques of liquid penetrate and magnetic particle testing. Emphasis will be placed on proper testing techniques and interpretation of test results. (All Semesters)

**EWLD 113 - Ultrasonic Testing I**

Credit(s): 2

*Corequisite(s):* WLDG 111.

Students will study the basic theory and application that pertains to Ultrasonic Testing (Level I). This course follows the ASNT-TC-1A guidelines and meets the formal education requirements. (Fall and Spring Semesters)

**EWLD 114 - Ultrasonic Testing II**

Credit(s): 3

*Prerequisite(s):* EWLD 113.

Students will complete a thorough review of ultrasonic techniques and evaluation of base material product forms. Pre, post, and actual weldment inspection will be covered. Evaluation of bonded structures will be covered at a minimum. Base material and welded joint discontinuity detection will be covered, along with evaluation per given code or specification. (Spring Semester)

**EWLD 115 - Eddy Current Testing**

Credit(s): 3

*Corequisite(s):* WLDG 111.

This course is a general study of eddy current testing principles, including the theory and practical hands-on skills for testing metals. Students will become familiar with and employ various probe types, on various material properties. Emphasis will be placed on the selection of proper calibration standards and equipment. (All Semesters)

**EWLD 121 - Radiographic Testing I**

Credit(s): 2

Students will study the basic theory and applications of basic Level I Radiographic examinations. This course will present the appropriate instruction in both theory and practical training to prepare the student for the Level I Radiographic examination. Training follows ASNT (ANSI/ASNT CP-105-2011) Topical Outlines for Qualification of Nondestructive Testing Personnel. (Fall Semester)

**EWLD 122 - Radiographic Testing II**

Credit(s): 3

*Prerequisite(s):* EWLD 121.

This course is a study of radiographic testing and interpretation of both digital and film processing techniques. Students are instructed in radiation safety, regulations, and the characteristics of x-ray and gamma radiation. Students apply interpretation techniques on various lab samples to determine the cause and effects of discontinuities in welding samples and other materials. This course provides the appropriate instruction in both theory and practical training to prepare the student for the Level II Radiographic examination. (Spring Semester)

**EWLD 125 - AWS D1.1 Code Book**

Credit(s): 2

*Prerequisite(s):* WLDG 111.

This course is a study of the American Structural Welding Society D1.1 Structural Welding Code-Steel book's standards and evaluation procedures. Students will learn to interpret code requirements for AWS welding procedures, evaluations, and certification requirements. (All Semesters)

**Film (FILM)****FILM 105 - Motion Picture Appreciation**

Credit(s): 1

A mini-course designed to develop informed, critical understanding within students. Examines the language and historical impact of the motion picture industry from the silent era to contemporary filmmaking. Course may be repeated for a total of four credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

## Forestry (FORS)

### FORS 120 - Forestry Navigation

Credit(s): 2

An introduction to basic forestry navigation techniques. Exercises include basic compass skills, understanding the historical development of maps, reading and using topographic maps, understanding the U.S. public land survey system (PLSS), and an introduction to Global Positioning System. Emphasis will be placed on forestry field measurements and data collection. (Fall Semester)

### FORS 152 - Sustainable Silviculture

Credit(s): 4

An introductory course in silvicultural practices aimed at management of land to a desired forested condition and the land's sustainable use in concert with other resources. (Spring Semester)

### FORS 153 - Forest Resource Calculations

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score, a grade of "S" or "C-" or better in M 065~, or instructor's consent.

This course involves resource data manipulation for planning and analysis with a concentration on typical natural resource problems encountered in the daily work routine. (Fall Semester)

### FORS 230 - Forest Fire Management

Credit(s): 3

This course covers forest fire prevention, presuppression, suppression, and the uses of fire in land management practices both historically and present day. Emphasis will be on fire behavior, fire weather, the national fire danger rating system, fuels loading, and fire control organization. (Spring Semester)

### FORS 232 - Forest Insects and Diseases

Credit(s): 3

Identification, significance of, and remedies for insect infestations and infectious and non-infectious diseases of forests and forest products. (Spring Semester)

### FORS 251 - Photogrammetry and Remote Sensing

Credit(s): 3

*Prerequisite(s)*: GPHY 284 or SRVY 283.

The theory and application of photo and electro-optical remote sensing for mapping resources and developing information systems. (Spring Semester)

### FORS 260 - Chainsaw and Crosscut Saw Operation and Maintenance

Credit(s): 1

This course is designed to provide the technical knowledge and skills for safely operating and maintaining chainsaws and crosscut saws. (Fall Semester)

### FORS 262 - Stock Packing Skills

Credit(s): 1

This course will teach students the fundamentals of stock packing for the backcountry. Stock packing is an integral part of a backcountry management plan. Topics covered will include animal behavior and herd dynamics, care and feeding of stock, tack, saddling, and riding, types of pack saddles, packing resources, pack regulations, and sustainable stock practices. (Spring Semester)

## FORS 272 - Inventory of Natural Resources

Credit(s): 4

*Prerequisite(s)*: NRSM 161.

This course is an extension of knowledge gained in NRSM 161 in which resources are inventoried and sampled in support of forest land management decisions. (Fall Semester)

## FORS 290 - Undergraduate Research

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

Undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid office before repeating this course. (Intermittently)

## FORS 295 - Field Experience: Logging Resources

Credit(s): 2

*Corequisite(s)*: ACT 283.

Attendance at the annual Western Forestry Clubs Conclave held at various locations throughout the West. Educational tours focus on forest management techniques used by managers to solve local problems. (Spring Semester)

## Firearms Technology (FT)

### FT 100 - Introduction to Firearms

Credit(s): 1

*Prerequisite(s)*: acceptance into the Firearms Technologies program or instructor's consent.

This course provides the orientation to the Firearms Technologies program. The course encompasses firearms safety, which is critical anytime firearms are assembled, repaired, or manufactured, with a focus on shop practices for the gun shop or manufacturing environment. The course also emphasizes nomenclature and terminology to ensure clear communication in the workplace. (Intermittently)

### FT 111 - Firearms Theory I

Credit(s): 3

*Prerequisite(s)*: acceptance into the Firearms Technologies program or instructor's consent.

This course encompasses ballistics, headspace, triggers, safeties, and cycle of operations basic to all firearms. The course will cover design, function, assembly, and disassembly of firearms. The types of firearms studied are single action revolvers, double action pistols, lever action rifles and bolt action rifles. Some history of firearms and ammunition will be presented in order to enhance the learner's understanding of firearms function and use. (Intermittently)

### FT 112 - Firearms Theory II

Credit(s): 3

*Prerequisite(s)*: FT 111 and acceptance into the Firearms Technologies program or instructor's consent.

This course will focus on the various systems used to operate pump and semi-automatic firearms. Systems include internal gas operated, external gas operated, short and long recoil operated, blowback and delayed blowback. The firearms used will be shotguns, rifles, and pistols. Ballistic software will be introduced and utilized as a tool for the gunsmith to study and compare cartridges and exterior ballistics. (Intermittently)

### **FT 120 - Bench Metal Techniques**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Technologies program or instructor's consent.

This course focuses on proper care and use of basic hand tools common to the firearms manufacture and repair business. The course emphasizes hand work and safety. Areas of concentration include proper use of measuring tools, files, hammers, drills, saws, as well as layout, soft soldering, silver brazing, heat treating, and hand polishing. The student will fabricate tools and/or parts from plans or exemplars in order to become skilled in the use of tools and best practices. (Intermittently)

### **FT 125 - Machine Tools for the Gunsmith**

Credit(s): 4

*Prerequisite(s):* MCH 132 and acceptance into the Firearms Technologies program.

This course covers the theory and practice of using machine tools for basic barrel fitting techniques. Techniques include truing the action, lapping lugs, fitting the barrel for best accuracy, chambering, headspacing, and installing sights and scope mounts. Projects include fabricating jigs and fixtures that are required to perform improvements to accuracy of bolt action rifles. There will also be discussions of safety that are pertinent when barreling any firearm. (Intermittently)

### **FT 131 - Firearms Repair I**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Technologies program or instructor's consent.

This course explores firearms repair theory and practice. Topics include necessary tools, design, function, disassembly, troubleshooting, assembly, and repair of selected handguns, shotguns, and rifles. The emphasis is on understanding the systems utilized in each firearm, such as gas operated vs. blowback designs. (Intermittently)

### **FT 132 - Firearms Repair II**

Credit(s): 3

*Prerequisite(s):* FT 131 and acceptance into the Firearms Technologies program, or instructor's consent.

This course is an extension of FT 131. Although the topics are similar, the student is exposed to more complex repairs. Fitting and adjusting of parts, with an emphasis on factory methods and techniques, are covered. (Spring Semester)

### **FT 140 - Precision Rifle Building**

Credit(s): 3

*Prerequisite(s):* MCH 132 and acceptance into the Firearms Technologies program, or instructor's consent.

This course is a study of the theory and concepts of advanced accuracy procedures. The focus is the diagnosis of accuracy problems and optimization of the firearm for best accuracy. There will be a variety of procedures and modifications studied, ranging from stock bedding to machining actions. Examples of topics are machining techniques, sighting systems, trigger systems, ammunition quality, and shooting techniques. (Spring Semester)

### **FT 200 - Introduction to Stock Inletting and Bedding**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Finishing program or instructor's consent.

This course will provide information related to the selection of stock blanks. Differences between semi-inlet stocks and blank stocks will be discussed along with layout of stock blanks for both structure and aesthetic appeal. The course will provide students with the knowledge to inlet a semi-inlet blank to a barreled action with the use of inletting tools and markers. Shaping as well as installation of forends and grip caps are included. Inletting and shaping of two-piece stocks will also be covered. (Fall Semester)

### **FT 201 - Gun Bluing**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Finishing program or instructor's consent.

This course presents the chemical processes and procedures used to produce a black oxide finish on firearms or any steel part, except for stainless steel, utilizing the hot caustic immersion and rust bluing processes. Metal preparation, bluing room design, equipment, chemicals, and safety factors will be covered. Polishing techniques and metal preparation utilizing primarily hand techniques will be emphasized. Student skills will be developed by applying these processes to test pieces, tools, and/or project firearms. (Fall Semester)

### **FT 202 - Advanced Metal Finishing**

Credit(s): 3

*Prerequisite(s):* FT 120 or instructor's consent.

This course is a study of those chemical processes and metal preparation techniques that are applicable to gun metal finishing. Metal finishing processes including nitre bluing, zinc and/or manganese phosphate coating, color case hardening, and bake on coatings will be covered along with metal preparation using power equipment and hand techniques. Students will develop skills by preparing and applying various metal finishes to projects in a safe manner. (Fall Semester)

### **FT 203 - Advanced Firearms Modification**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Finishing program or instructor's consent.

This course is a study of advanced gunsmith practices that are required in professional gunsmithing or firearms manufacturing. Topics will include choke tubes, barrel dent removal, back boring of shotgun barrels, barrel relining, bolt action feed, stuck cartridge removal, bolt face repair and modification, custom scope bases and sights. (Spring Semester)

### **FT 204 - Pistolsmithing**

Credit(s): 3

*Prerequisite(s):* acceptance into the Firearms Finishing program or instructor's consent.

This course is an in-depth study of the custom handgun, but the primary focus is on the model 1911. Topics will include building competition level pistols, fitting link and ramped barrels, throating, fitting slides to frames, installing aftermarket accessories, along with accuracy, recoil, and reliability. (Spring Semester)

### **FT 205 - Checkering**

Credit(s): 3

*Prerequisite(s)*: acceptance into the Firearms Finishing program or instructor's consent.

This course will cover layout and hand-cutting of a standard point pattern. The emphasis will be on construction of templates with layout and checkering of flat and curved surfaces. Cradle design and adjustment to gain positive results will be covered. Layout and cutting of more advanced fleur-de-lis patterns are also covered. Also included are re-cutting of existing patterns and repair of damaged checkering. Staining and finishing of completed work are covered with an emphasis on professional results. (Spring Semester)

### **FT 206 - Synthetic Stocks**

Credit(s): 3

*Prerequisite(s)*: acceptance into the Firearms Finishing program or instructor's consent.

This course will cover layout and hand-cutting of a standard point pattern. The emphasis will be on construction of templates with layout and checkering of flat and curved surfaces. Cradle design and adjustment to gain positive results will be covered. Layout and cutting of more advanced fleur-de-lis patterns are also covered. Also included are re-cutting of existing patterns and repair of damaged checkering. Staining and finishing of completed work are covered with an emphasis on professional results. (Spring Semester)

### **Global Leadership (GBLD)**

#### **GBLD 220 - Models of Leadership**

Credit(s): 1

The course supports student leaders by building leadership skills, developing awareness of leadership styles and theories, and facilitating personal growth through a variety of experiences and practice. (Spring Semester)

### **Graphic Design (GDSN)**

#### **GDSN 130 - Typography**

Credit(s): 3

*Prerequisite(s)*: GDSN 148 or GDSN 200.

*Corequisite(s)*: GDSN 148 or GDSN 200.

Because the eye is trained to appreciate the sensibilities and subtleties of typographic conventions such as kerning, leading, style, and practice, in this course students will gain an understanding of the vocabulary surrounding letter forms and the design of text. Symbolic communication inherent in different typefaces will also be explored. Typographic relationships with other graphic elements will be investigated through brochures, posters and other two-dimensional projects. (Fall Semester)

#### **GDSN 148 - Digital Illustration I**

Credit(s): 3

This is a beginning course in the use of Adobe Illustrator where students will develop vector-drawing abilities through a variety of skill-based assignments, with an emphasis on concept, creativity, technical achievement and presentation. In addition, students learn file preparation standards for production, including file formats, color palettes and image resolution. The most recent version of Illustrator is highly recommended. (Fall Semester)

#### **GDSN 149 - Digital Imaging I**

Credit(s): 3

This is a beginning course in the use of Adobe Photoshop. This class will introduce the concepts of basic digital image manipulation techniques. This includes cropping images, selecting details, creating new layers, adjusting color balance/contrast, adding type, web optimization, resampling/resizing of images, and using alpha channels. More intermediate topics such as layer mask selection, clipping masks, layer adjustments, filters, and image slicing will be introduced. The most recent version of Photoshop is highly recommended. (Fall Semester)

#### **GDSN 200 - Introduction to Desktop Publishing**

Credit(s): 3

*Prerequisite(s)*: GDSN 148 and GDSN 149.

This is a fast-paced course in the use of Adobe InDesign. The concepts of integrating imagery and type as art, identity branding, and multi-page layouts will be covered extensively. Students must be proficient with Illustrator and Photoshop because this course combines photo, illustration, and typography to create cohesive layouts. Students will finish this class with the ability to create a small magazine from concept to creation to production. The most recent version of InDesign is highly recommended. (Fall and Spring Semesters)

#### **GDSN 230 - Video Editing**

Credit(s): 4

This course integrates graphic design skills with video editing to create short promotional videos. Students explore basic working concepts of the art of video editing through the use of linear and non-linear video editing to tell a story from start to finish with a detailed plot arc. Topics include capturing digital video, organizing projects, storing video clips, explaining the browser, viewer, canvas, and timeline. Students learn advanced features such as special effects, camera angles, techniques for connecting shots, overlapping sound sequences, and text effects. (Spring Semester)

#### **GDSN 247 - Digital Portfolio Preparation**

Credit(s): 4

*Prerequisite(s)*: GDSN 250.

In this course, students develop a unique identity and branding to showcase examples of both graphic design and web technology pieces in preparation for the job market. A cohesive design will be displayed through a resume, business card, leave behind, print portfolio, and digital portfolio. This capstone course prepares Graphic Design and Web Technology students for the job market by teaching interviewing skills and independent contract techniques. (Spring Semester)

#### **GDSN 248 - Digital Illustration II**

Credit(s): 3

*Prerequisite(s)*: GDSN 148.

This is an advanced course in the use of Adobe Illustrator. The concepts of advanced digital illustration will be introduced and explored. This includes drawing in 3D, using perspective, streamlining color management, creating customized brushes, and using special effects. Also, a strong emphasis on typography as a design element will be applied. The most recent version of Illustrator is highly recommended. (Spring Semester)

### **GDSN 249 - Digital Imaging II**

Credit(s): 3

*Prerequisite(s):* GDSN 149.

This is an advanced course in the use of Adobe Photoshop. The concepts of advanced digital image manipulation techniques will be introduced and explored through Photoshop. This includes advanced techniques in retouching and enhancing techniques, creating special effects, and applying artistic type, textures and filters. The use of multiple layers with adjustments, blending modes, clipping masks, alpha channels, puppet warp, liquefy and other filters, will be thoroughly explored. The most recent version of Photoshop is highly recommended. (Spring Semester)

### **GDSN 250 - Graphic Design I**

Credit(s): 3

This course provides an introduction to the principles of Graphic Design that can be applied in photography, painting, and fine arts. The course covers the fundamentals of graphic design with an emphasis on creative problem solving. Students will learn composition, color theory, models and schemes, design components, typography and terminology, resolution, design basics to prepare for web, the marketing process including branding, standard business practices, contracts and ethical guidelines for the graphic arts industry. Students work on critical thinking skills by completing visual problem-solving exercises. This is an introductory course so assignments done on a computer will not be required. (Fall Semester)

### **GDSN 274 - Portfolio Presentation**

Credit(s): 1

*Prerequisite(s):* instructor's consent.

Exploration of techniques and formats used for the documentation and presentation of 2D and 3D artworks. Film, digital and web-based technologies will be used. Students will learn how to create and present portfolios of artwork. (Spring Semester)

### **GDSN 298 - Internship: Graphic Design**

Credit(s): 3

*Prerequisite(s):* completion of 30 credits with a GPA of 2.0 or better, and submission of an internship application.

This course offers a supervised, structured learning experience at an approved business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real world workplace issues. Typically, a student completes 45 site hours per one credit of lecture. Additionally, students participate in activities and class time beyond the hours spent at the job site. (All Semesters)

### **Geoscience: Geology (GEO)**

#### **GEO 100NL - Introduction to Earth Science**

Credit(s): 4

A survey, non-sequence course designed for the non-science major. Subjects include origin and history of the earth and solar system; Earth materials (minerals and rocks), action of wind, water and ice on the Earth's surface; landforms and mountain-building processes; and the physical ocean environment. Labs stress the application of lecture topics. (Fall and Spring Semesters)

#### **GEO 101NL - Introduction to Physical Geology**

Credit(s): 4

Basic concepts of earth materials and processes - minerals, sedimentary, igneous and metamorphic rocks, the rock cycle, weathering, erosion and development of landforms. Introduction to plate tectonics, volcanism, mountain building, continental structure, evolution and structural geology. Lab exercises to illustrate all aspects of lectures. (Spring Semester)

#### **GEO 130N - Geology of Northwest Montana**

Credit(s): 3

Lectures and field trips designed to acquaint the student with the geologic history, rock types, structural features, landforms, and natural resources of Northwest Montana. Field trips in the Flathead and Mission Valleys and Glacier Park. (Fall and Summer Semesters)

#### **GEO 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s):* instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **Global Humanities (GH)**

#### **GH 151H - Introduction to Western Humanities (Antiquity)**

*Formerly LSH 261H Introduction to the Humanities Origins and Influences I*

Credit(s): 4

This course offers an interdisciplinary survey of human creative achievements from Prehistory through the Late Middle Ages. By examining major works of art, architecture, music, literature and philosophy, students will gain an awareness of human productivity and the historical contexts that provided its inspiration, as well as an enhanced appreciation of the rich cultural heritage that informs our own contemporary identity. (Fall Semester)

#### **GH 152H - Introduction to Western Humanities (Modernity)**

*Formerly LSH 262H Introduction to the Humanities Origins and Influences II*

Credit(s): 4

This course offers an interdisciplinary survey of human creative achievements from Early Renaissance to Postmodernism. By examining major works of art, architecture, music, literature and philosophy, students will gain an awareness of human productivity and the historical contexts that provided its inspiration, as well as an enhanced appreciation of the rich cultural heritage that informs our own contemporary identity. (Spring Semester)

## **Geoscience: Geography (GPHY)**

### **GPHY 111NL - Introduction to Physical Geography**

Credit(s): 4

This course introduces physical earth systems - meteorology, soils, vegetation types and distribution, oceanography, landforms. Focus is on the use of geographic tools and analysis to understand spatial relationships of physical and biological phenomena on Earth, and how these relationships affect humans. (Fall Semester)

### **GPHY 121GA - Human Geography**

Credit(s): 3

A topical approach to geographic analysis of humans and their environment, this course includes population, migration, culture, development, industry, and urban patterns. It uses natural science concepts to understand human behavior. Focus is on key issues within a geographic framework, answering where and why. (Spring Semester)

### **GPHY 141GA - Geography of World Regions**

Credit(s): 3

A survey of world geographical regions, including the unique physical environment, population and settlement patterns, cultural diversity, political systems and economic and social status. Focus is on globalization, its effect on the region's environment, politics and economics, and how the regions affect globalization trends. (Fall and Spring Semesters)

### **GPHY 150 - Introduction to Geospatial Technology and Land Information**

Credit(s): 2

This course is designed to acquaint students with land information and mapping principles including an introduction to the Public Land Survey System, cadastral surveys and land records investigation. This course also serves as a combined introduction to geographic information systems (GIS), remote sensing (RS), global positioning systems (GPS), and cartography (the science and art of mapmaking). (Fall Semester)

### **GPHY 250 - Web GIS**

Credit(s): 2

This course introduces the design, publishing, and optimization of online geospatial data, as well as maintenance of basic geospatial web services and applications. The course includes an introduction to browser and mobile-enabled interactive applications. (Fall Semester)

### **GPHY 284 - Introduction to GIS Science and Cartography**

Credit(s): 4

This course covers concepts of spatial thinking and understanding spatial relationships and interaction in the natural and built environment. Additional topics include spatial data principles, data models, relational database concepts, contemporary digital cartography, map design and composition, spatial data conversion, and introduction to spatial analysis and synthesis. (Fall Semester)

## **GPHY 286 - Advanced GIS**

Credit(s): 4

*Prerequisite(s)*: GPHY 284.

This course introduces students to problem-solving and decision making using spatial analysis techniques through advanced tools in both vector and raster data models. Topics include spatial data analysis, surface analysis and 3D visualization, network analysis, and modeling applications. (Spring Semester)

## **Health Enhancement (HEE)**

### **HEE 202 - Instructional Strategies in Elementary Physical Education**

Credit(s): 3

This course is designed for elementary education students. It focuses on applying educational theory in planning, analyzing and presenting learning experiences to typical and atypical populations in elementary school physical education. Active participation is required. (Spring Semester)

### **HEE 220 - Introduction to Physical Education**

Credit(s): 3

This is a survey class dealing with all the introductory aspects of physical education, philosophies, history, objectives, career opportunities, adapted programs, sociology, psychology, physiology of sport. (Fall Semester)

### **HEE 233 - Health Issues of Children and Adolescents**

Credit(s): 3

This course focuses on the major health issues affecting school-age children in the United States and the policies and programs aimed at improving the health of this population. Topics include the role of state and local boards in authorizing school health promotion, school health curriculum design, health lesson plans, and teaching methods appropriate for health concepts. (Fall Semester)

## **Heavy Equipment Operator (HEO)**

### **HEO 100 - Commercial Truck Driver**

Credit(s): 4

*Prerequisite(s)*: Students must be at least 18 years of age and possess a valid Montana Driver's License.

This course will assist students in gaining a working knowledge of information needed to obtain a Class A CDL learner's permit through classroom instruction. This class also includes simulator and backing practice, and the driving experience necessary to pass the pre-trip, skills, and driving exam for the Montana Class A CDL. The lab exercises are designed to provide students with the driving skills in a working environment. (All Semesters)

### **HEO 101 - Commercial Driver's License (Bus)**

Credit(s): 3

*Prerequisite(s)*: students must be at least 18 years of age and possess a valid Montana Driver's License.

This course will assist students in gaining the knowledge and information needed to obtain a Class B CDL learner's permit through classroom instruction. The course also includes vehicle safety inspections, backing techniques, and the driving experience necessary to pass the pre-trip, skills, and driving exam for the Montana Class B CDL with passenger and school bus endorsements. The lab exercises are designed to provide students with driving skills in a working environment including town and open road. (All Semesters)

**HEO 102 - Commercial Truck Driver B to A Transition**

Credit(s): 2

This course will assist students in gaining a working knowledge needed to extend Class B skills to Class A CDL learner's permit through classroom instruction. This course also includes pre-trip, backing practice, and the driving experience necessary to pass the pre-trip, skills, and driving exam for the Montana Class A CDL. The lab exercises are designed to provide students who possess the basic Class B license and driving skills with the additional driving skills required for a Class A combination vehicle/trailer. (All Semesters)

**HEO 103 - Professional Truck Driver**

Credit(s): 8

*Prerequisite(s):* Students must be at least 18 years of age and possess a valid Montana Driver's License.

This course will assist students in the skills necessary to obtain a Class A CDL learner's permit through classroom instruction. It includes the driving experience necessary to pass the pre-trip, skills, and driving exam for the Montana Class A CDL. In addition, students will receive the necessary training in order to obtain HazMat, Double, Triple, Tanker, School Bus, and Passenger endorsements. It will also introduce students to handling and documenting cargo, environmental issues, accident procedures, trip planning, and interpersonal communication. (All Semesters)

**HEO 105 - Introduction to Heavy Equipment Operator**

Credit(s): 8

This course will introduce students to equipment work site safety, grade stake interpretation, and soil composition and characteristics. It will also introduce students to the operation of dump trucks, skid steers, dozers, excavators, backhoes, loaders, scrapers, and motor graders to the National Center for Construction Education and Research (NCCER) standards. (Fall Semester)

**HEO 110 - Heavy Equipment Operator II**

Credit(s): 12

*Prerequisite(s):* HEO 105.

This course is a continuation of HEO 105 designed to develop student proficiencies in equipment operational safety, soil stabilization and good grade determination, and operation of equipment that is fitted with GPS. Proficiency in the operation of all pieces of equipment is expected. Students will give presentations on topics in construction, excavation, or maintenance of equipment. (All Semesters)

**HEO 120 - Heavy Equipment: Service and Operation**

Credit(s): 4

This course introduces service and maintenance of various categories of heavy equipment. The student will learn to perform routine service and maintenance for major equipment components. In addition, the student will learn all safety aspects associated with one category of heavy equipment. For that same category, the student will learn all of the various operations. (Intermittently)

**HEO 181 - Commercial Truck Driver A to Bus Transition**

Credit(s): 1

*Prerequisite(s):* current Class A CDL.

The Commercial Truck Driving Class A to Bus Transition will assist students in gaining a working knowledge needed to extend Class A skills to include a bus endorsement. This class also includes pre-trip, backing practice, and the driving experience necessary to pass the pre-trip, skills, and driving exam for the Montana Class passenger and school bus endorsements. The lab exercises are designed to provide students who possess the Class A license and driving skills with the additional driving skills required to successfully pass the passenger and school bus performance test. (Intermittently)

**HEO 198 - Heavy Equipment Operator Internship**

Credit(s): 10

*Prerequisite(s):* HEO 105, HEO 110.

This course requires 400 hours of job site experience for the student employed as an intern equipment operator with a local business. (Summer Semester)

**Honors (HONR)****HONR 251HA - Honors: Humanities/Social Sciences-A**

Credit(s): 4

*Prerequisite(s):* acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major theories of Social Sciences-A (Anthropology, Psychology, Sociology) coordinated and examined through works of literature. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 252HM - Honors: Humanities/Mathematics**

Credit(s): 4

*Prerequisite(s):* acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes in the humanities coordinated and examined through mathematical concepts utilizing appropriate language and symbolism. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 253HN - Honors: Humanities/Science**

Credit(s): 4

*Prerequisite(s):* acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the humanities coordinated and examined through one or more of the sciences. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 254AM - Honors: Social Sciences-A/Mathematics**

Credit(s): 4

*Prerequisite(s):* acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-A (Anthropology, Psychology, Sociology) coordinated and examined through mathematics. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 255AN - Honors: Social Sciences-A/Science**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-A (Anthropology, Psychology, Sociology), coordinated and examined through one or more of the sciences. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 256NM - Honors: Science/Mathematics**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the sciences coordinated and examined through mathematics. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 257HB - Honors: Humanities/Social Sciences-B**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of Social Sciences-B (Economics, History, Political Science) coordinated and examined through the humanities. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 258NB - Honors: Science/Social Sciences-B**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-B (Economics, History, Political Science) coordinated and examined through themes of the sciences. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 259MB - Honors: Mathematics/Social Sciences-B**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-B (Economics, History, Political Science) coordinated and examined through mathematical concepts. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 260FA - Honors: Fine Arts/Social Sciences-A**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-A (Anthropology, Psychology, Sociology) coordinated and examined through the fine arts. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 261FB - Honors: Fine Arts/Social Sciences-B**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the Social Sciences-B (Economics, History, Political Science) coordinated and examined through the fine arts. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 262FN - Honors: Fine Arts/Science**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Scholars Program.

Title will vary. This course involves critical analysis of major themes of the sciences coordinated and examined through the fine arts. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 263FM - Honors: Fine Arts/Mathematics**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the fine arts coordinated and examined through mathematics. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 264GH - Honors: Global Issues/Humanities**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the humanities coordinated and examined through global perspectives, ethnocentrism, and cultural pluralism. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 265GM - Honors: Global Issues/Mathematics**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of global perspectives, ethnocentrism, and cultural pluralism coordinated and examined using quantitative interpretations. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 266GA - Honors: Global Issues/Social Sciences-A**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of Social Sciences-A (Anthropology, Psychology, Sociology) coordinated and examined through global perspectives, ethnocentrism, and cultural pluralism. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)



**HONR 267GB - Honors: Global Issues/Social Sciences-B**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of Social Sciences-B (Economics, History, Political Science) coordinated and examined through global perspectives, ethnocentrism, and cultural pluralism. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 268GF - Honors: Global Issues/Fine Arts**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of major themes of the fine arts coordinated and examined through global perspectives, ethnocentrism, and cultural pluralism. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**HONR 269GN - Honors: Global Issues/Science**

Credit(s): 4

*Prerequisite(s)*: acceptance into the Honors Program.

Title will vary. This course involves critical analysis of global perspectives, ethnocentrism, and cultural pluralism coordinated and examined using major themes in the sciences. Skills in critical reading/analysis and the development of ideas through argument, writing, and oral communication will be utilized in order to engage student's knowledge, imagination and creativity. (Intermittently)

**Human Services (HS)****HS 100A - Introduction to Human Services/Social Work**

Credit(s): 3

*Prerequisite(s)*: WRIT 101 or satisfactory placement test scores on the reading and writing section.

This course is an overview and orientation to the field of human services and related helping fields. Students will be able to identify basic helping skills and areas of knowledge needed for working with people. There will be a review of theoretical perspectives, careers, social policies, issues, and controversies in the field of human services. (Fall and Spring Semesters)

**HS 210 - Case Management**

Credit(s): 2

*Prerequisite(s)*: HS 100 or HS 250 or PSYX 100.

This course will introduce the student to service planning and the continuum of care in Human Services and Addiction Counseling. Students will understand and demonstrate activities associated with case management such as consumer identification, outreach, prevention relapse, assessment of needs, service planning, advocacy referral, etc. (Fall Semester)

**HS 250 - Interviewing/Crisis Intervention**

Credit(s): 4

*Prerequisite(s)*: HS 100 or PSYX 100.

Basic interviewing and interpersonal communication skills will be introduced and practiced. As basic skills are mastered, the class will move into the skills associated with counseling and crisis intervention. Theoretical and conceptual information related to effective intervention will be presented. Practical guidelines and techniques that will apply to a wide variety of intervention settings will be discussed and practiced. (Fall Semester)

**HS 279 - Legal, Ethical, and Professional Issues in Human Services**

Credit(s): 3

*Prerequisite(s)*: HS 100 or PSYX 100, or instructor's consent.

This course is an overview of the ethical and professional issues associated with the provisions of social services. Values, morality, and the major ethic issues facing practitioners will be addressed. (Spring Semester)

**History: American (HSTA)****HSTA 101B - American History I**

Credit(s): 4

This course is a comprehensive introductory history of Colonial, Revolutionary, Jeffersonian, Jacksonian, and Civil War era America. (Fall Semester)

**HSTA 102B - American History II**

Credit(s): 4

This course is a comprehensive introductory history of America from the Gilded Age (1870s) to the present. (Spring Semester)

**HSTA 111B - American Civil Rights Movement**

Credit(s): 3

This course examines the historic background of the civil rights movement in the United States and discusses the events at the core of the movement in the 1950s and 1960s, putting the civil rights movement in the context of US political, social, and economic history. (Intermittently)

**HSTA 255B - Montana History**

Credit(s): 3

This course is an examination and evaluation of the political, social, cultural, economic, and geographic heritage of Montana as a territory and a state. (Fall and Spring Semesters)

## **History: World (HSTR)**

### **HSTR 101B - Western Civilization I**

Credit(s): 4

This course covers prehistoric days to the mid-17th century, with emphasis on the political, social, cultural, and economic aspects of the great civilizations of the earlier period, and the revolutions in politics, commerce, industry, and science which ushered in the modern era. (Fall Semester)

### **HSTR 102B - Western Civilization II**

Credit(s): 4

This course covers early 1500s to the present with emphasis on the rise of national systems, and the on-going revolutions in Western Civilization with attendant philosophic, economic, and political conflicts and influences. (Spring Semester)

### **HSTR 201G - The 20th Century World I**

Credit(s): 3

This course traces the European impact on Africa, Asia and the Americas in terms of imperialism and industrialization up to World War II. An examination of the rise of Communism and Fascism in Europe and the development of nationalism in underdeveloped countries will also be covered. (Fall Semester)

### **HSTR 284B - Environmental History**

Credit(s): 3

This course is an introduction to the Western Civilization background, American development, and current global implications of environmental issues. (Fall Semester)

## **Health (HTH)**

### **HTH 101 - Opportunities in the Health Professions**

Credit(s): 2

This course is intended to offer students an opportunity to explore the world of health care. Through research, discussion groups, and observations, students will explore various career paths in health care. Students will identify the educational requirements for various health care careers. Some of the topics to be discussed are characteristics of health care personnel, certifications and licensing, health care systems, health care philosophy, law and ethics pertaining to health care, client advocacy, current issues and trends in health care and economic issues in health care. (Fall and Spring Semesters)

### **HTH 110 - Personal Health and Wellness**

Credit(s): 3

This course is the study of health principles enabling the student to make the essential choices for a more healthful lifestyle. (Fall Semester)

## **Heating, Ventilating, Air Conditioning, and Refrigeration Maintenance Technology (HVC)**

### **HVC 101 - HVAC Fundamentals**

Credit(s): 2

This course is designed to explore the common aspects of heating, ventilation, air conditioning, (HVAC) technology. Discussion will focus on such topics as heat transfer methods, basic terminology and definitions, industry specific safety topics, and applied physics for HVAC systems. (Fall Semester)

### **HVC 120 - Boiler Operator Certification**

Credit(s): 2

This is an introductory course in heating and power low pressure boiler systems. It will introduce the concepts and terminology of commercial, industrial, and residential boiler systems and emphasize troubleshooting and maintenance procedures employed in maintaining hot water systems. Area of focus include boiler fundamentals, boiler types, steam and hydronic boilers, fuels and burner types, valve identification, safety and relief valves, water level controllers, and industry safety issues associated with boiler accidents. The course will prepare students to take the Boiler Operator license exam. (Fall and Spring Semesters)

### **HVC 130 - HVAC Electrical**

Credit(s): 3

Basic electrical safety and electrical theory such as Ohms Law, circuit schematic symbols, and circuit characteristics, will be discussed as it specifically applies to DC and AC circuits in the HVAC industry. Additional theory will be presented regarding magnetism as it applies to AC power generation. The course will also include discussions and calculation of the effects of capacitive, induction, and resistive circuits. The course concludes with an overview of transformers. (Fall and Spring Semesters)

### **HVC 140 - HVAC Systems I**

Credit(s): 3

*Prerequisite(s):* HVC 101.

This course is a logical continuation of HVC 101. Topics covered will include human comfort, psychometrics, introduction to basic air distribution systems, air flow measurement calculations and balance considerations. The course will culminate with the student doing a basic heat load calculation for a residential structure and selecting heating equipment to be installed. (Fall Semester)

### **HVC 230 - HVAC Electrical II**

Credit(s): 3

*Prerequisite(s):* HVC 130.

Areas of study will include basic control circuits, sequency of operation of basic HVAC applications, electric motor theory and specific information on HVAC electrical component devices. The main focus of this course is the various types of AC electric motors and starting components used by single-phase and three-phase motors found in residential and light commercial applications. (Spring Semester)

### **HVC 240 - HVAC Systems II**

Credit(s): 3

*Prerequisite(s):* HVC 140.

This course is a continuation of HVC 140. Topics covered include duct sizing with activities based on previous work in HVC 140. Additional activities will include a residential cooling load calculation and selection of cooling equipment. The course will conclude with an overview of accessories utilized in a residential HVAC system. (Spring Semester)

### **HVC 250 - HVAC Refrigeration I**

Credit(s): 3

*Prerequisite(s):* HVC 140.

This course provides an introduction to the mechanical compression refrigeration cycle and the necessary components. Students will be introduced to the common terms and definitions of the cycle as well as what, when, and where to measure temperatures and pressures for diagnostics. An in-depth discussion of the four major components (Compressor, Condenser, Metering Device, Evaporator) will conclude with all of them working together in a hypothetical system moving heat energy. (Spring Semester)

### **HVC 252 - HVAC Refrigeration II**

Credit(s): 3

*Prerequisite(s):* HVC 250.

This course covers theory and practical application in the maintenance of commercial refrigeration systems. Students will be introduced to various controls and components used in these applications. The course covers evaporators and the refrigeration system, condensers, compressors, expansion devices, application of special system components, commercial ice machines, troubleshooting, and typical operating conditions for commercial refrigeration. (Spring Semester)

### **Individual Development (ID)**

**ID 102** see COLS 102

**ID 105** see COLS 105

**ID 106** see COLS 106

**ID 110** see COLS 110

**ID 115** see COLS 115

### **Interdisciplinary Studies (IDS)**

**IDS 120** see COLS 120

### **Languages: Italian (ITLN)**

#### **ITLN 101GH - Elementary Italian I**

Credit(s): 4

This course will bring students directly in touch with the language and culture of contemporary Italy. The format and structure will enable students to acquire solid grammar and conversational skills and become acquainted with the Italian culture. (Intermittently)

#### **ITLN 102GH - Elementary Italian II**

Credit(s): 4

This course will broaden students' Italian language skills and deal more in-depth with Italian culture and history. (Intermittently)

### **Information Technology Systems (ITS)**

#### **ITS 164 - Networking Fundamentals**

Credit(s): 3

This course is an introduction to networking fundamentals with both lecture and hands-on activities. Topics include the OSI model and industry standards, network topologies, IP addressing (including subnet masks), and basic network design. (Intermittently)

### **ITS 210 - Network Operating System-Desktop**

Credit(s): 3

This course examines the role of operating system software and other user interfaces. The primary focus will be on the installation, operation, maintenance, and system/diagnostic utilities of microcomputer operating systems in a multi-tasking operating systems environment. (Intermittently)

### **ITS 212 - Network Operating System-Server Admin**

Credit(s): 3

Emphasis is on management and use of common network operating systems. Topics and activities include product overview, installation, administration, problem resolution, configuration of security parameters and user accounts, console operations, and use of the network. (Intermittently)

### **ITS 216 - Network Operating System-Directory Services**

Credit(s): 2

*Prerequisite(s):* ITS 212.

This course looks at the planning and implementation processes, installing, maintaining, and troubleshooting Active Directory found within MS Windows Server 2003. Group and security policy creation and implementation will also be developed. (Intermittently)

### **ITS 218 - Network Security**

Credit(s): 3

This hands-on and theory-based course will study computer and network security. Topics will include threats; policy creation; implementing controls; securing hardware, networks, and operating systems; defending against attacks; and intrusion detection systems and practices. (Intermittently)

### **ITS 221 - Project Management**

Credit(s): 3

The purpose of this course is to provide students with the tools to successfully manage a web site project. Topics covered include managing a project's scope, cost, quality, and risk. Focus is on initiating, planning, executing, controlling, and closing projects. Software tools available to help manage and report on the project's progress will also be explored. (Spring Semester)

### **ITS 224 - Introduction to Linux**

Credit(s): 3

Emphasis is on management and use of common open source network operating systems. Topics and activities include product overview, installation, administration, problem resolution, configuration of security parameters and user accounts, console operations and use of the network. (Intermittently)

### **ITS 235 - IT Design Lab**

Credit(s): 2

*Prerequisite(s):* ITS 212, ITS 258.

*Corequisite(s):* ITS 212, ITS 258.

This is a capstone, controlled environment course allowing the students to plan a network, install software on clients and servers, attach to peripherals, apply security principles, and troubleshoot. Planning and documentation as a necessary component of information technology management will be included. (Intermittently)

### **ITS 258 - Routing and Switching**

Credit(s): 4

*Prerequisite(s)*: ITS 164.

This lab-based course will focus on network protocols, VLSM, router configuration, router IOS software management, routing protocols, access control lists, network address translation, LAN switching, and network design components. Troubleshooting in a network environment will be required. Objectives of the CCNA exam will be covered. (Intermittently)

### **ITS 271 - Securing Desktops/Mobile Devices**

Credit(s): 3

*Prerequisite(s)*: ITS 210, ITS 218.

This course will provide advanced technical information and relevant skills to successfully secure end-user devices, including desktop and laptop systems, tablets, cellular phones, and other portable computing equipment. Building on existing knowledge and skills in the areas of server management, network management, and security, students will gain mastery-level knowledge of security issues and best practices. Course content covers client/server exposures and protections (authentication options, packet signing and encryption of network traffic, appropriate implementation of permissions and rights); malware threats and treatments; transmission choices and precautions (wired, wireless, remote desktop access, virtual private networking (VPN)); cloud computing considerations; and corporate mobile device best practices. Hardening of the operating system and application software is also covered. Course content will focus on business-focused security practices. (Intermittently)

### **ITS 273 - Securing Networks**

Credit(s): 3

*Prerequisite(s)*: ITS 212, ITS 218.

This course provides advanced technical information and relevant skills to secure servers and business information. Building on existing knowledge and skills in the areas of server management, network management, and security, students will gain mastery-level knowledge of security issues and best practices. Students will examine and apply hardening techniques to operating systems and infrastructure-based applications. Strategies to ensure business continuity and data security are emphasized, including policy, data preservation, disaster preparedness, and disaster recovery. Legal guidelines and requirements, both domestic and international, are examined in the context of responsible and ethical computer use. Course content will focus on business-focused security practices. (Intermittently)

### **ITS 275 - Border/Perimeter Network Security**

Credit(s): 3

*Prerequisite(s)*: ITS 212, ITS 218.

This course provides advanced technical information and relevant skills to successfully secure computer networks at the public/private interface. Material focuses on hardware- and software-based techniques to prevent and monitor unauthorized or malicious access to corporate networks and servers. Building on existing knowledge of border and perimeter security, students will develop and implement best practices guidelines for boundary-related devices and software. Students will establish baseline assessments of network security from public access points and identify known and/or potential security vulnerabilities. Course content will focus on business-focused security practices. (Intermittently)

### **ITS 277 - Software Assurance and File System Internals**

Credit(s): 3

*Prerequisite(s)*: ITS 210, ITS 218.

This course provides advanced technical information and relevant skills to methodically secure software, including operating systems, custom application software, and commercially-available packages. Students will classify application software (including, but not limited to customer-facing, employee/partner, mobile/endpoint, database, and cloud-based), and perform risk analyses and common weakness assessments against these programs. Students will research various commercial, professional, and governmental security organizations and create a personalized repository of security-related checklists, toolkits, reference material, and resources. Students will investigate low-level file system structures such as master file tables, allocation tables, free space tables, file table entries, and metadata fields. Using common file signatures and checksums, students will verify internal content against external and metadata indicators. Students will examine 'hidden' disk space areas, including file, volume, and/or partition slack. Course content will focus on business-focused security practices. (Intermittently)

### **ITS 280 - Computer Repair and Maintenance**

Credit(s): 3

This course covers the basic to more advanced features of maintaining, troubleshooting, and repairing the PC as required for completion of the A+ Certification Exam. Topics include safety, memory management, operating systems, managing files, software and hardware replacement, upgrades, and installations. (Intermittently)

### **ITS 298 - Internship/Cooperative Education**

Credit(s): 3

*Prerequisite(s)*: completion of 30 semester credits with a grade point average of 2.0 or better and submission of an internship application.

This course offers a supervised, structured learning experience at an approved business/organization. Students experience the selection process, receive training related to their field of study, enhance their academic learning, and gain exposure to the workplace. Students apply theoretical classroom concepts to real-world workplace issues. Typically, a student completes 45 hours on-site per one lecture credit. Additionally, students participate in activities and class time beyond the hours spent at the job site. (All Semesters)

## **Kinesiology (KIN)**

### **KIN 201 - Basic Exercise Prescription**

Credit(s): 3

A dynamic course designed to familiarize students with the concepts of aerobic exercise and resistance training related to the areas of health, fitness, and performance. This course involves a combination of learning techniques, including lecture and hands-on activities. (Spring Semester)

### **KIN 203 - Functional Training**

Credit(s): 2

In this course, students will develop a knowledge base of the variety of real world movements that the human body can generate, as well as exercises that can be utilized to improve the functionality of the human machine executing these movements. This course involves a combination of learning techniques including lecture and hands-on activities. This course may be repeated for a total of four credits. Students receiving financial aid or veterans benefits should check with the Financial Aid Office before repeating this course. (Spring Semester)

### **KIN 215 - Fitness Assessment Techniques**

Credit(s): 3

This course is designed to introduce students to the basic fitness assessment techniques and to provide an opportunity to develop assessment skills through hands-on laboratory experience. Discussions focus on background theory and rationale for each technique, assessment methodology and appropriate utilization of the generated information. (Spring Semester)

## **Literature (LIT)**

### **LIT 110H - Introduction to Literature**

Credit(s): 3

This introductory course focuses on the reading, enjoyment, and critical analysis of fiction, poetry and drama. Students will read world literature, as well as works of the American West, contemporary dramatists, minority writers, and works focusing on the lives of immigrants, expatriates, and first-generation Americans. (Fall Semester)

### **LIT 112H - Introduction to Fiction**

Credit(s): 3

This introductory course focuses on the reading, enjoyment, and critical analysis of the short story and the novel. Students will read world literature, as well as contemporary writers of the American West; minority writers; and writers focusing on the lives of immigrants, expatriates and first-generation Americans. (Spring Semester)

### **LIT 120H - Poetry**

Credit(s): 3

This course is an introduction to the reading, enjoyment, interpretation, critical analysis, and appreciation of selected poetry. (Fall Semester)

### **LIT 201 - Introduction to Literary Studies**

Credit(s): 3

This writing-intensive introduction to the English major will prepare students for advanced study in literature by providing them with the foundational skills of literary analysis, literary theory, disciplinary methodologies, and close readings of literary texts. (Spring Semester)

### **LIT 210H - American Literature I**

Credit(s): 3

This survey course is designed to give students a broad overview of the evolving canon of influential literary works produced in America from approximately 1600 through 1865. Students will read a variety of exemplary texts from a historical perspective in order to critically analyze the formation of our American identity. (Fall Semester)

### **LIT 211H - American Literature II**

Credit(s): 3

This survey course is designed to give students a broad overview of the evolving canon of influential works produced in American Literature from 1865 to the present. Students will examine a variety of authors including African American, Native American, Asian, and Hispanic writers, and will focus on increasing awareness of how historical, economic, social, and geographical concerns help to mold our unique American identity. (Spring Semester)

### **LIT 214GH - Regional Literature**

Credit(s): 3

This course is an examination of regional literature in the context of critical multiculturalism. It analyzes topics through historical and cultural lenses and may focus on a specific regional literature or adopt a comparative approach. (Fall Semester)

### **LIT 216H - American Short Story**

Credit(s): 3

This course will trace the popular literary genre known as the short story from its inception in the early 19th century through the present. The course will examine the role of the short story in American history, and will focus on stories that reflect the various social, economic, and gender concerns of male and female authors from diverse ethnic backgrounds. (Spring Semester)

### **LIT 223H - British Literature I**

Credit(s): 3

This introduction to British writers and works begins with the ancient heroes and monsters in Beowulf and continues through the Middle Ages with readings from "The Canterbury Tales," as well as King Arthur and the Knights of the Round Table. The adventure continues during the Renaissance with "The Tragedy of Dr. Faustus," then moves on to a variety of works during the Restoration and 18th century: from the stinging satire, "Gulliver's Travels" to the hilarious comedy "She Stoops to Conquer." Literature read throughout the course will include a number of poems, essays, plays and stories. (Fall Semester)

### **LIT 224H - British Literature II**

Credit(s): 3

The course includes Romantic poets Wordsworth and Keats, Victorians Bronte, Tennyson, and Elizabeth Barret Browning as well as 20th century writers D.H. Lawrence, Virginia Woolf, Tom Stoppard and Seamus Heaney. (Spring Semester)

### **LIT 225H - Shakespeare: Tragedy and Comedy**

Credit(s): 3

In this course students will read, discuss and, if possible, see a presentation of selected tragedies and comedies: *King Lear*, *Julius Caesar*, *The Tempest*, *A Midsummer Night's Dream* and others. (Spring Semester)

**LIT 226H - Shakespeare: History and Tragedy**

Credit(s): 3

In this course students will read, discuss and, if possible, see a presentation of selected tragedies and history plays of Shakespeare: *Hamlet*, *Othello*, *MacBeth*, *Henry IV, Part I*, *Richard II*, and others. (Fall Semester)

**LIT 271H - Introduction to Science Fiction Literature**

Credit(s): 4

This course will study the development of science fiction as a literary genre that investigates the technological and social dilemmas encountered by humanity. The history of science fiction, the significant authors, and the genre's moral questions will be covered through an examination of the texts and films that have framed science fiction. (Spring Semester)

**LIT 285H - Mythologies**

Credit(s): 3

The course examines the purpose and applications of mythology in both historical and contemporary culture and how myths can transform through different periods, across cultures. Students will explore global mythologies including the ancient Greeks, Norse, Egyptians, Chinese, and indigenous Americans. (Fall Semester)

**Liberal Studies and Humanities (LSH)**

LSH 261H see GH 151H

LSH 262H see GH 152H

**Mathematics (M)****M 065~ - Prealgebra**

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score or Math Department consent.

This course is designed for those students who need to improve their prealgebra skills. Topics include signed numbers, basic factoring, basic equation solving, an introduction to polynomials, square roots, basic graphing and basic exponent rules. (All Semesters)

**M 090~ - Introductory Algebra**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score, a grade of "SA" or "C" or better in M 065~, or Math Department consent.

This course provides an introduction to algebra. The course covers the topics of solving and graphing linear equations, solving systems of linear equations, introductory polynomials and factoring, basic function notation, and graphing and solving basic quadratics. Graphical and algebraic approaches to solving equations and application problems will be used throughout the course. (All Semesters)

**M 094~ - Quantitative Reasoning**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score, a grade of "S" or "C" or better in M 065~, or Math Department consent.

This course is designed for students as the alternative to the traditional algebraic math sequence and to prepare them for college-level math courses emphasizing quantitative methods. Emphasis will be placed on using data and appropriate mathematical models to make decisions, while developing logical reasoning and critical thinking skills. Topics include proportional reasoning, utilizing various graphical representations, linear equations (including systems

of linear equations), and basic probability and statistics. (All Semesters)

**M 095~ - Intermediate Algebra**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score, a grade of "C" or better in M 090~, or Math Department consent.

This course is the second semester of algebra review and provides preparation for pre-calculus. This course concentrates on quadratic, exponential, rational and logarithmic expressions and equations. This course also covers the graphs of functions, inequalities, and solving linear systems of equations. (All Semesters)

**M 105M - Contemporary Mathematics**

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score, a grade of "C" or better in M 094~, or Math Department consent.

This course is an introduction to mathematical ideas and their impact on society. The course is designed to give students the skills required to understand and interpret quantitative information that they encounter, and to make numerically based decisions in their lives. Several math topics will be explored, including basic probability and statistics. (Fall and Spring Semesters)

**M 114 - Extended Technical Mathematics**

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score, a grade of "S" or "C" or better in M 065~, or Math Department consent.

This course presents mathematical topics as they are applied in a trades program. Topics covered include use of measuring tools, measurement systems and dimensional analysis, basic algebra topics, scientific notation, applied geometry, right and oblique triangle trigonometry, and exponential and logarithmic formulas. This course is intended for specific programs. (Fall and Spring Semesters)

**M 115M - Probability and Linear Mathematics**

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score, a grade of "C" or better in M 094~, or Math Department consent.

The course will cover systems of linear equations and matrix algebra including linear programming. An introduction to probability with emphasis on models and probabilistic reasoning will be covered. Examples of applications will be demonstrated from a wide variety of fields. (All Semesters)

**M 120 - Mathematics with Health Care Applications**

Credit(s): 3

*Prerequisite(s)*: appropriate placement test score, a grade of "SA" or "C" or better in M 065~, or Math Department consent.

This course is designed to provide students with a solid mathematical foundation necessary to succeed in a health care profession. This course will review algebra, measurements used in health care fields, dimensional analysis, and graphs and basic statistics. (All Semesters)

**M 123 - Surveying Mathematics I**

Credit(s): 2

*Prerequisite(s)*: appropriate placement test score or Math Department consent.

*Corequisite(s)*: M 095~.

This course includes geometry, particularly perimeter, circumference, area and volume, and trigonometry. Trigonometry topics are both right angle and oblique angle triangles. (Fall Semester)

**M 124 - Surveying Mathematics II**

Credit(s): 3

*Prerequisite(s):* a grade of "C" or better in M 095~ and M 123 or Math Department consent.

This course includes analytical geometry and calculus. The calculus topics are derivatives and integrals of functions of one variable. (Spring Semester)

**M 132M - Number and Operations for K-8 Teachers**

Credit(s): 3

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 094~, or Math Department consent.

This course focuses on the study of numbers and operations for prospective elementary and middle school teachers.

Topics include all subsets of the real number system, arithmetic operations and algorithms, numeration systems and problem solving. (Fall Semester)

**M 133M - Geometry and Geometric Measurement for K-8 Teachers**

Credit(s): 3

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 094~, or Math Department consent.

This course focuses on the study of geometry and geometric measurement for prospective elementary and middle school teachers. Topics include synthetic, transformational and coordinate geometry, Euclidean constructions, congruence and similarity, 2D and 3D measurement, and problem solving. (Spring Semester)

**M 140M - College Math for Healthcare**

Credit(s): 3

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 094~, or Math Department consent.

This course will apply mathematical reasoning and problem solving to the healthcare field. Topics covered include operations in the real number system, linear functions, exponential and logarithmic functions, dimensional analysis, concentration calculations, proportional reasoning, introductory statistics (including basic regression analysis), and introductory probability concepts. This course is intended for students pursuing healthcare programs. (Fall and Spring Semesters)

**M 152M - Precalculus Algebra**

Credit(s): 3

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 095~, or Math Department consent.

This course is the first semester of a precalculus series.

Topics covered include equations, systems of linear equations and methods of solution (including matrices), exponents and radicals, linear and quadratic functions (and their graphs), exponential and logarithmic functions (and their graphs), sequences and series. (All Semesters)

**M 153M - Precalculus Trigonometry**

Credit(s): 4

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 152, or Math Department consent.

This course is the second semester of a precalculus series. Trigonometric functions are introduced using the circular and angular definitions. Trigonometric graphs, identities, equations and applications are investigated. Polar coordinates, polar graphs and conic sections are also covered. (All Semesters)

**M 162M - Applied Calculus**

Credit(s): 4

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 152, or Math Department consent.

This course is an applications oriented approach to differential and integral calculus. Topics covered are limits, derivatives, applications of derivatives, definite integrals, and applications of the definite integral; these topics are covered for functions of one variable, including exponential, logarithmic and trigonometric functions. Applications of the calculus will be demonstrated through a technology component for the course. (Fall Semester)

**M 171M - Calculus I**

Credit(s): 5

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 152 and M 153, or Math Department consent.

This is the first of three standard courses in calculus, the others are M 172 and M 273. The course includes limits and continuity, derivatives, applications of derivatives and integration. The types of functions studied include algebraic, trigonometric, exponential, and logarithmic. (Fall Semester)

**M 172M - Calculus II**

Credit(s): 5

*Prerequisite(s):* appropriate placement test score, a grade of "C" or better in M 171, or Math Department consent.

This is the second of three standard courses in calculus. The course includes transcendental functions, applications and techniques of integration, infinite series, parametrized curves, and polar curves. (Spring Semester)

**M 189 - Typesetting Technical Documents Using LaTeX**

Credit(s): 1

LaTeX is a free typesetting system which is widely used for producing scientific and technical papers and presentations. In this course, students will learn how to typeset journal articles, technical reports, and slide presentations. Course topics include typesetting mathematical formulas, generating bibliographies and indexes, displaying tables, matrices and arrays, and importing graphics. (Intermittently)

**M 221M - Introduction to Linear Algebra**

Credit(s): 4

*Corequisite(s):* M 171 or Math Department consent.

The study of vectors in the plane and space, systems of linear equations, matrices, determinants, linear transformations, eigenvalues, and eigenvectors. Calculators and/or computers are used where appropriate. (Spring Semester)

**M 225M - Introduction to Discrete Mathematics**

Credit(s): 4

*Prerequisite(s):* a grade of "C" or better in M 171 or Math Department consent.

The study of mathematical elements of computer science including propositional logic, predicate logic, sets, functions and relations, combinatorics, mathematical induction, recursion and algorithms, matrices, graphs, trees, structures, morphisms, Boolean algebra, and computer logic. (Fall Semester of Odd Years)

### **M 234 - Higher Mathematics for K-8 Teachers**

Credit(s): 3

*Prerequisite(s)*: a grade of "C" or better in M 132 or Math Department consent.

This course focuses on the study of algebra, number theory, probability and statistics for prospective elementary and middle school teachers. Topics include proportional reasoning, functions, elementary number theory, statistical modeling and inference, and elementary probability theory. (Spring Semester)

### **M 242 - Methods of Proof**

Credit(s): 3

*Prerequisite(s)*: M 171 or Math Department consent.

Methods of Proof is an introduction to the axiomatic nature of modern mathematics. Emphasis is placed on the different methods of proof that can be used to prove a theorem. Mathematical topics discussed include symbolic logic, methods of proof, specialized types of theorems and proofs. (Fall Semester, Even Years)

### **M 273M - Multivariable Calculus**

Credit(s): 5

*Prerequisite(s)*: a grade of "C" or better in M 172 or Math Department consent.

This is the third semester of a three semester sequence in calculus, intended for students majoring in engineering, mathematics, chemistry, or physics. It includes vectors, vector-valued functions, partial derivatives, multiple integrals, and integration in vector fields. (Fall Semester)

### **M 274M - Introduction to Differential Equations**

Credit(s): 4

*Prerequisite(s)*: a grade of "C" or better in M 273 or Math Department consent.

This is a first course in ordinary differential equations. Topics may include linear and non-linear first order differential equations and systems, existence and uniqueness for initial value problems, series solutions, Laplace Transformations, and linear equations of second and higher order. Applications include forced oscillation, resonance, electrical circuits, and modeling differential equations. (Spring Semester)

### **M 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

Undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **Media Arts (MART)**

#### **MART 231 - Interactive Web I**

Credit(s): 4

This course introduces web development tools to create websites using industry standard practices and techniques. Students use HTML5 and Cascading Style Sheets to plan, design, and develop responsive websites. Topics include web design best practices, website hosting, web graphics, design standards, and embedding media. (Fall Semester)

#### **MART 232 - Interactive Web II**

Credit(s): 4

*Prerequisite(s)*: MART 231.

This course focuses on teaching students advanced web design concepts. Students will further their experience with web design, focusing on HTML5, CSS3, and a CMS to create responsive designs. (Spring Semester)

#### **MART 234 - Emerging Web Technologies**

Credit(s): 3

*Prerequisite(s)*: MART 232.

An advanced web course where students will explore new and emerging web technologies. This project-based course will apply these new techniques and tools to website development. (Fall Semester)

### **Machining and Manufacturing Technology (MCH)**

#### **MCH 101 - Introduction to Manufacturing Processes**

Credit(s): 1

This course is designed to provide the student a learning experience with the basic tools, equipment, and operations of manufacturing industries. The goal is for the student to understand the relationship among a manufacturing need, a design, the materials and processes used, as well as the tools and equipment necessary to manufacture a product. (Fall and Spring Semesters)

#### **MCH 102 - Introduction to Manufacturing Materials**

Credit(s): 2

This is an introductory course in the study of materials used in the manufacturing industry. Topics include selection and identification of steels, selection and identification of nonferrous metals, mechanical behavior of various plastics, hardening, case hardening, tempering, annealing, normalizing, stress relieving, and the use of the Rockwell and Brinell hardness testers. (Spring Semester)

#### **MCH 120 - Blueprint Reading and Interpretation for Machining**

Credit(s): 3

This course introduces the fundamental concepts necessary to interpret drawings and produce sketches for machine tool applications as applied to Machine Tool Technology. Topics include advanced sectioning, geometric dimensioning, geometric tolerance, and assembly drawings/sketching. Interpretation of specifications and determination of acceptable tolerance requirements to ensure quality control measures for design parts will also be stressed. (Fall and Spring Semesters)



**MCH 122 - Introduction to CAM**

Credit(s): 3

This course introduces CAM operational basics for both mill and lathe programming using current CAM software. The course includes terminology relevant to PC-based CAD/CAM work, hardware familiarity, system operation and management, folders, file type and structure, menu structure and use, and 2 ½ axis (milling machines) and 2 axis (lathes) tool paths. Emphasis is placed on proper geometric creation, management, relevant utilities, C-hooks, and toolbar and menu functions. (Spring Semester)

**MCH 125 - Introduction to CNC Lathe Operations**

Credit(s): 3

*Prerequisite(s):* MCH 132.

This course provides opportunities for students to develop skills in the setup and operation of CNC lathes. Topics include safety, lathe parts and controls, lathe tooling, lathe calculations, lathe setup and operations. This is a performance-based course that requires the production of assigned tool projects. (Spring Semester)

**MCH 127 - Introduction to CNC Mill Operations**

Credit(s): 3

*Prerequisite(s):* MCH 134.

This course provides instruction in the setup and operation of CNC mills. Student projects include specialty tooling and multi-axis machining. Students will also gain experience in process control. Topics include specialty tooling, multi-axis machining, process control, and laboratory exercises in part production. (Spring Semester)

**MCH 129 - Machine Quality Control and Precision Measurements**

Credit(s): 3

Students will develop the knowledge and skills to prepare them to analyze and evaluate the processes and methodology required in an industrial production environment to determine if quality control standards are being met. Topics include: use of non-precision measuring tools, use of precision measuring tools, use of comparison gauges, and analysis of measurements in a CNC environment. (Fall Semester)

**MCH 132 - Introduction to Engine Lathes**

Credit(s): 4

*Corequisite(s):* MCH 120 and MCH 129 or instructor's consent.

This course is the study of basic machine tool operations and forming processes. Topics include lathe work, drilling operations, tooling, and fixture work. (Fall Semester)

**MCH 134 - Introduction to Mills**

Credit(s): 4

The student will perform advanced hands-on machine shop operations: set up and operation of manual milling machines, drill presses, band saws, grinders, and other equipment commonly found in manufacturing facilities. The student will use precision measuring tools and methods, utilize blueprints, and perform project process planning. Various types of steel and aluminum are used. (Spring Semester)

**MCH 199 - Capstone I: Machinist**

Credit(s): 2

*Prerequisite(s):* enrollment in Machinist Technician Tier III program.

This course provides the initial groundwork for completing special projects using knowledge gained in previous course work. All projects must be approved by the instructor. (Fall Semester)

**MCH 220 - Geometric Dimensioning and Tolerancing**

Credit(s): 3

*Prerequisite(s):* DDSN 135 or MCH 122, MCH 129.

This course provides the basics of how to apply GD&T in metrology and CAD, including knowledge of the symbols, hands-on measurement of parts, and the use of CMMs. Students will learn the types and causes of measurement error and perform measurement setups. They will also learn about flatness, straightness, circularity, parallelism, angularity, concentricity, total run outs, position tolerancing, and gauge design for both soft and hard gauges. (Fall Semester)

**MCH 221 - Advanced Manual Mill**

Credit(s): 3

*Prerequisite(s):* MCH 134.

This course will cover the use and care of rotary tables, indexing heads, tilting vices, sine bar setup, gear cutting, and line boring utilizing horizontal and vertical mills. The course will also cover various work holding methods, jig and fixture work, location methods, and process planning. (Fall Semester)

**MCH 222 - Advanced CNC Mill Operations**

Credit(s): 3

*Prerequisite(s):* MCH 127.

This course provides advanced instruction in the setup and operation of the HAAS TM1 mill. Projects will include specialty tooling and automatic machining. Students will gain experience in process and quality control of part production. Other topics include specialty tooling, multi-axis machining, process control, and parts production. (Fall Semester)

**MCH 223 - Advanced Manual Lathe**

Credit(s): 3

*Prerequisite(s):* MCH 132.

This course will cover carbide cutters and tool holders, spindle collets and drawbars, taper attachments, and digital readouts. Students will use advanced tooling attachments. There will be setup and cutting for simple cam, acme, and buttress threads. The course will emphasize that close tolerances are required. (Spring Semester)

**MCH 224 - Advanced CNC Lathe Operations**

Credit(s): 3

*Prerequisite(s):* MCH 125.

This course provides advanced instruction in the setup and operation of the HAAS TM1 lathe. Projects will include specialty tooling and automatic machining. Students will gain experience in process and quality control of part production. Other topics include specialty tooling, multi-axis machining, process control, and parts production. (Spring Semester)

**MCH 225 - Machinery's Handbook**

Credit(s): 3

This course is an introduction to the basic trade handbook: Machinery's Handbook. The subjects that are covered include solving manufacturing problems using the various charts, formulas, and calculations. This course will also educate the student about how to find information quickly in this reference book, and how to apply the information to their specific applications. (Fall Semester)

**MCH 226 - Advanced CAD/CAM**

Credit(s): 3

*Prerequisite(s)*: MCH 122 or instructor's consent.

This is an advanced course in the study of computer aided manufacturing through the implementation of computer software for the design and creation of machine codes used in operating computer numerical control systems. Topics include 3D component and surface creation, development of advanced tool paths for machining advanced 3D components and surfaces, interface with advanced manufacturing systems with 4 axis or more, as well as Swiss CNC and Mill/Turn systems, simulation of tool paths, and instruction on live tooling synchronization. This course leads to an advanced understanding in design and programming for higher level machine tools. (Fall and Spring Semesters)

**MCH 227 - Swiss CNC and Mill-Turn Systems**

Credit(s): 4

*Prerequisite(s)*: MCH 125, MCH 127, MCH 226, or instructor's consent.

This is a course for the study and hands-on operation of advanced machine tools, specifically Swiss CNC or Mill-Turn systems. Topics include setup, "at system" programming, tooling and operation of advanced Swiss or Mill-Turn systems. The course will also emphasize system maintenance and service for these advanced machine tool categories. (Fall and Spring Semesters)

**MCH 290 - Undergraduate Research**

Credit(s): 1-4

*Prerequisite(s)*: instructor's consent.

This is an undergraduate research course that is under the supervision of a full-time instructor. This course may be repeated for a maximum of 12 credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**MCH 298z - Internship: Advanced Manufacturing**

Credit(s): 1

*Prerequisite(s)*: advisor's consent.

This course offers a supervised, structured learning experience at an approved manufacturing business facility. Students will receive an orientation to some basic duties and tasks performed by a technician, and will be assigned some basic tasks expected of an entry-level employee. Completion of these tasks, under the supervision of an experienced technician, will enhance the student's knowledge of the day-to-day work of a technician in the field. Prior to placement at an internship site, students will attend an internship orientation to learn the application and internship process. (Spring Semester)

**MCH 299 - Capstone II: Machinist**

Credit(s): 3

*Prerequisite(s)*: enrollment in the Machinist Technician Tier IV program.

This course provides opportunities for the student to arrange to complete special projects using knowledge gained in previous coursework. All projects must be approved by the instructor. (Spring Semester)

**Music (MUSI)****MUSI 101F - Enjoyment of Music**

Credit(s): 3

This course traces the development of art music through the past 1000 years. Vocal and instrumental music and composers from the Middle Ages, Renaissance, Baroque, Classical, Romantic, and 20th century will be examined through listening, reading, and writing. Students will be presented with the analytical and comparative tools to identify and understand the various historical musical eras. (Fall Semester)

**MUSI 102 - Performance Study**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

Title will vary. Private instruction for the non-music major or minor in voice, piano, string, wind and/or percussion instruments. This course covers the study of performing techniques, music interpretation, expression and style at a beginner level. Note: fees for tuition and lessons are separate payments. Students may expect to pay an additional fee for lessons in addition to tuition. (Intermittently)

**MUSI 104 - Music Fundamentals**

Credit(s): 1

This course provides an introduction to the music fundamentals including the grand staff, note reading in bass and treble clef, note values, time signatures, dynamics and tempo markings, articulations, accidentals, and major scales. (All Semesters)

**MUSI 105F - Music Theory I**

Credit(s): 3

*Corequisite(s)*: MUSI 140.

This is a course that teaches the fundamentals of music theory: meter, note values, rests, intervals, major scales, circle of fifths, chord construction, minor scales, basic harmonic progression, whole-tone scales and modes. (Fall Semester)

**MUSI 106F - Music Theory II**

Credit(s): 3

*Prerequisite(s)*: MUSI 105.

*Corequisite(s)*: MUSI 141.

This course is a continuation of MUSI 105, which teaches the fundamentals of music theory (meter, note values, rests, intervals, major scales, circle of fifths, chord construction, minor scales, basic harmonic progression, whole-tone scales and modes). (Spring Semester)

**MUSI 108r - Orchestra: Glacier Symphony**

Credit(s): 1

*Prerequisite(s):* audition.

An audition-only group, the symphony prepares and performs orchestral literature of the past and present and requires intensive rehearsals and public performances. Students must supply their own musical instruments. A maximum of six credits in music ensemble may be applied towards graduation. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 108u - Orchestra: FVCC**

Credit(s): 1

*Prerequisite(s):* audition.

The FVCC Orchestra prepares and performs orchestral literature of the past and present and requires rehearsals and public performances. Students must supply their own musical instruments. A maximum of six credits in music ensemble may be applied towards graduation. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 111 - Group Voice Class**

Credit(s): 2

This course provides an introduction to the skills which enable and enhance healthy singing, including: proper vocal technique, performance skills, and artistic presentation. Course is taught in a group setting. Appropriate to all levels, students do not have to read music in order to succeed in this course. (Spring Semester)

**MUSI 112x - Choir: Glacier Chorale**

Credit(s): 1

*Prerequisite(s):* audition.

An audition-only group, the chorale prepares and performs orchestral literature of the past and present and requires intensive rehearsals and public performances. A maximum of six credits in music ensemble may be applied towards graduation. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 114 - Band: Community Band**

Credit(s): 1

This course introduces the inner workings of a band program with survey and basic training on a variety of instruments. A maximum of six credits in music ensemble may be applied towards graduation. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 132F - History of Rock and Roll**

Credit(s): 3

This course surveys the development of rock and roll music from its early blues roots to the present decade. The student will become familiar with the various stylistic music eras through lecture, listening, analysis, discussion and student projects. Students will learn varieties and lineage of an important popular musical art and acquire the tools to identify and compare various historical styles. (Spring Semester)

**MUSI 135 - Keyboard Skills I**

Credit(s): 1

This course focuses on functional keyboard skills such as scales, sight reading, harmonization, transposition, and literature. A working understanding of musical notation is needed in order to succeed in this course. Intended to be taken concurrently with Music Theory and Aural Perception, but open to interested non-majors with a musical background. (Fall Semester)

**MUSI 136 - Keyboard Skills II**

Credit(s): 1

*Prerequisite(s):* MUSI 135.

This course, a continuation of MUSI 135, focuses on functional keyboard skills such as scales, sight reading, harmonization, transposition, and literature. Intended to be taken concurrently with Music Theory and Aural Perception, but open to interested non-majors with a musical background. (Spring Semester)

**MUSI 140 - Aural Perception I**

Credit(s): 2

*Corequisite(s):* MUSI 105.

This course builds aural skills through the use of singing and dictation to supplement MUSI 105. (Fall Semester)

**MUSI 141 - Aural Perception II**

Credit(s): 2

*Prerequisite(s):* MUSI 140.

*Corequisite(s):* MUSI 106.

This course, a continuation of MUSI 140, builds aural skills through the use of singing and dictation to supplement MUSI 106. (Spring Semester)

**MUSI 147 - Choral Ensemble: FVCC**

Credit(s): 1

This course will cover the classical choral ensemble literature and includes performing in small choral ensembles. This course may be repeated for a total of six credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 160 - Beginning Guitar**

Credit(s): 1

Designed for beginners, students learn the chords and classical playing techniques needed to accompany, as well as basic music reading and performance. It is not necessary to read music in order to take this course. This course may be repeated for a total of six credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**MUSI 162 - Chamber Ensembles: FVCC**

Credit(s): 1

*Prerequisite(s):* instructor's consent.

This course consists of string, woodwind, brass, percussion, piano, and vocal ensembles as appropriate to meet student needs. This course can be repeated for a total of six credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**MUSI 162z - Chamber Ensembles: Jazz Combos--FVCC**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of string, woodwind, brass, percussion, and piano ensembles as appropriate to meet student needs. FVCC Combos are small jazz ensembles. This course can be repeated for a total of six credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**MUSI 180u - Composition I: Fall**

Credit(s): 2

*Prerequisite(s)*: instructor's consent.

This course explores the craft of contemporary art music composition through the creation of original musical works, and the study of composition techniques and repertoire from the past century. Students will gain knowledge of a broad range of repertoire, aesthetics, and compositional techniques. (Fall Semester)

**MUSI 180v - Composition I: Spring**

Credit(s): 2

*Prerequisite(s)*: MUSI 180 Composition I: Fall.

This course is a continuation of MUSI 180 Composition I: Fall, further exploring the craft of contemporary art music composition through the creation of original musical works, and the study of composition techniques and repertoire from the past century. Students will gain knowledge of a broad range of repertoire, aesthetics, and compositional techniques. (Spring Semester)

**MUSI 194x - Seminar Workshop: Orchestra**

Credit(s): 2

*Prerequisite(s)*: audition.

This audition-only course presents vocal solo, small ensemble and chorus training for theatrical productions that include musicals, operas and other theatrical shows involving music. The course may be repeated for a total of six credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**MUSI 194 - Seminar Workshop: Vocal/Chorus**

Credit(s): 2

*Prerequisite(s)*: audition.

This audition-only course presents vocal solo, small ensemble and chorus training for theatrical productions that include musicals, operas and other theatrical shows involving music. The course may be repeated for a total of six credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

**MUSI 195 - Applied Music I**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

Title will vary. Private instruction in voice, piano, string, wind and/or percussion instruments. This course covers the study of performing techniques, music interpretation, expression, and style. A student may take a variety of music lessons, but a total of four credits may be earned for this course. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating the course. (Intermittently)

**MUSI 202H - Introduction to Music Literature**

Credit(s): 3

A survey of representative examples of the standard music literature of the Western European tradition. Particular attention to musical styles and forms and their relationship to musical understanding and effective listening. A basic knowledge of music fundamentals is expected. (Spring Semester)

**MUSI 205 - Music Theory III**

Credit(s): 3

*Prerequisite(s)*: MUSI 106.*Corequisite(s)*: MUSI 240.

This course is a continuation of MUSI 106, which teaches the fundamentals of music theory (meter, note values, rests, intervals, major scales, circle of fifths, chord construction, minor scales, basic harmonic progression, whole-tone scales, and modes). This course focuses on the harmonic language of the Romantic era, including jazz and 18<sup>th</sup> century counterpoint. An introduction to music notation for computer is included. (Fall Semester)

**MUSI 206 - Music Theory IV**

Credit(s): 3

*Prerequisite(s)*: MUSI 205.*Corequisite(s)*: MUSI 241.

This course is a continuation of MUSI 205, which teaches the fundamentals of music theory (meter, note values, rests, intervals, major scales, circle of fifths, chord construction, minor scales, basic harmonic progression, whole-tone scales, and modes). This course focuses on the harmonic language of the Romantic era, including jazz and 18<sup>th</sup> century counterpoint. An introduction to music notation for computer is included. (Spring Semester)

**MUSI 207FG - World Music**

Credit(s): 3

This course surveys the diversity of music among the world's peoples. Music systems, instruments and artists representing various indigenous peoples over seven continents are examined through cultural, social, religious, ceremonial, and performance traditions. Students will be introduced to universal musical elements and techniques for active listening. (Spring Semester)

**MUSI 230 - Intermediate Keyboard Skill: Repertoire**

Credit(s): 1

*Prerequisite(s)*: MUSI 136 or equivalent.

This course, a continuation of MUSI 136, focuses on functional keyboard skills such as scales, sight reading, harmonization, and transposition, but has an added emphasis on solo literature. (Fall Semester)

**MUSI 231 - Intermediate Keyboard Skill: Accompanying**

Credit(s): 1

*Prerequisite(s)*: MUSI 230 or equivalent.

This course, a continuation of MUSI 230, focuses on functional keyboard skills such as scales, sight reading, harmonization, transposition, and literature, but has an added emphasis on open score reading (SATB), ensemble literature, and accompanying at an intermediate level. (Spring Semester)

**MUSI 238** see MUSI 296y

### **MUSI 240 - Aural Perception III**

Credit(s): 2

*Prerequisite(s)*: MUSI 141.

*Corequisite(s)*: MUSI 205.

This course builds aural and vocal skills through the use of singing and dictation to supplement MUSI 205. (Fall Semester)

### **MUSI 241 - Aural Perception IV**

Credit(s): 2

*Prerequisite(s)*: MUSI 240.

*Corequisite(s)*: MUSI 206.

This course builds aural and vocal skills through the use of singing and dictation to supplement MUSI 206. (Spring Semester)

### **MUSI 260 - Intermediate Guitar**

Credit(s): 1

*Prerequisite(s)*: MUSI 160 or instructor's consent.

This is a continuation of MUSI 160 for students wanting additional instruction. Students will learn a greater understanding of music theory, note reading, advanced playing techniques, and chords. This course can be repeated for a total of six credits. Students receiving Financial Aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **MUSI 295 - Applied Music II**

Credit(s): 1

*Prerequisite(s)*: MUSI 195 and instructor's consent.

Title will vary. Continued private instruction in voice, piano, string, wind and/or percussion instruments. This course covers the study of performing techniques, music interpretation, expression and style at a more intermediate level. A student may take a variety of music lessons, but a total of four credits may be earned for this course. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating the course. (Intermittently)

### **MUSI 296 - Upper Division Required Performance**

Credit(s): 0

*Prerequisite(s)*: MUSI 195 and instructor's consent.

All majors pursuing a B.M. or B.M.E. degree must successfully complete all sections of the Upper Division Requirement Performance in order to attain upper-division standing in music. The performance is administered at the end of each semester and held at the University of Montana campus. This course may be repeated for a total of eight times. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **MUSI 296y - Piano Proficiency Assessment**

*Formerly MUSI 238 Piano Proficiency Assessment*

Credit(s): 0

*Prerequisite(s)*: instructor's consent.

All majors transferring to the University of Montana and who are pursuing a B.M. or B.M.E. degree must successfully complete all sections of the Piano Proficiency Assessment in order to attain upper-division standing in music. The exam is administered at the end of the semester and held at the University of Montana campus. This course may be repeated a total of eight times. Students receiving Financial Aid or veteran benefits should check with the Financial Aid Office before repeating the course. (Intermittently)

## **Music Technology (MUST)**

### **MUST 100 - Introduction to Music and Technology**

Credit(s): 2

This course is an introduction to the use of technology in music and its industry. It provides insight into building self-directed careers and is a basic exploration of music composition through the use of DAW. The introductory study of electronic music provides beginning skills to record at home, make your own electronic music, or produce other people's music. This course employs the study of electronic music composition, hands-on recording, and sound-design. This is a lab-based class where the majority of time will be spent creating electronic music. This course may be repeated for a total of six credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

## **Native American Studies (NASX)**

### **NASX 105G - Introduction to Native American Studies**

Credit(s): 3

*Prerequisite(s)*: ANTY 101 or ANTY 220 is recommended.

The traditional cultures of North America: the origin and distribution of native populations, their life ways prior to European contact, and the consequences of contact between Indians and non-Indians in North America after 1492 are explored. (Spring Semester)

### **NASX 232G - Montana Indians: Cultures, Histories, Current Issues**

Credit(s): 3

The traditional cultures of Indian nations associated with Montana; their lifestyles prior to European contact; Montana reservations and tribal governments; and current issues facing Montana's Indian people are explored. (Intermittently)

## **Nursing (NRSRG)**

### **NRSRG 106 - Nursing Assistant Course**

Credit(s): 5

*Prerequisite(s)*: successful completion of a background check from an approved vendor, completion of required immunizations, ability to lift 25 pounds, and Nursing Department consent.

This course covers concepts and practices in basic skills for CNA, including basic medical terminology, basic human anatomy and physiology, and the aging process. Students will gain understanding and application of the skills required to address the needs of the chronically ill residents in long-term care facilities. State of Montana CNA testing administered at the end of course. (All Semesters)

### **NRSRG 130 - Fundamentals of Nursing**

Credit(s): 3

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101, and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRSRG 131.

This course 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 health care. Emphasis is on theoretical and practical concepts of nursing skills required to meet the needs of patients in a variety of settings. (Spring Semester)

**NRSB 131 - Fundamentals of Nursing Laboratory**

Credit(s): 3

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101, and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRSB 130.

This lab is an integration of clinical skills performance using health care 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 health care settings. (Spring Semester)

**NRSB 135 - Pharmacology for Practical Nurses**

Credit(s): 3

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101 and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRSB 136.

This course introduces the student to the knowledge needed to provide safe nursing care to clients across the life span in the administration of medications. Content covered includes the basic pathophysiology of common disease processes, as well as the basic principles of pharmacology such as pharmacokinetics, pharmacodynamics, medication interactions, and potential adverse medication reactions. The emphasis is on client-centered care utilizing the nursing process and incorporating evidence-based practice within the licensed practical nurse scope of practice. (Spring Semester)

**NRSB 136 - Pharmacology for Practical Nurses Laboratory**

Credit(s): 1

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101, and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRSB 135.

This lab 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. (Spring Semester)

**NRSB 140 - Adult Health Nursing**

Credit(s): 4

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 141.

The course is designed to build upon the knowledge acquired in NRSB 130. 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. (Summer Semester)

**NRSB 141 - Adult Health Nursing Clinical**

Credit(s): 2

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 140.

This clinical is an integration of experiences in well-defined practice settings. The focus is on implementation of the nursing process, professional behaviors, communication, clinical decision making, caring interventions and collaboration in interdisciplinary practice to prevent, promote, maintain and restore basic health. (Summer Semester)

**NRSB 142 - Nursing Care of Women and Children**

Credit(s): 3

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 143.

This course introduces the student to the knowledge needed to provide safe nursing care for the female patient and family with regards to reproductive issues, including perinatal. Also included is the child patient and family with regards to 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. (Summer Semester)

**NRSB 143 - Nursing Care of Women and Children Clinical**

Credit(s): 1

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 142.

This clinical integrates the knowledge of care for women, children, and families into a variety of clinical settings. (Summer Semester)

**NRSB 148 - Leadership Issues for Practical Nurses**

Credit(s): 2

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 149.

This course 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 are included. (Summer Semester)

**NRSB 149 - Leadership Issues for Practical Nurses Clinical**

Credit(s): 1

*Prerequisite(s)*: NRSB 130, NRSB 131, NRSB 135, NRSB 136, NRSB 152, and NRSB 153.

*Corequisite(s)*: NRSB 148.

This clinical 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. (Summer Semester)

**NRS 152 - Gerontology and Community Nursing**

Credit(s): 2

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101, and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRS 153.

This course presents the knowledge, skills, and attitudes needed to provide high quality holistic nursing care for the geriatric patient 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 patients well-being in regards to common acute and chronic health issues, including end-of-life and palliative care. (Spring Semester)

**NRS 153 - Gerontology and Community Nursing Clinical**

Credit(s): 2

*Prerequisite(s)*: BIOH 104, M 120, PSYX 100, WRIT 101, and acceptance into the Practical Nursing program.

*Corequisite(s)*: NRS 152.

This clinical 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. (Spring Semester)

**NRS 230 - Nursing Pharmacology**

Credit(s): 3

*Prerequisite(s)*: BIOH 201, CHMY 121, M 140 or acceptable substitution, WRIT 101, and acceptance into the Registered Nursing ASN program.

*Corequisite(s)*: NRS 231.

This course provides the student with an overview of pharmacology with an emphasis of the study of effects, interactions, and nursing considerations of pharmacologic agents on the patient population across the lifespan. The course also explores the ethical, legal, cultural and age implications of pharmacologic therapy across diverse populations and the lifespan. (Fall Semester)

**NRS 231 - Nursing Pharmacology Lab**

Credit(s): 2

*Prerequisite(s)*: BIOH 201, CHMY 121, M 140 or acceptable substitution, WRIT 101, and acceptance into the Registered Nursing ASN program.

*Corequisite(s)*: NRS 230.

This course is an integration of lab experiences focusing on the basic principles in providing safe medication administration, including intravenous therapy across diverse populations and the lifespan. (Fall and Spring Semesters)

**NRS 232 - Foundations of Nursing**

Credit(s): 3

*Prerequisite(s)*: BIOH 201, CHMY 121, M 140 or M 152 or M 153 or M 171, WRIT 101, and acceptance into the Registered Nursing ASN program.

*Corequisite(s)*: NRS 233.

This course 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, physical, psychological and nutritional 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. (Fall and Spring Semesters)

**NRS 233 - Foundations of Nursing Laboratory**

Credit(s): 3

*Prerequisite(s)*: BIOH 201, CHMY 121, M 140, WRIT 101, and acceptance into the Registered Nursing ASN program.

*Corequisite(s)*: NRS 232.

An integration of lab experiences focusing on psychomotor nursing skills needed to assist individuals in meeting basic human needs. Application of the nursing process hands-on learning experiences for nursing skills, patient assessments, nutritional safety, and basic therapeutic skills are practiced and demonstrated. (Fall and Spring Semesters)

**NRS 234 - Adult Nursing I**

Credit(s): 3

*Prerequisite(s)*: BIOH 211, NRS 230, NRS 231, NRS 232, and NRS 233.

*Corequisite(s)*: NRS 235.

This course builds upon the knowledge and skills acquired in NRS 232, and places them in the context of patient-centered care. Social, cultural, ethical, rural and legal issues, 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, is emphasized. Normal aging, health alterations associated with aging, and their implications are addressed. (Fall and Spring Semesters)

**NRS 235 - Adult Nursing I Clinical**

Credit(s): 2

*Prerequisite(s)*: BIOH 211, NRS 230, NRS 231, and NRS 233.

*Corequisite(s)*: NRS 234.

This clinical 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. (Fall and Spring Semesters)

**NRSG 236 - Health and Illness of Maternal Nursing**

Credit(s): 2

*Prerequisite(s)*: BIOH 211, NRSG 230, NRSG 231, and NRSG 233.

*Corequisite(s)*: NRSG 237.

In this course, the student 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, ethical, legal, cultural and evidenced-based practice. (Fall and Spring Semesters)

**NRSG 237 - Health and Illness of Maternal Nursing Clinical**

Credit(s): 1

*Prerequisite(s)*: BIOH 211, NRSG 230, NRSG 231, and NRSG 233.

*Corequisite(s)*: NRSG 236.

This clinical 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. (Fall and Spring Semesters)

**NRSG 244 - Adult Nursing II**

Credit(s): 3

*Prerequisite(s)*: BIOH 211, NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 245.

This course 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. (Fall and Spring Semester)

**NRSG 245 - Adult Nursing II Clinical**

Credit(s): 2

*Prerequisite(s)*: NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 244.

In this clinical experience the student will provide 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. (Fall and Spring Semesters)

**NRSG 246 - Health and Illness of Child and Family Nursing**

Credit(s): 2

*Prerequisite(s)*: NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 247.

In this course, the student 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 developmental principles to facilitate positive health outcomes through health promotion, nutrition and disease prevention. (Fall and Spring Semesters)

**NRSG 247 - Health and Illness of Child and Family Nursing Clinical**

Credit(s): 1

*Prerequisite(s)*: NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 246.

In this clinical, students will utilize the nursing process, to provide nursing care of healthy and high-risk pediatric populations and their families experiencing disruptions in bio/psycho/social/cultural and spiritual needs. Emphasis is also placed on health promotion, health maintenance, and therapeutic communication. (Fall and Spring Semesters)

**NRSG 254 - Mental Health Concepts**

Credit(s): 3

*Prerequisite(s)*: NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 255.

In this course, the student focuses on the nursing concepts utilizing basic human needs, developmental theory, nursing process, therapeutic communication, and nursing interventions 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. (Fall and Spring Semesters)

**NRSG 255 - Mental Health Concepts Clinical**

Credit(s): 1

*Prerequisite(s)*: NRSG 234, NRSG 235, NRSG 236, NRSG 237, and NRSG 256.

*Corequisite(s)*: NRSG 254.

This clinical applies the knowledge of psychiatric and mental health nursing. Students will have mental health focused clinical experiences in a variety of settings. (Fall and Spring Semesters)

**NRSG 256 - Nursing Pathophysiology**

Credit(s): 3

*Prerequisite(s)*: BIOH 201, BIOH 211, CHMY 121, or instructor consent.

This course introduces the student to the basic principles and processes of pathophysiology including cellular communication, genes, and genetic disease; forms of cellular injury, nutrition, 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 developments in research and patient-centered nursing interventions. (All Semesters)

**NRSG 259 - Adult Nursing III**

Credit(s): 3

*Prerequisite(s)*: NRSG 230, NRSG 231, NRSG 232, NRSG 233, NRSG 234, NRSG 235, NRSG 236, NRSG 237, NRSG 244, NRSG 245, NRSG 246, NRSG 247, NRSG 254, NRSG 255.

*Corequisite(s)*: NRSG 260, NRSG 261.

This course 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. (Spring Semester)



**NRSG 260 - Adult Nursing III Lab**

Credit(s): 1

*Prerequisite(s)*: NRSG 230, NRSG 231, NRSG 232, NRSG 233, NRSG 234, NRSG 235, NRSG 236, NRSG 237, NRSG 244, NRSG 245, NRSG 246, NRSG 247, NRSG 254, NRSG 255.

*Corequisite(s)*: NRSG 259 and NRSG 261.

In this lab students are introduced to basic electrocardiogram interpretation, advanced concepts of perfusion, ventilation and complex pharmacologic regimens. (Spring and Summer Semesters)

**NRSG 261 - Adult Nursing III Clinical**

Credit(s): 2

*Prerequisite(s)*: NRSG 230, NRSG 231, NRSG 232, NRSG 233, NRSG 234, NRSG 235, NRSG 236, NRSG 237, NRSG 244, NRSG 245, NRSG 246, NRSG 247, NRSG 254, NRSG 255.

*Corequisite(s)*: NRSG 259, NRSG 260.

This clinical experience 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. (Spring and Summer Semesters)

**NRSG 266 - Managing Client Care for the RN**

Credit(s): 2

*Prerequisite(s)*: NRSG 230, NRSG 231, NRSG 232, NRSG 233, NRSG 234, NRSG 235, NRSG 236, NRSG 237, NRSG 244, NRSG 245, NRSG 246, NRSG 247, NRSG 254, NRSG 255.

*Corequisite(s)*: NRSG 267.

In this course students examine 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. Health care policy, finance, and regulatory environment issues are explored and applied to planning, collaborating and coordinating care across the continuum. (Spring and Summer Semesters)

**NRSG 267 - Managing Client Care for the RN Clinical**

Credit(s): 2

*Prerequisite(s)*: NRSG 230, NRSG 231, NRSG 232, NRSG 233, NRSG 234, NRSG 235, NRSG 236, NRSG 237, NRSG 244, NRSG 245, NRSG 246, NRSG 247, NRSG 254, NRSG 255.

*Corequisite(s)*: NRSG 266.

This precepted clinical experience 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. (Spring Semester)

**Natural Resources Science and Management (NRSM)****NRSM 101 - Natural Resource Conservation**

Credit(s): 3

This introductory natural resource course examines the difference between renewable and non-renewable resources with emphasis placed on understanding renewable resource conservation and management. Also explored are ecological principles behind soil, water, air, forest, rangeland, and wildlife conservation and management in a sustainable manner. Required for all first-year NR students. (Fall Semester)

**NRSM 161 - Natural Resource Measurements I**

Credit(s): 5

This is an introductory course in the techniques of resource measurements, species identification, compilation of field data and the application of normal statistics sampling procedures to representative resource situations. (Fall Semester)

**NRSM 271GN - Conservation Ecology**

Credit(s): 3

A holistic study of natural resource issues with emphasis on global forested ecosystems and human impacts. Topics include: global climate change, deforestation, indigenous cultures, soil erosion, water quality, urban interface, grazing, noxious weeds, wildfire management, game management, threatened and endangered species; including grizzly bears, lynx, wolves, bird and fish species. Non-natural resource majors are encouraged to take this course. (Spring Semester)

**Nutrition (NUTR)****NUTR 122 - Whole Foods Cooking**

Credit(s): 1

Students learn how to prepare meals that are nutrient dense and easy to prepare. Topics include principles of nutritional meal planning, digestion, colon health, food allergies, seasonal eating, fermentation of food, eating to maintain energy, therapeutic properties of foods, and healthy holiday foods. This course may be repeated for a total of two credits. Students receiving financial aid or veterans benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

**NUTR 221N - Basic Human Nutrition**

Credit(s): 3

This course relates nutritional needs during different stages of the life cycle. Basic concepts of human nutrition including carbohydrates, lipids, proteins, vitamins, minerals, absorption, digestions, metabolism, and energy utilization and how they relate to health and food consumption are covered. (All Semesters)

## Pharmacy (PHAR)

### PHAR 100 - Introduction to Pharmacy Practice for Technicians

Credit(s): 2

This course offers information regarding careers in pharmacy. It includes the history of pharmacy practice and defines roles of personnel relating to pharmaceutical services. Ethical standards of the occupation and federal and state laws regulating pharmacy practice with emphasis on Montana State Pharmacy Law regulating pharmacy technicians are studied. Day-to-day operations including preparation, maintenance, and storage of pharmaceuticals and records, and basic communication skills required of the pharmacy technician. (Fall Semester)

## Philosophy (PHL)

### PHL 101H - Introduction to Philosophy: Reason and Reality

Credit(s): 3

This course addresses the perennial questions of philosophy as they are found in the many nuances of *metaphysics* (what is real?), *epistemology* (what is knowledge?), and *ethics* (how ought we live?) through a study of selected great thinkers in the history of Western philosophy. (Fall and Spring Semesters)

### PHL 110H - Introduction to Ethics: Problems of Good and Evil

Credit(s): 3

This course is an examination of moral decision making and behavior, primarily within the western tradition. Students will critically examine various theories of both personal and societal ethics from the classical period until present day. Readings from Plato, Aristotle, St. Augustine, Kant, and Mill, as well as from numerous contemporary philosophers on such issues as good and evil, free will and determinism, ethical relativism, and egoism; courage, wisdom, compassion, and self-respect; hypocrisy, self-deception, jealousy and lying; birth control, abortion, euthanasia, racism and sexism. (Spring Semester)

## Photography (PHOT)

### PHOT 113F - Understanding Photography

Credit(s): 3

This course is an introduction to basic photographic theory and visual principles, including camera operation, film and digital and use of black and white darkroom. (Fall and Spring Semesters)

### PHOT 116 - Intermediate Black and White Photography

Credit(s): 3

*Prerequisite(s)*: PHOT 113.

This course involves theory and continued application of image control in black and white photography through the use of a variety of 35mm films and digital media. It will include advanced traditional black and white in preparation for portfolio review. (Fall and Spring Semesters)

## PHOT 154F - Exploring Digital Photography

Credit(s): 3

A beginning course about digital photography and the digital darkroom. Students learn about capturing technology of digital cameras and scanners, digital shooting techniques and computer transfer technology of monitors, printers and graphic programs. A photographic project is included. (All Semesters)

## PHOT 160 - Digital Darkroom

Credit(s): 3

This course teaches students to simplify the photography process from shoot to finish. The student will use Lightroom to learn to manage this digital workflow, while complementing Adobe Photoshop software. Lightroom will be used to import, manage, and adjust one image or large volumes of digital photographs. This course will introduce students to the tools and techniques used by the professionals in the photography field. Includes image capture, manipulation, and output. Students will learn the hardware and software used by today's creative professionals in a combination of lectures, demonstrations, and class projects. This course is intended for dedicated photography students. (All Semesters)

## PHOT 254 - Intermediate Digital Photography

Credit(s): 3

*Prerequisite(s)*: PHOT 154.

This course gives students advanced instruction in specialized digital photography areas: shooting at night, using flash and related tools, shooting portraiture, macro-photographing, indoor shooting and printing. Basic computer skills required. (All Semesters)

## Physics (PHSX)

### PHSX 110 - Applied Physics

Credit(s): 4

*Prerequisite(s)*: M 114, M 123 or other trigonometry course.

This course covers the primary topics in physics. Using methods of algebra, trigonometry and vectors, it is the mathematical study of mechanics, rotational motion, satellite motion, coordinate systems for orbital motion, electricity and magnetism, DC circuits, AC circuits, geometric optics, and wave optics. (Spring Semester)

### PHSX 126NL - General Science: Physical Science

Credit(s): 5

*Prerequisite(s)*: M 090~.

This course explores the basic principles of physics, chemistry, and the properties of matter. Material is presented in the context of observable, everyday phenomena emphasizing concepts rather than theory. (Spring Semester)

### **PHSX 205NL - College Physics I**

Credit(s): 5

*Prerequisite(s)*: M 153 or equivalent and high school trigonometry.

This is the first semester of a two-semester sequence for students who need physics to support work in other fields. It may not be used as a prerequisite for advanced work in physics. The mathematical study, using algebraic, trigonometric, and vector methods of Newtonian mechanics of solids and fluids including forces, motion both linear and rotational, equilibrium, work and energy, momentum, conservation laws, kinetic theory and thermodynamics, and vibrational and wave motion. Laboratory work is included. (Fall Semester)

### **PHSX 207NL - College Physics II**

Credit(s): 5

*Prerequisite(s)*: PHSX 205.

This is the second semester of a two-semester sequence for students who need physics to support work in other fields. It may not be used as a prerequisite for advanced work in physics. The mathematical study, using algebraic, trigonometric, and vector methods, of electricity and magnetism including forces, fields, and energy; induction; and AC and DC circuits; light, geometric and wave optics and optical devices; and selected topics from modern physics including special relativity, atomic physics, and nuclear and quantum physics applications. Laboratory work is included. (Spring Semester)

### **PHSX 220NL - Physics I (with Calculus)**

Credit(s): 5

*Prerequisite(s)*: M 171.

*Corequisite(s)*: M 172.

This is the first course in a three-semester sequence in general physics. Topics in mechanics (linear and rotational motion, energy and momentum, conservation principles), fluid dynamics, waves (simple harmonic motion, mechanical waves, superposition, sound), and heat (the laws of thermodynamics and the kinetic theory of gas). Laboratory work included. (Spring Semester)

### **PHSX 222NL - Physics II (with Calculus)**

Credit(s): 5

*Prerequisite(s)*: M 172, PHSX 220.

This second course in general physics covers electricity and magnetism (electric forces and fields, electric potential, AC and DC circuits, magnetic forces, torques and fields, Maxwell's equations) and optics (geometrical and wave optics). Laboratory work included. (Spring Semester)

### **PHSX 224 - Physics III**

Credit(s): 4

*Prerequisite(s)*: PHSX 222.

This third course in general physics covers waves and optics (further enhance the topics of the first two semesters) and modern physics (relativity, models of the atom, quantum mechanics, nuclear physics and particle physics). Laboratory work included. (Fall Semester)

### **PHSX 290 - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

Undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

### **Process Plant Technology (PPT)**

#### **PPT 201 - Introduction to Hydraulic and Pneumatic Systems**

Credit(s): 4

Industrial systems use the force and power of fluids and gases to perform a multitude of tasks. This course is designed to provide students with the basic understanding of how hydraulics and pneumatics, in an industrial setting, are used to complete tasks from simple to complex. The course will address subjects including hydraulic/pneumatic components, symbols, schematics, design, and mathematics associated with such power systems. (Fall Semester)

#### **PPT 202 - Advanced Hydraulic and Pneumatic Systems**

Credit(s): 4

*Prerequisite(s)*: PPT 201.

This course extends the knowledge base from the introductory course to a more practical setting for the application of fluid power systems. Students will be exposed to more complex elements of hydraulic/pneumatic design. They will become more effective in the installation, adjustment, and troubleshooting of industrial systems. Practical circuits will be created and debugged using hands-on hydraulic/pneumatic equipment. Troubleshooting issues will emphasize systematic strategies instead of trial and error methods. (Spring Semester)

### **Political Science (PSCI)**

#### **PSCI 210B - Introduction to American Government**

Credit(s): 3

Students will explore the nature, purpose, and forms of the American government; relationship between function and structure; dynamics of political change; governmental problems of modern society; emphasis upon constitutional principles, political processes, public opinion, interest groups, political parties, elections, congress, the Presidency, and the Courts. (All Semesters)

#### **PSCI 230G - Introduction to International Relations**

Credit(s): 3

This course reviews the evolution of the nation-state system and survey of contemporary international actors, issues, and forces for stability and change. (Fall Semester)

#### **PSCI 250B - Introduction to Political Theory**

Credit(s): 3

This course analyzes the various attempts (from Plato to Marx) to explain, instruct, and justify the distribution of political power in society. Emphasis is placed upon those theories whose primary concern is to define the nature of the ethical "good" society. (Spring Semester)

## **Psychology (PSYX)**

### **PSYX 100A - Introduction to Psychology**

Credit(s): 4

This course is the scientific study of human behavior and mental processes. Topics include (but are not limited to) the history and disciplines of psychology, research methods, the biological bases of behavior, human development, sensation and perception, consciousness, cognition, intelligence, learning, memory, motivation, emotion, personality, stress and coping, disorders and their treatments, and social psychology. (All Semesters)

### **PSYX 150 - Drugs and Society**

Credit(s): 3

This course is a study of substance use and abuse in society, relative to controlled substances in general, and to specific classes of drugs as well. Personal and societal attitudes and responses toward the drug phenomenon are explored. (Fall and Spring Semesters)

### **PSYX 230A - Developmental Psychology**

Credit(s): 3

*Prerequisite(s):* PSYX 100.

This course is an examination of the stages of normal development with the intent to provide a broad, comprehensive background in the study of human development from conception through the end of life. The basic theme will focus on what can be done to facilitate the development of more fully functioning individuals at each particular stage of life and how culture and ethnicity influence development over the life span. (Fall and Spring Semesters)

### **PSYX 233 - Fundamentals of Psychology of Aging**

Credit(s): 3

This course presents current research on neuroscience and physiology of aging; explores factors that influence health and have implications for preventive measures in disease and health disorders in the aging; examines nature of health problems and methods of assessing physical, cognitive, and psychological need; and explores aging effects on client and caregiver. (Fall Semester)

### **PSYX 240A - Fundamentals of Abnormal Psychology**

Credit(s): 3

*Prerequisite(s):* PSYX 100.

This course is an introduction to the scientific study of abnormal behavior as a way to describe, predict and explain psychopathology. Topics include classification schemes, the major disorders, and appropriate therapies. (Fall and Spring Semesters)

### **PSYX 250NA - Fundamentals of Biological Psychology**

Credit(s): 3

*Prerequisite(s):* PSYX 100.

An exploration of the basic neural mechanisms underlying behavior, including topics such as: the neuron, the impulse, the synapse, the central and peripheral nervous systems, psychoactive drugs, reproduction, emotion, learning and memory, communication, and neurological and psychiatric disorders. (Fall and Spring Semesters)

### **PSYX 260A - Fundamentals of Social Psychology**

Credit(s): 3

*Prerequisite(s):* PSYX 100.

The study of human behaviors as social beings, and how social situations affect individual behavior is the basis of this course. Topics include aggression, prejudice, conformity, communications, and a variety of social experiences. (Fall and Spring Semesters)

### **PSYX 264 - Fundamentals of Group Dynamics for Substance Abuse Counselors**

Credit(s): 3

*Prerequisite(s):* CAS 242 or PSYX 100 or instructor's consent.

This course is an introduction to the use of group counseling in substance abuse treatment. The stages of group development, leadership skills, and ethical concerns in this approach to substance abuse treatment are highlighted. (Spring Semester)

### **PSYX 270 - Fundamentals of Psychology of Learning**

Credit(s): 3

*Prerequisite(s):* PSYX 100A.

An introduction to theory and research on human and animal learning, this course addresses scientific principles, theories, and applications related to learning, including (but not limited to) classical, operant, and instrumental conditioning, social learning, and other types and approaches to learning. (Spring Semester)

## **Parks, Tourism, and Recreation Management (PTRM)**

### **PTRM 201 - Recreation Management**

Credit(s): 2

This course will introduce students to the many recreational uses on public and private lands. The focus will be recreational management of multiple-use forestlands, parks, wilderness, and private lands. Students will explore constraints and challenges imposed by multiple uses of land. Historical and current relationships between people, recreation, and natural resources in the United States will be discussed. Recreational survey data will be developed and compiled and then uses and recommendations will be provided. Students also will plan, implement, and manage a recreational event. (Fall Semester)

## **Religious Studies (RLST)**

### **RLST 100G - Introduction to the Study of Religion**

Credit(s): 3

This course examines religion as a universal aspect of human culture. Through this academic approach to the subject, numerous religious traditions will be studied. Common elements such as symbols, rites, scriptures, language, and mythologies will be examined. (Intermittently)

## **Languages: Russian (RUSS)**

### **RUSS 101GH - Elementary Russian I**

Credit(s): 4

Introduction to Russian grammar and sentence structure, with extensive practice in conversation and oral comprehension. (Intermittently)

### **RUSS 102GH - Elementary Russian II**

Credit(s): 4

*Prerequisite(s):* RUSS 101.

This course is a continuation of RUSS 101. Further instruction and practice in oral and written communication, as well as Russian culture. (Intermittently)

## **Sustainable Food and Bioenergy Systems (SFBS)**

### **SFBS 146 - Introduction to Sustainable Food and Bioenergy Systems**

Credit(s): 3

This course provides an introduction to agricultural sustainability from a systems perspective, with an emphasis in the natural sciences. An array of diverse agricultural systems and practices will be discussed and examined for their relative sustainability. Key topics include food systems, crop production and agroecology. (Fall Semester)

## **Languages: Sign (SIGN)**

### **SIGN 101G - Introduction to American Sign Language**

Credit(s): 3

Learn to communicate with the deaf using the language most widely employed by the deaf population. This course includes expressive and receptive skills in finger spelling, basic word and phrase sign, facial expression and body language, conceptual signing, and basic deaf culture. (Fall and Spring Semesters)

### **SIGN 201G - Intermediate American Sign Language**

Credit(s): 3

*Prerequisite(s):* SIGN 101 or some knowledge of sign language.

Learn to communicate with the deaf, using American Sign Language. Includes finger spelling and conceptual signing, facial expression and body language, and deaf culture. (Spring Semester)

## **Sociology (SOCl)**

### **SOCl 101A - Introduction to Sociology**

Credit(s): 3

A course designed to introduce the student to the concepts and terms used in the study of man as a social being, it addresses group life of humans: culture, society, association, institutions, collective behavior, and social interaction. (All Semesters)

### **SOCl 142 - 21st Century Popular Culture**

Credit(s): 3

This course investigates popular culture, its nature, its role in our lives and its broad effects on society and democratic ideals. (Spring Semester)

## **SOCl 220GA - Race, Gender and Class**

Credit(s): 3

Using a variety of sociological perspectives, this course looks at the relationship between race, gender, and class in the United States and around the world. Emphasis is on historical and comparative analysis, distribution of power, conflict and reconciliation, and social change. (Fall and Spring Semesters)

### **SOCl 260 - Introduction to Juvenile Delinquency**

Credit(s): 3

This course explores theories of causation, social function and treatment of juvenile delinquency; specific attention to juvenile court systems and correctional/treatment methods as they relate to deviance prior to adulthood. (Fall Semester)

## **Languages: Spanish (SPNS)**

### **SPNS 101GH - Elementary Spanish I**

Credit(s): 4

This course is an introduction to reading, writing, and speaking Spanish. (Fall Semester)

### **SPNS 102GH - Elementary Spanish II**

Credit(s): 4

*Prerequisite(s):* SPNS 101.

A continuation of SPNS 101 with more in-depth practice in reading, writing, and speaking Spanish. Examines cultural practices of Spanish-speaking countries. (Spring Semester)

## **Surveying (SRVY)**

### **SRVY 120 - Surveying in Natural Resources**

Credit(s): 2

An introduction to basic land measurements and forest surveying techniques. Exercises include measuring horizontal, vertical, and slope distances; measuring angles and direction, conducting closed traverses, identifying property boundary location and computation and drafting of field data. (Spring Semester)

### **SRVY 152 - Surveying Graphics**

Credit(s): 2

Instruction and practice in the use of drafting tools, lettering, and line construction. The drafting of surveying related projects such as certificates of survey, topographic maps, easement, and encroachment exhibits. (Fall Semester)

### **SRVY 241 - Introduction to Surveying for Land Surveyors I**

Credit(s): 5

*Corequisite(s):* M 095~, M 123.

Instruction and practice in the use of various surveying instruments to determine point locations; measurement of horizontal and vertical angles; chaining and use of EDM; leveling to determine elevations; recording of field notes; statistical analysis of data; use of compass; the relationships between angles and bearings/azimuths. (Fall Semester)

## **SRVY 242 - Introduction to Surveying for Land Surveyors II**

Credit(s): 5

*Prerequisite(s)*: SRVY 241.

*Corequisite(s)*: SRVY 255.

A continuation of SRVY 241; additional practice in the measurement of horizontal and zenith angles and distances; sources of random and systematic errors associated with traverses; traverse and coordinate geometry computations using hand calculators; area determination of regular and irregular polygons; calculation and staking of horizontal and vertical curves; site/topographic mapping; state plane coordinates. (Spring Semester)

## **SRVY 245 - GPS Mapping**

Credit(s): 2

*Prerequisite(s)*: GPHY 284 or SRVY 283.

An introductory course on the fundamentals of the Global Positioning System as it applies to digital mapping and navigation. Instruction and practice in the use of mapping-grade GPS receivers. Analysis of positional accuracy and precision. Course concludes with students selecting and implementing an individual mapping project with final report and class presentation. (Spring Semester)

## **SRVY 246 - Introduction to GPS for Surveyors**

Credit(s): 2

*Prerequisite(s)*: GPHY 284 or SRVY 283.

An introductory course on the fundamentals of the Global Positioning System as it applies to digital mapping and navigation. Instruction and practice in the use of mapping-grade GPS receivers. Analysis of positional accuracy and precision. Course concludes with students selecting and implementing an individual mapping project with final report and class presentation. (Spring Semester)

## **SRVY 247 - Survey-grade GPS Control and Analysis**

Credit(s): 3

*Prerequisite(s)*: SRVY 270 and SRVY 271 or instructor's consent.

This course is a review of basic Global Positioning System principles, maintenance and adjustment of equipment, instruction and practice in field and office procedures for collecting and processing survey-grade GPS data, student-designed projects with instructor supervision utilizing both fast static and RTK GPS survey techniques to extend a control network, and mast field and office procedures. (Spring Semester)

## **SRVY 248 - Unmanned Aerial Mapping Systems**

Credit(s): 2

This course covers the fundamental components of small unmanned aerial systems (UASs) and how they are used to produce high resolution, spatially accurate, planimetric maps, and 3-D models of the terrain. (Fall Semester)

## **SRVY 255 - Surveying Calculations**

Credit(s): 3

*Prerequisite(s)*: SRVY 241.

*Corequisite(s)*: SRVY 242.

Use of personal computers and associated software to solve typical surveying problems: traverse calculations; rotation and translation of coordinates; intersection calculations; area cutoff calculations; subdivision and road right-of-way design. (Spring Semester)

## **SRVY 262 - Public Land Survey System**

Credit(s): 3

*Prerequisite(s)*: SRVY 241.

A study of the United States Public Land Survey System. Emphasis on the legal principles of boundary location and the retracement of the rectangular survey system. Subdivision of sections. Corner search and remonumentation. Determination of directions using solar observation. (Spring Semester)

## **SRVY 265 - Surveying Laws and Land Division**

Credit(s): 3

*Prerequisite(s)*: SRVY 270.

A study of selected state laws and regulations that pertain to the surveying profession; laws that affect the surveying and division of lands in Montana; layout and design of subdivisions. (Spring Semester)

## **SRVY 268 - CAD for Surveying Profession**

Credit(s): 4

*Prerequisite(s)*: SRVY 152.

Introduction to the use of AutoCAD to generate drawings associated with the surveying profession such as certificates of survey, plan/profile drawings, and preliminary subdivision plats. Use of DXF files. Digitizing of existing drawings into an Auto-CAD drawing. (Fall Semester)

## **SRVY 270 - Legal Principles in Surveying I**

Credit(s): 5

*Prerequisite(s)*: SRVY 242, SRVY 255, SRVY 262.

*Corequisite(s)*: SRVY 268.

Legal principles associated with locating boundaries: simultaneously versus sequentially created boundaries; deeds and other legal instruments; easements; research and evidence; use of county courthouse records; law library research with in-class presentation of relevant cases; writing and interpretation of legal descriptions; professional ethics and business practices; retracing/surveying boundaries with total stations; use of data collectors for mapping purposes. (Fall Semester)

## **SRVY 271 - Legal Principles in Surveying II**

Credit(s): 2

*Prerequisite(s)*: SRVY 270 or instructor's consent.

*Corequisite(s)*: SRVY 247, SRVY 273.

More legal principles associated with locating boundaries: additional writing and interpretation of legal descriptions; riparian boundaries and related topics; adverse possession and prescription; road law; advanced PLSS case studies; emphasis on case law research with written reports and oral presentations; professional ethics and business practices. (Spring Semester)

## **SRVY 273 - Route Surveying**

Credit(s): 2

*Prerequisite(s)*: SRVY 270.

*Corequisite(s)*: SRVY 247, SRVY 271.

Instruction and practice in basic road design techniques: review of horizontal and vertical curve calculations; spiral curves; P-line staking; earthwork and mass diagram calculations; slope staking. (Spring Semester)

### **SRVY 275 - Analytic Photogrammetry and Remote Sensing**

Credit(s): 3

*Prerequisite(s)*: GPHY 284 or SRVY 283.

The theory and application of photo and electro-optical remote sensing for mapping resources and developing information systems. (Spring Semester)

### **SRVY 280 - Land Surveying Computers**

Credit(s): 2

*Prerequisite(s)*: SRVY 246.

Computer maintenance procedures typically encountered in a surveying office environment including installation and upgrading of hardware and software. Installation and configuration of plotters, digitizer boards and GPS stations is also covered. (Spring Semester)

### **SRVY 283 - GIS for Survey Analysis**

Credit(s): 4

Introduction to the basic concepts and techniques of computerized spatial data management and analysis systems with application to natural resource/surveying assessment. (Fall Semester)

### **SRVY 290 - Undergraduate Research: Projects in GIS**

Credit(s): 2

Student designed project with staff supervision to extend GIS and remote sensing knowledge and experience. Students will select a project within their field of interest and design/implement a GIS for the project. Some opportunities exist for internships with local agencies. This course may be repeated for a total of four credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **SRVY 290x - Undergraduate Research**

Credit(s): 1

*Prerequisite(s)*: instructor's consent.

This course consists of undergraduate research under the supervision of a full-time faculty member. This course may be repeated for a total of ten credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating the course. (Intermittently)

### **SRVY 298 - OJT: Land Surveying III**

Credit(s): 4

*Prerequisite(s)*: SRVY 242.

On-the-job training under the supervision of a registered professional surveyor. A minimum of 120 hours of work is required as well as a daily diary detailing work performed. (Intermittently)

### **Statistics (STAT)**

#### **STAT 216M - Introduction to Statistics**

Credit(s): 4

*Prerequisite(s)*: appropriate placement test score, a grade of "C" or better in M 115, M 140, or M 152, or Math Department consent.

Graphical methods, measures of location and dispersion, probability, commonly used distributions, estimation, and tests of hypotheses through analysis of variance are introduced. Five major probability distributions are discussed: the binomial, normal, student's t, chi-square, and the F distribution. (All Semesters)

### **Theatre (THTR)**

#### **THTR 101FH - Introduction to Theatre**

Credit(s): 3

The background and theories of theatre arts, appreciation of the theatre and dramatic literature, and the practical aspects of producing a play are explored. (Intermittently)

#### **THTR 102F - Introduction to Theatre Design**

Credit(s): 3

This course will provide a basic understanding of the principles of design for the theatre including the production elements of scenery, sound, digital media and lighting. (Spring Semester)

#### **THTR 103 - Introduction to House Management**

Credit(s): 1

Students will learn the procedures and responsibilities of house management and of being front-of-house staff through participation in several class/workshops and then putting those skills into practice by working FVCC Theatre Arts productions. This course may be repeated for a total of four credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

#### **THTR 106 - Theatre Production I: Run Crew**

Credit(s): 1

Students function as a member of the production team in a role of responsibility (i.e. scenic designer, lighting designer, artistic director, technical director...). Course may be repeated for a total of four credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Intermittently)

#### **THTR 120F - Introduction to Acting I**

Credit(s): 3

The focus of this course is interactive development of basic acting skills through psycho-physical technique: dramatic action, image-making and improvisation. (Fall Semester)

#### **THTR 121F - Introduction to Acting II**

Credit(s): 3

*Prerequisite(s)*: instructor's consent.

A continuation of THTR 120, students further explore improvisation, textual links and development of performance project. (Spring Semester)

#### **THTR 202 - Stagecraft I: Lighting and Costumes**

Credit(s): 3

Fundamental theories and application in the areas of scenery, lighting, sound, and stage properties are covered in this course. (Fall Semester)

#### **THTR 203 - Stagecraft II: Scenery and Props**

Credit(s): 3

This course is a continuation of the fundamental theories and application in the areas of scenery, lighting, sound and stage properties and painting. (Spring Semester)

### **THTR 205 - Theatre Workshop II**

Credit(s): 2

This course is designed to give the student the theory, practice, and application of the artistic and technical production in a performance situation. Course may be repeated for a total of eight credits. Students receiving financial aid or veterans' benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

### **THTR 210 - Voice and Speech I**

Credit(s): 3

*Prerequisite(s):* THTR 102 or instructor's consent.

This course introduces the basic concepts of voice production, phonetics, and speech for the stage. Students will develop kinesthetic awareness of the body necessary for dynamic movement, breath, voice, and speech on stage. (Fall Semester)

### **THTR 215 - Audition Preparation**

Credit(s): 2

This course will introduce students to the audition techniques appropriate to professional theatre auditions and best practices in auditions for theatre, film, television, and advanced training programs. This course can be repeated for a total of four credits. Students receiving financial aid or veterans benefits should check with the Financial Aid office before repeating this course. (Spring Semester)

### **THTR 235H - Dramatic Literature**

Credit(s): 3

This course will examine a variety of plays from ancient Greece to modern times. The types of drama studied range from tragedy to comedy. The styles of drama studied will also vary including classicism, realism, and absurdism. This course focuses on drama as a literary genre. (Fall and Spring Semesters)

### **THTR 239CF - Creative Drama and Dance for K-8**

Credit(s): 3

This course focuses on the use of creative drama and dance as types of educational tools. Students will explore, experience, and implement creative teaching methods in order to promote scholarship through kinesthetic teaching in elementary education. (Spring Semester)

### **THTR 275 - Beginning Directing II**

Credit(s): 3

This course is offered for students wishing to expand their theatre experience in the area of artistic direction. This course is geared to anyone with an interest in developing the basic skills necessary to understand the role and responsibility of the artistic director. (Intermittently)

### **Fish and Wildlife Science and Management (WILD)**

#### **WILD 270N - Wildlife Habitat and Conservation**

Credit(s): 3

Principles of wildlife ecology and wildlife administration as a basis for the conservation of species with their habitat. Non-natural resource majors are encouraged to take this course. (Spring Semester)

### **Welding (WLDG)**

#### **WLDG 100 - Introduction to Welding Fundamentals**

Credit(s): 2

This course is an introduction to welding theory. The fundamentals of welding equipment used in oxyacetylene, shielded metal arc, gas metal arc, gas tungsten arc, including welding and cutting safety. Basic metallurgy and welding process theory will be incorporated. Some computer training is included. (Fall Semester)

#### **WLDG 111 - Welding Theory I Practical**

Credit(s): 3

This is an introductory course presenting the care and use of arc and oxy-fuel welding equipment, regulators, torches, cylinders, power sources, electrodes, characteristics of operation, welding of mild steel and special application weld procedures. Various techniques of welding mild steel and medium steel will be studied. Mechanical properties of metals and types of joints are also presented. (All Semesters)

#### **WLDG 117 - Blueprint Reading and Welding Symbols**

Credit(s): 3

This course presents an introduction to industrial blueprints used in the welding industry. Emphasis will be placed on terminology, weld symbols, weld specifications, dimensions, industry and AWS standards. The course also includes interpretation of plans and drawings used by industry in field applications. (All Semesters)

#### **WLDG 119 - Welding Certification II**

Credit(s): 2

*Prerequisite(s):* WLDG 185 or instructor's consent.

This class provides experienced welders the opportunity to prepare for, practice, and complete the AWS National Welding Certificate exam. The training will include flat, horizontal, vertical, and overhead positions for mild and medium steel. Emphasis is placed on AWS standards for Structural Steel welding codes employing 1" steel for unlimited thickness certification to AWS standards. This course may be repeated for a total of eight credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this course. (Fall and Spring Semesters)

#### **WLDG 122 - Welding Theory III Practical**

Credit(s): 4

*Prerequisite(s):* WLDG 100, WLDG 111 or instructor's consent.

This is an introductory course that presents the care and use of flux core arc welding (FCAW) and gas tungsten arc welding (GTAW). The course presents various techniques of welding mild steel and medium steel. The mechanical properties of metals and types of joints are discussed in relation to FCAW and GTAW techniques. (All Semesters)



**WLDG 136 - GMAW/GTAW Welding and Certification**

Credit(s): 4

*Prerequisite(s)*: WLDG 111.

An advanced study of Gas Metal Arc Welding using the dual shield flux-core welding process in various positions; emphasis will be placed on 5G and 6G positions. Gas Tungsten Arc Welding to ferrous and non-ferrous metals in various positions on pipe and plate will be studied. This course may be repeated for a total of 16 credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this class. (All Semesters)

**WLDG 145 - Fabrication Basics I**

Credit(s): 2

*Corequisite(s)*: EWLD 110, WLDG 111, and WLDG 117.

This course covers basic fabrication techniques as they relate to product manufacturing, maintenance and repair. Topics presented include bending, forming, shearing, punching operations. Emphasis is placed on welding with the FCAW (Dual Shield) method. This course also covers thermal torch cutting (i.e. hand held plasma and oxy-fuel). Students will be able to perform proficiency within these cutting methods and describe the pros and cons of each method. (Fall Semester)

**WLDG 146 - Fabrication Basics II**

Credit(s): 3

*Prerequisite(s)*: EWLD 110, WLDG 111, WLDG 117, and WLDG 145.

This course builds on the previous fabrication course by reinforcing equipment use and welding capabilities. Assigned welding projects are incorporated into the class. This course requires students to create complete blueprints of the project chosen. Equipment use and welding skills learned from prerequisite courses will be utilized for this course. (Spring Semester).

**WLDG 185 - Welding Qualification Test Preparation**

Credit(s): 3

*Prerequisite(s)*: WLDG 111 or instructor's consent.

This course provides experienced welders the opportunity to prepare for, practice, and complete the AWS National Welding Certificate exam to AWS D1.1 code. The training will include flat, horizontal, vertical, overhead positions of mild and medium steel. Emphasis is placed on heat and rod selection for various metals, techniques, and exam requirements. Both stick and tig welders will be employed. This course may be repeated for a total of nine credits. Students receiving financial aid or veteran's benefits should check with the Financial Aid Office before repeating this class. (Fall and Spring Semesters)

**WLDG 210 - Pipe Welding**

Credit(s): 4

*Prerequisite(s)*: WLDG 111.

This course is an introduction to pipe welding using the shielded metal arc welding process. The student is instructed on electrode selection, joint and equipment setup. All pipe welding positions will be presented along with the various welding processes employed in pipe welding. (Fall and Spring Semesters)

**WLDG 220 - Welding Fabrication I**

Credit(s): 4

*Prerequisite(s)*: EWLD 110, WLDG 111, WLDG 117, and WLDG 146.

This is an advanced fabrication course that covers basic project management, including material and labor bidding and time management. Projects will be instructor driven and students are responsible for the basic design, along with maintaining a project package. By the end of this course, students will have a greater understanding of projects costs and management. (Fall Semester)

**WLDG 222 - Welding Fabrication II**

Credit(s): 4

*Prerequisite(s)*: EWLD 110, WLDG 111, WLDG 117, and WLDG 220.

This course offers advanced welding techniques that include beam coping and splicing. Welding procedure specifications (WPS's) and how they are created will be covered. Projects from WLDG 220 will be utilized for this course. Welder qualification tests will be given using the flux core arc (FCAW Dual Shield) method in both horizontal and vertical upward positions (2G and 3G unlimited thickness). (Spring Semester)

**WLDG 280 - Weld Testing Certification**

Credit(s): 4

*Prerequisite(s)*: WLDG 122, WLDG 210.

This course is an advanced study of pipe welding using SMAW, FCAW, and GTAW including electrode selection, equipment setup, and shop safety. This course will emphasize the 5G and 6G welding positions using E6010 and E7018 electrodes, along with plumbing, squaring, and fabricating steel test pipes. This course may be repeated for a total of 16 credits. Students receiving financial aid or veteran benefits should check with the Financial Aid Office before repeating this course. (All Semesters)

## **Writing (WRIT)**

### **WRIT 095~ - Developmental Writing**

Credit(s): 3

*Prerequisite(s)*: a score of 6-10 on the FVCC Writing Placement assessment or a COMPASS score of 38 or better or instructor's consent.

This is a developmental writing course focused on building skills necessary for expository writing. Based on assessment of student needs, instruction emphasizes paragraph development resulting in unity, coherence, and organization. Students will begin with the well-developed paragraph and extend to the essay. Instruction in grammar, mechanics and usage is also included. (All Semesters)

### **WRIT 101W - College Writing I**

Credit(s): 3

*Prerequisite(s)*: a score of 11 or better on the FVCC Writing Placement, or a COMPASS score of 75 or better, or a grade of "C-" or better in WRIT 095~.

Instruction and practice in expository writing, this course emphasizes specific writing and revision techniques to develop coherence, conciseness, clear and forceful style and voice, and thinking skills. Assignments range from short pieces to essays and a research paper. Mastery of the basics of grammar and mechanics is assumed. (All Semesters)

### **WRIT 121C - Introduction to Technical Writing**

Credit(s): 3

*Prerequisite(s)*: placement into WRIT 101 required; successful completion of WRIT 101 is recommended.

This course develops skills in writing for technical application: resumes, reports, business letters and fundamentals of research - the type of writing found in business, science and industry. (Spring Semester)

### **WRIT 201W - College Writing II**

Credit(s): 3

*Prerequisite(s)*: a grade of "B-" or better in WRIT 101 or instructor's consent.

This course refines specific writing techniques and develops control of style and voice. Emphasis will be placed on the essay form and writing for a specific audience. Also included are advanced rhetorical and persuasive forms, elementary logic, and research techniques. (Fall and Spring Semesters)

### **WRIT 204 - Academic Journal**

Credit(s): 3

This course allows students to experience the production of an academic journal from concept to publication. Students will review submissions, edit creative works, design, and produce an academic journal. (Fall and Spring Semesters)

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 BA, University of Alabama

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 BA, University of Illinois

## Career and Technical Education

### Advisory Board Membership

#### Accounting Technology

Julie Adkins - Julie M. Adkins, CPA  
Jason Brown - Automated Business Services  
Amy Elletson - FVCC Business Services  
Reed Gunlikson - Gunlikson CPA's and Consultants  
Don Kisler - Jordahl and Sliter  
Susan Nicosia - City of Columbia Falls

#### Agriculture

Brian Bay - H.E. Robinson Vo-Ag Center  
Brooke Bohannon - MSU Northwestern Ag Research Center  
Gretchen Boyer - Farm Hands/Nourish the Flathead  
Markus Braaten - Precision Applications  
Mark Lalum - Cenex Harvest States  
Pat McGlynn - Montana State University Extension  
Josh Slotnick - University of Montana/Garden City Harvest  
Rebecca Ulizio - Two Bear Farm  
Jim Watson - Springbrook Ranch

#### Brewing Science and Brewery Operations

Joe Barberies - Great Northern Brewing Company  
Thomas Blake and Victoria Corollo Blake - Big Sky Malts  
David Brendgard - Flathead Lake Brewing Company  
Tom Britz - Glacier Hops Ranch  
Kyle Carlson - Tamarack Brewing Company  
Mike Elliott - Philipsburg Brewing Company  
Darin and Carla Fisher - Backslope Brewing Company  
Jeremiah Johnson - The Front Brewing Company  
Matt Long - Big Sky Brewing Company  
Cole Schneider - Kalispell Brewing Company  
Sarah Sorenson - Cabinet Mountain Brewing Company

#### Business, Small Business, and Entrepreneurship

Roberta Diegel - Kalispell Job Service  
Cindy Jones - Kalispell Public Schools  
Margaret Lekander - Wheaton's  
Kim Morisaki - Montana West Economic Development  
Klaus Pfeifer - Kettle Care Organics  
Jeremy Presta - Parkside Credit Union  
Lisa Slagle - Wheelie Creative  
Joe Unterreiner - Kalispell Chamber of Commerce  
Jeff Wisher - Able Body Shop

#### Criminal Justice

Lori Adams - Kalispell Municipal Court  
David Castro - Montana Probation and Parole  
Ed Corrigan - Flathead County Attorney  
Chuck Curry - Flathead County Sheriff  
Bill Dial - Chief Whitefish Police Department  
Ike Eisentraut - Moonlighting Detective Agency  
Captain Hilldenstaff - Montana Highway Patrol  
Roger Laferriere - Office of Emergency Services  
Steven Liss - Federal Bureau of Investigation  
David Perry - Columbia Falls Police Chief  
Wade Rademacher - Kalispell Police Department  
Richard Stratton - U.S. Customs and Border Protection

#### Culinary Arts

Josh Auerhammer - Culinary Design Studio  
Mary Behrendt - Columbia Falls School District  
Andy Blanton - Café Kandahar  
Barb Brandt - Montana Coffee Traders  
Dana Cordell - Montana Apple Barrel  
Heather Estrada - FVCC  
Casey Jensen - FVCC Graduate  
Lori Marin - Consumer Foods  
Chris McLaughlin - Tamarack Brewery  
Jeff Russell - Great Northern Pasta  
Hugh Yates - Blue Canyon Kitchen and Tavern

#### Early Childhood Education

Kali Adoretti - Nurturing Center  
Renee August - FVCC Early Childhood Center Director  
Brent Benkelman - Cornelius Hedges Principal  
Collette Box - Discovery Developmental Center Director  
Mary Buenz - Family Engagement Coordinator  
Trevor Dahlman - Olney Bissell Principal  
Chris Medhus - Court Appointed Special Advocates (CASA)  
Cindy Moulton - Nurturing Center  
Marcy Otten - Northwest Montana Head Start Director  
Sherrie Smith - FVCC Adjunct Faculty

#### Electrical Technology

Chris Smith - Monster Electric  
Dale Johnson  
Dave Hudak - Powerhouse Electric  
Ed Ek - American Electric  
Kevin Elliott - Elliott Electric  
Steve Symington - Control Electric

#### Firearms Technology and Finishing

KK Jense - Proof Research  
Chris Parson - FVCC  
Jeff Sipe - Montana Rifle Company  
Jim Wright - Proof Research  
Fred Zeglin - FVCC

#### Goldsmithing and Jewelry Arts

Tony Asa - Independent Goldsmith  
Susie Burch - FVCC  
Janet Fischer - FVCC Instructor  
Nathaniel Gilham - FVCC Instructor and Graduate  
Vivian Goodnight - FVCC Alum  
Jill Goodson - Gemvision  
Wayne Hammer - Vizeit, Inc.  
Karen Kolar - FVCC Instructor  
Benjamin Mattison - FVCC Graduate  
Murphy McMahon - Murphy McMahon & Co.

#### Graphic Design

Cindy Branch - 406 Woman  
Gina Gagnon - Snowghost Design  
Dwayne Harris - Flathead Beacon  
Jeremiah Martin - The Zane Ray Group  
Raquel Mayer - Quel Design  
Diane Skyland - FVCC  
Lisa Slagle - Wheelie Creative Design LLC

### Heating, Ventilation and Air Conditioning (HVAC)

Chris Compton - HVACREDU  
Scott Hinkley - Advanced Refrigeration  
Randy Schelling - Airworks  
Jim Thramer - Advanced Refrigeration  
Dave Waldenberg - Central Heating, Plumbing, Cooling, and Electrical  
Diane & Bill Yarus - Airworks

### Heavy Equipment Operator

Jeff Claridge - LHC  
Dave Landstrom - MT Fish Wildlife and Parks  
Steve Settle - Settle Construction  
Dave Weaver - Hanson Trucking  
Mike Wilson - Timberlake Construction

### Human Services

Mike Cummins - Flathead Valley Chemical Dependency Program  
Kim DeWitt - Community Action Partnership  
Randy Kenyon - Opportunity, Inc.  
Flo Kiewel - Summit/Independent Living Center  
Doug Nelson  
Sherry Wulf - United Way

### Information Technology

Joseph French - Eckstrom Consulting  
Sean Lohr - North Valley Hospital  
Gil Parsons - Flathead County  
Dean Walseth - Kalispell Regional Hospital  
Glen Wehe - Evergreen School District

### Manufacturing

Tim Birk - Commercial Machine Services  
Gary Byers - Creative Sales  
Simon Gross - Converting Equipment International  
Glen Harrison - Defiance Machine  
Jon Kuntz - Applied Materials - Birch Grove  
Phil Leiritz - American Eagle  
Casey Malmquist - SmartLam  
Greg Smith - Thompson Precision  
Jim Wright - Proof Research

### Medical Assistant

Dr. Craig Harrison - Kalispell Gastroenterology, KRMC  
Stacy Isch-Koester - Community Member  
Keila Johnson - Graduate, Northwest Family Medicine  
Kelly Leaser - FVCC Instructor  
Laren Macasek, CMA (AAMA) - Northwest Orthopedics & Sports Medicine, KRMC  
Rita Nixon, CMA (AAMA) - Family Health Care, KRMC  
Lisa Paulson - student  
Charles Taylor - FVCC Faculty  
Misty Taylor - Graduate, Digestive Health Institute of Montana

### Medical Laboratory Technology

Janice Alexander - Flathead Valley Community College  
Terri Benedict - North Valley Hospital Laboratory Manager  
Adam Birks - Kalispell Regional Medical Center Laboratory Director  
Jon Cuthbertson - Public representative, MEA Labs  
Andrea Goff - Laboratory Business Operations Supervisor  
Shelley Graham - LIS Supervisor  
Stephen Jensen - KRMC Phlebotomy Supervisor  
Donna Koester - Hematology Supervisor  
Terry Kotrla - FVCC Program Director  
Teresa Ladenburg - Chemistry Supervisor  
Erin Meeks - Transfusion Service Supervisor  
Rose Overcast - Microbiology and Molecular Supervisor  
Denise Pacovsky - FVCC Full Time Faculty  
Diane Praxel - KRMC Processing Supervisor  
Max Schroeckenstein - Family Healthcare Lab Supervisor

### Natural Resources Conservation and Management

Karl Anderson - Flathead National Forest  
Fred Bicha - City of Kalispell Parks and Recreation  
Mark Boardman - Stoltz Land and Lumber Co.  
Heidi Fleury - Lake County Conservation District  
Dave Jones - DNRC  
Jim Kranz - Plum Creek Timber (retired)  
Daniel Leavell - Kootenai National Forest  
Carol Treadwell - Bob Marshall Wilderness Foundation  
Jim Williams - Fish, Wildlife and Parks  
Lorrie Woods - Plum Creek Timber

### Nursing Programs

Krista Andrews - Flathead Community Health Center  
Lisa Dennison - Flathead County Health Department  
Shilo Fritz - Brendan House  
Molly Johnson - Dialysis Clinic  
Dr. TC Origitano - Neuroscience and Spine Institute  
Kathy Ray - Montana Veteran's Nursing Home  
Cheryl Richards - North Valley Hospital  
Brent Smith - Libby Care Center of Cascadia  
Suzy Williams - FVCC Foundation  
Pat Wilson - Kalispell Regional Healthcare  
Stacy Wood - Cabinet Peaks Medical Center



### Paramedicine

Justin Bartels NRP- ALERT  
Bob Blair, MD - Silvertip Emergency Physicians  
James Boyce - Evergreen Fire and Rescue  
Jon Campbell - Kalispell Fire Department  
Chris Clouse - FVCC  
Mike Cullen- Polson and Ronan Ambulance  
Chuck Curry - Flathead County Sheriff's Office  
Todd Johnson, MD - Silvertip Emergency Physicians  
Joe Page - Whitefish Fire  
Dick Sine, NRP-Flathead County EMS Office  
Lance Westgard - Three Rivers EMS  
Cole Williams - Program Graduate  
Pat Wilson, RN - KRMC

### Personal Trainer

Dara Dobson - The Summit  
Sue Justis - FVCC  
Stu Levitt - The Summit  
Cathy Lisowski - The Summit  
Craig Schmidt - Bigfork Athletic Club  
Troy Schultz - M Team

### Physical Therapist Assistant

Kristina Bieber - Riverbend Physical Therapy  
Joe Bilau - KRMC  
Lori Elwell - FVCC  
Lynnell Finley - Advanced Rehabilitation Services  
Kim Givler - Professional Therapy Associates  
Lori Graybill - Brendan House  
Patrick Gulick - Orthopedic Rehabilitation  
Dorene Hay - KRMC  
Sandra Johnson  
Alisa Kristensin - Summit Outpatient PT  
Kathleen Linney - Acute Physical Therapy, KRMC  
Katherine Major - Mountain Physical Therapy  
Kelly Malmin - Professional Therapy Associates  
Amanda McDonald - Precision Physical Therapy  
Keith Ori - Orthopedic Rehabilitation  
Candy Van Frachen - Immanuel Lutheran Home

### Radiologic Technology

Cathy Allard - FVCC  
Karrie Bolivar - FVCC  
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Chelsea Glantz-Thramer - KRMC  
Bree Hoerner - KRMC  
Adam Ruther - KRMC  
Karla Ryan - FVCC  
Calvin Sphuler - KRMC  
Holly Strey -- KRMC  
Ty Weber - KRMC

### Support Professional

Chere Anderson - Glacier High School  
Tara Barnes - Flathead High School  
Valerie Cooper - LC Staffing  
Mora McCarthy - Flathead Job Service  
Jordan Nelson - Express Employment Professionals  
Jill Sigmund - FVCC  
Theresa Williamson - FVCC Program Graduate

### Surgical Technology

Cara Boka, CST – KRMC  
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Ben Dykstra, MD - NW Montana Surgical Assoc., PC  
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Sue LeBlanc - Health Center Northwest  
Tymber Liehr - Program Graduate  
Christina Sullivan - Program Student  
Jason Wojciechowski - KRMC

### Surveying

Erika Bachurski, LSI - Robert Peccia & Associates  
Ted Belcer, PLS - MDOT  
Jeff Bell, PLS - MDOT  
Andy Belski, PLS - River Design Group  
Bryan Block, PLS - Block's Surveying  
Dan Brien, PLS - Sands Surveying  
Robert Brown, PLS - RAB Surveying  
Marc Burkhart, PLS - Flathead National Forest  
James Burton, PLS  
Sam Cordi, PLS - Sam Cordi Land Surveying  
Michael Drenth, PLS - Eby & Associates  
Jane Eby, PLS, PE - Eby & Associates  
Bob Erickson, PLS - Jackola Engineering  
Olaf Ervin, PLS - O C Ervin Land Surveying  
Ron Gardner, PLS - TD&H Engineering  
Richard Goacher, PLS - Goacher & Associates  
Dawn Marquardt, PLS - Marquardt & Marquardt  
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Jamie Reed, PLS - Sands Surveying  
Mark Roedel, PLS - MDOT  
Tom Sands, PLS - Sands Surveying  
Thomas Sibson, PLS - Sam Cordi Land Surveying  
Jason Smith, PLS - Robert Peccia & Associates  
S. Richard Smith, PLS - Smith Surveying  
Jay Squire, PLS - Jay Squire Land Surveying  
Brian Sullivan, PLS - F & H Land Surveying  
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R. Kim Wunderlich, PLS - Glacier Surveying

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John Klippel - American Web Design  
Andrea Korb - Whitefish Web Design  
Peter Lanier - Flathead Beacon  
Blake Stout - Torrent Technologies

### Welding and Fabrication Technology

Colby Carlson - Carlson Fabrication  
Shawn Decker - North Valley Steel  
Phil Eisenzimer - American Gas & Welding  
James Mower - NORCO  
T. J. Naldrett - Nomad  
Jack Stoken - Pacific Steel and Recycling  
Scott Yarde - Countryside Welding

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## A

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