

# 2021-2022 Course Catalog 

Casper College

## Academic Information

## Academic Credit

Students should expect to devote the following time per credit, per week for a 15 -week semester. A period is 50 -minutes or a minimum of 80 hours of on-the-job training with college supervision.

- 1 lecture credit equals 1 period with 2 hours of outside preparation.
- 1 laboratory or activity credit equals 2 to 4 periods and necessary outside preparation.
- 1 music studio credit equals 30 minutes of applied instruction plus three hours of practice per week.

An equivalent amount of work is expected for internships, practicums, studio work, clinicals, independent study, compressed courses, and other academic work leading to the award of academic credit.

## Academic Standing

Students are considered in good standing if they attend Casper College for one or more semesters and earn a 2.0 or higher-grade point average for that semester or for their cumulative average. The registrar notifies students who are not making satisfactory academic progress. Students may be placed on academic probation when:

- The student does not meet the minimum qualifications for admission or
- The student does not meet the minimum grade standard to be considered in good standing

The college removes students from academic probation who attain a semester grade point average that meets or exceeds the minimum requirements to be considered in good standing. Students who fail to achieve good standing after one semester on academic probation are subject to academic suspension.

The college issues an academic suspension when a student fails to achieve good standing after one semester on academic probation or for academic dishonesty. Students on academic suspension may not register for academic courses for at least one semester unless they receive an approved petition for an exception.

Financial aid probation and suspensions are issued in accordance with the rules and regulations governing the form of aid received and are determined separately from academic probation and suspension.

Corrective measures come in the following forms:

1. Current semester problems. Students having trouble with a course may withdraw from the course or the college (see schedule changes) audit the course (see Auditing Courses), or request an incomplete or in progress (see Incomplete and In Progress). All timelines must be met to make any changes.
2. Academic standing. Academic standing is based on either semester grade point average or cumulative grade point average (see Academic Standing), thus allowing redemption in one semester regardless of past record and avoiding penalty for one below-par semester in an otherwise satisfactory record.
3. Academic Forgiveness. Degree-seeking students currently attending Casper College may petition the registrar to remove up to two semesters, in their entirety, from the calculation of the student's cumulative grade point average (GPA) and degree credits. The registrar will approve a petition for students who have completed 24 semester credits of college-level courses with a 2.5 GPA after the last semester listed on the forgiveness petition. This is a one-time-only option.

## Advising

Your advisor is essential to your success. Be sure to meet with your advisor before enrolling for classes or making schedule changes.

## Advisor Assignments

Students are assigned an advisor who has specific knowledge about their chosen program during new student advising and registration events. Students have the right to request a new advisor. Students who wish to change their advisor contact Enrollment Services. Students who want a specific advisor must obtain permission from that advisor and contact Enrollment Services to make the change.

## Advisor's Roles and Responsibilities

- Help advisees develop realistic educational career plans.
- Assist advisees in planning a program of study consistent with abilities and interests.
- Assist with selecting courses and verify that prerequisites are met.
- Provide registration priority date and time.
- Monitor advisee's progress toward educational and career goals.
- Discuss the relationship between instructional programs and occupation/career goals.
- Interpret instructional policies, procedures, and requirements.
- Approve educational transactions (e.g. schedule, drops, adds, withdrawals, change of major, waivers, removing academic holds, etc.).
- Maintain a file for each advisee.
- Refer students to appropriate resources and services.
- Request reassignment of advisee to another advisor, if necessary.
- Assist advisees in identifying career opportunities.
- Direct advisees to career counselors, if necessary.


## Advisee's Roles and Responsibilities

- Share interests, goals, and educational and career plans.
- Report personal information that has a bearing on your academic success such as the number of hours working, family responsibilities, and financial aid status.
- Be familiar with the academic catalog and student handbook.
- Know your advisor's advising hours and phone number.
- Schedule an appointment or meet during designated advising hours. Call if you are unable to keep an appointment. Meeting with your advisor is required before you can register.
- Keep a record of graduation requirements, which is your responsibility to fulfill.
- Keep correspondence from the college and meetings with your advisor(s).
- Know deadline dates listed in class schedules and Student Handbook.
- Contact the appropriate student support services when necessary.
- Prepare for meetings with your advisor, particularly when registering for classes. Have an idea about what courses you want to take for your program and electives. Have a list of alternative courses in case the courses you want are closed or waitlisted.
- Become familiar with how to use myCCinfo.
- Alert your advisor immediately of difficulties affecting your course work or continued enrollment.
- Provide Enrollment Services with your current address and phone number.


## Class Attendance

Students are expected to attend all sessions of the classes in which they are enrolled. Students should contact the Vice President for Student Services Office in the Nolte Gateway Center or 307-268-2201 if they are called for jury duty, subpoenaed as a
witness, or ill or injured and unable to attend class for an extended period. The office will notify instructors of students on extended leave. This notification does not give students an excused absence. Students should contact their instructors as soon as they can, to inform them of an absence. Instructors may request that students provide appropriate documentation to the Vice President for Student Services Office upon their return and complete any make up work assigned. Contact the Vice President for Student Services Office at 307-268-2201 about documentation requirements.

Students should check with their instructors about their class attendance policies. Casper College encourages its instructors to make a reasonable effort to allow students to observe their major religious holidays or to participate in college-sponsored activities without academic penalty. Students must notify their instructors as soon as possible of dates for which they plan to request an excused absence and abide by their instructor's class policies.

Instructors are required to report the names of students who attend class irregularly or are absent for several consecutive class sessions to the Vice President for Student Services Office, who will contact students about their intent to continue in the course. Excessive absences or tardiness may result in a lower grade or a faculty-initiated withdrawal from the course.

Automatic Withdrawal: Students who have not attended or participated in a course they are enrolled in during the first week of the semester will be automatically dropped from that course at the beginning of the second week. Contact your instructor if you have questions about automatic withdrawal.

Instructor sponsors or coaches submit a list of students who will miss class because of a college-sponsored activity to the student's faculty and the vice president for student services at least three days before the first scheduled day to be gone. Students should talk with their instructors before any absences. The instructor may excuse absences and allow make-up work.

## Choosing a Major

Many students come to Casper College with a clear idea about what they want to accomplish while they are here; other students are undecided. Instructors can provide information about the areas in which they teach. The Career Services staff in the Enrollment Services/Student Success Center can assist students with choosing a major or career. Services include exploring majors and how those majors translate into careers, creating academic and career timelines, building career readiness skills employers want, and building career experience. They are located in the Nolte Gateway Center, third floor.

Casper College offers certificates and associate's degrees. It is important when choosing a major or career to know the differences between the programs we offer. Certificates usually take two semesters to finish and include only the courses directly relevant to the field. An associate of applied science degree is a good choice for students who want to earn a college degree and enter the workforce, but do not plan to pursue a bachelor's degree. Students interested in pursuing a bachelor's degree will want to select majors that lead to an associate of arts, associate of business, associate degree in nursing, or associate of science. These programs parallel the first two years of most bachelor degree programs.

## Course Evaluations

Casper College evaluates credit-bearing courses in which five or more students are enrolled. Near the end of the course meeting time, students will receive a link in their college email to an online evaluation for the course. Completing course evaluations assist instructors to improve their teaching. Student participation in course evaluations is highly encouraged. The information provided is anonymous.

## Course Grading

The college issues student grade reports twice a semester. The mid-term grades indicate the student's academic progress part-way through the semester and are not part of the student's permanent record. Final semester grades are a part of the student's permanent record. Students may view their grades online in myCCinfo.

Students who think they received an incorrect grade should contact their instructor. Instructors may submit a Grade Change Form to Enrollment Services if there has been an error. Grades are eligible to be changed for up to one year from the date the grade was assigned.

$$
\begin{array}{ll}
\text { Grades } & \text { Grade Points } \\
\text { A - excellent } & 4 \text { points } \\
\text { B — above average } 3 \text { points } \\
\text { C- average } & 2 \text { points } \\
\text { D— below average } 1 \text { point } \\
\text { F— failure } & 0 \text { points } \\
\text { I— incomplete } & 0 \text { points } \\
\text { S— satisfactory } & 0 \text { points } \\
\text { U— unsatisfactory } & 0 \text { points } \\
\text { AU - Audit } & 0 \text { points } \\
\text { W— withdrawn } & 0 \text { points } \\
\text { Drop } & 0 \text { points }
\end{array}
$$

Grade Point Averages (GPA). There are two types of grade point averages (GPA): semester and cumulative. Semester GPA is calculated by multiplying the credits a course is worth by the number of points the earned grade is worth to give the total grade points for that course. Do this for each course taken in a semester. Add the points for all the courses taken that semester and divide by the total number of credits attempted for that semester. The cumulative GPA is calculated by dividing the total number of grade points earned at Casper College by the total number of semester credits earned.

Incomplete Grade. An incomplete (I) is awarded when a student, for reasons beyond the student's control, is unable to finish the course and the student would otherwise have had a passing grade. A student who receives an incomplete must arrange with the instructor to complete the course. To be eligible for an incomplete grade assignment, the following criteria must be met.

1. The student must have completed at least $50 \%$ of the course.
2. The student must have a passing grade.
3. The instructor and student establish a time frame to complete the course, not to exceed one year. If the student does not complete in this time frame, the student will be assigned an F for the course.
The student must submit a completed Incomplete Grade Contract to the Registrar's Office.
Satisfactory/Unsatisfactory. Courses that offer an S/U grading option are identified as such in the Academic Catalog. Students may select $\mathrm{S} / \mathrm{U}$ grading when they register for the course or before the withdraw deadline date. Instructor permission is required for any changes after registration. Grade points are not awarded for $\mathrm{S} / \mathrm{U}$ or pass/fail grades; therefore, courses awarded an $\mathrm{S} / \mathrm{U}$ grade are not included in the student's GPA calculation. S/U grades may count toward degree, satisfactory progress, and athletic or activity eligibility requirements

Audit. Students may audit a course when they want to attend a class but do not want to receive credit or a grade for that course. Students who wish to audit a course indicate so at the time of enrollment. Students who satisfactorily complete an audited course,
including regular attendance, will receive an audit notation on their transcript. They will not receive credit or a grade. The college charges full tuition to audit a course.

Withdraw/Drop. Students may drop a course at any time before the census date listed in the academic calendar (usually day 10 of the semester) using myCCinfo, or by going to Enrollment Services. Dropped courses are not recorded on a student's transcript. Students may withdraw from courses after the census date in myCCinfo, or they may submit a completed Change Form to Enrollment Services before the withdrawal deadline listed on the academic calendar. Withdrawals are recorded on the student's transcript as a withdrawn (W) course. After the withdraw deadline, a student may submit a completed petition with their instructor's permission to Enrollment Services. Additional documentation may be requested, and approval is not guaranteed. Check the refund schedule for any applicable charges.

## Course Load

Course load is measured in credits enrolled in each semester. Twelve credits is full-time enrollment. On average, a student will need to take a minimum of 16 credits to complete an associate's degree within two years. The maximum recommended credit load is 19 credits per semester. Students should discuss their appropriate course loads with their academic advisors. The vice president for student services or an enrollment service director may grant an exception to this rule for a student with a good academic record.

## Course Numbering System

## General Transfer Course Numbers

1000-1499
Freshman

2000-2499
Sophomore

If the second digit starts with $0,1,2,3$, or 4 the course is academic/transfer.

## Vocational Course Numbers

1500-1999
Freshman

2500-2999
Sophomore

If the second digit starts with $5,6,7,8$, or 9 the course is vocational/technical.

## Course Numbers for Undergraduate Variable Courses:

| Course Type | General | Occupational |
| :--- | :--- | :--- |
| Capstone Courses | 1395,2395 | 1895,2895 |
| Field Studies | 1460,2460 | 1960,2960 |
| Directed Studies/Research Problems | 1465,2465 | 1965,2965 |


| Internship/Practicum | 1470,2470 | 1970,2970 |
| :--- | :--- | :--- |
| Independent Studies | 1475,2475 | 1975,2975 |
| Cooperative Work Experience | 1480,2480 | 1980,2980 |
| Seminar | 1485,2485 | 1985,2985 |
| Topics | 1490,2490 | 1990,2990 |
| Workshop | 1495,2495 | 1995,2995 |

Capstone Courses - The capstone course is usually the last class in a program of study. It represents a "crowning achievement" as a capstone does in architecture. A capstone course may require a project and/or presentation and an assessment exam to test interdisciplinary skills (like math, writing, critical thinking, etc.). A capstone may also involve a final research paper exploring a topic of interest, emerging from a student's program of study. Ultimately, a capstone gives the student the opportunity to demonstrate the knowledge and skills gained during the college career.

Field Studies - A combination of classroom instruction with participation in the actual field being studied.

Directed Studies/Research Problems - Special projects and research carried out under the direction of faculty.

Internship/Practicum - Unpaid work experience related to a chosen field of study. (approximately 30 hours of work experience equates to 1 credit hour)

Independent Studies - A course designed and taken under a special contract with a faculty member.

Cooperative Work Experience - A planned academic program allowing students to blend classroom theory with related paid work experience. Prerequisites: Approval of appropriate faculty member. ( 80 hours of work experience equate to one credit hour)

Seminar - An in-depth examination of a specific issue or subject. A seminar can meet at varying times and durations during a semester. ( 16 contact hours equate to one credit hour)

Special topics courses - Courses that are not part of the regular catalog curriculum. Designed to meet special needs or interests and provide flexibility in the curriculum to meet a variety of situations. Courses may be designed to meet the interests of a group of students, to fit the talents of a visiting professor, to study a current problem, or to meet similar educational situations. Special topics courses may be offered in any department and are normally semester-long courses for one to three credits with a max of six credits if different topics are offered. Special topics may be offered, however, as short courses by visiting professors for one or two credits. Special topics courses offered are listed in the registration material for each semester.

Workshop - Specific training or instruction with an emphasis on skill development. Involves interactive participation among class members and instructors. Students acquire a basic understanding of principles and procedures in the field being addressed. (1-3 hrs. lec)

## Credit for Prior Learning

Credit for prior learning (CPL) is a process that enables students to demonstrate what they have learned and translate that learning into college credit. CPL validates college-level knowledge and competencies acquired through life, work, military experience, civic engagement, independent study, and professional development classes or training. It may be used to obtain credit for courses taken at another institution that did not transfer. Contact the Records Office with questions about CPL.

Casper College offers students three ways to earn CPL: by exam, professional certification, or military training and experience. Academic departments may identify courses for which students can earn credit by taking an exam. Exams may be departmental, College Level Exam Program (CLEP), College Entrance Exam Board Advanced Placement Exam (AP), or International Baccalaureate (IB).

Departmental Exam. Students who have experience, training, or noncredit coursework in a subject area may request to earn a credit by an exam. If the request is granted, the departmental instructor will develop an exam that corresponds with the outcomes, objectives, and rigor of the course and program. Exams may be written, oral, or a demonstration.

CLEP. CLEP assesses proficiency through exams on business, composition and literature, world languages, history and social sciences, and science and mathematics. Most CLEP exams cover lower-level and introductory knowledge.

AP. High schools administer AP exams to students who have taken an AP course. The test assesses the student's subject area knowledge. Casper College awards credits to students who pass an AP exam at the minimum level for a course approved for AP credit.

IB. High schools administer IB exams to students who have taken an IB course. The test assesses the student's subject area knowledge. Casper College awards credits to students who pass an IB exam at the minimum level for courses approved for IB credit.

The college may grant credit for professional certifications that directly correspond to a course. To receive credit, students must provide documentation of the certification that is current and valid to an instructor in the area of study that corresponds with the certification. Upon acceptance of the certification, the instructor submits a request to issue CPL to their department chair or program director for approval. Upon approval, the request is submitted to the Records Office who records the credits.

Students who have earned military education and training credit may apply for CPL. Casper College uses the American Council of Education's (ACE) Guide to the Evaluation of Educational Experiences in the Armed Services to determine credit for military training and experience and ACE's National Guide to College Credit for Workforce Training to determine credit in exceptional cases. The college reserves the right to make an independent determination of equivalency of courses or to require departmental exams and evaluations.

The college will grant one semester credit for physical education to students who present a Report of Discharge (DD Form 214) to the Records Office establishing active duty of 181 days or more. Students who present such evidence for more than one year of active duty will be granted two semester credits.

The veteran coordinator will request the Registrar's Office complete a military transcript evaluation for students who requested a transcript evaluation on the Request for Certification form. The Registrar's Office will evaluate transcripts for classes that could count for elective or general education credit. Students who would like their transcripts evaluated for specific course credits that could apply to their program of study must contact their advisors. Advisors will coordinate with the Records Office to review the transcripts to determine if there are any specific course credits eligible to apply towards a student's program of study.

The following are the requirements of CPL at Casper College.

1. Casper College awards CPL for coursework in disciplines related to its degree and certificate programs. Students must prove their knowledge and competencies in an area of study offered by the college.
2. Students may only apply for CPL for courses applicable to curriculum requirements in the student's declared program of study.
3. Students must be registered as degree seeking and admitted into a specific program during the semester in which CPL is awarded.
4. Students may apply for CPL only one time for the same course.
5. Students must submit official documentation of previous work or demonstrated competencies before CPL will be awarded.
6. Students may not earn CPL for courses in which they are currently enrolled, have audited, received a failing grade, or earned credit in a higher-level course in the same subject area. Students cannot use CPL to replace a failed grade or raise a passing grade in the same course.
7. Students placed in a higher-level course may earn CPL in lower-level courses by taking an approved exam. Any exams taken for CPL must be completed by midterm of the semester in which the student is enrolled in the higher-level course.
8. CPL satisfies prerequisite requirements the same as coursework does.
9. Students who take AP or IB exams must score the minimum or above on each test to receive credit. They must request an official transcript from the College Board for AP exams or International Baccalaureate for an IB exam be sent to the Record's Office, who makes the placement decision for AP and IB credit.
10. Students who intend to use CPL in a course in which a grade has not been awarded to meet degree requirements at another institution should check the requirements of the receiving institution.
11. The Records Office awards and records CPL. Credits are assigned but a grade is not. Credit earned through CPL is not used to calculate grade point average.
12. To earn a grade for a departmental exam, students must pass an assessment developed by a Casper College instructor with expertise in the subject area that corresponds to the published course outcomes. Students must pass all work assessed at $75 \%$ or a " C " level proficiency or better for all of the course outcomes and competencies.
13. All CPL must be awarded before the semester before graduation.
14. Casper College may accept CPL awarded by a regionally accredited institution with the approval of the Records Office and the dean of the school in which a similar course would typically be offered. These credits have the same limitations in meeting graduation requirements as CPL earned at Casper College and will be used in computing the total credits of CPL for which a student is eligible.
15. Regardless of the amount of CPL the college awards, degree-seeking students must earn at least 15 of the credits applied toward graduation through the completion of Casper College coursework. For certificate programs, $40 \%$ of the total required credits must be earned through Casper College coursework. No more than $40 \%$ of the total credits applied toward a degree or certificate may be awarded through CPL.

## Credit for Prior Learning Fees

Students who take a CLEP exam must pay a non-refundable third-party vendor fee and a non-refundable college processing fee. Contact the Testing Center at 307-268-3850 or testing@caspercollege.edu for more information on fees. Students who take a departmental exam or earn CPL via a professional certification must pay a college processing fee to Accounting and Financial Management. Students requesting military education and training credit are not required to pay a processing fee. High schools administer AP and IB exams. Students should inquire with their respective high school for more information.

## Credit for Prior Learning Appeals

Students who wish to appeal a CPL decision must follow the student grievance policy before the end of the semester in which the student requested CPL or the CPL exam was administered. The college will deny appeal requests made after the deadline.

## CLEP Course Equivalencies

| CLEP Subject Exam | Minimum Exam <br> Score | Equivalent Casper College Course | Semester Credits <br> Awarded |
| :--- | :--- | :--- | :--- |
| Business | See Accounting Department |  |  |
| Financial Accounting | 50 | COSC 1200: Computer Information <br> Systems | 3 |
| Information Systems | 50 | BADM 2010: Business Law I | 3 |
| Introductory Business Law | 50 | MGT 2100: Principals of <br> Management | 3 |
| Principles of Management |  |  |  |


| Principals of Marketing | 50 | MKT 2100: Principles of Marketing | 3 |
| :---: | :---: | :---: | :---: |
| Composition and Literature |  |  |  |
| American Literature | 50 | ENGL 2310: American Literature I | 3 |
| Analyzing and Interpreting Literature | See English Department |  |  |
| College Composition Modular* | 55 | ENGL 1010: English Composition | 3 |
| English Literature | 50 | ENGL 2210: English Literature I | 3 |
| World Language |  |  |  |
| French Language: Level 1 and 2 | 41+ | FREN 1010: First Year French I | 4 |
| French Language: Level 1 and 2 | 50+ | FREN 1020: First Year French II | 8 |
| French Language: Level 1 and 2 | 57+ | FREN 2030: Second Year French I | 12 |
| German Language: Level 1 and 2 | 40+ | GERM 1010: First Year German I | 4 |
| German Language: Level 1 and 2 | 48+ | GERM 1020: First Year German II | 8 |
| German Language: Level 1 and 2 | 54+ | GERM 2030: Second Year German I | 12 |
| Spanish Language: Level 1 and 2 | 41+ | SPAN 1010: First Year Spanish I | 4 |
| Spanish Language: Level 1 and 2 | 50+ | SPAN 1020: First Year Spanish II | 8 |
| Spanish Language: Level 1 and 2 | 54+ | SPAN 2030: Second Year Spanish I | 12 |
| History and Social Sciences |  |  |  |
| American Government \# | 50 | POLS 1000: American and Wyoming Government | 3 |
| History of the United States I \# | 50 | HIST 1211: United States to 1865 | 3 |
| History of the United States II \# | 50 | HIST 1221: United States from 1865 | 3 |
| Introduction to Educational Psychology | 50 | EDFD 2100: Educational Psychology |  |
| Introductory Psychology | 50 | PSYC 1000: General Psychology | 3 |
| Introductory Sociology | 50 | SOC 1000: Introduction to Sociology | 3 |
| Principles of Microeconomics | 50 | ECON 1020: Microeconomics | 3 |



## Advanced Placement Course Equivalencies

$\left.\begin{array}{|l|l|l|}\hline \text { AP EXAM } & \begin{array}{l}\text { Minimum Exam } \\ \text { Score }\end{array} & \text { Equivalent Casper College Course }\end{array} \begin{array}{l}\text { Semester Credits } \\ \text { Awarded }\end{array}\right]$

| English |  |  |  |
| :---: | :---: | :---: | :---: |
| English Language and Composition | 4+ | ENGL 1010: English I Composition | 3 |
| History |  |  |  |
| Macroeconomics | 4+ | ECON 1010: Macroeconomics | 3 |
| Microeconomics | 4+ | ECON 1020: Microeconomics | 3 |
| Psychology | $3+$ | PSYC 1000: General Psychology | 3 |
| United States History* | 4 |  <br> HIST 1221: United States from 1865 | 6 |
| STEM |  |  |  |
| Biology | 4+ | BIOL 1010: General Biology | 4 |
| Calculus AB | $3+$ | MATH 2200: Calculus I | 4 |
| Calculus BC | 3+ | MATH 2200: Calculus I \& MATH 2205: Calculus II | 8 |
| Chemistry | 4+ | CHEM 1020: Chemistry I, CHEM 1030: Chemistry II | 8 |
| Computer Science A | 4 | COSC 1010: Introduction to Computer Science | 4 |
| Computer Science A | 5 | COSC 1010: Introduction to Computer Science \& COSC 1030: Computer Science I | 8 |
| Computer Science Principles | 4+ | COSC 1010: Introduction to Computer Science \& COSC 1030: Computer Science I | 8 |
| Physics 1 | $4+$ | PHYS 1110: General Physics I | 4 |
| Physics 2 | 4+ | PHYS 1110: General Physics I \& PHYS 1120: General Physics II | 8 |
| Physics C: Mechanics Physics C: Electricity and Magnetism | 4+ | PHYS 1310: College Physics I \& PHYS 1320: College Physics II | 8 |
| Statistics | $3+$ | STAT 2050: Fundamentals of Statistics | 4 |


| World Languages and Cultures |  |  |  |
| :---: | :---: | :---: | :---: |
| French Language and Culture | 3 | FREN 1010: First Year French I | 4 |
| French Language and Culture | 4 | FREN 1010: First Year French I \& FREN 1020: First Year French II | 8 |
| French Language and Culture | 5 | FREN 1010: First Year French I, FREN 1020: First Year French II, \& FREN 2030: Second Year French I | 12 |
| German Language and Culture | 3 | GERM 1010: First Year German I | 4 |
| German Language and Culture | 4 | GERM 1010: First Year German I \& GERM 1020: First Year German II | 8 |
| German Language and Culture | 5 | GERM 1010: First Year German I, GERM 1020: First Year German II, \& GERM 1030: Second Year German I | 12 |
| Spanish Language and Culture | 3 | SPAN 1010: First Year Spanish I | 4 |
| Spanish Language and Culture | 4 | SPAN 1010: First Year Spanish I \& SPAN 1020: First Year Spanish II | 8 |
| Spanish Language and Culture | 5 | SPAN 1010: First Year Spanish I, SPAN 1020: First Year Spanish II, \& SPAN 2030 Second Year Spanish I | 12 |

* This credit will not meet the requirements for Wyoming Constitution.


## International Baccalaureate Course Equivalencies

| IB Exam | Minimum Exam <br> Score | Equivalent Casper College Course | Semester Credits <br> Awarded |
| :--- | :--- | :--- | :--- |
| Arts |  |  |  |
| Art HL | $4+$ | ART 1000: General Studio Art |  |
| Music HL | 4 | MUSC 1000: Introduction to Music | 3 |
| Music SL | $4+$ | MUSC 1000: Introduction to Music | 3 |
| Theatre HL | THEA 2050: Theatre Practice | 3 |  |
| Theatre SL | THEA 2050: Theatre Practice | 3 |  |
| Individuals and Societies |  |  |  |


| Economics HL | $5+$ |  <br> ECON 1020: Principals of Microeconomics | 6 |
| :---: | :---: | :---: | :---: |
| History of the Americans HL* | 4 | HIST 1211: United States to 1865 \& HIST 1221: United States from 1865 | 6 |
| Macroeconomics, Principals of | 6+ | ECON 1010: Principals of Macroeconomics | 3 |
| Microeconomics, Principals of | 6+ | ECON 1020: Principals of Microeconomics | 3 |
| Philosophy HL | 4+ | PHIL 1000: Intro to Philosophy | 3 |
| Psychology HL | 4+ | PSYC 1000: General Psychology | 3 |
| Psychology SL | 4+ | PSYC 1000: General Psychology | 3 |
| Social and Culture Anthropology SL | 4+ | ANTH 1200: Introduction to Cultural Anthropology | 3 |
| World Religions SL | 4+ | RELI 1000: Introduction to World Religion | 3 |
| Language Acquisition |  |  |  |
| French Language | 4 | FREN 1010: First Year French I | 4 |
| French Language | 5 | FREN 1010: First Year French I \& FREN 1020: First Year French II | 8 |
| French Language | 6+ | FREN 1010: First Year French I, <br>  <br> FREN 2030: Second Year French I | 12 |
| German Language | 4 | GERM 1010: First Year German I | 4 |
| German Language | 5 | GERM 1010: First Year German I \& GERM 1020: First Year German II | 8 |
| German Language | 6+ | GERM 1010: First Year German I, GERM 1020: First Year German II, \& GERM 1030: Second Year German I | 12 |
| Russian Language | 4 | RUSS 1010: 1st Year Russian I | 4 |
| Russian Language | 5 | RUSS 1010: 1st Year Russian I \& RUSS 1020: 1st Year Russian II | 8 |
| Spanish Language | 4 | SPAN 1010: First Year Spanish I | 4 |


| Spanish Language | 5 | SPAN 1010: First Year Spanish I \& SPAN 1020: First Year Spanish II | 8 |
| :---: | :---: | :---: | :---: |
| Spanish Language | 6+ | SPAN 1010: First Year Spanish I, SPAN 1020: First Year Spanish II, \& SPAN 2030 Second Year Spanish I | 12 |
| Language and Literature |  |  |  |
| English HL | $4+$ | ENGL 1010: English Comp I | 3 |
| Mathematics |  |  |  |
| Mathematical Studies SL | 4 | MATH 1000: Problem Solving | 3 |
| Mathematical SL | 4 | MATH 1450: Algebra \& Trigonometry | 5 |
| Mathematics HL | 4 | MATH 2200: Calculus I \& MATH 2205: Calculus II | 8 |
| Sciences |  |  |  |
| Biology HL | $4+$ | BIOL 1010: General Biology I | 4 |
| Biology SL | 4+ | BIOL 1000: Introduction to Biology I | 4 |
| Chemistry HL | 4 | CHEM 1000: Intro to Chemistry | 4 |
| Chemistry HL | 5+ | CHEM 1020: Chemistry I, CHEM 1030: Chemistry II | 8 |
| Computer Science HL | 4+ | COSC 1010: Introduction to Computer <br> Science I \& COSC 1030: Introduction to Computer Science II | 8 |
| Computer Science SL | 4+ | COSC 1010: Introduction to Computer Science I | 4 |
| Environmental Systems and Societies SL | 4+ | ENR 1200: Environmental Science | 4 |
| Physics HL | 4 | PHYS 1110: General Physics I \& PHYS 1120: General Physics II | 3 |

*This credit will not meet the requirement for the Wyoming Constitution course.
*Must have an official transcript from International Baccalaureate Program.

## Honor Rolls

The college uses semester or cumulative grade point averages to determine eligibility for the following honors:

- President's Honor Roll: This honor is granted at the end of the fall and spring semesters to full-time, degree-seeking students who completed at least 12 credits with a 3.5 or higher-grade point average in the given semester.
- Dean's Honor Roll: This honor is granted at the end of the fall and spring semesters to part-time, degree-seeking students who completed at least 6 but fewer than 12 credits and non-degree seeking students who completed 6 or more credits with a 3.5 or higher-grade point average in the given semester.
- Graduate with Distinction: Students receiving associate's degrees who have earned a minimum of 32 semester credits (semester credits attempted as defined in Grade Averages) at Casper College and have attained a cumulative GPA of 3.8 or better in Casper College coursework graduate with distinction.


## Honor Societies

- Lambda Epsilon Chi: A national honor society that recognizes excellence in legal assistant/paralegal studies.
- Phi Rho Pi: This national organization recognizes excellence in forensics competition and is open to students interested in competitive speaking.
- Phi Theta Kappa: An invitation to join Phi Theta Kappa, a national two-year college honorary scholastic fraternity, is dependent upon meeting several qualifications. The student must:
- have a Casper College cumulative grade point average of 3.5 or higher at the time of initiation;
- have completed at least 12 credits of Casper College coursework; and
- be enrolled in Casper College for at least six credits in the semester he or she becomes eligible for membership and is initiated.
- Psi Beta: A National Honor society in psychology that encourages professional development and psychological literacy of all students at two-year colleges through promotion and recognition of excellence in scholarship, leadership, research, and community service


## Moodle4Me

Moodle4Me is a Learning Management System (LMS) used in distance education classes and classes with a web component. At the beginning of each semester, Enrollment Services will email information to students enrolled in online courses on how to get their username, pin (password), and directions for logging into Moodle4Me. Classes become accessible on the first day of school.

To access Moodle4Me, go to https://www.caspercollege.edu/current-students. For technical assistance, contact the Digital Learning Center at www.caspercollege.edu/dlc.

## Repeated Courses

If a student repeats a Casper College course, the most recently completed course will be used to calculate the student's cumulative grade point average. All attempts at a course are included on the student's official transcripts. Repeated courses may be eligible for financial aid.

## Transcripts

A transcript is a record of the courses a student has taken. Students can download unofficial transcripts from myCCinfo at any time. Students may request official transcripts by completing the request application. The College will not issue official transcripts if the student has any administrative holds. There may be a charge for official transcripts.

## Syllabi

Your instructor will provide a syllabus, or you can locate it on the college's website. Select "Current Students" on the homepage and then "Syllabi." Choose the semester, course group, and section number for the course syllabus you are looking for. Syllabi for the current semester are not usually available until after the first week of classes. Your course syllabus will include information on grading, assignments, and another important course information.

## Transferring

Each college or university sets its own standards. Generally, a student in good standing at an accredited college or university can transfer to another accredited school without difficulty if the student has satisfactory grades (C or better) and proper course selection. Casper College is accredited by the Higher Learning Commission and other special accrediting bodies.

Students who plan to transfer to another college or university after they graduate, should select Casper College courses in accordance with the requirements of the schools to which they plan to transfer and consult with their transfer institution. Student Success Center professionals, who are located in the Nolte Gateway Center, third floor, are good resources for transfer information. The following suggestions may assist you with your transfer planning.

- Start planning for your transfer during your freshman year.
- Research in- and out-of-state colleges and universities to compare costs and programs.
- Request an academic catalog and admission materials from institutions you are considering.
- Select a transfer institution by the beginning of your sophomore year.
- Know admission, housing, and financial aid deadlines.
- Select Casper College classes that match your transfer institution's requirements. Their academic catalog and your advisor can help with this process.
- Apply for admission. Allow enough time to complete additional requirements such as a written essay, portfolio of your work, or reference letters. Budget for application fees.
- Send a copy of your Casper College transcript with your application. Your transfer institution will need it to determine which credits will transfer.
- Contact the financial aid office at your transfer institution to inquire about financial aid. Enrollment Services can help in this process.
- Arrange for housing early. Many college towns have housing shortages. Contact the housing office if you plan to live on campus. They may offer special housing arrangements for upper-classmen including single rooms.
- Have your official Casper College transcript sent to your transfer institution after you have completed your last semester.


## Degree Requirements

## Degrees Conferred

Casper College grants six types of degrees: associate of arts, associate of science, associate of business, associate of fine arts, associate degree in nursing, and associate of applied science degrees. Certificates are offered in many areas. There are two types of course requirements.

General education. All students seeking the same degree or certificate are required to take these classes in addition to the classes for their major to meet the college's general education outcomes.

Major requirements. These are classes required for a major. For example, communication majors are required to take classes in public speaking, interpersonal communication, communication theory, and mass media.

## Application for Graduation

Casper College awards degrees and certificates for eligible candidates for graduation at the end of each semester (fall, spring, and summer). A candidate for graduation must file an application for graduation with the Records Office by the published deadline, which is December 1 for December graduation, April 1 for May graduation, and July 16 for August graduation. The form is available at www.caspercollege.edu/offices-services/records. A degree or certificate check and an application for graduation must be completed and on file with the records office before the candidate registers for the final semester. Enrollment Services determines eligibility for graduation.

A commencement ceremony is held at the end of the spring semester for students who were eligible for graduation within the year. Watch for signs posted around campus for deadlines to order your cap and gown, usually around mid-March. Candidates may order announcements through the Jack McCann Campus Store.

## Academic Catalog Governing Graduation

Students are expected to fulfill the requirements for graduation stated in the Academic Catalog in effect at the time of their graduation. They may elect to fulfill the requirements for graduation in the Academic Catalog in effect at the time they first enrolled as a degree-seeking student in their program if they have not interrupted that program for more than one year.

## Institutional Requirements

To graduate from Casper College a student must:

- Complete a minimum of 60 approved semester credits with a grade point average of 2.0 or higher in those courses counted toward graduation.
- Earn at least 15 of the semester credits applied toward graduation through the completion of Casper College coursework, including at least six hours within the desired major. The vice president for academic affairs may waive this requirement.
- Complete at least one physical education activity course. (The associate degree in nursing is exempt from this requirement.) The college will waive this requirement for any student who presents a physician's statement of medical restriction to Enrollment Services. No more than four semester credits in physical activity courses will count toward an associate degree.
- Students who have earned a C or better in a college level political science or history course that covered the U.S. constitution may be able to take POLS 1100 Wyoming Government (1CR) in lieu of one of the courses used to satisfy the U.S. and Wyoming constitutions course requirement. Students must receive a C or better in POLS 1100 to satisfy the requirement. Call the Political Science Department at 307-268-2368 to request permission to take POLS 1100 or to schedule an appointment.
- Complete the requirements for one of the six degrees listed in this section, (e.g., A.A., A.S., A.B.A., A.D.N., A.F.A., and A.A.S.).
- If the student is seeking a second associate's degree, the student must complete all general and departmental degree requirements and 15 semester credits beyond the study requirements of the first degree.


## General Education Philosophy Statement, Outcomes, and Requirements (GERs)

While education within a major field of study prepares each student to achieve success within a chosen vocation, general education provides the cornerstone of understanding in areas that prepare students for life. The goal of general education is to provide the skills necessary for one to be an educated member of society. Therefore, as a fundamental part of their education at Casper College, graduates are expected to possess the following core abilities, commonly termed institutional learning outcomes.

Students will be able to

- Demonstrate effective communication
- Apply scientific methods
- Solve problems using critical thinking and creativity
- Demonstrate knowledge of diverse cultures and historical perspectives
- Appraise creative and/or aesthetic activities
- Use information to conduct research
- Analyze the importance of personal, civic, and social responsibilities
- Use quantitative analytical skills to evaluate and process data

General Education Course Requirements are criteria established by Faculty Senate to apply when considering if a course should be designated as a general education course. These criteria include reasoning and inquiry in science, math computation, communication, human behavior, and cultural environment.

## Reasoning and Inquiry in Science

As a result of completing general education courses in this area, students will be able to comprehend and apply the basic principles of science and scientific inquiry methods.

## Evaluation Criteria:

Comprehension: define central facts, concepts, and theories of the physical universe and understand the mechanics (chemical, physical, biological) of the natural world.

Application: execute laboratory exercises, document and evaluate empirical observations, and implement the scientific method and creative thinking.

Inquiry: exercise critical thinking in the evaluation of current science, gather, assess and weigh evidence, and demonstrate the ability to locate, evaluate, and effectively use and cite scientific literature.

Courses used to satisfy the general education reasoning and inquiry in science requirement for graduation must be selected from the following departments or courses and must include a lab:

Life Science Category: biology (BIOL), environment and natural resources (ENR), life science (LIFE), molecular biology (MOLB), zoology (ZOO)

Physical Science Category: astronomy (ASTR), atmospheric science (ATSC), chemistry (CHEM), geology (GEOL), GEOG 1010, physics (PHYS),

## Math Computation

As a result of completing general education courses in this area, students will be able to comprehend and use quantitative
concepts and methods to interpret and critically evaluate data and effectively problem-solve in a variety of contexts demanding quantitative literacy.

## Evaluation Criteria:

Comprehension and Application: implement appropriate use of operators and formulas and solve quantitative exercises with mathematical concepts, tools, and methods.

Interpretation and Evaluation: demonstrate logical reasoning, read and communicate using the language of mathematics, and assess nature or importance of quantitative data.

Problem Solving: formulate and implement strategies incorporating math, statistics, logic, and probability and address real-world situations using computational analysis.

Courses used to satisfy the math computation requirement for graduation must be selected from the following departments or courses: business administration BADM 1005 (AAS degree only), mathematics (MATH), or statistics (STAT).

## Communication

As a result of completing general education courses in this area, students will be able to effectively use the English language, writing and speaking with clarity, coherence, and persuasiveness.

## Evaluation Criteria:

Clarity: practice proper grammar, mechanics, and formatting, use proper diction and selection of suitable wording, integrate appropriate visual digital elements such as graphs, tables, and charts, and incorporate audience awareness and adaptation.

Coherence: employ appropriate organization and structure for different forms of communication and practice production of delivery that is effective for a specific audience or occasion.

Persuasiveness: apply critical and creative thinking through the use of logic, evidence, and appeals, use citation, sources, and documentation, and exhibit the ability to locate, evaluate, and effectively use source materials.

Courses used to satisfy the communication requirement for graduation must be selected from the following departments or courses: BADM 1020, BOTK 1540, communication (COMM), COMM 2010, ENGL 1010, ENGL 1020, ENGL 2205 or ENGL 2020. Students in A.A., A.S., A.D.N., and A.B. degrees are required to complete ENGL 1010 and need to verify with their advisers which second approved English composition course they should complete for their specific degree requirements.

## Human Behavior

As a result of completing general education courses in this area, students will have developed a deeper understanding of the relation of self to the world through investigation of the influence of social, cultural, economic, and political institutions in shaping human thought, value, and behavior.

## Evaluation Criteria:

Relation of Self to the World: examine human values, ideas, and experiences, analyze human ideas, behavior, influence, and social interactions, investigation of world influences, delineate and examine intersections of social, cultural, economic, and political institutions, explore different forms of self and cultural expression through artifacts, and exhibit the ability to locate, evaluate, and effectively use source materials.

Shaping Human Thought, Value, and Behavior: compare different methods and theories to interpret and explain human events and cultures and examine the role of diversity in human societies and its impact on global change.

Courses used to satisfy the human behavior requirement for graduation must be selected from the following departments or courses: AGEC 1010, AGEC 1020, anthropology (ANTH), addictionology (ADDN), criminal justice (CRMJ), economics (ECON), GNDR 1000, geography (GEOG), history (HIST), political science (POLS), psychology (PSYC), or sociology (SOC).

The following courses can be used to satisfy the U.S. and Wyoming Constitutions requirement for graduation: HIST 1211, HIST 1221, HIST 1251, POLS 1000, or POLS 1100 (by instructor permission only).

## Cultural Environment

As a result of completing general education courses in the fine arts concentration area, students will have a deeper appreciation and understanding of the creative process, the pleasures and challenges of artistic expression, and the role and value of the fine arts in society and culture.

As a result of completing general education courses in the humanities concentration area, students will have a richer understanding of the human condition through investigation, appreciation, and evaluation of the aesthetic, historical, philosophical, and literary dimensions of human experience.

Evaluation Criteria for Fine Arts Concentration:
Artistic Expression: explore, identify, and discuss artistic genres, their pleasures, and their challenges.
Creative Process: practice and assess the creative process and expression through participation as viewers or creators of artistic objects, texts, or performances.

Role and Value: evaluate the role and value of fine arts in culture and society.
Evaluation Criteria for Humanities Concentration (must use a combination of the following criteria):
Aesthetic Dimension: recognize and articulate the aesthetic value of cultural objects thereby developing a deeper appreciation for them.

Historical Dimension: recognize and interpret historical contexts and relevance of cultural objects.
Philosophical Dimension: examine the development of philosophies and their influence on the aesthetics and content of cultural objects.

Literary Dimension: interpret literary ideas and analyze form and structures of texts.
Courses used to satisfy the cultural environment requirement for graduation must be selected from the following departments or courses: art (ART), AAST 1000, BADM 2050, BADM 2060, COMM 2380, dance (DANC), EDCI 2250, ENGL 1040, ENGL 2006, ENGL 2011, ENGL 2020, ENGL 2050, ENGL 2055, ENGL 2060, ENGL 2080, ENGL 2130, ENGL 2140, ENGL 2150, ENGL 2185, ENGL 2210, ENGL 2220, ENGL 2225, ENGL 2230, ENGL 2235, ENGL 2270, ENGL 2310, ENGL 2320, ENGL 2350, ENGL 2440, humanities (HUMN), INST 2350, philosophy (PHIL), music (MUSC) [a maximum of four credit hours in music studio and ensembles], POLS 2290, POLS 2460, RELI 1000, theatre (THEA), WMST 1080, WMST 2020, WMST 2021, WMST 2025, WMST 2040, or world languages: ASL 1200. ASL 1220, ASL 2200, ASL 2220, French (FREN), German (GERM), Japanese (JAPN), Latin (LATN), Russian (RUSS), or Spanish (SPAN).

## Physical Education

Courses that may be used to satisfy the physical education requirement for graduation must be selected from the following departments or courses: physical education activity (PEAC) and physical education varsity sports (PEAT)

## Associate of Arts, Associate of Business, and Associate of Science Degree Requirements

Students seeking the associate of arts, associate of business, or associate of science degree must complete a minimum of 32 hours in general education at the 1000 level or above, including at least one credit in physical education activity, and a course in the U.S. and Wyoming Constitutions. Students must fulfill the minimum course requirements of categories $1,2,3,4$ and 5 as listed below. Students must select the remainder of their general education from areas one, two, and/or three. Courses can be taken from within or outside the student's major field of study. These degrees are considered transfer degrees.

| Category | Credit |
| :---: | :---: |
| 1. Reasoning and Inquiry in Science (laboratory science) | 4 |
| 2. Math Computation | 3 |
| 3. Communication | 6 |
| 4. Human Behavior | 3 |
| A. U.S. and Wyoming Constitutions course | 3 |
| 5. Cultural Environment | 3 |
| 6. General Education Electives. to be chosen from areas 1, 2, 3, 4, or 5 above | 8-11 |
| 7. Physical Education | 1-2 |
| TOTAL GENERAL EDUCATION (All credit hours must be 1000 level or above) | 32 |
| TOTAL MAJOR REQUIREMENTS | 28 |
| Approved by the academic department |  |
| TOTAL MINIMUM DEGREE CREDITS | 60 |
| Associate of Fine Arts and Associate of Applied Science Degree Requirements |  |
| Students seeking the associate of fine arts or associate of applied science degree must complete a minimum of 17 credits in general education, including a minimum of one credit in physical education activity and a course in the U.S. and Wyoming Constitutions. Students must complete at least one course in each of the three general education areas listed below. Courses can be taken from within or outside the student's major field of study. These degrees are considered nontransferable degrees. |  |
| Category | Credit |
| 1. Reasoning and Inquiry (laboratory science) or Math Computation | 3-4 |
| 2. Communication | 3 |
| 3. Human Behavior |  |
| A. U.S. and Wyoming Constitutions course | 3 |
| 4. Cultural Environment |  |

4. Cultural Environment
5. General Education Electives. To be chosen from area 1, 2, 3, or 4 above ..... 5-11
6. Physical Education ..... 1
TOTAL GENERAL EDUCATION (All credit hours must be 1000 level or higher) ..... 17
TOTAL MAJOR REQUIREMENTS ..... 43
Approved by the academic department
TOTAL MINIMUM DEGREE CREDITS60
Associate Degree in NursingStudents seeking the associate's degree in nursing must complete a minimum of 24 hours in general education at the 1000 levelor above, including a course in the U.S. and Wyoming Constitutions. Students must fulfill the minimum course requirements ofcategories $1,2,3$, and 4 as listed below. Courses can be taken from within or outside the student's major field of study.This degree is considered a transfer degree.
Category Credit
7. Reasoning and Inquiry in Science (Laboratory science) (ZOO 2040, ZOO 2041, and ZOO 2110) ..... 8
8. Math Computation (MATH 1400) ..... 4
9. Communication ..... 6
10. Human Behavior (PSYC 1000) ..... 3
A. U.S. and Wyoming Constitutions course ..... 3
TOTAL GENERAL EDUCATION (All credit hours must be 1000 level or above) ..... 24
TOTAL MAJOR REQUIREMENTS ..... 44
Approved by the academic department
TOTAL MINIMUM DEGREE CREDITS68

## Certificate of Completion

Certificates derive from and are an integral part of our degree programs. To qualify for a certificate of completion, a student must be enrolled as a degree-seeking student and complete one of the certificate programs listed under the various department curricula with a grade point average of 2.0 or better.

## Course Abbreviations

| AAST | African American Studies |
| :--- | :--- |
| ACCT | Accounting |
| ADDN | Addictionology |
| AECL | Agroecology |
| AGEC | Agriculture Economics |
| AGRI | Agriculture |
| AGTK | Agriculture Technology |
| ANSC | Animal Science |
| ANTH | Anthropology |
| ART | Art |
| ASL | American Sign Language |
| ASTR | Astronomy |
| ATEC | Assistive Technology |
| ATSC | Atmospheric Science |
| AUBR | Auto Body Repair |
| AUTO | Automotive |
| AVTN | Aviation |
| BADM | Business Administration |
| BANK | Banking |
| BIOL | Biology |
| BOTK | Business Office Technology |
| BUSN | Business |
| CE | Civil Engineering/Cultural Environment |
|  | Requirement |
| CHEM | Chemistry |
| CHIN | Chinese |
| CMAP | Computer Applications |
| CNSL | Counseling |
| CNTK | Construction Technology |
| COMM | Communication and Mass Media |
| COSC | Computer Science |
| COTA | Certified Occupational Therapy Assistant |
| CRMJ | Criminal Justice |
| CROP | Crop Science |
| CSCO | Cisco |
| CSEC | Computer Security |
| DANC | Dance |
| DESL | Diesel Technology |
| ECON | Economics |
| EDCI | Curriculum and Instruction |
| EDEC | Early Childhood |
| EDEL | Education/Elementary |
| EDEX | Exceptional Children |
| EDFD | Education Foundations |
| EDUC | Education |
| ELAP | Electrical Apprenticeship |
| ELTR | Electronics |
| EMGT | Emergency Management |
| EMT | Emergency Medical Technician |
| ENGL | English |
|  |  |


| ENR | Environmental and Natural Resources |
| :---: | :---: |
| ENTK | Engineering Technology |
| ENTO | Insect Biology |
| ENVT | Environmental Science |
| ES | Engineering Science |
| EXTR | Extractive Resources |
| FCSC | Family and Consumer Science |
| FDSC | Food Science |
| FIN | Finance |
| FIRE | Fire Technology |
| FREN | French |
| GEOG | Geography |
| GEOL | Geology |
| GERM | German |
| GNDR | Gender |
| HIST | History |
| HLED | Physical and Health Education |
| HLTK | Health Technology |
| HMDV | Human Development |
| HMSV | Human Service |
| HOSP | Hospitality |
| HUMN | Humanities |
| IMGT | Information Management |
| INET | Internet |
| INST | International Studies |
| ITEC | Instructional Technology |
| JAPN | Japanese |
| KIN | Kinesiology |
| LEGL | Legal Assistance |
| LIFE | Life Science |
| MATH | Mathematics |
| MCHT | Machine Tool Technology |
| MGT | Management |
| MKT | Marketing |
| MLTK | Medical Laboratory Technician |
| MOLB | Molecular Biology |
| MUSC | Music |
| NRST | Nursing Studies |
| OCTH | Occupational Therapy |
| PEAC | Physical Education Activities |
| PEAT | Physical Education Varsity Sports |
| PEPR | Professional Physical Education |
| PHIL | Philosophy |
| PHLB | Phlebotomy |
| PHTK | Pharmacy Technology |
| PHYS | Physics |
| POLS | Political Science |
| PSYC | Psychology |
| PTEP | Paramedic Technology |
| RDTK | Radiologic Technology |
| RELI | Religion |
| RESP | Respiratory Therapy |
| RETK | Renewable Energy Technology |
| REWM | Range Management |

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ROBO Robotics
RUSS Russian
SOC Sociology
SOIL Soil Science
SOWK Social Work
SPAN Spanish
STAT Statistics
THEA Theatre and Dance
WELD Welding Technology
WMST Women's Studies
ZOO Zoology
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# Degree Certificates \& Programs 

Accounting, A.B.<br>Freshman Year Fall Semester (15 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2350 - Business Calculus (4CR)


## Spring Semester (17 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- COMM 0000 - Written and Oral Communications Requirement (3CR)
- COMM 2010 - Public Speaking (3CR)
- ECON 1010 - Macroeconomics (3CR)
- MATH 2355 - Mathematical Applications for Business (4CR)


## Sophomore Year <br> Fall Semester (17 credits)

- ACCT 2230 - Intermediate Accounting I (4CR)
- BADM 2010 - Legal Environment of Business (3CR)
- ECON 1020 - Microeconomics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Spring Semester (14 credits)

- ACCT 2420 - Intermediate Accounting II (4CR)
- MGT 2100 - Principles of Management (3CR) or
- MKT 2100 - Principles of Marketing (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Program Total: 63 credits

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Addiction Studies Certificate

First Semester (12 Credits)

- ADDN 1020 - Foundations of Substance Use Disorders Counseling I (3CR)
- ADDN 2005 - Group Process (3CR)
- PSYC 1000 - General Psychology (3CR)
- PSYC 2155 - Motivational Interviewing (3CR)


## Second Semester (15 Credits)

- ADDN 2010 - Addictions Assessment (3CR)
- ADDN 2100 - Foundations of Substance Use Disorder Counseling II (3CR)
- PSYC 2050 - Introductory Counseling/Clinical Theories (3CR)
- PSYC 2080 - Biological Psychology (3CR)
- PSYC 2210 - Drugs and Behavior (3CR)

Third Semester (15 Credits)

- ADDN 2015 - Ethics and Professional Issues (3CR)
- PSYC 2340 - Abnormal Psychology (3CR)
- ADDN 1050 - Crime and Drugs (3CR)
- ADDN 1520 - Anger, Addiction and Trauma (3CR)

Total Program Credits (41 Credits)

Note:
The certificate program is only available to students who have previously earned a degree in another major area. The normal length of this program is nine months.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Addiction Studies, A.S.

## Freshman Year

Fall Semester (16 Credits)

- ADDN 1020 - Foundations of Substance Use Disorders Counseling I (3CR)
- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (3CR) Choose from the following: ECON 1010, SOC 1000, SOWK 2000, STAT 2050, STAT 2070
- PSYC 1000 - General Psychology (3CR)


## Spring Semester (18 Credits)

- ADDN 2100 - Foundations of Substance Use Disorder Counseling II (3CR)
- CE 0000 - Cultural Studies Requirement (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 1000 - Problem Solving (3CR)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 2155 - Motivational Interviewing (3CR)


## Sophomore Year

## Fall Semester (21 Credits)

- ADDN 2005 - Group Process (3CR)
- ADDN 2010 - Addictions Assessment (3CR)
- GEL 0000 - General Electives (3CR) Choose from the following: ECON 1010, SOC 1000, SOWK 2000, STAT 2050, STAT 2070
- PEL 0000 - Program Electives (3CR) Choose from the following: ADDN 1050, ADDN 1520, PSYC 2260, PSYC 2300
- PSYC 2050 - Introductory Counseling/Clinical Theories (3CR)
- PSYC 2080 - Biological Psychology (3CR)
- PSYC 2210 - Drugs and Behavior (3CR)


## Spring Semester (16 Credits)

- ADDN 2015 - Ethics and Professional Issues (3CR)
- ADDN 2470 - Addiction Practicum (3CR)
- GEL 0000 - General Electives (3CR) Choose from the following: ECON 1010, SOC 1000, SOWK 2000, STAT 2050, STAT 2070
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR) Choose from the following: ADDN 1050, ADDN 1520, PSYC 2260, PSYC 2300
- PSYC 2340 - Abnormal Psychology (3CR)


## Total Program Credits (71 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Agribusiness, A.A.S. <br> Freshman Year <br> Fall Semester (16 Credits)

- AGEC 1010 - Agricultural Macroeconomics (3CR)
- AGRI 1010 - Introduction to Agricultural Technology (2CR)
- AECL 1000 - Agroecology (4CR)
- ANSC 1010 - Intro to Animal Science (4CR) or
- SOIL 2010 - Introduction to Soil Science (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (16-17 Credits)

- AGEC 1020 - Agricultural Microeconomics (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEOG 1100 - Intro to GIS (4CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)
- PEL 0000 - Program Electives (3CR)


## Sophomore Year Fall Semester (16 Credits)

- ACCT 1005 - Practical Accounting (4CR) or
- ACCT 2010 - Principles of Accounting I (4CR)
- AGEC 2010 - Farm-Ranch Business Records (3CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- PEL 0000 - Program Electives (4CR)


## Spring Semester (14-15 Credits)

- AGEC 2020 - Farm-Ranch Business Management (4CR) or
- AGEC 2300 - Agricultural Marketing (3CR)
- HU - Human Behavior Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (7CR)


## Program Electives

- ACCT 2010 - Principles of Accounting I (4CR)
- ACCT 2020 - Principles of Accounting II (4CR)
- COMM 1030 - Interpersonal Communication (3CR)
- COMM 2010 - Public Speaking (3CR)
- Choose from any course(s) with the following prefixes: AECL, AGRI, AGTK, ANSC, CROP, FDSC, REWM, SOIL, BADM, MGT, MKT


## Total Program Credits (62-64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Agribusiness, A.S. <br> Freshman Year <br> Fall Semester (16 Credits)

- AGEC 1010 - Agricultural Macroeconomics (3CR)
- AGRI 1010 - Introduction to Agricultural Technology (2CR)
- LS 0000 - Lab Science Requirement (life Science) (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR) or higher


## Spring Semester (17 Credits)

- AGEC 1020 - Agricultural Microeconomics (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 2350 - Business Calculus (4CR)
or
- LS 0000 - Lab Science Requirement (Physical Science) (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (12 Credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- AGEC 2010 - Farm-Ranch Business Records (3CR)
- PEL 0000 - Program Electives (5CR)


## Spring Semester (15 Credits)

- AGEC 2020 - Farm-Ranch Business Management (4CR)
- AGEC 2300 - Agricultural Marketing (3CR)
- HU - Human Behavior Requirement (3CR)
- PEL 0000 - Program Electives (5CR)


## Program Electives

- ACCT 2020 - Principles of Accounting II (4CR)
- AECL 1000 - Agroecology (4CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- AGRI 2000 - Agricultural Chemicals I (3CR)
- AGRI 2010 - Agricultural Chemicals II (3CR)
- AGTK 1570 - Horseshoeing (2CR)
- AGTK 1580 - Introduction to Outdoor Recreation: Guide Outfitting (3CR)
- AGTK 1590 - Packing and Outfitting (2CR)
- ANSC 1220 - Livestock Judging II (Advanced) (3CR)
- ANSC 2020 - Feeds and Feeding (4CR)
- ANSC 1010 - Intro to Animal Science (4CR)
- ANSC 1020 - Livestock Production II (3CR)
- ANSC 1030 - Equine Management (3CR)
- ANSC 1200 - Livestock Fitting and Showing (2CR)
- ANSC 1210 - Livestock Judging I (3CR)
- ANSC 2110 - Beef Production (3CR)
- ANSC 2120 - Sheep Production (3CR)
- ANSC 2130 - Swine Production (3CR)
- ANSC 2230 - Livestock Judging III (2CR)
- BADM 2100 - Small Business Practices (2CR)
- BADM 2195 - Entrepreneurship (3CR)
- BADM 2245 - Real Estate Law (3CR)
- BADM 1000 - Intro to Business (3CR)
- BADM 1020 - Business Communications (3CR)
- BADM 1025 - Entrepreneurial Finance (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- BADM 2040 - E-commerce (3CR)
- BANK 1500 - Principles of Banking (3CR)
- FDSC 2100 - Principles of Meat Science (3CR)
- MATH 2350 - Business Calculus (4CR)
- REWM 2000 - Principles of Range Management (3CR)
- SOIL 2010 - Introduction to Soil Science (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Agricultural Communications,

 A.S.Freshman Year Fall Semester (17 Credits)

- ANSC 1010 - Intro to Animal Science (4CR) or
- AECL 1000 - Agroecology (4CR)
- BIOL 1000 - Introduction to Biology I (4CR)
- COMM 2010 - Public Speaking (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR)


## Spring Semester (14 Credits)

- COMM 1000 - Intro to Mass Media (3CR)
- LS 0000 - Lab Science Requirement (Physical Science) (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- GEL 0000 - General Electives (3CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions Requirement (3CR)


## Sophomore Year Fall Semester (15 Credits)

- AGEC 1010-Agricultural Macroeconomics (3CR)
- COMM 1040 - Intro to Human Communication (3CR)
- COMM 2100 - Reporting and News Writing (3CR)
- PEL 0000 - Program Electives (6CR)


## Spring Semester (14 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- COMM 2320 - Intro to Social Media (3CR)
- CE 0000 - Cultural Studies Requirement (3CR)
- PEL 0000 - Program Electives (5CR)


## Electives

- AGEC 1020 - Agricultural Microeconomics (3CR)
- AGEC 2300 - Agricultural Marketing (3CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- AGRI 2000 - Agricultural Chemicals I (3CR)
- AGRI 2010 - Agricultural Chemicals II (3CR)
- AGRI 2475 - Independent Study in Agriculture (1-3CR) (Max. 3)
- ANSC 1030 - Equine Management (3CR)
- ANSC 1100 - Artificial Insemination (1CR)
- ANSC 1150 - Animal Diseases (2CR)
- ANSC 1200 - Livestock Fitting and Showing (2CR)
- ANSC 1210 - Livestock Judging I (3CR)
- ANSC 1220 - Livestock Judging II (Advanced) (3CR)
- ANSC 2020 - Feeds and Feeding (4CR)
- ANSC 2130 - Swine Production (3CR)
- ANSC 2230 - Livestock Judging III (2CR)
- COMM 2090 - Intro to Persuasion (3CR)
- COMM 2310 - Public Relations (3CR)
- COMM 2190 - Basic Video Production (3CR)
- COMM 2340 - Editing and Production (3CR)
- COMM 2355 - Intro to Photography (3CR) 3
- FDSC 2100 - Principles of Meat Science (3CR)
- REWM 2000 - Principles of Range Management (3CR)
- SOIL 2010 - Introduction to Soil Science (4CR)


## Total Program Credits (60 Credits)

## Note:

The above curriculum meets the requirements for the Associate of Science degree. Substitutions may be made to comply with the requirements of the institution to which a student may desire to transfer.

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Agriculture, A.S.

Freshman Year
Fall Semester (17 Credits)

- ANSC 1010 - Intro to Animal Science (4CR) or
- AECL 1000 - Agroecology (4CR)
- AGRI 1010 - Introduction to Agricultural Technology (2CR)
- BIOL 1000 - Intro to Biology (4CR) or
- BIOL 1010 - General Biology (4 CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)


## Spring Semester (18 Credits)

- BIOL 2022 - Animal Biology (4CR)
- or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year Fall Semester (15 Credits)

- AGEC 1010-Agricultural Macroeconomics (3CR)
or
- AGEC 1020 - Agricultural Microeconomics (3CR)
- GEL 0000 - General Electives (2CR)
- PEL 0000 - Program Electives (10CR)


## Spring Semester (14 Credits)

- AGEC 2020 - Farm-Ranch Business Management (4CR) or
- ANSC 2020 - Feeds and Feeding (4CR)
- PEL 0000 - Program Electives (10CR)


## Program Electives

- AGEC 2010 - Farm-Ranch Business Records (3CR)
- AGEC 2300 - Agricultural Marketing (3CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- AGTK 1570 - Horseshoeing (2CR)
- AGTK 1580 - Introduction to Outdoor Recreation: Guide Outfitting (3CR)
- AGTK 1590 - Packing and Outfitting (2CR)
- ANSC 1030 - Equine Management (3CR)
- ANSC 1020 - Livestock Production II (3CR)
- ANSC 1100 - Artificial Insemination (1CR)
- ANSC 1160 - Issues in Agriculture (3CR)
- ANSC 1200 - Livestock Fitting and Showing (2CR)
- ANSC 1210 - Livestock Judging I (3CR)
- ANSC 1220 - Livestock Judging II (Advanced) (3CR)
- ANSC 2020 - Feeds and Feeding (4CR)
- ANSC 2110 - Beef Production (3CR)
- ANSC 2120 - Sheep Production (3CR)
- ANSC 2130 - Swine Production (3CR)
- ANSC 2230 - Livestock Judging III (2CR)
- BIOL 2022 - Animal Biology (4CR)
- BIOL 2023 - Plant and Fungal Biology (4CR)
- COMM 1030 - Interpersonal Communication (3CR)
- COMM 2010 - Public Speaking (3CR)
- CROP 2200 - Forage Crop Science (4CR)
- EDEX 2484 - Intro to Special Education (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- EDFD 2100 - Educational Psychology (3CR)
- FDSC 2040 - Principles of Meat Animal Evaluation (3CR)
- FDSC 2100 - Principles of Meat Science (3CR)
- ITEC 2360 - Teaching with Technology (3CR)
- REWM 2000 - Principles of Range Management (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- PSYC 1000 - General Psychology (3CR)
- SOIL 2010 - Introduction to Soil Science (4CR)


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

# American Sign Language Studies, A.A. 

Freshman Year
Fall Semester (15-16 Credits)

- ASL 1010 - American Sign Language I (4CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (16 Credits)

- ASL 1020 - American Sign Language II (4CR)
- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
or
- SOC 1000 - Sociological Principles (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COMM 1030 - Interpersonal Communication (3CR)
- PEL 0000 - Program Electives (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- ASL 2030 - American Sign Language III (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (13 Credits)

- ASL 2040 - American Sign Language IV (4CR)
- PEL 0000 - Program Electives (6CR) (3CR from Diversity in the World) (3CR from U.S. Diversity)
- GEL 0000 - General Electives (3CR)


## Approved Program Electives

- THEA 1100 - Beginning Acting (3CR)
- Communications Courses
- Gender Studies
- Women's Studies

Diversity in the World (min one course)

- INST 2350 - Introduction to Global Studies (3CR)
- POLS 1200 - Non-Western Political Cultures (3CR)
- POLS 2290 - Governments and Politics of Latin America (3CR)
- RELI 1000 - Introduction to Religion (3CR)
- Any other World Language (4CR)

Diversity in the U.S. (min one course)

- AAST 1000 - Intro to African American Studies (3CR)
- EDCI 2250 - Diversity in Education (3CR)
- WMST 1080 - Introduction to Women's Studies (3CR)
- WMST 2020 - Women and Food (3CR)
- WMST 2310 - History of Women in America (3CR)


## Total Program Credits (60 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Animal Science Technology, A.A.S. <br> Freshman Year <br> Fall Semester (17 Credits)

- AECL 1000 - Agroecology (4CR) or
- CROP 2200 - Forage Crop Science (4CR)
- AGRI 1010 - Introduction to Agricultural Technology (2CR)
- ANSC 1010 - Intro to Animal Science (4CR)
- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010- General Biology I (4CR)
- COMM 0000 - Written or Oral Communication Requirement (3CR)

Spring Semester (15 Credits)

- ANSC 1020 - Livestock Production II (3CR)
- ANSC 1030 - Equine Management (3CR)
- ANSC 2120 - Sheep Production (3CR)
or
- ANSC 2130 - Swine Production (3CR)
- GEL 0000 - General Electives (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- AGEC 2010 - Farm-Ranch Business Records (3CR)
- ANSC 2110 - Beef Production (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- REWM 2000 - Principles of Range Management (3CR)
- PEL 0000 - Program Electives (5CR)


## Spring Semester (14 Credits)

- ANSC 2020 - Feeds and Feeding (4CR)
- AGEC 2020 - Farm-Ranch Business Management (4CR)
- PEL 0000 - Program Electives (6CR)


## Program Electives:

- AGEC 1020 - Agricultural Microeconomics (3CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- AGRI 2475 - Independent Study in Agriculture (1-3CR) (Max. 3)
- AGTK 1570 - Horseshoeing (2CR)
- AGTK 1580 - Introduction to Outdoor Recreation: Guide Outfitting (3CR)
- AGTK 1590 - Packing and Outfitting (2CR)
- ANSC 1100 - Artificial Insemination (1CR)
- ANSC 1160 - Issues in Agriculture (3CR)
- ANSC 1200 - Livestock Fitting and Showing (2CR)
- ANSC 1210 - Livestock Judging I (3CR)
- ANSC 1220 - Livestock Judging II (Advanced) (3CR)
- ANSC 2230 - Livestock Judging III (2CR)
- BIOL 2022 - Animal Biology (4CR)
- FDSC 2040 - Principles of Meat Animal Evaluation (3CR)
- FDSC 2100 - Principles of Meat Science (3CR)


## Total Program Credits (63 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Animal Science, A.S.

## Freshman Year <br> Fall Semester (15 Credits)

- ANSC 1010 - Intro to Animal Science (4CR)
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)


## Spring Semester (17 Credits)

- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 0000 - Written and Oral Communications Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR) Choose from the following course prefixes: ANSC, AGRI, AGEC, AGTK, REWM, CROP, AECL, BIOL, FDSC, SOIL, ZOO, MOLB, PHYS
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year

Fall Semester (12 Credits)

- AGEC 1010-Agricultural Macroeconomics (3CR)
- or
- AGEC 1020 - Agricultural Microeconomics (3CR)
- FDSC 2040 - Principles of Meat Animal Evaluation (3CR)
- PEL 0000 - Program Electives (6CR) Choose 6 credits from the following courses:
- AGEC 2010 - Farm-Ranch Business Records (3CR)
- AGEC 2020 - Farm-Ranch Business Management (4CR)
- ANSC 2110 - Beef Production (3CR)
- ANSC 2120 - Sheep Production (3CR)
- ANSC 2130 - Swine Production (3CR)
- ANSC 1020 - Livestock Production II (3CR)
- ANSC 1030 - Equine Management (3CR)
- REWM 2000 - Principles of Range Management (3CR)


## Spring Semester (16 Credits)

- ANSC 2020 - Feeds and Feeding (4CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (9CR) Choose from the following course prefixes: ANSC, AGRI, AGEC, AGTK, REWM, CROP, AECL, BIOL, FDSC, SOIL, ZOO, MOLB, PHYS


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Anthropology, A.A.

## Freshman Year

 Fall Semester (17 Credits)- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- ANTH 2210 - North American Indians (3CR) or
- RELI 1000 - Introduction to Religion (3CR)
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- WL 0000 - World Language (4CR)


## Spring Semester (16 Credits)

- ANTH 1100 - Introduction to Biological Anthropology (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 1000 - Problem Solving (3CR) (or higher)
- SOC 1000 - Sociological Principles (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- BIOL 2022 - Animal Biology (4CR)
- HIST 1110 - Western Civilization I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (13 Credits)

- ANTH 1300 - Introduction to Archaeology (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- HIST 1120 - Western Civilization II (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Applied Statistics Certificate Certificate Requirements

- STAT 2000 - Statistics and the World (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)
- STAT 2120 - Applied Sampling Methods (5CR) **
or
- STAT 2240 - Applied Categorical Data Analysis (5CR) ***
- STAT 2150 - Applied Statistical Methods of Data Analysis (4CR)
- STAT 2220 - Applied Experimental Design (5CR) *


## Total Certificate Credits (21 Credits)

Note:
The normal length of this program is two years.

* Students desiring upper division credit (UW) must register for STAT 4025 (UW/CC) and STAT 2221. Taken concurrently these courses are equivalent to STAT 2220. **Students desiring upper division credit (UW) must register for STAT 4155 (UW/CC) and STAT 2121. Taken concurrently these courses are equivalent to STAT 2120. ***Students desiring upper division credit (UW) must register for STAT 4045 (UW/CC) and STAT 2241. Taken concurrently these courses are equivalent to STAT 2240.


## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Applied Statistics, A.S.

Freshman Year
Fall Semester (17 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1400 - College Algebra (4CR) (or higher)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)
- GEL 0000 - General Electives (4CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- GEL 0000 - General Electives (4CR)
- PEL 0000 - Program Electives (4 CR)
- STAT 2150 - Applied Statistical Methods of Data Analysis (4CR)
- STAT 2000 - Statistics and the World (3CR) Or
- STAT 2120 - Applied Sampling Methods (5CR) or
- STAT 2240 - Applied Categorical Data Analysis (5CR)


## Spring Semester (14 Credits)

- STAT 2215 - Applied Linear Regression (5CR)
- STAT 2220 - Applied Experimental Design (5CR)
- PEL 0000 - Program Electives (4 CR)


## Electives:

- COSC 1010 - Introduction to Computer Science (4CR)
- COSC 1030 - Computer Science I (4CR)
- ENGL 2005 - Writing in Technology and the Sciences (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2200 - Calculus I (4CR)
or
- MATH 2350 - Business Calculus (4CR)
- PSYC 2000 - Research Psychological Methods (4CR)
- STAT 2120 - Applied Sampling Methods (5CR) **
- STAT 2240 - Applied Categorical Data Analysis (5CR) ***
- STAT 2485 - Statistics Laboratory (2CR)


## Total Program Credits (62 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

All classes in the major must be passed with a "C" or better.

* Students desiring upper division credit (UW) must register for STAT 4025 (UW/CC) and STAT 2221. Taken concurrently these courses are equivalent to STAT 2220.
**Students desiring upper division credit (UW) must register for STAT 4155 (UW/CC) and STAT 2121. Taken concurrently these courses are equivalent to STAT 2120.
***Students desiring upper division credit (UW) must register for STAT 4045 (UW/CC) and STAT 2241. Taken concurrently these courses are equivalent to STAT 2240.


## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Architectural Graphics and Design Certificate

## Freshman Year

Fall Semester (7 credits)

- ENTK 1500 - Engineering Graphics (4CR)
- CNTK 2510 - Construction Estimating (3CR)


## Spring Semester (7 credits)

- ENTK 1021 - Descriptive Geometry (3CR)
- ENTK 1710 - Architectural Drafting I (4CR)


## Sophomore Year <br> Fall Semester (7-8 credits)

- ENTK 2600 - Construction Documents (4CR)
- PEL 0000 - Program Electives (3-4CR)

Choose one course from the following: CNTK 1700, CNTK 1870, CNTK 1905, CNTK 2520, CNTK 2525

## Spring Semester (7-8 credits)

- ENTK 1720 - Architectural Drafting II (4CR)
- PEL 0000 - Program Electives (3-4CR) Choose one course from the following: CNTK 1700, CNTK 1870, CNTK 1905, CNTK 2520, CNTK 2525


## Program Total (28-30 credits)

## Note:

*These courses are often completed by students previous to being a degree seeking student at Casper College and are included in the Engineering Technology and Design, A.A.S. degree as well.

This program cannot be completed in nine months due to the sequence of classes.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Art Education, A.F.A.

## Freshman Year Fall Semester (18 Credits)

- ART 0200 - Convocation (0CR)
- ART 1005 - Drawing I (3CR)
- ART 1130 - Foundation: Color Theory (3CR)
- ART 2010 - Art History I (3CR)
- ART 2090 - Printmaking (3CR)
- ENGL 1010 - English Composition I (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (15-16 Credits)

- ART 1110 - Foundation: Two-Dimensional (3CR)
- ART 1120 - Foundation: Three Dimensional (3CR)
- ART 2020 - Art History II (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR) (both math and lab science recommended)


## Sophomore Year

Fall Semester (18 Credits)

- ART 1115 - Digital Media (3CR)
- ART 2035 - Art History III (3CR)
- ART 2310 - Sculpture I (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- ITEC 2360 - Teaching with Technology (3CR)


## Spring Semester (14 Credits)

- ART 2073 - Introduction to Art Education (3CR)
- ART 2141 - Professional Practice in the Arts (1CR)
- ART 2210 - Painting I (3CR)
- ART 2410 - Ceramics I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (65-66 Credits)

## Note:

The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Art, A.A.

## Freshman Year <br> Fall Semester (15 Credits)

- ART 0200 - Convocation (0CR)
- ART 1005 - Drawing I (3CR)
- ART 1110 - Foundation: Two-Dimensional (3CR)
- ART 1130 - Foundation: Color Theory (3CR)
- ART 2010 - Art History I (3CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (12 Credits)

- ART 2020 - Art History II (3CR)
- ART 2310 - Sculpture I (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition (3CR)


## Sophomore Year Fall Semester (17 Credits)

- ART 1120 - Foundation: Three Dimensional (3CR)
- ART 2035 - Art History III (3CR)
- GEL 0000 - General Electives (6CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (3CR)

Spring Semester (16 Credits)

- ART 2210 - Painting I (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Assistive Technology Certificate

## Certificate Requirements

- HLTK 1855 - Assistive Technology Practicum (3CR)
- HLTK 1860 - Introduction to Human Disease (3CR)
or
- HLTK 2560 - The Interprofessional Health Care Team (3CR) (for those students that have completed COTA 2420)
- HLTK 1870 - Professionalism in Healthcare (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Note:

The normal length of this program is 16 weeks.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Athletic Training, A.S.

## Freshman Year

Fall Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- KIN 1020 - Taping and Wrapping of Injuries (1CR)
- KIN 1052 - Introduction to Athletic Training (3CR)
- MATH 1400 - College Algebra (4CR)
- KIN 1005 - Introduction to Kinesiology and Health Promotion


## Spring Semester (14 Credits)

- COMM 2010 - Public Speaking(3CR)
- FCSC 1141 - Principles of Nutrition (3CR) or
- PEPR 2136 - Sports Nutrition (3CR)
- KIN 2068 - Athletic Training Clinical I (1CR)
- PSYC 1000-General Psychology (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- KIN 2058 - Assessment and Evaluation of Athletic Injuries/Illness II (3CR)
- KIN 2078 - Athletic Training Clinical II (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000- Program Electives (3CR from HLED 1006, HLTK 1200, or PEPR 2030)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (14 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- CHEM 1000 - Intro to Chemistry (4CR) or
- CHEM 1020 - Chemistry I (4CR)
or
- PHYS 1050 - Concepts of Physics (4CR)
or
- PHYS 1110 - General Physics I (4CR)
- KIN 2050 - Functional Kinesiology (3CR)
- KIN 2057 - Assessment and Evaluation of Athletic Injuries/Illness I (3CR)
- KIN 2098 - Athletic Training Clinical III (1CR)


## Total Program Credits (60 Credits)

Note:
Students who plan to transfer to the University of Wyoming are advised that UW requires CHEM 1000 Basic Chemistry and CHEM 1006 Basic Chemistry Lab. Major courses listed are designed to fit a variety of transfer programs. Students transferring to specific Baccalaureate programs at other institutions should provide their academic advisor with a copy of that program to ensure proper transfer of courses (some substitution of courses will be allowed).

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Auto Body Repair Technology Certificate

Freshman Year
Fall Semester (19.5 credits)

- AUBR 1540 - Auto Body Welding (3CR)
- AUBR 1550 - Auto Body Repair I (5CR)
- AUBR 1810 - Collision Damage Repair I (4CR)
- AUBR 1910 - Auto Paint I (5CR)
- WELD 1820 - GMAW and GTAW Welding (2.5CR)


## Spring Semester (19.5 credits)

- AUBR 1560 - Auto Body Repair II (5CR)
- AUBR 1710 - Frame and Chassis I (2.5CR)
- AUBR 1820 - Collision Damage Repair II (4CR)
- AUBR 1920 - Auto Paint II (5CR)
- WELD 1910 - Specialized Welding and Joining (3CR)


## Program Total (39 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Auto Body Repair Technology,

## A.A.S.

## Freshman Year <br> Fall Semester (19.5 credits)

- AUBR 1540 - Auto Body Welding (3CR)
- AUBR 1550 - Auto Body Repair I (5CR)
- AUBR 1810 - Collision Damage Repair I (4CR)
- AUBR 1910 - Auto Paint I (5CR)
- AUBR 1920 - Auto Paint II (5CR)
- WELD 1820 - GMAW and GTAW Welding (2.5CR)

Spring Semester (19.5 credits)

- AUBR 1560 - Auto Body Repair II (5CR)
- AUBR 1710 - Frame and Chassis I (2.5CR)
- AUBR 1820 - Collision Damage Repair II (4CR)
- AUBR 1920 - Auto Paint II (5CR)
- WELD 1910 - Specialized Welding and Joining (3CR)


## Sophomore Year <br> Fall Semester (12 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR) (or)
- MATH 0000 - Math Computation (3CR)
- GEL 0000 - General Electives (3CR)


## Spring Semester (12.5 credits)

- AUBR 1975 - Independent Study - Auto Body Repair (3CR) or
- AUBR 1980 - Cooperative Work Experience (3CR)
- WELD 1700 - General Welding (2.5)
- GEL 0000 - General Electives (6CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Total Program Credits (63.5 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Automotive Technology Certificate

## Certificate Requirements

Fall Semester (21 credits)

Students beginning the program in the fall semester will register for the fundamental courses listed below.

- AUTO 1510 - Engine System Fundamentals (6CR)
- AUTO 1690 - Manual Power Train Fundamentals (4CR)
- AUTO 1765 - Automotive Electrical (5CR)
- AUTO 2550 - Auto Alignment and Suspension(4CR)
- AUTO 2980 - Cooperative Work Experience (Automotive) (2CR) required


## Spring Semester (20 credits)

Students will select from the following courses in the spring semester.

- AUTO 1740 - Brake Systems (4CR)
- AUTO 1760 - Heating and Air Conditioning (4CR)
- AUTO 2565 - Advanced Automotive Electrical (5CR)
- AUTO 2610 - Computerized Fuel Systems (5CR)
- AUTO 2980 - Cooperative Work Experience (Automotive) (2CR) required


## Program Total (41 credits)

## Note:

The normal length of this program is typically two semesters

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Automotive Technology, A.A.S.

Freshman Year
Fall Semester (21 credits)

- AUTO 1510 - Engine System Fundamentals (6CR)
- AUTO 1690 - Manual Power Train Fundamentals (4CR)
- AUTO 1765 - Automotive Electrical (5CR)
- AUTO 2550 - Auto Alignment and Suspension (4CR)
- AUTO 2980 - Cooperative Work Experience (Automotive) (2CR) required

Spring Semester (20 credits)

- AUTO 1740 - Brake Systems (4CR)
- AUTO 1760 - Heating and Air Conditioning (4CR)
- AUTO 2565 - Advanced Automotive Electrical (5CR)
- AUTO 2610 - Computerized Fuel Systems (5CR)
- AUTO 2980 - Cooperative Work Experience (Automotive) (2CR) required


## Sophomore Year

 Fall Semester (12 credits)- GEL 0000 - General Electives (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PEL 0000 - Program Electives (6CR) Approved electives may be any other AUBR, AUTO, DESL, ELTR, MCHT and/or WELD courses.


## Spring Semester (12-13 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 0000 - Math Computation (3CR) (or)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (2CR)

Approved electives may be any other AUBR, AUTO, DESL, ELTR, MCHT and/or WELD courses.

## Total Program Credits (66 Credits)

## Note:

The normal length of this program is two academic years.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Aviation Certificate

## Certificate Requirements

- ATSC 2000 Introduction to Meteorology (4CR)
- AVTN 2510 Private Pilot Ground School (3CR)
- AVTN 2520 Private Pilot Flight School (3CR)
- AVTN 2600 Instrument Pilot Ground School (3CR)
- AVTN 2620 Instrument Pilot Flight School (3CR)
- AVTN 2705 Commercial Pilot Ground School (3CR)
- AVTN 2720 Commercial Pilot Flight I (3CR)
- AVTN 2730 Commercial Pilot Flight II (3CR)
- Select any COMM course for 3CR


## Graduation Requirements:

The normal length of this program is nine months

For specific graduation requirements see "Degree Requirements"

Aviation, A.A.S.<br>Freshman Year<br>Fall Semester (14 credits)

- AVTN 2510 - Private Pilot Ground (3CR)
- AVTN 2520 - Private Pilot Flight (3CR)
- FIN 1000 - Personal Finance (3CR)
- ELTR 1540 - Basic AC/DC Electronics (2CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)

Spring Semester (16 credits)

- AVTN 2600 - Instrument Pilot Ground (3CR)
- AVTN 2620 - Instrument Pilot Flight (3CR)
- COMM 0030 - Interpersonal Communications (3CR)
or
- COMM 2010 - Public Speaking (3CR)
- GEOG 1080 - Introduction to GPS and Maps (3CR)
- MGT 2100 - Principles of Management (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Sophomore Year Fall Semester (13-14 credits)

- ATSC 2000 - Introduction to Meteorology (4CR)
- AVTN 2705 - Commercial Pilot Ground (3CR)
- AVTN 2720 - Commercial Pilot Flight I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)


## Spring Semester (16-17 credits)

- AVTN 2730 - Commercial Pilot Flight II (3CR)
- PHYS 1050 - Concepts of Physics (4CR)
- PEL 0000 - Program Electives (9-10CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Biology, A.S.

Freshman Year
Fall Semester (18 Credits)

- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (4CR)


## Spring Semester (14 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEL 0000 - Program Electives (8CR)


## Must choose two of the following three:

- BIOL 2022 - Animal Biology (4CR)
- BIOL 2023 - Plant and Fungal Biology (4CR)
- MOLB 2210 - General Microbiology (4CR)


## Sophomore Year Fall Semester (16 Credits)

- MATH 2200 - Calculus I (4CR)
- PEL 0000 - Program Electives (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1110 - General Physics I (4CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (16 Credits)

- GEL 0000 - General Electives (4CR)
- CHEM 2300 - Intro to Organic Chemistry (4CR)
- PHYS 1120 - General Physics II (4CR)
- PEL 0000 - Program Electives (4CR)


## Program Electives:

Electives may be chosen at the direction of the academic advisor

- CHEM 1030 - Chemistry II (4CR)
- COSC 1010 - Introduction to Computer Science (4CR)
- BIOL 2022 - Animal Biology (4CR)
- BIOL 2023 - Plant and Fungal Biology (4CR)
- MOLB 2210 - General Microbiology (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Total Program Credits (64 Credits)

## Note:

The normal length of this program is two academic years at 14-16 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of

Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Bookkeeper Certificate

## Fall Semester (16 credits)

- BADM 1005 - Business Mathematics I (3CR) or
- MATH 1000 - Problem Solving (3CR)
- BADM 1020 - Business Communications (3CR)
- ACCT 2010 - Principles of Accounting I (4CR)
- ACCT 2110 - QuickBooks Accounting (3CR)
- CMAP 1765 - Spreadsheet Applications (3CR) or
- CMAP 1750 - Excel Basics (1CR)
- CMAP 1755 - Spreadsheet Applications II (1CR)
- CMAP 1760 - Spreadsheet Applications III (1CR)


## Spring Semester (16 credits)

- ACCT 2115 - Advanced QuickBooks (3CR)
- ACCT 2510 - Accounting for Bookkeepers (4CR)
- ACCT 2460 - Payroll Accounting (3CR)
- ACCT 2800 - Certified Bookkeeper Exam Review (3CR)
- CMAP 1200 - Computer Information Systems (3CR)


## Program Total (32 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Bookkeeper, A.A.S.

Freshman Year
Fall Semester (16 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- MATH 1000 - Problem Solving (3CR) (or)
- BADM 1005 - Business Mathematics I (3CR)
- BADM 1020 - Business Communications (3CR)
- ACCT 2110 - QuickBooks Accounting (3CR) (Fall only)
- CMAP 1765 - Spreadsheet Applications (3CR) (or)
- CMAP 1750 - Excel Basics (1CR) AND
- CMAP 1755 - Spreadsheet Applications II (1CR) AND
- CMAP 1760 - Spreadsheet Applications III (1CR)


## Spring Semester (16 credits)

- ACCT 2115 - Advanced QuickBooks (3CR) (Spring only)
- ACCT 2460 - Payroll Accounting (3CR) (Spring only)
- ACCT 2510 - Accounting for Bookkeepers (4CR)
- ACCT 2800 - Certified Bookkeeper Exam Review (3CR)
- CMAP 1200 - Computer Information Systems (3CR)


## Sophomore Year Fall Semester (14 credits)

- COMM 1030 - Interpersonal Communication (3CR)
- ACCT 2230 - Intermediate Accounting I (4CR) (Fall only)
- BADM 2010 - Legal Environment of Business (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- IMGT 2410 - Data Analytics (1CR)


## Spring Semester (12 credits)

- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (3CR)
- MGT 2100 - Principles of Management (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Business Administration, A.B.

Freshman Year
Fall Semester (16 credits)

- CMAP 1200 - Computer Information Systems (3CR)
- ECON 1010 - Macroeconomics (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 2350 - Business Calculus (4CR)
- MGT 2100 - Principles of Management (3CR)


## Spring Semester (16 credits)

- FIN 1000 - Personal Finance (3CR) (or)
- BADM 2030 - Business Ethics (3CR)
- ECON 1020 - Microeconomics (3CR)
- ENGL 1020 - English Composition II (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MATH 2355 - Mathematical Applications for Business (4CR)


## Sophomore Year

Fall Semester (14 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- BADM 2010 - Legal Environment of Business (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) (or)
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Spring Semester (15 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. and Wyoming Constitution Requirement (3CR)


## Total Program Credits (61 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Chemistry, A.S.

## Freshman Year

Fall Semester (17 Credits)

- CHEM 1020 - Chemistry I (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- PEL 0000 - Program Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 Credits)

- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 2200 - Calculus I (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- CHEM 2420 - Organic Chemistry I (4CR)
- GEL 0000 - General Electives (4CR)
- PEL 0000 - Program Electives (5CR)
- PHYS 1310 - College Physics I (4CR)

Spring Semester ( 15 Credits)

- CHEM 2230 - Quantitative Analysis (4CR)
- CHEM 2440 - Organic Chemistry II (4CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (4CR)


## Total Program Credits (64 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

To obtain a degree in chemistry, a student must obtain a grade of "C" or better in all major requirements.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Coaching Certificate

## Fall Semester (7 Credits)

- PEPR 2091 - Sports Officiating I (2CR)
- PEPR 2100-Theory of Coaching: (2CR)
- PSYC 1000-General Psychology (3CR)

Spring Semester (9 Credits)

- PEPR 1052 - Prevention and Care of Athletic Injuries (3CR)
- PEPR 2090 - Foundations of Athletic Coaching (3CR)
- PSYC 2300 - Developmental Psychology (3CR)


## Total Certificate Credits (16 Credits)

Note:
The normal length of this program is nine months.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Cognitive Retraining

## Certificate PROGRAM ON HIATUS:

NO LONGER ACCEPTING STUDENTS

## Communication - Public Relations, A.A.

Freshman Year<br>Fall Semester (16 Credits)

- COMM 1000 - Intro to Mass Media (3CR)
- ENGL 1010 - English Composition I (3CR)
- COMM 2010 - Public Speaking (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR)
or
- Math 1400 - College Algebra (4CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written or Oral Communication Requirement (3CR)
- COMM 2100 - Reporting and News Writing (3CR)
- COMM 2310 - Public Relations (3CR)
- COMM 2390 - Independent Publications (1CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. and Wyoming Constitution Requirement (3CR)


## Sophomore Year

 Fall Semester (15 Credits)- COMM 1030 - Interpersonal Communication (3CR)
- COMM 2090 - Intro to Persuasion (3CR)
- COMM 2010 - Public Speaking (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (15 Credits)

- COMM 1040 - Intro to Human Communication (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (3CR)
- COMM 2320 - Intro to Social Media (3CR)


## Total Program Credits (63 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Communication - Human Communication, A.A.

## Freshman Year

Fall Semester (16 Credits)

- COMM 1000 - Intro to Mass Media (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 0000 - Math Computation (3CR)
- PEL 0000 - Program Electives (3CR) (must come from COMM Department)


## Spring Semester (16 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COMM 2010 - Public Speaking (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR) (must come from COMM Department)
- POLS 0000 - U.S. and Wyoming Constitution Requirement (3CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- COMM 1030 - Interpersonal Communication (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (6CR)
- PEL 0000 - Program Electives (5CR)


## Spring Semester ( 15 Credits)

- COMM 1040 - Intro to Human Communication (3CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (9CR)


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Communication - Journalism,

 A.A.Freshman Year
Fall Semester (16 Credits)

- COMM 1000 - Intro to Mass Media (3CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (16 Credits)

- ART 1115 - Digital Media (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COMM 2100 - Reporting and News Writing (3CR)
- COMM 2390 - Independent Publications (1CR)
- PEL 0000 - Program Electives (6CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- COMM 1030 - Interpersonal Communication (3CR)
or
- COMM 2010 - Public Speaking (3CR)
- COMM 2340 - Editing and Production (3CR)
- COMM 2355 - Intro to Photography (3CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (13 Credits)

- COMM 1040 - Intro to Human Communication (3CR)
- PEL 0000 - Program Electives (6CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. and Wyoming Constitution Requirement (3CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Communication -

 Multimedia, A.A.Freshman Year<br>Fall Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COMM 1000 - Intro to Mass Media (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (15 Credits)

- COMM 2010 - Public Speaking (3CR) or
- COMM 1030 - Interpersonal Communication (3CR)
- GEL 0000 - General Electives (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR)
- POLS 0000 - U.S. and Wyoming Constitution Requirement (3CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- ART 1115 - Digital Media (3CR)
- COMM 2100 - Reporting and News Writing (3CR)
- COMM 2190 - Basic Video Production (3CR)
- GEL 0000-General Electives (3CR)
- PEL 0000 - Program Electives (3CR)
- MUSC 2415 - Sound Reinforcement I (2CR)


## Spring Semester (13 Credits)

- COMM 1040 - Intro to Human Communication (3CR)
- COMM 2200 - Broadcast Production (3CR)
- COMM 2390 - Independent Publications (1CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR)


## Total Program Credits (61 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Community Emergency Medical Services

Certificate Requirements

- PTEP 2961 - Community EMS Technician (4CR)
- PTEP 2962 - Community EMS Technician Clinical (1CR)
- PTEP 2971 - Community EMS Clinician (8CR)
- PTEP 2972 - Community EMS Clinician Clinical (3CR)


## Total Certificate Credits (16 CR)

Note:
The normal length of this program is two semesters.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Computed Tomography

Certificate PROGRAM ON HIATUS:
NO LONGER ACCEPTING STUDENTS

## Computer Science, A.S.

Freshman Year<br>Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2200 - Calculus I (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COSC 1030 - Computer Science I (4CR)
- LS 0000 - Lab Science Requirement (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)

Sophomore Year
Fall Semester (19 Credits)

- COSC 2406-Object-oriented Programming (4CR)
- COSC 2030 - Computer Science II (4CR)
- GEL 0000 - General Electives (4CR)
- PEL 0000 - Program Electives (7CR)


## Spring Semester (16 Credits)

- COSC 2150 - Computer Organization (3CR)
- COSC 2300 - Discrete Structures (3CR)
- PEL 0000 - Program Electives (10CR) Program electives must include at least two credits from the following courses:
- COSC 2405 - User Interface Design (2CR)
- COSC 2409 - Programming:
- COSC 2418 - Web App Development (3CR)
- ES 1000 - Orientation to Engineering Study (1CR)


## Total Program Credits (67 Credits) <br> Computer Science, A.S.: <br> Business Concentration

Freshman Year
Fall Semester (15 Credits)

- CE 0000-Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2200 - Calculus I (4CR)
or
- MATH 2350 - Business Calculus (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester - (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- COSC 1030 - Computer Science I (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year

Fall Semester - (16 Credits)

- ACCT 2010 - Principles of Accounting (4CR)
- COSC 2030 - Computer Science II (4CR)
- COSC 2406-Object-oriented Programming (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Spring Semester - (18 Credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- COSC 2150 - Computer Organization (3CR)
- COSC 2300 - Discrete Structures (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- PEL 0000 - Program Electives (3CR) Program electives must include at least two credits from the following courses:
- COSC 2409 - Programming:
- COSC 2418 - Web App Development (3CR)
- COSC 2405 - User Interface Design (2CR)
- ES 1000 - Orientation to Engineering Study (1CR)


## Total Program Credits (64 Credits)

## Note:

The normal length of this program is two academic years at 16-18 credit hours per semester.

To obtain a degree in computer science, a student must obtain a grade of " C " or better in all major requirements.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Construction Management,

 A.S.Freshman Year
Fall Semester (17 credits)

- CNTK 1530 - Architectural and Construction Planning (3CR)
- CNTK 1525 - Materials Handling and Construction Equipment (3CR)
- CNTK 2510 - Construction Estimating (3CR)
- ENTK 1500 - Engineering Graphics (4CR)
- MATH 1400 - College Algebra (4CR)


## Spring Semester ( 15 credits)

- BADM 2010 - Legal Environment of Business (3CR)
- CNTK 2525 - Construction Project Management (3CR)
- CNTK 1870 - Construction Materials and Methods (3CR)
- CNTK 1560 - Construction Safety (3CR)
- MATH 1405 - Trigonometry (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- CHEM 1020 - Chemistry I (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000-Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (16 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- MGT 2100 - Principles of Management (3CR)
- PSYC 1000 - General Psychology (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- GEL 0000 - General Electives (5CR)


## Total Program Credits (64 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Construction Technology Certificate

Fall Semester (19 credits)

- CNTK 1520 - Blueprint Reading for Construction (2CR)
- CNTK 1525 - Materials Handling and Construction Equipment (3CR)
- CNTK 1530 - Architectural and Construction Planning (3CR)
- CNTK 1700 - Introduction to Construction (4CR)
- CNTK 2510 - Construction Estimating (3CR)
- ENTK 1500 - Engineering Graphics (4CR)


## Spring Semester (18 credits)

- CNTK 1560 - Construction Safety (3CR)
- CNTK 1860 - Woodworking Fundamentals I (4CR)
- CNTK 1870 - Construction Materials and Methods (3CR)
- CNTK 1905 - Carpentry (4CR)
- ENTK 1710 - Architectural Drafting I (4CR)


## Program Total (37 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Construction Technology,

A.A.S.<br>Freshman Year<br>Fall Semester (16 credits)

- CNTK 1520 - Blueprint Reading for Construction (2CR)
- CNTK 1525 - Materials Handling and Construction Equipment (3CR)
- CNTK 1530 - Architectural and Construction Planning (3CR)
- CNTK 1700 - Introduction to Construction (4CR)
- ENTK 1500 - Engineering Graphics (4CR)


## Spring Semester (18 credits)

- CNTK 1560 - Construction Safety (3CR)
- CNTK 1860 - Woodworking Fundamentals I (4CR)
- CNTK 1870 - Construction Materials and Methods (3CR)
- CNTK 1905 - Carpentry (4CR)
- ENTK 1710 - Architectural Drafting I (4CR)


## Sophomore Year <br> Fall Semester (17 credits)

- CNTK 2510 - Construction Estimating (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- ENTK 2600 - Construction Documents (4CR)
- GEL 0000 - General Electives (4CR)
- LS 0000 - Lab Science Requirement (4CR) (or)
- MATH 0000 - Math Computation (3CR)

Spring Semester (13 credits)

- CNTK 2525 - Construction Project Management (3CR)
- ENTK 1010 - Elements of Surveying (3CR)
- GEL 0000 - General Electives (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (64 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Criminal Justice, A.A.

Freshman Year<br>Fall Semester (16 Credits)

- CRMJ 2120 - Introduction to Criminal Justice (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 0000 - Math Computation (3CR) 1000 level or higher
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CRMJ 2210 - Criminal Law I (3CR)
- CRMJ 2250 - Police Administration (3CR)
- PSYC 1000 - General Psychology (3CR)
- SOC 1100 - Social Problems (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- CRMJ 2130 - Criminal Investigation I (3CR)
- CRMJ 2280 - Criminal Procedure (3CR)
- CRMJ 2430 - The Community and the Police (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- SOC 2400-Criminology (3CR)
- STAT 2070 - Introductory Statistics for Social Science (4CR) *will need if transferring to UW


## Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- CRMJ 2230 - Law of Evidence (3CR)
- CRMJ 2350 - Introduction to Corrections (3CR)
- CRMJ 2895 - Capstone Directed Studies in Criminal Justice (1CR)
- GEL 0000 - General Electives (3CR) (World Language if transferring)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 2000 - Research Psychological Methods $(4 \mathrm{CR}) *$ will need if transferring to UW


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Criminal Justice, A.A.S.

Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR) or
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CRMJ 2120 - Introduction to Criminal Justice (3CR)
- MATH 0000 - Math Computation (3CR) or
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (15 Credits)

- CRMJ 2210 - Criminal Law I (3CR)
- CRMJ 2250 - Police Administration (3CR)
- CRMJ 2350 - Introduction to Corrections (3CR)
- PSYC 1000 - General Psychology (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- CRMJ 2130 - Criminal Investigation I (3CR)
- CRMJ 2430-The Community and the Police (3CR)
- CRMJ 2280 - Criminal Procedure (3CR)
- FIRE 1670 - Basic Emergency Care/First Responder (3CR)
- SOC 2400 - Criminology (3CR)


## Spring Semester (13 Credits)

- ADDN 1050 - Crime and Drugs (3CR)
- CRMJ 1705 - Firearms (3CR)
- CRMJ 2005 - Introduction to Automated Fingerprint Identification Systems (1CR)
- CRMJ 2570 - Criminalistics (3CR)
- CRMJ 2895 - Capstone Directed Studies in Criminal Justice (1CR)
- CRMJ 2970 - Criminal Justice Internship (13CR) (MAX 3)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Cyber Security Certificate

Fall Semester ( 15 credits)

- BADM 1020 - Business Communications (3CR)
- CSCO 2000 - Beginning Internetworking (3CR) (or)
- ELTR 2910 - Computer Networking (2CR)
- CSEC 1501 - Network Security Fundamentals (3CR) (Fall only)
- CSEC 1530 - Computer Forensics (3CR)
- MATH 1000 - Problem Solving (3CR)

Spring Semester (16 credits)

- CSCO 2010 - Advanced Internetworking I (3CR)
- CSCO 2020 - Advanced Internetworking II (4CR)
- CSEC 1510 - Network Defense Principles (3CR) (Spring only)
- CSEC 1520 - Network Attack Principles (3CR) (Spring only)
- CMAP 1615 - Operating Systems (3CR) (Spring only)


## Program Total (31 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Cyber Security, A.A.S.

## Freshman Year

Fall Semester (16 credits)

- CSEC 1501 - Network Security Fundamentals (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- CSCO 2000 - Beginning Internetworking (3CR) (or)
- ELTR 2910 - Computer Networking (2CR)
- GEL 0000 - General Electives (3CR)


## Spring Semester ( 15 credits)

- CMAP 1815 - Database Applications (3CR)
- CMAP 1200 - Computer Information Systems (3CR)
- CSEC 1520 - Network Attack Principles (3CR)
- CSCO 2010 - Advanced Internetworking I (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year

Fall Semester (17 credits)

- COSC 1010 - Introduction to Computer Science (4CR)
- CMAP 1200 - Computer Information Systems (3CR)
- CSCO 2020 - Advanced Internetworking II (4CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- INET 2670 - Internet Ethics and Cyber Law (3CR)

Spring Semester (14 credits)

- CMAP 1615 - Operating Systems (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CSEC 1510 - Network Defense Principles (3CR)
- CSEC 1530 - Computer Forensics (3CR)
- CSEC 1980 - Cooperative Work Experience Internship (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Total Program Credits (62 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Cyber Security, A.S. <br> Freshman Year <br> Fall Semester (16 credits)

- CSEC 1501 - Network Security Fundamentals (3CR)
- ENGL 1010 - English Composition I (3CR)
- CSCO 2000 - Beginning Internetworking (3CR) (or)
- ELTR 2910 - Computer Networking (2CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 2200 - Calculus I (4CR)
(or)
- MATH 2350 - Business Calculus (4CR)


## Spring Semester (16 credits)

- CMAP 1200 - Computer Information Systems (3CR)
- CSCO 2010 - Advanced Internetworking I (3CR)
- CSEC 1520 - Network Attack Principles (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)


## Sophomore Year

Fall Semester (17 credits)

- BADM 1020 - Business Communications (3CR)
- COSC 1010 - Introduction to Computer Science (4CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- INET 2670 - Internet Ethics and Cyber Law (3CR)
- LS 0000 - Lab Science Requirement (4CR)


## Spring Semester (15 credits)

- CSEC 1510 - Network Defense Principles (3CR)
- CSEC 1530 - Computer Forensics (3CR)
- CSEC 1980 - Cooperative Work Experience Internship (1CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (64 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Dance A.A. <br> Freshman Year Fall Semester (18 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- DANC 1210 - Dance Ensemble I (1CR)
- DANC 1300 - Dance Improvisation I (1CR)
- DANC 1410 - Beginning Ballet I (1CR)
- DANC 1420 - Beginning Ballet II (2CR) (if placed)
- DANC 1460 - Beginning Modern Dance I (1CR)
- DANC 1480 - Beginning Jazz Dance I (1CR)
- ENGL 1010 - English Composition I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- THEA 1010 - Fundamentals of Theatre Arts (3CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- DANC 1015 - Introduction to Dance (2CR)
- DANC 1210 - Dance Ensemble I (1CR)
- DANC 1320 - Dance Improvisation II (1CR)
- DANC 1420 - Beginning Ballet II (2CR) or
- DANC 2410 - Intermediate Ballet I (2CR)
- DANC 1500 - Dance Performance (1-2 CR) (Max. 5)
- DANC 1450 - Beginning Tap Dance I (1CR)
- DANC 1470 - Beginning Modern Dance II (1CR)
- DANC 2480 - Intermediate Jazz Dance II (1CR)
- MATH 1400 - College Algebra (4CR)


## Sophomore Year Fall Semester (18 Credits)

- DANC 2200 - Backgrounds of Dance (3CR)
- DANC 2210 - Dance Ensemble II (1CR)
- DANC 2212 - Beginning Composition (2CR)
- DANC 2410 - Intermediate Ballet I (2CR)
- DANC 2450 - Intermediate Tap Dance I (1CR)
- DANC 2460 - Intermediate Modern Dance I (2CR)
- HU 0000 - Human Behavior Requirements (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (19 Credits)

- CE 0000-Cultural Environment Requirement (3CR)
- DANC 1500 - Dance Performance (1-2 CR) (Max. 5)
- DANC 2210 - Dance Ensemble II (1CR)
- DANC 2470 - Intermediate Modern Dance II (2CR)
- DANC 2215 - Intermediate Dance Composition (3CR)
- DANC 2420 - Intermediate Ballet II (2CR)
- GEL 0000 - General Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (72 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Diesel Power Technology Certificate

Fall Semester (21 credits)

- DESL 1540 - Heavy Duty Electrical Systems (3CR)
- DESL 1610 - Engine Rebuilding I (9CR)
- DESL 1650 - Diesel Fuel Systems and Tuning I (5CR) (5 weeks)
- DESL 1980 - Co-op Work Experience (Diesel) (4CR)

Spring Semester ( 22 credits)

- DESL 1580 - Power Train, Braking, and Steering (3CR)
- DESL 1620 - Engine Rebuilding II (9CR)
- DESL 1660 - Diesel Fuel Systems and Tuning II (3CR) ( 5 weeks)
- DESL 1850 - Basic Hydraulics (3CR)
- DESL 1980 - Co-op Work Experience (Diesel) (4CR)


## Program Total (42 credits)

## Natural Gas Option

Complete all degree requirements above with the exception of DESL 1620, DESL 1680 will be taken in place.
*Permission of the instructor required.

- DESL 1680 - Natural Gas Engine Technology (10.5CR)


## Total Program Credits 44.5

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Diesel Power Technology,

## A.A.S.

Freshman Year
Fall Semester (21 credits)

- DESL 1540 - Heavy Duty Electrical Systems (3CR)
- DESL 1610 - Engine Rebuilding I (9CR)
- DESL 1650 - Diesel Fuel Systems and Tuning I (5CR) (5 weeks)
- DESL 1980 - Co-op Work Experience (Diesel) (4CR)


## Spring Semester (22 credits)

- DESL 1580 - Power Train, Braking, and Steering (3CR)
- DESL 1620 - Engine Rebuilding II (9CR)
- DESL 1660 - Diesel Fuel Systems and Tuning II (3CR) (5 weeks)
- DESL 1850 - Basic Hydraulics (3CR)
- DESL 1980 - Co-op Work Experience (Diesel) (4CR)


## Sophomore Year Fall Semester (10 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR) (or)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (11 credits)

- GEL 0000 - General Electives (7CR)
- PEL 0000 - Program Electives (4CR) Diesel electives must be chosen from the following: AUBR, AUTO, DESL, ELTR, MCHT, and WELD


## Natural Gas Option

Complete all degree requirements above with the exception of DESL 1620. DESL 1680 will be taken in its place.
*Permission of instructor required.

- DESL 1680 - Natural Gas Engine Technology (10.5CR) *


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Early Childhood Education,

 A.A.Freshman Year
Fall Semester (16 Credits)

- EDEC 1020 - Introduction to Early Childhood Education (3CR)
- ENGL 1010 - English Composition I (3CR)
- HLTK 1620 - American Heart Association Heart Saver First Aid, CPR and AED (.33CR)
- MATH 1000 - Problem Solving (3CR)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 1000 - General Psychology (3CR)


## Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- EDEC 1100 - Observation and Guidance of Young Children (2CR)
- EDEC 1105- Observation and Guidance of Young Children Lab (1CR)
- EDEC 1200 - Administration in Early Childhood Programs (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- EDEC 1030 - Infant and Toddler Care (2CR)
- EDEC 1035 - Infant and Toddler Care Lab (1CR)
- EDEC 1300-Curriculum Planning and Development for Young Children (2CR)
- EDEC 1305-Curriculum Planning and Development for Young Children Lab (1CR)
- FCSC 2122 - Child Development Lab (1CR)
- LS 0000 - Lab Science Requirement (4CR)
- SOC 2325 - Marriage and Family (3CR)

Spring Semester (16 Credits)

- EDEC 2200 - Early Childhood Practicum (6CR)
- EDEL 2280 - Literature for Children (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (3CR) (EDEL 2140 HIGHLY recommended)


## Total Program Credits (62 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Economics, A.S.

## Freshman Year

Fall Semester (16 credits)

- CMAP 1200 - Computer Information Systems (3CR)
- ECON 1010-Macroeconomics (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- PEL 0000 - Program Electives (3CR)

Choose 3 credits from the following areas: ACCT, BADM, MATH, FIN, or, STAT

## Spring Semester (16 credits)

- ECON 1020 - Microeconomics (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- MATH 2200 - Calculus I (4CR)
(or)
- MATH 2350 - Business Calculus (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- GEL 0000 - General Electives (6CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives Choose 3 credits from the following areas: ACCT, BADM, MATH, FIN, STAT
- MATH 2205 - Calculus II (4CR)
(or)
- MATH 2355 - Mathematical Applications for Business (4CR)


## Spring Semester (15 credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR) Choose 3 credits from the following areas: ACCT, BADM, MATH, FIN, STAT
- STAT 2050 - Fundamentals of Statistics (4CR)


## Program Total (63 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Electrical Apprentice Certificate

Semester 1 (5 credits)

- ELAP 1515 - Electrical Apprentice 1A (5CR)


## Semester 2 (5 credits)

## Semester 3 (5 credits)

- ELAP 1535 - Electrical Apprentice 2A (5CR)


## Semester 4 (5 credits)

- ELAP 1545 - Electrical Apprentice 2B (5CR)

Semester 5 (5 credits)

- ELAP 1555 - Electrical Apprentice 3A (5CR)

Semester 6 (5 credits)

- ELAP 1565 - Electrical Apprentice 3B (5CR)


## Semester 7 (5 credits)

- ELAP 1575 - Electrical Apprentice 4A (5CR)


## Semester 8 (5 credits)

- ELAP 1585 - Electrical Apprentice 4B (5CR)


## Program Total (40 credits)

## Completion

This certificate takes 8 semesters, or 4 years, to complete.
Note:
For more information on independent apprenticeship training contact: Casper College at 1-800-442-2963 extension 2494 Wyoming Electrical Joint Apprenticeship and Training Council Casper College partners with the Wyoming Electrical Joint Apprentice and Training Council (JATC) to provide classroom training designed to complement on-the-job training received by electrical apprentices. Classes meet several times a year, for a week at a time, over the 4 -year apprenticeship program duration. The combination of coursework and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire Prevention and Electrical Safety.

## Electronics Technology, A.A.S.

Freshman Year<br>Fall Semester (15 credits)

- ELTR 2925 - Fiber Optics (4CR)
- ELTR 1750 - Electronic Design and Fabrication (2CR)
- ELTR 1760 - Introduction to Digital Electronics (3CR)
- GEL 0000 - General Electives (3CR)
- MATH 0000 - Math Computation (3CR) (or)
- LS 0000 - Lab Science Requirement (4CR)


## Spring Semester (15 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- ELTR 2840 - Motor Controls (3CR)
- ELTR 1570 - Electric Circuits (4CR)
- ELTR 1620 - Electrical Concepts Laboratory (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- CSCO 2000 - Beginning Internetworking (3CR)
- ELTR 1700 - Introduction to Solid State Electronics (4CR)
- ELTR 2610 - Advanced Microprocessors (3CR)
- ELTR 2815 - Programmable Logic Controllers (3CR)
- GEL 0000 - General Electives (3CR)

Spring Semester (14 credits)

- ELTR 2600 - Electronic Communication (3CR)
- ELTR 2870 - CCD Cameras and Security Systems (2CR)
- ELTR 2570 - Process Control (3CR)
- GEL 0000 - General Electives (1CR)
- PEL 0000 - Program Electives (5CR)


## Total Program Credits (60 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Elementary Education, A.A.

Freshman Year
Fall Semester (16 Credits)

- EDEL 2100 - Family, School, and Community Engagement (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR) Chose from one of the following: (GEOL 1070, LIFE 1020, or PHYS 1090)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (16 Credits)

- EDEL 2140-Teaching Literacy in the Elementary School (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- MATH 1100 - Number and Operations for Elementary School Teachers (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 2300 - Developmental Psychology (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)


## Sophomore Year

## Fall Semester (17 Credits)

- EDFD 2100 - Educational Psychology (3CR)
- EDST 2550 - Educational Assessment (3CR)
- HLED 2006 - Health for Elementary Educators (1CR)
- ITEC 2360 - Teaching with Technology (3CR)
- LS 0000 - Lab Science Requirement (4CR) Chose from one of the following: (GEOL 1070, LIFE 1020, or PHYS 1090)
- MATH 1105 - Data, Probability and Algebra for Elementary School Teachers (3CR)

Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- EDEL 2280 - Literature for Children (3CR)
- EDEX 2484 - Intro to Special Education (3CR)
- EDUC 2100 - Practicum in Teaching (2-4CR)
- MATH 2120 - Geometry and Measurement for Elementary School Teachers (3CR)


## Total Program Credits (65 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Engineering Technology and Design Certificate

Fall Semester (15 credits)

- ENTK 1060 - Excel Technical Applications (3CR)
- ENTK 1500 - Engineering Graphics (4CR)
- ES 1000 - Orientation to Engineering Study (1CR)
- MATH 1400 - College Algebra (4CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (15 credits)

- ENTK 2010 - CAD 3D Modeling and Mechanical Design I (4CR)
- ENTK 2525 - Design and Manufacturing Methods I (4CR)
- PHYS 1050 - Concepts of Physics (4CR)
- PEL 0000 - Program Electives (3CR)

Program Electives (minimum 6 Credits)
Approved elective prefixes; CE, CHEM, CNTK, ELTR, ENTK, ES, MATH, MCHT, PHYS, WELD

## Program Total (30 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

Engineering Technology and<br>Design, A.A.S.<br>Freshman Year<br>Fall Semester (17 credits)

- ENGL 1010 - English Composition I (3CR)
- ENTK 1060 - Excel Technical Applications (3CR)
- ENTK 1500 - Engineering Graphics (4CR)
- MATH 1400 - College Algebra (4CR)
- PEL 0000 - Program Electives (3CR) Approved electives: ENTK, ART, CNTK, ELTR, MCHT, ROBO, WELD, computer component, and business component

Spring Semester (15 credits)

- PHYS 1050 - Concepts of Physics (4CR) (or)
- CHEM 1020 - Chemistry I (4CR)
- ENTK 1021 - Descriptive Geometry (3CR)
- ENTK 1710 - Architectural Drafting I (4CR)
- ENTK 2010 - CAD 3D Modeling and Mechanical Design I (4CR)


## Sophomore Year

Fall Semester (16 credits)

- ENTK 2020 - CAD 3D Modeling and Mechanical Design II (4CR)
- ENTK 2550 - Civil Drafting I (4CR)
- ENTK 2600 - Construction Documents (4CR)
- GEOG 1100 - Introduction to GIS (4CR)

Spring Semester (15 credits)

- ENTK 1010 - Elements of Surveying (3CR)
- ENTK 1720 - Architectural Drafting II (4CR)
- ENTK 2030-CAD 3D Modeling and Mechanical Design III (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (63 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Engineering, A.S.

## Freshman Year <br> Fall Semester ( 15 Credits)

- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- ES 1060 - Intro to Engineering Problem Solving (3CR)
- MATH 2200 - Calculus I (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- ES 2110 - Statics (3CR)
- MATH 2205 - Calculus II (4CR)
- PHYS 1310 - College Physics I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- ES 2120 - Dynamics (3CR)
- MATH 2210 - Calculus III (4CR)
- PEL 0000 - Program Electives (7CR) Program electives need to be selected from the following departments, ES, PHYS, CHEM, COSC or courses listed below
- GEL 0000 - General Electives (3CR)


## Spring Semester (14 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (5CR) Program electives need to be selected from the following Departments: ES, PHYS, CHEM, COSC or courses listed below.


## Program Electives

- CE 2070 - Engineering Surveying (3CR)
- MATH 2310 - Applied Differential Equations I (3CR)
- MATH 2250 - Elementary Linear Algebra (3CR)


## Total Program Credits (63 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## English, A.A.

English, A.A.: Literature Emphasis
Freshman Year
Fall Semester (14 Credits)

- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- WL 0000 - World Language (4CR) (ASL does not meet program requirement)

Spring Semester (17 Credits)

- COMM 0000-Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (3CR) (writing course 2000 level or above)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- WL 0000 - World Language (4CR) (ASL does not meet program requirement)


## Sophomore Year <br> Fall Semester (15 Credits)

- ENGL 2310 - American Literature I (3CR)
- ENGL 2210 - English Literature I (3CR)
- PEL 0000 - Program Electives (9CR) (3CR must come from ENGL lit focus)


## Spring Semester (12 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 2220 - English Literature II (3CR) or
- ENGL 2320 - American Literature II (3CR)
- PEL 0000 - Program Electives (8CR) (Any course from the following areas: ANTH, ADDN, ART, ASTR, BIOL, CHEM, COMM, CRMJ, ECON, ENTO, FREN, GEOG, GERM, HIST, HUMN, JAPN, MATH, MOLB, MUSC, PEAC, PHIL, PSYC, RELI, RUSS, SOC, SPAN, STAT, THEA, WMST, ZOO)

Total Program Credits (60 Credits)

## English, A.A.: Writing Emphasis <br> Freshman Year <br> Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1000 - Problem Solving (3CR)
or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (19 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- WL 0000 - World Language (4CR) (ASL does not meet program requirement, same Language both semesters)
- PEL 0000 - Program Electives (5CR) (ENGL writing focus)


## Sophomore Year Fall Semester (12 Credits)

- COMM 2100 - Reporting and News Writing (3CR)
- ENGL 2210 - English Literature I (3CR)
- ENGL 2310 - American Literature I (3CR)
- PEL 0000 - Program Electives (3CR) (ENGL writing focus)


## Spring Semester (12 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 2220 - English Literature II (3CR) or
- ENGL 2320 - American Literature II (3CR)
- PEL 0000 - Program Electives (3CR)

Total Program Credits (60 Credits)

## English, A.A.: Secondary Education Emphasis

Freshman Year
Fall Semester (13 Credits)

- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR)
or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 1000 - General Psychology (3CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (3CR) (ENGL lit Focus)
- PSYC 2300 - Developmental Psychology (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- EDFD 2100 - Educational Psychology (3CR)
- ENGL 2210 - English Literature I (3CR)
- ENGL 2310 - American Literature I (3CR)
- ITEC 2360 - Teaching with Technology (3CR)
- WL 0000 - World Language (4CR) (same language both semesters)


## Spring Semester (17 Credits)

- EDUC 2100 - Practicum in Teaching (2-4CR)
- EDEX 2484 - Intro to Special Education (3CR)
- ENGL 2220 - English Literature II (3CR) or
- ENGL 2320 - American Literature II (3CR)
- GEL 0000 - General Electives (3CR)
- WL 0000 - World Language (4CR) (same language both semesters)

Total Program Credits (62 Credits)
Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Entrepreneurship, A.A.S.

Freshman Year
Fall Semester (18 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- BADM 1025 - Entrepreneurial Finance (3CR)
- CMAP 1200 - Computer Information Systems (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (16 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- BADM 1020 - Business Communications (3CR)
- BADM 2195 - Entrepreneurship (3CR)
- ECON 1010 - Macroeconomics (3CR)
- MGT 2100 - Principles of Management (3CR)


## Sophomore Year Fall Semester (18 credits)

- ACCT 2460 - Payroll Accounting (3CR) (OR)
- ACCT 2430 - Income Tax (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- ECON 1020 - Microeconomics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- POLS 1000 - American and Wyoming Government (3CR)

Spring Semester (15 credits)

- BADM 2030 - Business Ethics (3CR)
- BADM 2340 - Business Organizations and Government Regulations (3CR)
- BUSN 2000 - Intro to International Business (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MGT 2100 - Principles of Management (3CR)


## Total Program Credits (67 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Environmental Science, A.S.

## Freshman Year <br> Fall Semester (15 Credits)

- CHEM 1000 - Intro to Chemistry (4CR) or
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- ENR 1200 - Environment (4CR) or
- ENR 1500 - Water, Dirt, and Earth's Environment (4CR) or
- GEOL 1500 - Water, Dirt, and Earth's Environment (4CR)
- MATH 1400 - College Algebra (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (6CR)
- Foundations in Values and Management (3CR Minimum) from the following: ACCT 2010, BADM 1000, ECON 1020, ENR 2450 or ZOO 2450, GEOG 1100, POLS 2000, POLS 2310, REWM 2000, SOC 1000, SOC 2112


## Sophomore Year <br> Fall Semester (15 Credits)

- GEL 0000 - General Electives (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (6CR)
- POLS 0000 - U.S. \& Wyoming Constitutions Requirement (3CR)


## Spring Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (6CR)
- PEL 0000 - Program Electives (6CR)


## Program Electives:

Choose from list below for a total of 18 credits.

- Any course in AGRI, AGEC, AGTK, ANSC, ANTH, ATSC, BIOL, CHEM, COMM, ECON, ENR, ENVT, EXTR, GEOG, LIFE, MATH (1400 or higher), MOLB, PHYS, POLS, REWM, SOC, SOIL, and ZOO.
- GEOL 2000 - Geochemical Cycles and the Earth System (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Total Program Credits (61 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Equine Assisted Therapy Certificate <br> Total Program Credits (12 Credits)

- HLTK 1860 - Introduction to Human Disease (3CR)
or
- HLTK 2560 - The Interprofessional Health Care Team (3CR) (for those students that have completed COTA 2420)
- HLTK 1865 - Equine Assisted Therapy Practicum (3CR)
- HLTK 1870 - Professionalism in Healthcare (3CR)
- SOC 1000 - Sociological Principles (3CR)

Note:
The normal length of this program is 16 weeks.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Fine Art, A.F.A.

Freshman Year
Fall Semester (16-17 Credits)

- ART 1005 - Drawing I (3CR)
- ART 1120 - Foundation: Three Dimensional (3CR)
- ART 2010 - Art History I (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (12 Credits)

- ART 1010 - Intro to Art (3CR)
- ART 2005 - Drawing II (3CR)
- ART 2020 - Art History II (3CR)
- ART 2310 - Sculpture I (3CR)


## Sophomore Year Fall Semester (18 Credits)

- ART 1115 - Digital Media (3CR)
- ART 1130 - Foundation: Color Theory (3CR)
- ART 1150 - Black and White Film Photography I (3CR)
- ART 2035 - Art History III (3CR)
- ART 2090 - Printmaking (3CR)
- ART 2210 - Painting I (3CR)


## Spring Semester (14 Credits)

- ART 2141 - Professional Practice in the Arts (1CR)
- ART 2410 - Ceramics I (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEL 0000 - Program Electives (4CR) ART
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60-61 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Fire Science Technology <br> Certificate

Fall Semester ( 15 credits minimum)

- FIRE 1500 - Introduction to Fire Science (3CR)
- FIRE 1670 - Basic Emergency Care/First Responder (3CR)
- FIRE 1760 - Building Construction (3CR)
- FIRE 1810 - Introduction to Wildland Fire Fighting (3CR)
- FIRE 2515 - Advanced Firefighting (3CR)
- FIRE 2530 - Hazardous Materials (3CR)
- FIRE 2560 - Apparatus and Procedures (3CR)

Spring Semester (15 credits minimum)

- FIRE 1510 - Fire Fighting Strategy and Tactics I (3CR)
- FIRE 1520 - Fire Fighting Strategy and Tactics II (3CR)
- FIRE 1550 - Causes and Investigation (3CR)
- FIRE 1700 - Fundamentals of Fire Prevention (3CR)
- FIRE 1818 - Wildland Leadership (3CR)
- FIRE 1830 - Intermediate Wildland Fire Behavior (3CR)
- FIRE 2525 - Rescue Practices for the Fire Service (3CR)
- FIRE 2570 - Managing Fire Service (3CR)
- FIRE 2960 - Firefighter Development (3CR)
- FIRE 2970 - Fire Service Field Internship (3CR)


## Program Total (30 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Fire Science Technology,

## A.A.S.

Freshman Year
Fall Semester (16 credits)
15 Credits minimum from FIRE

- FIRE 1500 - Introduction to Fire Science (3CR)
- FIRE 1670 - Basic Emergency Care/First Responder (3CR)
- FIRE 1810 - Introduction to Wildland Fire Fighting (3CR)
- FIRE 2515 - Advanced Firefighting (3CR)
- FIRE 2530 - Hazardous Materials (3CR)
- FIRE 2560 - Apparatus and Procedures (3CR)
- PEAC 0000 -Physical Education Requirement (1CR)


## Spring Semester (15 credits)

15 Credits minimum from FIRE

- FIRE 1510 - Fire Fighting Strategy and Tactics I (3CR)
- FIRE 1520 - Fire Fighting Strategy and Tactics II (3CR)
- FIRE 1550 - Causes and Investigation (3CR)
- FIRE 1700 - Fundamentals of Fire Prevention (3CR)
- FIRE 1760 - Building Construction (3CR)
- FIRE 1818 - Wildland Leadership (3CR)
- FIRE 1830 - Intermediate Wildland Fire Behavior (3CR)
- FIRE 2525 - Rescue Practices for the Fire Service (3CR)
- FIRE 2960 - Firefighter Development (3CR)


## Sophomore Year <br> Fall Semester (16-17 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (7CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (13 credits)

- FIRE 2970 - Fire Service Field Internship (3CR)
- PEL 0000 - Program Electives (10CR)


## Total Program Credits (60 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Forensic Science, A.S.

Freshman Year<br>Fall Semester (15 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- CRMJ 2120 - Introduction to Criminal Justice (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (16 Credits)

- CHEM 1000 - Intro to Chemistry (4CR) or
- CHEM 1020 - Chemistry I (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CRMJ 2230 - Law of Evidence (3CR)
- GEL 0000 - General Electives (3CR) Selected with advisor
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year Fall Semester (14 Credits)

- CHEM 2300 - Intro to Organic Chemistry (4CR)
- CRMJ 2130 - Criminal Investigation I (3CR)
- PEL 0000 - Program Electives (3CR) Selected with advisor
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (15 Credits)

- CRMJ 2570 - Criminalistics (3CR)
- PEL 0000 - Program Electives (9CR) Selected with advisor
- CE 0000 - Cultural Environment Requirement (3CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required
for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Foundations of

## Interprofessional Health Care Certificate

Fall Semester (12 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- HMDV 1300 - On Course (2CR)
- PEL 0000 - Program Electives (5CR)


## Spring Semester (12 Credits)

- COMM 1030 - Interpersonal Communication (3CR)
- HLTK 2560 - The Interprofessional Health Care Team (3CR)
- PEL 0000 - Program Electives (6CR)


## Approved Electives (11CR)

- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- HLTK 1000 - Principles of Healthcare Calculations (2CR)
- HLTK 1200 - Medical Terminology (3CR)
- HLTK 1860 - Introduction to Human Disease (3CR)
- HLTK 1870 - Professionalism in Healthcare (3CR)
- HLTK 1975 - Spanish for Health Care Workers (3CR)
- HLTK 2400 - Complementary and Alternative Therapies (CAT) and Nursing (3CR)
- HLTK 2550 - Understanding the Economics, Ethics, and Policies Influencing Health Care (3CR)
- PSYC 1000 - General Psychology (3CR)
- PSYC 2155 - Motivational Interviewing (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Total Program Credits (24 Credits)

## Graduation Requirements

The normal length of this program is 9 months. For specific graduation requirements see "Degree Requirements".

## General Studies, A.A.

## Freshman Year

Fall Semester (14 Credits)

- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1400 - College Algebra (3CR) (or higher)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (9CR) Program Studies courses (28CR total) chosen in consultation with an advisor. 9 credits must come from the areas of human behavior, cultural studies, and/or communications.


## Sophomore Year <br> Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (9CR) Program Studies courses (28CR total) chosen in consultation with an advisor. 9 credits must come from the areas of human behavior, cultural studies, and/or communications.

Spring Semester (16 Credits)

- GEL 0000 - General Electives (6CR)
- PEL 0000 - Program Electives (10CR)

Program Studies courses (28CR total) chosen in consultation with an advisor. 9 credits must come from the areas of human behavior, cultural studies, and/or communications.

## Total Program Credits (61 Credits)

## Note:

The normal length of this program is two academic years at 15 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## General Studies, A.S.

## Freshman Year

Fall Semester (14 Credits)

- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (9CR) General studies courses (28 CR) - Should be chosen in consultation with an academic advisor. Consider the requirements of the institution to which you will transfer, and your personal goals.


## Sophomore Year <br> Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR) One additional course to be chosen from ADDN, ANSC, ASTR, BIOL, CHEM, COSC, FCSC, GEOG, GEOL, MOLB, PHYS, POLS, PSYC, SOC or ZOO.
- PEL 0000 - Program Electives (9CR) General studies courses (28CR) - Should be chosen in consultation with an academic advisor. Consider the requirements of the institution to which you will transfer, and your personal goals.


## Spring Semester (15 Credits)

- GEL 0000 - General Electives (6CR)
- PEL 0000 - Program Electives (10CR) General studies courses (28CR) - Should be chosen in consultation with an academic advisor. Consider the requirements of the institution to which you will transfer, and your personal goals.


## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Geographic Information Systems Certificate <br> Fall Semester (7 Credits)

- GEOG 1080 - Introduction to GPS and Maps (3CR)
- GEOG 1100 - Introduction to GIS (4CR)


## Spring Semester (11 Credits)

- GEOG 1110 - Management and Implementation of GIS (4CR)
- GEOG 2100 - Advanced GIS (4CR)
- GEOG 2150 - Map Use and Analysis (3CR)


## Total Certificate Credits (18 CR)

## Note:

The normal length of this program is 9 months.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Geographic Information Systems, A.S. <br> Freshman Year <br> Fall Semester (16 Credits)

- ENGL 1010 - English Composition I (3CR)
- GEOG 1080 - Introduction to GPS and Maps (3CR)
- GEOG 1100 - Introduction to GIS (4CR)
- MATH 0000 - Math Computation (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEOG 1110 - Management and Implementation of GIS (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- GEOG 2150 - Map Use and Analysis (3CR)
- GEOG 2100 - Advanced GIS (4CR)
- PEL 0000 - Program Electives (7CR)

Spring Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- PEL 0000 - Program Electives (8CR)


## Program Electives

Students should select a minimum of 14 credits from the following list of courses to satisfy their area of expertise. Electives to be selected in consultation with advisor.

- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- CMAP 1815 - Database Applications (3CR)
- COSC 1010 - Introduction to Computer Science (4CR)
- COSC 1030 - Computer Science I (4CR)
- COSC 2030 - Computer Science II (4CR)
- COSC 2405 - User Interface Design (2CR)
- COSC 2406 - Object-oriented Programming (4CR)
- ES 1060 - Intro to Engineering Problem Solving (3CR)
- ENTK 1010 - Elements of Surveying (3CR)
- ENTK 1500 - Engineering Graphics (4CR)
- ENTK 2550 - Civil Drafting I (4CR)
- EXTR 1500-Geology of Extractive Resources (3CR)
- EXTR 2520 - Introduction to Well Logging (3CR)
- EXTR 2550 - Geologic Computing Methods (3CR)
- EXTR 2560 - Energy Policy and Economics (3CR)
- EXTR 2570 - Introduction to Seismic Interpretation (3CR)
- GEOG 1000 - World Regional Geography (3CR)
- GEOG 1050 - Introduction to Environmental and Natural Resources (3CR)
- GEOG 2480 - GIS Cooperative Work Experience
- GEOL 1100 - Physical Geology (4CR)
- GEOL 2150 - Geomorphology (4CR)
- RETK 2500 - Basic Site Planning (3CR)
- Any BIOL or FIRE course may be taken with advisor approval.


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Geology, A.S.

Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- GEOL 1100 - Physical Geology (4CR) or
- GEOL 1500 - Water, Dirt, and Earth's Environment (4CR)
- MATH 1400 - College Algebra (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (13 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEOL 2010 - Mineralogy (3CR)
- MATH 0000 - Math Computation (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR)


## Sophomore Year <br> Fall Semester (17-18 Credits)

- CHEM 1020 - Chemistry I (4CR)
- GEOL 2000 - Geochemical Cycles and the Earth System (4CR)
or
- GEOL 2050 - Principles of Paleontology (3CR)
- GEOL 2100 - Stratigraphy and Sedimentation (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (18 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- GEOL 2005 - Introduction to Geophysics (4CR)
- PEL 0000 - Program Electives (8CR)


## Program Electives

- ATSC 2000 - Introduction to Meteorology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- GEOG - Any geography course
- GEOL - Any geology course
- MATH 2200 - Calculus I (4CR)
- MATH 2205 - Calculus II (4CR)
- MATH 2210 - Calculus III (4CR)
- MATH 2250 - Elementary Linear Algebra (3CR)
- PHYS 1110 - General Physics I (4CR) or
- PHYS 1310 - College Physics I (4CR)
- STAT - Any statistics course
- Other appropriate courses approved by advisor


## Total Program Credits (65 Credits)

## Note:

The normal length of this program is two academic years at 16-18 credit hours per semester.
To obtain a degree in geology, a student must obtain a grade of "C" or better in all major requirements.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Gerontology Certificate

## Total Certificate Credits (12 CR)

- SOC 1000 - Sociological Principles (3CR)
- HLTK 1860 - Introduction to Human Disease (3CR)
or
- HLTK 2560 - The Interprofessional Health Care Team (3CR) (for those students that have completed COTA 2420)
- HLTK 1870 - Professionalism in Healthcare (3CR)
- HLTK 1875 - Gerontology Practicum (3CR)

Note:
The normal length of this program is 16 weeks.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Graphic Design, A.F.A.

Freshman Year
Fall Semester (15 Credits)

- ART 1005 - Drawing I (3CR)
- ART 1010 - Intro to Art (3CR)
- ART 2010 - Art History I (3CR)
- ENGL 1010 - English Composition I (3CR)
- ART 1115 - Digital Media (3CR)


## Spring Semester ( 15 Credits)

- ART 1130 - Foundation: Color Theory (3CR)
- ART 2020 - Art History II (3CR)
- ART 2110 - Typography (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- ART 1120 - Foundation: Three Dimensional (3CR)
- ART 2035 - Art History III (3CR)
- ART 2112 - Graphic Design I (3CR)
- ART 2125 - Graphic Design II (3CR)
- PEL 0000 - Program Electives (3CR)(ART)

Spring Semester (15 Credits)

- ART 2130 - Graphic Design III (3CR)
- ART 2141 - Professional Practice in the Arts (1CR)
- ART 2245 - Digital Photography I (3CR)
- PEL 0000 - Program Electives (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Health Science, A.S. Athletic Training Emphasis

## Freshman Year

 Fall Semester (16 Credits)- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (3CR)
- KIN 1020 - Taping and Wrapping of Injuries (1CR)
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)

Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- HU 0000 - Human Behavior Requirements (3CR)
- KIN 2050 - Functional Kinesiology (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Sophomore Year Fall Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000-General Electives (3CR)
- KIN 1052 - Introduction to Athletic Training (3CR)
- PEL 0000 - Program Elective (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (13 Credits)

- FCSC 1141 - Principles of Nutrition (3CR)
- HLTK 2560 - Interprofessional Health Care Team (3CR)
- PEL 0000 - Program Electives (4CR)
- GEL 0000 - General Elective (3CR)


## Total Program Credits (60 Credits)

## General Health Science Emphasis

## Freshman Year

Fall Semester ( 15 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (2CR)
- GEL 0000 - General Electives (4CR)


## Sophomore Year

## Fall Semester (15 Credits)

- HLTK 1500 - Introduction to Health Care and Services (2CR)
- PEL 0000 - Program Electives (8CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (15 Credits)

- HLTK 2560 - Interprofessional Health Care Team (3CR)
- PEL 0000 - Program Electives (10CR)


## Total Program Credits (60 Credits)

Pre- Medical Lab Technician Training Emphasis<br>Freshman Year<br>Fall Semester (15 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- or
- BIOL 1010 - General Biology I (4CR)
- CMAP 1505-Technology Literacy (1CR)
- ENGL 1010 - English Composition I (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MOLB 2210 - General Microbiology (4CR)
- or
- MOLB 2240 - Medical Microbiology (4CR)
- SOC 1000 - Sociological Principles (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- LS 0000 - Lab Science Requirement (4CR)
- MLTK 1800 - Principles of Phlebotomy (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester ( 15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- HLTK 2560 - Interprofessional Health Care Team (3CR)
- MLTK 1970 - Clinical Practicum: Phlebotomy (2CR)
- PEL 0000 - Program Electives (7CR)


## Total Program Credits (60 Credits)

## Pre-Nursing Emphasis

Freshman Year
Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- HLTK 1300 - Nursing Boot Camp (1CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- HMDV 1300 - On Course (2CR)
- LS 0000 - Lab Science Requirement (4CR)


## Spring Semester ( 15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEL 0000 - Program Electives (4CR)
- MATH 1400 - College Algebra (4CR)
- ZOO 2015 - Human Anatomy (4CR)


## Sophomore Year <br> Fall Semester ( 15 Credits)

- GEL 0000 - General Electives (2CR)
- PEL 0000 - Program Electives (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 1000 - General Psychology (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Spring Semester ( 15 Credits)

- GEL 0000 - General Electives (2CR)
- HLTK 2560 - Interprofessional Health Care Team (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (6CR)


## Total Program Credits (60 Credits)

## Pre-Occupational Therapy Assistant Emphasis

Freshman Year

Fall Semester (15 Credits)

- COTA 2300 - Fieldwork Integration I (2CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- OCTH 2000 - Introduction to Occupational Therapy (2CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- HLTK 2560 - Interprofessional Health Care Team (3CR)
- KIN 2050 - Functional Kinesiology (3CR)
- PEL 0000 - Program Electives (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (17 Credits)

- GEL 0000 - General Electives (7CR)
- PEL 0000 - Program Electives (6CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Program Credits (60 Credits)

## Pre-Paramedic Technology <br> Emphasis

Freshman Year
Fall Semester (15.33-16.33 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- HLTK 1625 - American Heart Association Heart Saver First Aid, CPR and AED (.33CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR)
- or
- MATH 1400 - College Algebra (4CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 1000 - General Psychology (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Sophomore Year

Fall Semester (14 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- PEL 0000 - Program Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Spring Semester (15 Credits)

- EMT 1500 - Basic Emergency Medical Technician (9CR)
- HLTK 2560 - Interprofessional Health Care Team (3CR)
- HU 0000 - Human Behavior Requirements (3CR)


## Total Program Credits (60.3361.33 Credits)

## Pre-Pharmacy Technology

Emphasis
Freshman Year
Fall Semester (15 Credits)

- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- LS 0000 - Lab Science Requirement (4CR)
- PSYC 1000 - General Psychology (3CR)

Spring Semester (15.33 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CHEM 1000 - Intro to Chemistry (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (5CR)
- HLTK 1625-American Heart Association BLS for the Provider (.33CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (6CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (15 Credits)

- HLTK 2560 - Interprofessional Health Care Team (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (6CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)

Total Program Credits (60.33 Credits)

## Pre-Radiography Emphasis

Freshman Year
Fall Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- MATH 1400 - College Algebra (4CR)
- PSYC 1000 - General Psychology (3CR)
- or
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- ZOO 2015 - Human Anatomy (4CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- HLTK 1200 - Medical Terminology (3CR)
- PEL 0000 - Program Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- RDTK 1500 - Introduction to Radiologic Technology (1CR)
- ZOO 2025 - Human Physiology (4CR)


## Spring Semester (15 Credits)

- HLTK 2560 - The Interprofessional Health Care Team (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (6CR)
- RDTK 2200 - Sectional Anatomy (3CR)


## Total Program Credits (61 Credits)

## Pre-Respiratory Emphasis

Freshman Year
Fall Semester (15-16 Credits)

- CHEM 1000 - Intro to Chemistry (4CR)
- CE 0000-Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- HLTK 1500 - Introduction to Health Care and Services (2CR)
- MATH 1000 - Problem Solving (3CR)
- or
- MATH 1400 - College Algebra (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- HLTK 2560 - Interprofessional Health Care Team (3CR)
- PHYS 1050 - Concepts of Physics (4CR)
- PSYC 1000 - General Psychology (3CR)
- or
- SOC 1000 - Sociological Principles (3CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives
- (4CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (13 Credits)

- GEL 0000 - General Electives (4CR)
- PEL 0000 - Program Electives (5CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Program Credits (60 Credits)

## Approved Electives:

- ANTH 1100 - Introduction to Biological Anthropology (3CR)
- or
- SOC 1000 - Sociological Principles (3CR)
- BIOL 1000 - Introduction to Biology I (4CR)
- or
- BIOL 1010 - General Biology I (4CR)
- CHEM 1000 - Intro to Chemistry (4CR)
- and
- CHEM 1020 - Chemistry I (4CR)
- and
- CMAP 1505-Technology Literacy (1CR)
- CMAP 1550 - E-Portfolio Development (1CR)
- FCSC 1141 - Principles of Nutrition (3CR)
- HLED 1006 - Personal Health (3CR)
- HLTK 1000 - Principles of Healthcare Calculations (2CR)
- HLTK 1200 - Medical Terminology (3CR)
- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- HLTK 1855 - Assistive Technology Practicum (3CR)
- HLTK 1860 - Introduction to Human Disease (3CR)
- HLTK 1865 - Equine Assisted Therapy Practicum (3CR)
- HLTK 1870 - Professionalism in Healthcare (3CR)
- HLTK 1875 - Gerontology Practicum (3CR)
- HLTK 1975 - Spanish for Health Care Workers (3CR)
- HLTK 2400 - Complementary and Alternative Therapies (CAT) and Nursing (3CR)
- HLTK 2550 - Understanding the Economics, Ethics, and Policies Influencing Health Care (3CR)
- HMDV 1300 - On Course (2CR)
- KIN 1052 - Introduction to Athletic Training (3CR)
- KIN 2130 - Directed Study in Human Prosection (3CR)
- MOLB 2210 - General Microbiology (4CR)
- or
- MOLB 2240 - Medical Microbiology (4CR)
- KIN 1005 - Introduction to Kinesiology and Health Promotion
- PEPR 1052 - Prevention and Care of Athletic Injuries (3CR)
- PEPR 2030 - Motor Learning (3CR)
- PEPR 2090 - Foundations of Athletic Coaching (3CR)
- PEPR 2091 - Sports Officiating I (2CR)
- PEPR 2100 - Theory of Coaching: (2CR)
- PEPR 2135 - Personal Trainer Education (3CR)
- PEPR 2136 - Sports Nutrition (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- RDTK 1500 - Introduction to Radiologic Technology (1CR)
- STAT 2050 - Fundamentals of Statistics (4CR)
- or
- STAT 2070 - Introductory Statistics for Social Science (4CR)
- ZOO 2140 - Cadaver Anatomy (4CR)
- ZOO 2025 - Human Physiology (4CR)


## DISCLAIMER

Completion of the health science degree does not guarantee admission to a specific program.

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

History, A.A.

Freshman Year Fall Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- HIST 1211 - United States to 1865 (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- WL 0000 - World Language (4CR)


## Spring Semester (17 Credits)

- COMM 0000-Written and Oral Communication Requirement (3CR)
- HIST 1221 - United States from 1865 (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- POLS 1000 - American and Wyoming Government (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- GEL 0000 - General Electives (9CR)
- HIST 1110 - Western Civilization I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)

Spring Semester (15 Credits)

- HIST 1120 - Western Civilization II (3CR)
- HIST 1251 - Wyoming History (3CR)
- PEL 0000 - Program Electives (9CR)


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of

Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Hospitality and Tourism Management, A.A.S.

Freshman Year
Fall Semester (15-16 Credits)

- HOSP 1520 - Introduction to Hospitality and Tourism Management (3CR)
- HOSP 1540 - Hotel Operations Management (3CR)
- ENGL 1010 - English Composition I (3CR)
- BADM 1005 - Business Mathematics I (3CR) or
- MATH 1400 - College Algebra (4CR)
- MKT 1010 - Sales and Customer Relationship Management (3CR)


## Spring Semester (16 Credits)

- ACCT 1005 - Practical Accounting (4CR) or
- ACCT 2010 - Principles of Accounting I (4CR)
- CMAP 1200 - Computer Information Systems (3CR)
- BADM 1020 - Business Communications (3CR) or
- ENGL 1020 - English Composition II (3CR)
- HOSP 1560 - Convention Sales and Management (3CR)
- HOSP 2320 - Food and Beverage Management (3CR)


## Sophomore Year <br> Fall Semester (15 credits)

- HOSP 1570 - Human Resource Hospitality Management (3CR)
- HOSP 2530 - Tourism Management (3CR)
- COMM 1030 - Interpersonal Communication (3CR)
or
- COMM 2010 - Public Speaking (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MGT 2100 - Principles of Management (3CR)


## Spring Semester (13-17 credits)

- HOSP 2525 - Recreation and Tourism Planning and Development (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- GEL 0000 - General Electives (4CR)

Must take 4CR general elective if you do not take MATH 1400

## Total Program Credits (64 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Industrial Electronics Certificate

## Freshman Year

Fall Semester (6 credits)

- ELTR 1750 - Electronic Design and Fabrication (2CR)
- ELTR 2925 - Fiber Optics (4CR)


## Spring Semester (8 credits)

- ELTR 1570 - Electric Circuits (4CR)
- ELTR 1620 - Electrical Concepts Laboratory (1CR)
- ELTR 2840 - Motor Controls (3CR)


## Sophomore Year Fall Semester (6 credits)

- ELTR 1760 - Introduction to Digital Electronics (3CR)
- ELTR 2815 - Programmable Logic Controllers (3CR)

Spring Semester (3 credits)

- ELTR 2570 - Process Control (3CR)


## Program Total (23 credits)

Note:
This program cannot be completed in 2 semesters.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## International Studies, A.A.

Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- INST 2350 - Introduction to Global Studies (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- WL 0000 - World Language (4CR)

Spring Semester (16 Credits)

- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- POLS 1200 - Non-Western Political Cultures (3CR)
- POLS 2310 - Intro to International Relations (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- ECON 1010 - Macroeconomics (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR)
- POLS 1000 - American and Wyoming Government (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (14 Credits)

- GEOG 1000 - World Regional Geography (3CR)
- HIST 1110 - Western Civilization I (3CR) or
- HIST 1120 - Western Civilization II (3CR)
- PEL 0000 - Program Electives (8CR)


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Kinesiology and Health Promotion, A.S.

## Freshman Year <br> Fall Semester (16.33 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HLED 1006 - Personal Health (3CR)
- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- MATH 1400 - College Algebra (4CR)
- KIN 1005 - Introduction to Kinesiology and Health Promotion


## Spring Semester (15 Credits)

- CHEM 1000 - Intro to Chemistry (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEPR 1052 - Prevention and Care of Athletic Injuries (3CR)
- PSYC 1000 - General Psychology (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Summer Semester (3 Credits)

- PSYC 2230 - Sports and Exercise Psychology (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- FCSC 1141 - Principles of Nutrition (3CR)
or
- PEPR 2136 - Sports Nutrition (3CR)
- PEPR 2030 - Motor Learning (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- KIN 2050 - Functional Kinesiology (3CR)
- PEPR 2135 - Personal Trainer Education (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Total Program Credits (60.33 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward
the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

# Leadership and Organizational Management, A.A.S. 

Freshman Year<br>Fall Semester (15 credits)

- BADM 1005 - Business Mathematics I (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- CMAP 1200 - Computer Information Systems (3CR)
- ENGL 1010 - English Composition I (3CR)
- MGT 2100 - Principles of Management (3CR)


## Spring Semester (16 credits)

- BADM 1020 - Business Communications (3CR)
- ECON 1010 - Macroeconomics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MATH 1400 - College Algebra (4CR)
- MGT 2110-Organizational Behavior (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- FIN 1000 - Personal Finance (3CR) or
- ECON 1020 - Microeconomics (3CR)
- MGT 2050 - Leading Organizational Change (3CR)
- MGT 2150 - Leadership (3CR)
- POLS 1000-American and Wyoming Government (3CR)

Spring Semester (14 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- BADM 2030 Business Ethics (3CR)
- BADM 2340 - Business Organizations and Government Regulations (3CR) or
- BUSN 2000 - Intro to International Business (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Total Program Credits (61 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Liberal Arts, A.A.

Freshman Year
Fall Semester (14-15 Credits)

- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- WL 0000 - World Language (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Communication Requirement (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- GEL 0000 - General Electives (5CR)
- PEL 0000 - Program Electives (6CR) ENGL Lit Focus
- PHIL 2300 - Ethics in Practice (3CR) or
- PHIL 2420-Critical Thinking (3CR)


## Spring Semester (16 Credits)

- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives(12CR) COMM, computer/internet skills, creative writing, fine arts, social sciences, business, philosophy or other courses approved by advisor (12CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (64 Credits)

## Note:

The normal Length of this program is two academic years at $15-17$ credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Machine Tool Technology Certificate

Fall Semester (16 credits)

- ENTK 1500 - Engineering Graphics (4CR)
- MCHT 1640 - Basic Machining Practice (10CR)
- MCHT 1680 - Blueprint Reading (2CR)


## Spring Semester (19 credits)

- MCHT 1570 - Machine Trades Computations (2CR)
- MCHT 1650 - Intermediate Machining Practice (10CR)
- MCHT 2680 - Metallurgy (3CR)
- MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)
or
- MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)


## Program Total (35 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Machine Tool Technology,

A.A.S.

Freshman Year
Fall Semester (16 credits)

- ENTK 1500 - Engineering Graphics (4CR)
- MCHT 1640 - Basic Machining Practice (10CR)
- MCHT 1680 - Blueprint Reading (2CR)


## Spring Semester ( 15 credits)

- MCHT 2680 - Metallurgy (3CR)
- MCHT 1570 - Machine Trades Computations (2CR)
- MCHT 1650 - Intermediate Machining Practice (10CR)


## Sophomore Year <br> Fall Semester (18-19 credits)

- MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)
- MCHT 2800 - Computer Assisted Manufacturing (3CR)
- MCHT 1980 - Cooperative Work Experience (Machine Shop) (5CR)
or
- MCHT 2650 - Advanced Machining Practice (5CR)
- GEL 0000 - General Electives (3CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)

Spring Semester (14-15 credits)

- MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (3-4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (63-64) credits)

Note:
To graduate with a certificate or degree, students must earn a "C" or better in all major requirements.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Magnetic Resonance Imaging <br> Certificate PROGRAM IS ON <br> HIATUS: NO LONGER ACCEPTING STUDENTS

Mammography Certificate PROGRAM IS ON HIATUS: NO LONGER ACCEPTING STUDENTS

Management, A.A.S.

Freshman Year
Fall Semester (16 credits)

- BADM 1005 - Business Mathematics I (3CR) or
- MATH 1400 - College Algebra (4CR)
- CMAP 1200-Computer Information Systems (3CR)
- ENGL 1010 - English Composition I (3CR)
- MGT 2100 - Principles of Management (3CR)
- MKT 2100 - Principles of Marketing (3CR)


## Spring Semester (15 credits)

- BADM 1020 - Business Communications (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- ECON 1010 - Macroeconomics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MGT 2110 - Organizational Behavior (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- FIN 1000 - Personal Finance (3CR)
- ECON 1020 - Microeconomics (3CR)
- MGT 2200 - Strategic Human Resource Management (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (14 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- BADM 2340 - Business Organizations and Government Regulations (3CR)
- GEL 0000 - General Elective (4CR)
- MGT 2150 - Leadership (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Elective (3CR from


## Total Program Credits (61 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of

Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Manufacturing Technology Certificate

Fall Semester (14 credits)

- ENTK 1500 - Engineering Graphics (4CR)
- MCHT 1640 - Basic Machining Practice (10CR)

Spring Semester (15 credits)

- ENTK 2010-CAD 3D Modeling and Mechanical Design I (4CR)
- ENTK 2525 - Design and Manufacturing Methods I (4CR)
- MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)
- WELD 1910 - Specialized Welding and Joining (3CR)


## Fall Semester (13 Credits)

- ENTK 2020 - CAD 3D Modeling and Mechanical Design II (4CR)
- MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)
- WELD 1700 - General Welding (2.5CR)
- WELD 1820 - GMAW and GTAW Welding (2.5CR)


## Program Total (42 credits)

Note:
The normal length of this program is three semesters.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Manufacturing and Automation Technology,

A.A.S.

Freshman Year
Fall Semester ( 15.5 credits)

- ENTK 1060 - Excel Technical Applications (3CR)
- ENTK 2010-CAD 3D Modeling and Mechanical Design I (4CR)
- MCHT 1610 - Machine Tool Technology I (2CR)
- WELD 1820 - GMAW and GTAW Welding (2.5CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 credits)

- ELTR 1540 - Basic AC/DC Electronics (2CR)
- MANF 2525 - Design and Manufacturing Methods (4CR)
- MANF 2690 - Robot Welding (4CR)
- MCHT 1620 - Machine Tool Technology II (2CR)
- MATH 0000 - Math Computation (3CR) or
- LS 0000 - Lab Science Requirement (4CR)


## Sophomore Year

Fall Semester (14 credits)

- ENTK 2020 - CAD 3D Modeling and Mechanical Design II (4CR)
- ELTR 2815 - Programmable Logic Controllers (3CR)
- MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)


## Spring Semester (16 credits)

- MANF 2550 - Automation Control (3CR)
- MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)
- GEL 0000 - General Electives (7CR)
- PEL 0000 - Program Electives (2CR)


## Total Program Credits (60.5 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Marketing Certificate

## Fall Semester (9-10 credits)

- BADM 1005 - Business Mathematics I (3CR)
- or
- MATH 1400 - College Algebra (4CR)
- MKT 1010 - Sales and Customer Relationship Management (3CR)
- MKT 2100 - Principles of Marketing (3CR)

Spring Semester (9-10 credits)

- ACCT 1005 - Practical Accounting (4CR)
- or
- ACCT 2010 - Principles of Accounting I (4CR)
- BADM 2010 - Legal Environment of Business (3CR)
- MKT 1300 - Integrated Marketing Communication (3CR)


## Fall Semester (9 credits)

- COMM 1030 - Interpersonal Communication (3CR)
- MKT 2000 - Introduction to Digital Marketing (3CR)
- MGT 2100 - Principles of Management (3CR)

Spring Semester (6 credits)

- ENGL 1020 - English Composition II (3CR)
- MKT 2200 - Consumer Behavior (3CR)


## Program Total (34 credits)

## Note:

This program cannot be completed in nine months due to limited availability of some courses, however, certificate may be earned within nine months with coordination and approval from the marketing instructor

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Marketing, A.S. <br> Freshman Year <br> Fall Semester (13 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEL 0000 - Program Electives (3CR) Choose course from BADM 2195, MKT 1010, 1100, or 2000.

Spring Semester (16 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MKT 1300 - Integrated Marketing Communication (3CR)


## Sophomore Year <br> Fall Semester (18 credits)

- GEL 0000 - General Electives (4CR)
- MATH 1400 - College Algebra (4CR)
- MGT 2100 - Principles of Management (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PEL 0000 - Program Electives (3CR)

Choose course from BADM 2195, MKT 1010, 1100 , or 2000.

## Spring Semester (17 credits)

- BADM 2010 - Legal Environment of Business (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MKT 2200 - Consumer Behavior (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) (or)
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Total Program Credits (64 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Mathematics - Secondary

Education, A.S.
Freshman Year Fall Semester (17 Credits)

- EDCI 1500 - Introduction to Teaching (1CR)
- EDFD 2020 - Foundations of Education (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 2200 - Calculus I (4CR)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 2205 - Calculus II (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 2300 - Developmental Psychology (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CE 0000-Cultural Environment Requirement (3CR)
- EDFD 2100 - Educational Psychology (3CR)
- ITEC 2360 - Teaching with Technology (3CR)
- MATH 2210 - Calculus III (4CR)
- MATH 2250 - Elementary Linear Algebra (3CR)


## Spring Semester (14 Credits)

- EDEX 2484 - Intro to Special Education (3CR)
- EDUC 2100 - Practicum in Teaching (2-4CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2300 - Discrete Structures (3CR)


## Total Program Credits (62 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Mathematics, A.S.

Freshman Year
Fall Semester (17 Credits)

- CE 0000-Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2200 - Calculus I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 2205 - Calculus II (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- COSC 1010 - Introduction to Computer Science (4CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 2210 - Calculus III (4CR)
- MATH 2250 - Elementary Linear Algebra (3CR)


## Spring Semester (14 Credits)

- MATH 2300 - Discrete Structures (3CR)
- MATH 2310 - Applied Differential Equations I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- GEL 0000 - General Electives (7CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Mechanical Graphics and Design Certificate

Freshman Year<br>Fall Semester (8 credits)

- ENTK 1500 - Engineering Graphics (4CR)
- ENTK 2010 - CAD 3D Modeling and Mechanical Design I (4CR)


## Spring Semester (7 credits)

- ENTK 2525 - Design and Manufacturing Methods I (4CR)
- ENTK 1021 - Descriptive Geometry (3CR)


## Sophomore Year

Fall Semester (11-12 credits)

- ENTK 2020 - CAD 3D Modeling and Mechanical Design II (4CR)
- PEL 0000 - Program Electives Choose two courses from below:
- MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)
- MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)
- MCHT 2800 - Computer Assisted Manufacturing (3CR)


## Spring Semester (4 credits)

- ENTK 2030 - CAD 3D Modeling and Mechanical Design III (4CR)


## Program Total (30-31 credits)

## Note:

*These courses are often completed by students previous to being a degree seeking student at Casper College and are included in the Engineering Technology and Design, A.A.S. degree as well.

This program cannot be completed in nine months due to the sequence of courses.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Medical Laboratory

Technician, A.S.
Freshman Year
Fall Semester (15 Credits)

- CMAP 1505-Technology Literacy (1CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MLTK 1500 - Clinical Hematology and Hemostasis (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- MOLB 2210 - General Microbiology (4CR) or
- MOLB 2240 - Medical Microbiology (4CR)


## Spring Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MLTK 1600 - Clinical Immunohematology (3CR)
- MLTK 1700 - Microscopy: Urinalysis and Body Fluids (2CR)
- MLTK 2600 - Clinical Microbiology I (2CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Summer Semester (7 Credits)

- CHEM 1000 - Intro to Chemistry (4CR) or
- CHEM 1020 - Chemistry I (4CR)
- MLTK 1800 - Principles of Phlebotomy (3CR)


## Sophomore Year Fall Semester (18 Credits)

- ANTH 1200 Intro to Cultural Anthropology (3CR) or
- PSYC 1000 - General Psychology (3CR) or
- SOC 1000 - Sociological Principles (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MLTK 2500 - Clinical Chemistry (3CR)
- MLTK 2650 - Clinical Microbiology II (2CR)
- MLTK 2700 - Immunology (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (15 Credits)

- MLTK 2800 - Clinical Pathophysiology (4CR)
- MLTK 2971 - Clinical Practicum: Hematology (2CR)
- MLTK 2972 - Clinical Practicum: Chemistry (2CR)
- MLTK 2973 - Clinical Practicum: Immunohematology (2CR)
- MLTK 2974 - Clinical Practicum: Microbiology (2CR)
- MLTK 2976 - Clinical Practicum: Serology (1CR)
- MLTK 2977 - Clinical Practicum: Urinalysis and Body Fluids (1CR)
- MLTK 2978 - Clinical Practicum: Medical Laboratory Technician Professionalism (1CR)


## Total Program Credits (69-72 Credits)

Note:
Courses listed are consistent with the required curriculum for Baccalaureate Medical Technology programs. Additional credit hours beyond the AS degree may be required to meet prerequisite coursework requirements for the BS programs.
The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 71 approved semester credits are required for graduation. For specific graduation requirements see "Degree Requirements".
Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, and Associate of Applied Science degrees.

## Museum/Gallery Studies, A.A.

Freshman Year
Fall Semester (16 Credits)

- ART 1300 - Museum Studies (3CR)
- ART 2010 - Art History I (3CR)
- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (15 Credits)

- ANTH 1300 - Introduction to Archaeology (3CR)
- ART 2020 - Art History II (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- ANTH 1100 - Introduction to Biological Anthropology (3CR) or
- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- ART 2023 - Collections Management (3CR)
- ART 2035 - Art History III (3CR)
- COMM 2010 - Public Speaking (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (16 Credits)

- ART 2970 - Museum Training Internship (6CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of

Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Music Education, A.F.A.

## Freshman Year

Fall Semester (16 Credits)

- ENGL 1010 - English Composition I (3CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 0200 - Convocation (0CR)
- MUSC 1003 - Introduction to Life as a Music Major (3CR)
- MUSC 1030 - Written Theory I (3CR)
- MUSC 1035 - Aural Theory I (1CR)
- MUSC 1290 - Class Piano I (1CR)
- PSYC 1000 - General Psychology (3CR)

Spring Semester (15 Credits) Vocal Emphasis (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 0200 - Convocation (0CR)
- MUSC 1025 - Introduction to Music Education (2CR)
- MUSC 1040 - Written Theory II (3CR)
- MUSC 1045 - Aural Theory II (1CR)
- MUSC 1295 - Class Piano II (1CR)
- PSYC 2300 - Developmental Psychology (3CR)

For Vocal Emphasis Add the Following 2 Credits

- MUSC 2320 - Diction for Singers I (2CR)


## Sophomore Year

Fall Semester (17 Credits)

- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 1330 - Public School Methods: String I (1CR)
or
- MUSC 1350 - Public School Methods: Woodwind I (1CR)
- MUSC 2030 - Written Theory III (3CR)
- MUSC 2035 - Aural Theory III (1CR)
- MUSC 2050 - Music History Survey I (3CR)
- MUSC 2290 - Class Piano III (1CR)
- MATH 1000 - Problem Solving (3CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (12 Credits)

- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 1335 - Public School Methods: String II (1CR)
- MUSC 1355 - Public School Methods: Woodwind II (1CR)
- MUSC 2040 - Written Theory IV (3CR)
- MUSC 2045 - Aural Theory IV (1CR)
- MUSC 2055 - Music History Survey II (3CR)
- MUSC 2295 - Class Piano IV (1CR)
- MUSC 2395 - Piano Proficiency
- PEAC 0000 - Physical Education Requirement (1CR)


## Total Program Credits (60 Credits) Vocal Emphasis (62 Credits)

Note:
The normal length of this program is two academic years at 17-19 credits hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

Music Performance, A.F.A.
Vocal Music Performance
Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- LS 0000 - Lab Science Requirement (4CR)
- MUSC 0200 - Convocation (0CR)
- MUSC 1003 - Introduction to Life as a Music Major (3CR)
- MUSC 1030 - Written Theory I (3CR)
- MUSC 1035 - Aural Theory I (1CR)
- MUSC 1270 - Voice I (1-2CR) (Max. 8)
- MUSC 1290 - Class Piano I (1CR)
- MUSC 1400 - Collegiate Chorale (1CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MUSC 0200 - Convocation (0CR)
- MUSC 1040 - Written Theory II (3CR)
- MUSC 1045 - Aural Theory II (1CR)
- MUSC 1270 - Voice I (1-2CR) (Max. 8)
- MUSC 1295 - Class Piano II (1CR)
- MUSC 1400 - Collegiate Chorale (1CR)
- MUSC 2320 - Diction for Singers I (2CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year

Fall Semester (16 Credits)

- MUSC 0200 - Convocation (0CR)
- MUSC 1400 - Collegiate Chorale (1CR)
- MUSC 2030 - Written Theory III (3CR)
- MUSC 2035 - Aural Theory III (1CR)
- MUSC 2050 - Music History Survey I (3CR)
- MUSC 2270 - Voice II (1-2CR) (Max 8)
- MUSC 2290 - Class Piano III (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- WL 0000 - World Language (4CR) FREN or GERM


## Spring Semester (14 Credits)

- MUSC 0200 - Convocation (0CR)
- MUSC 1400 - Collegiate Chorale (1CR)
- MUSC 1425 - History of Rock Music (3CR) or
- MUSC 2026 - Intro to Film and Video Game Music (3CR)
or
- MUSC 2063 - Blues, Jazz, and Rock (3CR)
- MUSC 2040 - Written Theory IV (3CR)
- MUSC 2045 - Aural Theory IV (1CR)
- MUSC 2055 - Music History Survey II (3CR)
- MUSC 2270 - Voice II
- MUSC 2295 - Class Piano IV (1CR)
- MUSC 2395 - Piano Proficiency

Total Program Credits (63 Credits)
Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Instrumental Performance

Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- LS 0000- Lab Science Requirement (4CR) or
- MATH 1000 - Problem Solving (3CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (2CR)
- MUSC 1003 - Introduction to Life as a Music Major (3CR)
- MUSC 1030 - Written Theory I (3CR)
- MUSC 1035 - Aural Theory I (1CR)
- MUSC 1290 - Class Piano I (1CR)


## Spring Semester (14 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (2CR)
- MUSC 1040 - Written Theory II (3CR)
- MUSC 1045 - Aural Theory II (1CR)
- MUSC 1295 - Class Piano II (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year Fall Semester (15 Credits)

- GEL 0000 - General Electives (3CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (2CR)
- MUSC 2030 - Written Theory III (3CR)
- MUSC 2035 - Aural Theory III (1CR)
- MUSC 2050 - Music History Survey I (3CR)
- MUSC 2290 - Class Piano III (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000- Program Electives (3CR)


## Spring Semester (14 Credits)

- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (2CR)
- MUSC 1425 - History of Rock Music (3CR) or
- MUSC 2026 - Intro to Film and Video Game Music (3CR)
or
- MUSC 2063 - Blues, Jazz, and Rock (3CR)
- MUSC 2040 - Written Theory IV (3CR)
- MUSC 2045 - Aural Theory IV (1CR)
- MUSC 2055 - Music History Survey II (3CR)
- MUSC 2295 - Class Piano IV (1CR)
- MUSC 2395 - Piano Proficiency


## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required
for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Music, A.A. <br> Freshman Year <br> Fall Semester (16 Credits)

- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 1003 - Introduction to Life as a Music Major (3CR)
- MUSC 1030 - Written Theory I (3CR)
- MUSC 1035 - Aural Theory I (1CR)
- MUSC 1290 - Class Piano I (1CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 1025 - Introduction to Music Education (2CR)
- MUSC 1040 - Written Theory II (3CR)
- MUSC 1045 - Aural Theory II (1CR)
- MUSC 1295 - Class Piano II (1CR)
- PEL 0000 - Program Electives (2CR) from a 1000 level music studio


## Sophomore Year <br> Fall Semester (16 Credits)

- LS 0000 - Lab Science Requirement (4CR)
- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 2030 - Written Theory III (3CR)
- MUSC 2035 - Aural Theory III (1CR)
- MUSC 2050 - Music History Survey I (3CR)
- MUSC 2290 - Class Piano III (1CR)
- PEL 0000 - Program Electives (2CR) from a 2000 level music studio


## Spring Semester (15 Credits)

- MUSC 0200 - Convocation (0CR)
- Music Ensemble (1CR)
- Music Studio (1CR)
- MUSC 2040 - Written Theory IV (3CR)
- MUSC 2045 - Aural Theory IV (1CR)
- MUSC 2055 - Music History Survey II (3CR)
- MUSC 2295 - Class Piano IV (1CR)
- MUSC 2395 - Piano Proficiency
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (62 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Musical Theatre Performance,

 A.A.Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- DANC 1410 - Beginning Ballet I (1CR)
- MUSC 1031 - Music Theory I for Musical Theatre (3CR)
- MUSC 1035 - Aural Theory I (1CR)
- MUSC 1046 - Musical Theatre Voice (1CR)
- MUSC 1290 - Class Piano I (1CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- THEA 1010 - Fundamentals of Theatre Arts (3CR)
- THEA 1100 - Beginning Acting (3CR)


## Spring Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- DANC 1450 - Beginning Tap Dance I (1CR)
- MATH 1000 - Problem Solving (3CR)
- MUSC 1041 - Music Theory II for Musical Theatre (3CR)
- MUSC 1045 - Aural Theory II (1CR)
- MUSC 1046 - Musical Theatre Voice (1CR)
- MUSC 1295 - Class Piano II (1CR)
- THEA 2350 - Musical Theatre History and Analysis (4CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- DANC 1480 - Beginning Jazz Dance I (1CR)
- GEL 0000 - General Electives (6CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MUSC 1046 - Musical Theatre Voice (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- THEA 2310 - Auditioning (3CR)

Spring Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MUSC 1046 - Musical Theatre Voice (1CR)
- THEA 1125 - Musical Theatre Performance Techniques I (3CR)
- THEA 2050-Theatre Practice
- THEA 2100 - Acting II (3CR)

Total Program Credits (66 Credits)

Note:
The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Nursing A.D.N.

ADN - Prerequisite Requirements (14 Credits)

To be considered for admission for the Associate Degree Nursing (ADN) Program, you must be currently enrolled or have completed with a " C " or better in the following:

- ENGL 1010 - English Composition I (3CR)
- HMDV 1300 - On Course (2CR)
- HLTK 1300 - Nursing Boot Camp (1CR)
- MATH 1400 - College Algebra (4CR)
- ZOO 2015 - Human Anatomy (4CR)


## ADN - Freshman Year

First Semester (15 Credits)

- CMAP 1550 - E-Portfolio Development (1CR)
- NURS 1100 - Professional Nursing Care in Health Promotion (10CR)
- ZOO 2025 - Human Physiology (4CR)


## Second Semester (13 Credits)

- NURS 1200 - Professional Nursing Care of the Patient with Chronic Illness (10CR)
- PSYC 1000-General Psychology (3CR)


## ADN - Sophomore Year <br> Third Semester (13 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- NURS 2300 - Professional Nursing Care of the Patient with Acute Illness (10CR)


## Fourth Semester (13 Credits)

- NURS 2400 - Professional Nursing Care of the Patient with Complex Illness (10CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits including Prerequisites (68 Credits)

## LPN Advanced Placement

Licensed practical nurses who wish to enter the ADN Program as Advanced Placement LPNs at the second level of the program must submit their application to the Director of Nursing. Application dates are posted on the Nursing Program Website. Advanced placement admission will be contingent on space available. Further information on the program and the application process can be found in the Guide to Advanced Placement Education for the LPN, also found on the website.
Preference for advanced placement will be given first to qualified LPNs who received Casper College's PN certificate, then to LPNs from Wyoming or other programs. Transfer students are given preference following advanced placement students.

## Note:

The normal length of this program is two academic years at 13-14 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Nutrition, A.S. <br> Freshman Year Fall Semester (17 Credits)

- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- FCSC 1141 - Principles of Nutrition (3CR)
- MATH 1400 - College Algebra (4CR)
- PEL 0000 - Program Electives (3CR)


## Spring Semester (16 Credits)

- ANSC 1160 - Issues in Agriculture (3CR)
- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEL 0000 - Program Electives (3CR)
- PSYC 1000-General Psychology (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CHEM 2300 - Intro to Organic Chemistry (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- FCSC 1150 - Scientific Study of Food (3CR)
- GEL 0000 - General Electives (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (13 Credits)

- CHEM 1030 - Chemistry II (4CR)
- COMM 2010 - Public Speaking (3CR)
- FCSC 2141 - Nutrition Controversies (2CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Program Electives:

- HOSP 2320 - Food and Beverage Management (3CR)
- HOSP 2330 - Food and Beverage Services (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR)
- MOLB 2210 - General Microbiology (4CR)
- MOLB 2240 - Medical Microbiology (4CR)
- ZOO 2015 - Human Anatomy (4CR)

Total Program Credits (62 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.
To obtain a degree in nutrition, a student must obtain a grade of "C" or better in all major requirements

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Occupational Therapy Assistant, A.S. <br> Freshman Year Fall Semester (15 Credits)

- ENGL 1010 - English Composition I (3CR)
- COTA 2300 - Fieldwork Integration I (2CR)
- OCTH 2000 - Introduction to Occupational Therapy (2CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 1000-General Psychology (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (16 Credits)

- COTA 2020 - Human Occupations and Life Roles (2CR)
- COTA 2200 - Therapeutic Approaches and Media I (2CR)
- COTA 2310 - Fieldwork Integration II (2CR)
- GEL 0000 - General Electives (3CR)
- KIN 2050 - Functional Kinesiology (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Summer Semester (7 Credits)

- COTA 2150 - Group Dynamics (1CR)
- COTA 2420 - Clinical Conditions (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)


## Sophomore Year Fall Semester (18 Credits)

- COTA 2100 - Psychosocial Aspects (3CR)
- COTA 2160 - Leadership Skills (2CR)
- COTA 2210 - Therapeutic Approaches and Media II (2CR)
- COTA 2320 - Fieldwork Integration III (2CR)
- COTA 2350 - Clinical Theory and Practice I (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 1000 - Problem Solving (3CR)


## Spring Semester (16 Credits)

- COTA 2220 - Therapeutic Approaches and Media III (3CR)
- COTA 2330 - Fieldwork Integration IV (2CR)
- COTA 2400 - Clinical Theory and Practice II (3CR)
- COTA 2450 - Health Care Systems (3CR)
- GEL 0000 - General Electives (2CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Summer Semester (6 Credits)

- COTA 2500 - Fieldwork A (3CR)
- COTA 2550 - Fieldwork B (3CR)


## Total Program Credits (78 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Office Management Certificate

## Fall Semester (12 credits)

- ACCT 1005 - Practical Accounting (4CR) or
- ACCT 2010 - Principles of Accounting I (4CR)
- BOTK 1660 - Document Formatting (2CR)
- CMAP 1715 - Word Processing Applications (3CR)
- CMAP 1765-Spreadsheet Applications (3CR)


## Spring Semester (16 credits)

- BADM 1000 - Intro to Business (3CR)
- BADM 1020 - Business Communications (3CR)
- CMAP 1550 - E-Portfolio Development (1CR)
- CMAP 1815 - Database Applications (3CR)
- CMAP 2630 Presentation Graphics (2CR)
or
- CMAP 2635 - Presentation Graphics I (1CR) and
- CMAP 2636 - Presentation Graphics II (1CR)
- BOTK 1955 - Professional Development (3CR)
- PEL 0000 - Program Electives (1CR)


## Program Total (30 credits)

## Note:

The normal length of this program is nine months. All classes in the major must be passed with a " C " or better.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Office Management, A.A.S.

Freshman Year<br>Fall Semester (16-17 credits)

- BOTK 1655 - Keyboarding Speed and Accuracy (1CR)
- CMAP 1200 - Computer Information Systems (3CR)
- CMAP 1715 - Word Processing Applications (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR) or
- BADM 1005 - Business Mathematics 1 (3CR)
- MGT 2100 - Principles of Management (3CR)


## Spring Semester (16 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- BOTK 1660 - Document Formatting (2CR)
- BOTK 1955 - Professional Development (3CR)
- GEL 0000 - General Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (15 credits)

- ACCT 2110 - QuickBooks Accounting (3CR)
- BADM 2010 - Legal Environment of Business (3CR)
- CMAP 1550 - E-Portfolio Development (1CR)
- CMAP 1765 - Spreadsheet Applications (3CR) or
- CMAP 1815 - Database Applications (3CR)
- CMAP 2630 Presentation Graphics (2CR) or
- CMAP 2635 - Presentation Graphics I (1CR) and
- CMAP 2636 - Presentation Graphics II (1CR)
- INET 1590 - Web Page Design (3CR)


## Spring Semester (14-16 credits)

- BADM 1020 - Business Communications (3CR)
- BADM 2030 - Business Ethics (3CR)
- BOTK 1980 - Cooperative Work Experience I (13CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MGT 2200 - Strategic Human Resource Management (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Program Total (61-63 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Outdoor Recreation \& Tourism A.S. <br> Freshman Year Fall Semester (15 credits)

- HOSP 1520 - Introduction to Hospitality and Tourism Management (3CR)
- MATH 1000 - Problem Solving (3CR)
- ENGL 1010 - English Composition I (3CR)
- SOC 2112 - Environmental Sociology (3CR)
- ART 1300 - Museum Studies (3CR)


## Spring Semester (15 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)
- ENR 1500 - Water, Dirt, and Earth's

Environment (4CR)
or

- GEOL 1500 - Water, Dirt, and Earth's Environment (4CR)


## Sophomore Year <br> Fall Semester (16 credits)

- ECON 1010 - Macroeconomics (3CR)
- HOSP 2530 - Tourism Management (3CR)
- ACCT 1000 - Intro to Accounting (4CR)
or
- ACCT 2010 - Principles of Accounting I (4CR)
- POLS 1000 - American and Wyoming Government (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Spring Semester (14 credits)

- GEOG 1000 - World Regional Geography (3CR) or
- GEOG 1110 - Management and Implementation of GIS (4CR)
- HOSP 2525 - Recreation and Tourism Planning and Development (3CR)
- HOSP 2980 - Cooperative Work Experience (Hospitality Management) (3CR)
or
- ENR 2480 - Cooperative Work Experience (3CR) or
- GEOG 2480 - GIS Cooperative Work Experience (3CR)
- PEL 0000 - Program Electives (4-5CR)

At least 4-5 credits from the following:

- AGTK 1580 - Introduction to Outdoor Recreation: Guide Outfitting (3CR)
- AGTK 1590 - Packing and Outfitting (2CR)
- ART 2470 - Art Museum Training Internship (or)
- ATSC 2000 - Introduction to Meteorology (4CR)
- CNSL 2200 - Introduction to Student Leadership I (2CR)
- HOSP 1570 - Human Resource Hospitality Management (3CR)
- MGT 2150 - Leadership (3CR)
- MKT 1010 - Sales and Customer Relationship Management (3CR)
- ENGL 2055 - Creative Writing: Writing in the Wild (3CR)
and
- BIOL 2110 - Yellowstone Field Science (3CR)
and
- PEAC 2084 - Outdoor Living Skills (1CR) or
An approved travel course (1-6CR)


## Total Program Credits (60 credits)

Graduation Requirements:
A minimum of 60 approved semester credits are required
for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Paralegal Certificate

Fall Semester (17 Credits)

- CRMJ 2120 - Introduction to Criminal Justice (3CR)
- LEGL 1610 - Introduction to the Paralegal Profession (3CR)
- LEGL 1700 - Legal Analysis (3CR)
- LEGL 1710 - Legal Research and Writing I (3CR)
- LEGL 2500 - Civil Procedure (3CR)


## Spring Semester (16 Credits)

- CRMJ 2230 - Law of Evidence (3CR)
- LEGL 1620 - Transactional Law (3CR)
- LEGL 1720 - Legal Research and Writing II (3CR)
- LEGL 2550 - Litigation Support (3CR)
- LEGL 2610 - Family Law (3CR)


## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Paralegal Studies, A.A.

## Freshman Year <br> Fall Semester (15 Credits)

- ENGL 1010 - English Composition I (3CR)
- LEGL 1610 - Introduction to the Paralegal Profession (3CR)
- LEGL 1700 - Legal Analysis (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- POLS 1000 - American and Wyoming Government (3CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- LEGL 1620 - Transactional Law (3CR)
- LEGL 2610 - Family Law (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PSYC 1000 - General Psychology (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CRMJ 2120 - Introduction to Criminal Justice (3CR)
- CE 0000-Cultural Environment Requirement (3CR)
- LEGL 1710 - Legal Research and Writing I (3CR)
- LEGL 2500 - Civil Procedure (3CR)
- LS 0000 - Lab Science Requirement (4CR)


## Spring Semester ( 15 Credits)

- CRMJ 2230 - Law of Evidence (3CR)
- LEGL 1720 - Legal Research and Writing II (3CR)
- LEGL 2550 - Litigation Support (3CR)
- GEL 0000 - General Electives (6CR)


## Total Program Credits (62 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Paramedic Technology, A.S.

For further information on the Paramedic Technology Program please contact the program director Russ Christiansen at 307-268-2693 or by email at rchristiansen@caspercollege.edu.

## Prerequisite Courses (14.33 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- ZOO 2015 - Human Anatomy (4CR)
- ZOO 2025 - Human Physiology (4CR)


## Freshman Year <br> Fall Semester (17 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 1000 - Problem Solving (3CR)
- PSYC 1000 - General Psychology (3CR)
- PTEP 2500 - Introduction to Paramedic Technology (8CR)


## Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (3CR)
- PTEP 2600 - Paramedic Technology Medical Emergencies (8CR)
- PTEP 2610 - Paramedic Practical 1 (2CR)


## Summer Semester (7 Credits)

- PTEP 2800 - Paramedic Technology Trauma (7CR)


## Sophomore Year

Fall Semester (14 Credits)

- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PTEP 2900 - Paramedic Technology Advanced Cardiology and Special Considerations (8CR)
- PTEP 2910 - Paramedic Practical 3 (3CR)


## Spring Semester (14 Credits)

- GEL 0000 - General Electives (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PTEP 2950 - Paramedic Capstone (10CR)


## Total Program Credits (61 Credits) (With prerequisites Total 75.33 <br> Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Personal Trainer Education Certificate

Fall Semester (15 Credits)

- HLED 1006 - Personal Health (3CR)
- KIN 1005 - Introduction to Kinesiology and Health Promotion
- PEPR 2030 - Motor Learning (3CR)
- PEPR 2136 - Sports Nutrition (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (14 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- PEPR 1052 - Prevention and Care of Athletic Injuries (3CR)
- PEPR 2135 - Personal Trainer Education (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Certificate Credits (29 CR)

Note:
The normal length of this program is nine months.

Graduation Requirements
For specific graduation requirements see "Degree Requirements".

## Pharmacy Technology

## Certificate

## Total Certificate Credits (43.33)

Fall Semester (14 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- ZOO 2015 - Human Anatomy (4CR) and
- ZOO 2025 - Human Physiology (4CR)
- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 1030 - Interpersonal Communication (3CR)
or
- COMM 2010 - Public Speaking (3CR)
- HLTK 1200 - Medical Terminology (3CR)


## Spring Semester (10.33 Credits)

- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- PHTK 1000 - Pharmacy Calculations I (1CR) *
- PHTK 1600 - Pharmacy Simulation Laboratory I (4CR) *
- PHTK 1650 - Pharmacy Law and Ethics (2CR) *
- PHTK 1710 - Pharmacology I (3CR) *


## Summer Semester (8 Credits)

- PHTK 1720 - Pharmacology II (3CR)
- PHTK 2972 - Pharmacy Experiential Training II (5CR)

Note:

* Enrollment limited to pharmacy technology majors. The normal length of this program is 10 months.


## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Pharmacy Technology, A.S.

Freshman Year
Fall Semester (14-15 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- ZOO 2015 - Human Anatomy (4CR) and
- ZOO 2025 - Human Physiology (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)


## Spring Semester (16 Credits)

- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
and
- COMM 1030 Interpersonal Communications (3CR)
or
- COMM 2010 - Public Speaking (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- PSYC 1000 - General Psychology (3CR)


## Sophomore Year

Fall Semester (13.33 Credits)

- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- PHTK 1000 - Pharmacy Calculations I (1CR)
- PHTK 1600 - Pharmacy Simulation Laboratory I (4CR)
- PHTK 1650 - Pharmacy Law and Ethics (2CR)
- PHTK 1710 - Pharmacology I (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (14 Credits)

- PHTK 1610 - Pharmacy Simulation Laboratory II (4CR)
- PHTK 1630 - Pharmacy Calculations II (2CR)
- PHTK 1720 - Pharmacology II (3CR)
- PHTK 2971 - Pharmacy Experiential Training I (5CR)


## Summer Semester (9 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHTK 2972 - Pharmacy Experiential Training II (5CR)


## Total Program Credits (67.33 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

* Enrollment limited to pharmacy technology majors.

In order to successfully complete either curriculum, the student must have a cumulative GPA of 2.0 and a "C" or better in all of the major courses, and a satisfactory rating in all experiential rotations.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Phlebotomy Technician Training Certificate

- CMAP 1505-Technology Literacy (1CR)
- MLTK 1800 - Principles of Phlebotomy (3CR)
- MLTK 1970 - Clinical Practicum: Phlebotomy (2CR) (not offered in the summer semester)
- COMM 1505 - Communication for Professional Success (1-2CR) (3CR)
or
- ENGL 1010 - English Composition I (3CR) and one of the following:
- SOC 1000 - Sociological Principles (3CR)
- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- PSYC 1000 - General Psychology (3CR)


## Total Program Credits (12 Credits)

Note:
The normal length of this program is 16 weeks.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Photography, A.F.A.

## Freshman Year

Fall Semester (16 Credits)

- ART 1005 - Drawing I (3CR)
- ART 1110 - Foundation: Two-Dimensional (3CR)
- ART 1150 - Black and White Film Photography I (3CR)
- ART 2010 - Art History I (3CR)
- ENGL 1010 - English Composition I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (12 Credits)

- ART 2020 - Art History II (3CR)
- ART 1115 - Digital Media (3CR)
- ART 2245 - Digital Photography I (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)


## Sophomore Year

Fall Semester (15-16 Credits)

- ART 1120 - Foundation: Three Dimensional (3CR)
- ART 1130 - Foundation: Color Theory (3CR)
- ART 1160 - Black and White Film Photography II (3CR)
- ART 2035 - Art History III (3CR)
- LS 0000 - Lab Science Requirement (4CR)
or
- MATH 0000 - Math Computation (3CR)

Spring Semester (17 Credits)

- ART 2141 - Professional Practice in the Arts (1CR)
- ART 2255 - Digital Photography II (3CR)
- PEL 0000 - Program Electives (10CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Total Program Credits (60 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Physical Education, A.S.

Freshman Year
Fall Semester (16 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- KIN 1005 - Introduction to Kinesiology and Health Promotion
- PSYC 1000-General Psychology (3CR)


## Spring Semester (13 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Sophomore Year Fall Semester (17 Credits)

- FCSC 1141 - Principles of Nutrition (3CR)
- EDFD 2100 - Educational Psychology (3CR)
- HLED 1006 - Personal Health (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEPR 2030 - Motor Learning (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (14.33 Credits)

- COMM 1030 - Interpersonal Communication (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- PEPR 2012 - Physical Education for Elementary School (3CR)
- ITEC 2360 - Teaching with Technology (3CR)
- PEPR 2460 - Field Experience (Physical Education) (2CR)


## Total Program Credits (60.33

 Credits)
## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Physics, A.S.

Freshman Year
Fall Semester (14 Credits)

- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 2200 - Calculus I (4CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 2205 - Calculus II (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1310 - College Physics I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 2210 - Calculus III (4CR)
- PHYS 1320 - College Physics II (4CR)
- GEL 0000 - General Electives (5CR)


## Spring Semester (15 Credits)

- PHYS 2310 - Physics III: Waves and Optics (4CR)
or
- PHYS 2320 - Physics IV: Modern Physics (4CR)
- MATH 2250 - Elementary Linear Algebra (3CR) or
- MATH 2310 - Applied Differential Equations I (3CR)
- PEL 0000 - Program Electives (8CR)

Program electives must be chosen from the following departments: BIOL, CHEM, COSC, ES, GEOL, MATH, PHYS

## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.
To obtain a degree in physics, a student must obtain a grade of "C" or better in all major requirements.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Political Science, A.A.

## Freshman Year

Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- LS 0000 - Lab Science Requirement (4CR)
- POLS 1000 - American and Wyoming Government (3CR)
- WL 0000 - World Language (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- POLS 1200 - Non-Western Political Cultures (3CR)
- POLS 2310 - Intro to International Relations (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year

Fall Semester (16 Credits)

- PEL 0000 - Program Electives (3CR) in POLS (6CR) in non-POLS
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Spring Semester (14 Credits)

- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (6CR) in nonPOLS
- POLS 2460 - Intro to Political Philosophy (3CR)


## Total Program Credits (64 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Practical Nursing Certificate

Prerequisite Courses (21 Credits)

- ENGL 1010 - English Composition I (3CR)
- HMDV 1300 - On Course (2CR)
- HLTK 1300 - Nursing Boot Camp (1CR)
- MATH 1400 - College Algebra (4CR)
- PSYC 1000 - General Psychology (3CR)
- ZOO 2015 - Human Anatomy (4CR)
- ZOO 2025 - Human Physiology (4CR)


## Fall Semester (10 Credits)

- NURS 1100 - Professional Nursing Care in Health Promotion (10CR)


## Spring Semester (10 Credits)

- NURS 1200 - Professional Nursing Care of the Patient with Chronic Illness (10CR)


## Total Program Credits (20 credits) (41 Credits with Prerequisites)

Note:
Upon admission to the Nursing Program, the normal length of this certificate is 9-11 months.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Pre-Dentistry, A.S.

Freshman Year
Fall Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (14 Credits)

- BIOL 2022 - Animal Biology (4CR) or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- PHYS 1110 - General Physics I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- WL 0000 - World Language (4CR) *
- GEL 0000 - General Electives (3CR)


## Spring Semester (16 Credits)

- MOLB 2210 - General Microbiology (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1120 - General Physics II (4CR)
- WL 0000 - World Language (4CR) *
- GEL 0000 - General Electives (3CR)


## Total Program Credits (64 Credits)

Note:

* Students should refer to the requirements of their
professional school or transfer institution.
To obtain a degree in Pre-Dentistry or Pre-Medicine, a student must receive a grade of " C " or better in all major requirements.
The normal length of this program is two academic years at 17-19 credits hours per semester.


## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Law (Business), A.B.

## Freshman Year

 Fall Semester (14 credits)- ECON 1010 - Macroeconomics (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 2350 - Business Calculus (4CR)
- MGT 2100 - Principles of Management (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (16 credits)

- BADM 2010 - Legal Environment of Business (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- ECON 1020 - Microeconomics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- MATH 2355 - Mathematical Applications for Business (4CR)


## Sophomore Year <br> Fall Semester (17 credits)

- ACCT 2010 - Principles of Accounting I (4CR)
- BADM 2340 - Business Organizations and Government Regulations (3CR)
- COMM 2010 - Public Speaking (3CR)
- MKT 2100 - Principles of Marketing (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR)
(or)
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Spring Semester (16 credits)

- ACCT 2020 - Principles of Accounting II (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (2CR) Advisor approved electives from ACCT, BADM, HOSP, MKT, MGT, ECON OR COSC
- POLS 1000 - American and Wyoming Government (3CR)


## Program Total (63 credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Medicine, A.S.

## Freshman Year

Fall Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (17 Credits)

- BIOL 2022 - Animal Biology (4CR)
or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 0000 - Math Computation (3CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- GEL 0000 - General Electives (3CR)
- PHYS 1110 - General Physics I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- WL 0000 - World Language (4CR) *


## Spring Semester (16 Credits)

- GEL 0000 - General Electives (3CR)
- MOLB 2210 - General Microbiology (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1120 - General Physics II (4CR)
- WL 0000 - World Language (4CR) *


## Total Program Credits (64 Credits)

## Note:

* Students should refer to the requirements of their professional school or transfer institution.
To obtain a degree in Pre-Dentistry or Pre-Medicine, a student must receive a grade of " C " or better in all major requirements.
The normal length of this program is two academic years at 17-19 credits hours per semester.


## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Occupational Therapy,

A.S.

Freshman Year
Fall Semester (16-17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PSYC 1000 - General Psychology (3CR)

Spring Semester ( 15 Credits)

- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 2010 - Public Speaking (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- OCTH 2000 - Introduction to Occupational Therapy (2CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- PSYC 2300 - Developmental Psychology (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR)
- ZOO 2015 - Human Anatomy (4CR)
- GEL 0000 - General Electives (3CR)


## Spring Semester (17 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 2340 - Abnormal Psychology (3CR)
- SOC 1000 - Sociological Principles (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Program Credits (62-63 Credits)

## Note:

*Although MATH 1000 fulfills the Math requirement for this degree, it is not a sequential course. Students completing this course will have to complete MATH 1400 if they desire to pursue higher level MATH courses.
**Students wishing to apply to the UND Masters of Occupational Therapy program will need to have completed 9 credit hours of fine arts/humanities courses (3 hours of which needs to be simultaneously designated as Global Studies credit) that adheres to the University of North Dakota's Essential Studies program and is transferable. Please work with a pre-OT advisor to ensure appropriate course selection.
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Optometry, A.S.

## Freshman Year

Fall Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 0000 - Math Computation (3CR)
- PSYC 1000 - General Psychology (3CR)


## Spring Semester (17 Credits)

- BIOL 2022 - Animal Biology (4CR) or
- BIOL 2023 - Plant and Fungal Biology (4CR) or
- MOLB 2210 - General Microbiology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CHEM 2300 - Intro to Organic Chemistry (4CR) or
- CHEM 2420 - Organic Chemistry I (4CR)
- MATH 2200 - Calculus I (4CR)
- MOLB 2210 - General Microbiology (4CR)
- PHYS 1110 - General Physics I (4CR)


## Spring Semester (12 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- MOLB 2220 - Pathogenic Microbiology (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1120 - General Physics II (4CR)


## Total Program Credits (62 Credits)

## Note:

* Students should refer to the requirements of their professional school or transfer institution.
The normal length of this program is two academic years at 16-18 credit hours per semester.


## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Pharmacy, A.S.

Freshman Year
Fall Semester (17 Credits)

- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 0000 - Math Computation (3CR)


## Spring Semester (18 Credits)

- BIOL 2022 - Animal Biology (4CR) or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR)
- MOLB 2210 - General Microbiology (4CR)


## Sophomore Year <br> Fall Semester (18 Credits)

- CHEM 2420 - Organic Chemistry I (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 2200 - Calculus I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (17 Credits)

- CHEM 2440 - Organic Chemistry II (4CR)
- MOLB 2220 - Pathogenic Microbiology (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- STAT 2050 - Fundamentals of Statistics (4CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Program Credits (70 Credits)

Note:
This degree does not guarantee that a student has met all the prerequisites for admission to any pharmacy school.
***Exact entry level course is determined by ACT or placement exam scores.
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Physical Therapy, A.S.

## Freshman Year

Fall Semester (18 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- CHEM 1020 - Chemistry I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (17 Credits)

- BIOL 2022 - Animal Biology (4CR) or
- BIOL 2023 - Plant and Fungal Biology (4CR) or
- MOLB 2210 - General Microbiology (4CR)
- CHEM 1030 - Chemistry II (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- MATH 1405 - Trigonometry (3CR)


## Sophomore Year <br> Fall Semester (17 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- PHYS 1110 - General Physics I (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- ZOO 2015 - Human Anatomy (4CR)


## Spring Semester (12 Credits)

- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1120 - General Physics II (4CR)
- SOC 1000 - Sociological Principles (3CR)
- ZOO 2025 - Human Physiology (4CR)


## Total Program Credits (64 Credits)

## Note:

*Most Physical Therapy programs will require additional Psychology and Cultural Environment courses. Additionally, some Physical Therapy programs will require Statistics and may encourage a Calculus I course in lieu of Physics II. Students should work with the academic advisor to confirm required pre-requisites for their intended transfer institution.
Students should work with their advisor to review the prerequisite requirements for their intended professional school(s) or transfer institution(s). Completion of the AS degree from Casper College does not guarantee fulfillment of all pre-requisite requirements for the transfer institution. Additional pre-requisite/recommended courses for Physical Therapy programs are offered by Casper College and also UW Casper.
The normal length of this program is two academic years with coursework above the 1000 level and an average load of $15-18$ credit hours per semester. Summer sessions may be encouraged for completion in 2 years.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Pre-Veterinary, A.S.

## Freshman Year Fall Semester (14 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- COMM 2010 - Public Speaking (3CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)


## Spring Semester (16 Credits)

- BIOL 2022-Animal Biology (4CR) or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1405-Trigonometry (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (15 Credits)

- CHEM 2420 - Organic Chemistry I (4CR)
- GEL 0000 - General Electives (3CR)
- MOLB 2210 - General Microbiology (4CR)
- PHYS 1110 - General Physics I (4CR)


## Spring Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- MOLB 2220 - Pathogenic Microbiology (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PHYS 1120 - General Physics II (4CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Total Program Credits (61 Credits)

## Note:

*Elective credits should come from courses that help fulfill pre-requisite requirements at the student's intended transfer institution. These choices should be made in consultation with an academic advisor.
Prior to transfer, it is recommended that students complete CHEM 3750 - Principles of Biochemistry (University of Wyoming course offered in Casper).
The above curriculum will vary to some degree with the student's background and experience. For example, some students will not need the beginning mathematics courses and may go directly into calculus. This will save time and permit the student to complete additional courses. Recommended courses include animal production,
genetics, microbiology, and comparative chordate anatomy. The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Psychology, A.S.

## Freshman Year <br> Fall Semester ( 15 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- GEL 0000 - General Electives (2CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- PSYC 2380 - Social Psychology (3CR)


## Sophomore Year <br> Fall Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- PSYC 2080 - Biological Psychology (3CR) or
- PSYC 2210 - Drugs and Behavior (3CR)
- PSYC 2340 - Abnormal Psychology (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Spring Semester (14 Credits)

- GEL 0000 - General Electives (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (6CR)
- PSYC 2000 - Research Psychological Methods (4CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Radiography, A.S.

Prerequisite and General Education Courses (39 Credits)

## PREREQUISITE COURSES: (19 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- MATH 1400 - College Algebra (4CR)
- RDTK 1500 - Introduction to Radiologic Technology (1CR)
- ZOO 2015 - Human Anatomy (4CR)
- ZOO 2025 - Human Physiology (4CR)
- ATI Test of Essential Skills (TEAS) - proficient or higher
GENERAL EDUCATION COURSES (20
Credits) (can be completed within or outside of the major field of study.)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)
- PSYC 1000-General Psychology (3CR) or
- SOC 1000 - Sociological Principles (3CR)


## First Year

Summer Semester (6.33 Credits)

- HLTK 1625 - American Heart Association BLS for the Provider (.33CR)
- RDTK 1530 - Patient Care and Management (2CR) *
- RDTK 1580 - Radiographic Positioning I (2CR) *
- RDTK 1710-1st Yr.-Clinical Education I (2CR)


## Fall Semester (10 Credits)

- RDTK 1610 - Radiographic Imaging I (5CR)
- RDTK 1680 - Radiographic Positioning II (3CR)
- RDTK 1810-1st Yr.-Clinical Education II (3CR)
- RDTK 1830 - Pharmacology for Radiographers (1CR)

Spring Semester (12 Credits)

- RDTK 1640 - Radiographic Imaging II (5CR)
- RDTK 1910-1st Yr.-Clinical Education III (3CR)
- RDTK 2580 - Radiographic Positioning III (3CR)
- RDTK 2200 - Sectional Anatomy (3CR) Can be taken prior to admission after completion of ZOO 2015 and Zoo 2025


## Second Year

Summer Semester (2 Credits)

- RDTK 2710-2nd Yr.-Clinical Education IV (2CR)


## Fall Semester (10 Credits)

- RDTK 2630 - Radiographic Pathology (3CR)
- RDTK 2640 - Radiation Biology and Protection (2CR)
- RDTK 2810-2nd Yr.-Clinical Education V (5CR)


## Spring Semester (7 Credits)

- RDTK 2910-2nd Yr.-Clinical Education VI (5CR)
- RDTK 2930 - Transition from Student to Radiographer (2CR)


## Total Program Credits (83.33 Credits)

## Note:

To continue in the Associate of Science Radiography Program, a student must maintain a cumulative GPA of 2.3 or better and earn a " C " or better in all radiography, allied health, and laboratory science courses.
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Ranch and Agrotourism Management

Fall Semester (16-19CR)

- AGEC 2010 - Farm-Ranch Business Records (3CR)
- AGEC 2020 - Farm-Ranch Business Management (4CR)
- HOSP 1570 - Human Resource Hospitality Management (3CR)
or
- ANSC 2110 - Beef Production (3CR)
- REWM 2000 - Principles of Range Management (3CR)
- MKT 2000 - Introduction to Digital Marketing (3CR)
- PEL 0000 - Program Electives (1-3CR)


## Spring Semester (14-17CR)

- AGEC 2300 - Agricultural Marketing (3CR)
- AGRI 2485 - Ranch Management Seminar (2CR)
- ANSC 2020 - Feeds and Feeding (4CR)
- HOSP 2525 - Recreation and Tourism Planning and Development (3CR)
- PEL 0000 - Program Electives (1-4CR)


## Summer Semester (3CR)

- ANSC 2470 - Ranch Management Internship (3CR)


## Program Electives

- ACCT 1005-Practical Accounting (4CR)
- ACCT 2010 - Principles of Accounting I (4CR)
- AGRI 1010 - Introduction to Agricultural Technology (2CR)
- AGRI 1020 - GPS and GIS in Agriculture (2CR)
- AGTK 1560 - Horse Hoof Trimming (1CR)
- AGTK 1570 - Horseshoeing (2CR)
- AGTK 1590 - Packing and Outfitting (2CR)
- ANSC 1030 - Equine Management (3CR)
- ANSC 1100 - Artificial Insemination (1CR)
- ANSC 1150 - Animal Diseases (2CR)
- ANSC 1160 - Issues in Agriculture (3CR)
- BADM 1005 - Business Mathematics I (3CR)
- CROP 2200 - Forage Crop Science (4CR)
- HOSP 1570 - Human Resource Hospitality Management (3CR)
- MKT 2000 - Introduction to Digital Marketing (3CR)
- SOIL 2010 - Introduction to Soil Science (4CR)
- ZOO 2450 - Principles of Fish and Wildlife Management (3CR)


## Total Program Credits (33-39 CR)

## Notes

The normal length of this program is 12 months.

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Range Management, A.S. <br> Freshman Year <br> Fall Semester (18 Credits)

- AECL 1000 - Agroecology (4CR)
- ANSC 1010 - Intro to Animal Science (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR)
- REWM 2000 - Principles of Range Management (3CR)

Spring Semester ( 15 Credits)

- BIOL 1010 - General Biology I (4CR)
- CHEM 1000 - Intro to Chemistry (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- AGEC 1010 - Agricultural Macroeconomics (3CR)
- BIOL 2023 - Plant and Fungal Biology (4CR)
- BIOL 2400 - General Ecology (3CR)
- HU 0000 - Human Behavior Requirements (3CR)

Spring Semester ( 15 Credits)

- CROP 2200 - Forage Crop Science (4CR)
- PEL 0000 - Program Electives (4CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- SOIL 2010 - Introduction to Soil Science (4CR)

Total Program Credits (61 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Renewable Energy Technology

Certificate (PROGRAM ON HIATUS:
NO LONGER ACCEPTING STUDENTS)

## Renewable Energy Technology,

A.A.S. program on hiatus: no LONGER ACCEPTING STUDENTS

## Respiratory Therapy, A.S.

## Prerequisite Courses (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- HLTK 1200 - Medical Terminology (3CR)
- MATH 1000 - Problem Solving (3CR)
- ZOO 2015 - Human Anatomy (4CR)
- ZOO 2025 - Human Physiology (4CR)


## Freshman Year <br> Summer Semester (5 Credits)

- RESP 1500 - Introduction to Respiratory Therapy (3CR)
- RESP 1505 - Cardiopulmonary Anatomy \& Physiology (2CR)


## Fall Semester (13 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- RESP 1507 - Respiratory Therapy I (3CR)
- RESP 1515 - Respiratory Lab I (1CR)
- RESP 1518 - Respiratory Practicum I (3CR)
- RESP 1523 - Respiratory Pharmacology (2CR)


## Spring Semester (16 Credits)

- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- PSYC 1000 - General Psychology (3CR) or
- SOC 1000 - Sociological Principles (3CR)
- RESP 1527 - Respiratory Therapy II (3CR)
- RESP 1535 - Respiratory Lab II (1CR)
- RESP 1538 - Respiratory Practicum II (4CR)
- RESP 1545 - Respiratory Pathophysiology (2CR)


## Sophomore Year

Summer Semester (3 Credits)

- RESP 2500 - Respiratory Specialty Practicum (3CR)

Fall Semester (14 Credits)

- CHEM 1000 - Intro to Chemistry (4CR) or
- PHYS 1050 - Concepts of Physics (4CR)
- RESP 2507 - Respiratory Therapy III (3CR)
- RESP 2510 - Respiratory Pediatrics and Neonatology (2CR)
- RESP 2545 - Respiratory Lab III (1CR)
- RESP 2548 - Respiratory Practicum III (4CR)


## Spring Semester (13 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- RESP 2557 - Respiratory Therapy IV (3CR)
- RESP 2570 - Respiratory Simulations (2CR)
- RESP 2575 - Respiratory Lab IV (1CR)
- RESP 2578 - Respiratory Practicum IV (4CR)


## Total Program Credits (64 Credits)

Note:
To continue in the Associate of Science Respiratory Therapy Program, a student must maintain a cumulative GPA of 2.3 or better and earn a " C " or better in all respiratory, allied health, and laboratory science courses.

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Retail Management Certificate (PROGRAM ON HIATUS:NO LONGER ACCEPTING STUDENTS)

Retail Merchandising, A.A.S. PROGRAM ON HIATUS: NO LONGER ACCEPTING STUDENTS

## Social Studies - Secondary

## Education, A.A.

Freshman Year
Fall Semester (16 Credits)

- CE 0000 - Cultural Environment Requirement (3CR) (Highly recommend POLS 2290 or POLS 2460)
- ENGL 1010 - English Composition I (3CR)
- GEOG 1000 - World Regional Geography (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 1000 - American and Wyoming Government (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (16 Credits)

- EDFD 2020 - Foundations of Education (3CR)
- ITEC 2360 - Teaching with Technology (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- PSYC 2300 - Developmental Psychology (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)


## Sophomore Year

 Fall Semester (17 Credits)- ECON 1010 - Macroeconomics (3CR)
- EDFD 2100 - Educational Psychology (3CR)
- GEOG 1010 - Introduction to Physical Geography (4CR)
- PEL 0000 - Program Electives (3CR)
- WL 0000 - World Language (4CR)


## Spring Semester (17 Credits)

- EDEX 2484 - Intro to Special Education (3CR)
- EDUC 2100 - Practicum in Teaching (2-4CR)
- PEL 0000 - Program Electives (3CR)
- ECON 1020 - Microeconomics (3CR)
- WL 0000 - World Language (4CR)


## Program Electives

- HIST 1110 - Western Civilization I (3CR)
- HIST 1120 - Western Civilization II (3CR)
- HIST 1211 - United States to 1865 (3CR)
- HIST 1221 - United States from 1865 (3CR)
- HIST 1251 - Wyoming History (3CR)
- POLS 2200 - Politics of Europe (3CR)
- POLS 2290 - Governments and Politics of Latin America (3CR)
- POLS 2310 - Intro to International Relations (3CR)
- POLS 2410 - Intro to Public Administration (3CR)
- POLS 2460 - Intro to Political Philosophy (3CR)


## Total Program Credits (66 Credits)

Note:
Student advisement for secondary education is done by the department which offers the subject area that the student wants to teach.
Transfer note: The University of Wyoming requires a major core area of 15 credits in one subject.

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Social Work, A.A.

## Freshman Year <br> Fall Semester (16 Credits)

- BIOL 1000 - Introduction to Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- PSYC 1000 - General Psychology (3CR)
- SOC 1000 - Sociological Principles (3CR)
- SOC 1101 - Education and the Good life: A FirstYear Seminar (3CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 1000 - Problem Solving (3CR) (or higher)
- PSYC 2080 - Biological Psychology (3CR)
- SOC 1100 - Social Problems (3CR)
- SOWK 2000 - Intro to Social Work (3CR)


## Sophomore Year <br> Fall Semester (13 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- ECON 1010 - Macroeconomics (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. and Wyoming Constitutions Requirement (3CR)


## Spring Semester (16 Credits)

- SOWK 2025 - Social Work Capstone (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR) or
- STAT 2070 - Introductory Statistics for Social Science (4CR)
- PEL 0000 - Program Electives (9CR)


## Program Electives

- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- PSYC 2210 - Drugs and Behavior (3CR)
- PSYC 2340 - Abnormal Psychology (3CR)
- SOC 2325 - Marriage and Family (3CR)
- SOC 2400 - Criminology (3CR)
- SOWK 2005 - Social Work Lab (1CR)
- WL 0000 - World Language (4-8CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Sociology, A.A.

Freshman Year Fall Semester (14 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- SOC 1000 - Sociological Principles (3CR)
- SOC 1101 - Education and the Good life: A FirstYear Seminar (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)


## Spring Semester (15 Credits)

- COMM 0000 - Written or Oral Communication Requirement (3CR)
- MATH 1000 - Problem Solving (3CR)
- PEL 0000 - Program Electives (3CR)
- SOC 1100 - Social Problems (3CR)
- $\quad$ SOC 2325 - Marriage and Family (3CR)


## Sophomore Year <br> Fall Semester (14 Credits)

- LS 0000 - Lab Science Requirement (4CR)
- POLS 0000 - US and Wyoming Constitutions Requirement (3CR)
- SOC 2400 - Criminology (3CR)
- WL 0000 - World Language (4CR)


## Spring Semester (17 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives ( 10 Credits)
- WL 0000 - World Language (4CR)


## Program Electives

- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- ECON 1010 - Macroeconomics (3CR)
- HIST 1110 - Western Civilization I (3CR)
- HIST 1120 - Western Civilization II (3CR)
- PHIL 1000 - Introduction to Philosophy (3CR)
- POLS 2460 - Intro to Political Philosophy (3CR)
- PSYC 1000 - General Psychology (3CR)
- STAT 2070 - Introductory Statistics for Social Science (4CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Software Application

Certificate (PROGRAM ON HIATUS:
NO LONGER ACCEPTING STUDENTS)

## Software Support Specialist,

A.A.S. PRogram on hiatus: no LONGER ACCEPTING STUDENTS

Spanish, A.A.<br>Freshman Year<br>Fall Semester (15 Credits)

- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- MATH 1000 - Problem Solving (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- SPAN 1010 - First Year Spanish I (4CR)


## Spring Semester (16 Credits)

- ANTH 1200 - Introduction to Cultural Anthropology (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- SPAN 1020 - First Year Spanish II (4CR)


## Sophomore Year Fall Semester (16 Credits)

- COMM 1030 - Interpersonal Communication (3CR)
- GEL 0000 - General Electives (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (3CR)
- SPAN 2030 - Second Year Spanish I (4CR)


## Spring Semester (13 Credits)

- SPAN 2040 - Second Year Spanish II (4CR)
- SPAN 2140 - Introduction to Reading/Composition and Conversation (3CR)
- PEL 0000 - Program Electives (6CR)


## Program Electives

- (4CR) course credits from ASL, FREN, GERM, JAPN, RUSS
- ANTH 2000 - Introduction to Linguistic Anthropology (3CR)
- BUSN 2000 - Intro to International Business (3CR)
- COMM 1040 - Intro to Human Communication (3CR)
- EDFD 2020 - Foundations of Education (3CR)
- GEOG 1000 - World Regional Geography (3CR)
- HIST 1110 - Western Civilization I (3CR)
- HIST 1120 - Western Civilization II (3CR)
- HIST 2115 - Twentieth Century Europe (3CR)
- INST 2310 - Introduction to International Relations (3CR)
- POLS 1020 - Issues in Foreign Relations I (3CR)
- POLS 1030 - Issues in Foreign Relations II (3CR)
- POLS 1200 - Non-Western Political Cultures (3CR)
- POLS 2200 - Politics of Europe (3CR)
- POLS 2290 - Governments and Politics of Latin America (3CR)
- PHIL 1000 - Introduction to Philosophy (3CR)
- RELI 1000 - Introduction to Religion (3CR)
- SOC 1000 - Sociological Principles (3CR)


## Total Program Credits (60 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Technical Education, A.S.

Freshman Year
Fall Semester (17 credits)

- CNTK 1860 - Woodworking Fundamentals I (4CR)
- ENGL 1010 - English Composition I (3CR)
- ENTK 1500 - Engineering Graphics (4CR)
- MATH 1000 - Problem Solving (3CR)
- PSYC 1000-General Psychology (3CR)


## Spring Semester (21 credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GEL 0000 - General Electives (5CR)
- EDFD 2020 - Foundations of Education (3CR)
- PSYC 2300 - Developmental Psychology (3CR)
- STAT 2050 - Fundamentals of Statistics (4CR)


## Sophomore Year <br> Fall Semester (18.5 credits)

- EDFD 2100 - Educational Psychology (3CR)
- ELTR 1540 - Basic AC/DC Electronics (2CR)
- ENTK 2010 - CAD 3D Modeling and Mechanical Design I (4CR)
- ITEC 2360 - Teaching with Technology (3CR)
- PHYS 1050 - Concepts of Physics (4CR)
(or)
- PHYS 1110 - General Physics I (4CR)
- WELD 1820 - GMAW and GTAW Welding (2.5CR)


## Spring Semester (15.5-17.5 credits)

- EDEX 2484 - Intro to Special Education (3CR)
- EDUC 2100 - Practicum in Teaching (2-4CR)
- ENTK 2525 - Design and Manufacturing Methods I (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 1000 - American and Wyoming Government (3CR)
- WELD 1700 - General Welding (2.5CR)


## Program Total (71.5-73.5 credits)

## Note:

Students who plan to transfer to a four-year school in industrial education should contact that institution for information about transferability and credits. Student advisement will follow the guidelines of the school of choice.
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Technical Studies, A.A.S.

## Freshman Year <br> Fall Semester ( 15 credits)

Core Technical Studies Coursework (15CR)
Spring Semester ( 15 credits)
Core Technical Studies Coursework (15CR)

## Sophomore Year

 Fall Semester (13 credits)- ENGL 1010 - English Composition I (3CR)
- PEL 0000 - Program Electives (10CR) Additional courses within or complimenting the core area; to be decided in consultation with an advisor


## Spring Semester (17 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- CE 0000 - Cultural Environment Requirement (3CR)
or
- HU 0000 - Human Behavior Requirements (3CR)
- GEL 0000 - General Electives (3CR)
- MATH 1400 - College Algebra (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 1000 - American and Wyoming Government (3CR)


## Program Total (60 credits)

## Note:

This degree is designed for those students who are planning to transfer to a bachelor of applied science degree program. It is typically applicable for students with a certificate or 30 credits or more within a technical field of study in the School of Business and Industry. The Core Technical Studies Coursework must come from a single area of study.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied

Science and Associate Degree in Nursing.

## Technical Theatre, A.A.

## Freshman Year

Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- THEA 1010 - Fundamentals of Theatre Arts (3CR)
- THEA 2145-Costume Construction (3CR)
- THEA 2220 - Stagecraft (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- MATH 0000 - Math Computation (3CR)
- PEL 0000 - Program Electives (1CR)
- THEA 1100 - Beginning Acting (3CR)
- THEA 2160 - Stage Makeup (3CR)
- THEA 2235 - Introduction to Scenic Design (3CR)
or
- THEA 2240 - Costume Design (3CR)


## Sophomore Year <br> Fall Semester (12 Credits)

- HU 0000 - Human Behavior Requirements (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (2CR)
- THEA 2010 - Theatrical Backgrounds Drama I (3CR)


## Spring Semester (15 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- GEL 0000 - General Electives (6CR)
- THEA 2020 - Theatrical Backgrounds Drama II (3CR)
- THEA 2800 - Stage Lighting (3CR)


## Program Electives

- THEA 1005 - The Art of Sound (1CR)
- THEA 1471 - Technical Theatre Practicum Costuming (2CR)
- THEA 1472 - Technical Theatre Practicum Lighting (2CR)
- THEA 1473 - Technical Theatre Practicum Properties (2CR)
- THEA 2060 - Production: Run Crew
- THEA 2070 - Production: Costume Crew
- THEA 2080 - Production: Stage Management


## Total Program Credits (60 Credits)

## Note:

The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required
for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Theatre Performance, A.A.

Freshman Year
Fall Semester (19 Credits)

- ENGL 1010 - English Composition I (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Elective (1CR) Theatre dance course
- THEA 1010 - Fundamentals of Theatre Arts (3CR)
- THEA 1100 - Beginning Acting (3CR)
- THEA 2050 - Theatre Practice (1CR)
- THEA 2220 - Stagecraft (4CR)


## Spring Semester (14 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)
- THEA 1700 - Voice for the Actor (3CR)
- THEA 2050 - Theatre Practice (1CR)
- THEA 2160 - Stage Makeup (3CR)


## Sophomore Year Fall Semester (18 Credits)

- CE 0000 - Cultural Environment Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- MATH 1000 - Problem Solving (3CR)
- PEL 0000 - Program Electives (3CR)
- THEA 2010 - Theatrical Backgrounds Drama I (3CR)
- THEA 2310 - Auditioning (3CR)


## Spring Semester (12 Credits)

- GEL 0000 - General Electives (6CR)
- THEA 2020 - Theatrical Backgrounds Drama II (3CR)
- THEA 2100 - Acting II (3CR)


## Program Electives

- MUSC 1270 - Voice I (1-2CR) (Max 8)
- MUSC 1272 - Class Voice (1CR)
- THEA 2790 - Stage Management (2CR)
- Dance Courses
- Theatre Courses


## Total Program Credits (63 Credits)

## Note:

The normal length of this program is two academic years at 16-18 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Web Design and Development Certificate

Fall Semester (15 credits)

- INET 1590 - Web Page Design (3CR)
- CMAP 1200 - Computer Information Systems (3CR)
- INET 2670 - Internet Ethics and Cyber Law (3CR)
- INET 1610 - Dynamic Web Graphics (3CR)
- INET 1885 - Adobe Photoshop for the Web (3CR)
or
- ART 1115 - Digital Media (3CR) or
- ART 2245 - Digital Photography I (3CR)


## Spring Semester (15 credits)

- BADM 1020 - Business Communications (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- INET 1650 - Web Programming I (3CR)
- INET 1890 - Introduction to Web Design (3CR)
- CMAP 1815 - Database Applications (3CR) or
- CMAP 1800 - Database Basics (1CR) and
- CMAP 1805 - Database Applications II (1CR) and
- CMAP 1810 - Database Applications III (1CR)


## Program Total (30 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Web Design and Development, A.A.S.

Freshman Year
Fall Semester (15-16 credits)

- CMAP 1200 - Computer Information Systems (3CR)
- ENGL 1010 - English Composition I (3CR)
- INET 1590 - Web Page Design (3CR)
- MATH 1400 - College Algebra (4CR) or
- BADM 1005 - Business Mathematics I (3CR)
- MKT 2000 - Introduction to Digital Marketing (3CR)


## Spring Semester (13 credits)

- BADM 1020 - Business Communications (3CR)
- COSC 1010 - Intro to Computer Science (4CR)
- CMAP 1815 - Database Applications (3CR) or
- CMAP 1800 - Database Basics (1CR)
and
- CMAP 1805 - Database Applications II (1CR) and
- CMAP 1810 - Database Applications III (1CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)


## Sophomore Year <br> Fall Semester (16 credits)

- INET 2670 - Internet Ethics and Cyber Law (3CR)
- INET 1610 - Dynamic Web Graphics (3CR)
- IMGT 2400 - Introduction to Information Management (3CR)
- COSC 2418 - Web App Development (3CR)
- PEL 0000 - Program Electives (4CR) Choose from CMAP, COSC, CSCO, INET


## Spring Semester (16 credits)

- ART 2245 - Digital Photography I (3CR) or
- ART 1115 - Digital Media (3CR) or
- INET 1885 - Adobe Photoshop for the Web (3CR)
- GEL 0000 - General Electives (3CR)
- INET 1980 - Cooperative Work Experience (3CR)
or
- INET 2895 - Web Design Capstone/Seminar (3CR)
- INET 1650 - Web Programming I (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR) from CMAP, COSC, CSCO, INET


## Total Program Credits (60-61

 Credits)
## Note

All classes in the major must be passed with a " C " or better.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements."

Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Welding Certificate <br> Fall Semester (22 credits)

- WELD 1555 - Welding Technology Safety and Problem Solving (1.5CR)
- WELD 1650 - Print Reading and Welding Symbols (2CR)
- WELD 1710 - Oxyacetylene Welding and Cutting (1.5CR)
- WELD 1755 - Shielded Metal Arc Welding (8CR)
- WELD 1770 - Gas Metal/Flux Core Arc Welding (5CR)
- WELD 2510 - Pipe Welding I (4CR)


## Spring Semester (21 credits)

- WELD 1785 - Gas Tungsten Arc Welding (GTAW) (5CR)
- WELD 1860 - Welding Fabrication (5CR)
- WELD 1910 - Specialized Welding and Joining (3CR)
- WELD 2500 - Structural Welding (3CR)
- WELD 2520 - Pipe Welding II (5CR)


## Program Total (43 credits)

## Graduation Requirements

For specific graduation requirements see "Degree Requirements".

## Welding, A.A.S.

Freshman Year Fall Semester (22 credits)

- WELD 1555 - Welding Technology Safety and Problem Solving (1.5CR)
- WELD 1650 - Print Reading and Welding Symbols (2CR)
- WELD 1710-Oxyacetylene Welding and Cutting (1.5CR)
- WELD 1755 - Shielded Metal Arc Welding (8CR)
- WELD 1770 - Gas Metal/Flux Core Arc Welding (5CR)
- WELD 2510 - Pipe Welding I (4CR)


## Spring Semester (21 credits)

- WELD 1785 - Gas Tungsten Arc Welding (GTAW) (5CR)
- WELD 1860 - Welding Fabrication (5CR)
- WELD 1910 - Specialized Welding and Joining (3CR)
- WELD 2500 - Structural Welding (3CR)
- WELD 2520 - Pipe Welding II (5CR)


## Sophomore Year <br> Fall Semester (11 credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- LS 0000 - Lab Science Requirement (4CR) or
- MATH 0000 - Math Computation (3CR)
- PEL 0000 - Program Electives (2CR)
- POLS $0000-$ U.S. \& Wyoming Constitutions (3CR)

Spring Semester (12 credits)

- GEL 0000 - General Electives (7CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (4CR)
*Approved electives from the departments of AUBR, AUTO, CNTK, MCHT, WELD 1700 or WELD 1820


## Total Program Credits (66q credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of

Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

# Wildlife and Fisheries Biology and Management, A.S. 

Freshman Year
Fall Semester (17 Credits)

- BIOL 1000 - Introduction to Biology I (4CR) or
- BIOL 1010 - General Biology I (4CR)
- ENGL 1010 - English Composition I (3CR)
- MATH 1400 - College Algebra (4CR) or higher (7CR total)
- POLS 0000 - U.S. \& Wyoming Constitutions (3CR)


## Spring Semester (18 Credits)

- BIOL 2022 - Animal Biology (4CR)
or
- BIOL 2023 - Plant and Fungal Biology (4CR)
- CHEM 1020 - Chemistry I (4CR)
- COMM 0000 - Written and Oral Communication Requirement (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (4CR)


## Sophomore Year

Fall Semester ( 15 Credits)

- CHEM 1030 - Chemistry II (4CR)
- CE 0000 - Cultural Environment Requirement (3CR)
- ENR 2450 - Principles of Fish and Wildlife Management (3CR)
or
- ZOO 2450 - Principles of Fish and Wildlife Management (3CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (4CR)


## Spring Semester (16 Credits)

- BIOL 2410 - Intro to Field Ecology (2CR)
- GEL 0000 - General Electives (3CR)
- PEL 0000 - Program Electives (8CR)


## Total Program Credits (66 Credits)

Note:
The normal length of this program is two academic years at 15-17 credit hours per semester.

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## Women's and Gender Studies <br> Certificate (PROGRAM IS ON <br> HIATUS: NO LONGER ACCEPTING STUDENTS)

## Women's and Gender Studies,

## A.A.

Freshman Year
Fall Semester (17 Credits)

- ENGL 1010 - English Composition I (3CR)
- MATH 1000 - Problem Solving (3CR) or
- MATH 1400 - College Algebra (4CR)
- POLS 1000 - American and Wyoming Government (3CR)
- WMST 1080 - Introduction to Women's Studies (3CR)
- WL 0000 - World Language (4CR)


## Spring Semester (16 Credits)

- COMM 0000 - Written and Oral Communication Requirement (3CR)
- GNDR 1000 - Introduction to Gender Studies (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- PEL 0000 - Program Electives (3CR)
- WL 0000 - World Language (4CR)


## Sophomore Year

Fall Semester (16 Credits)

- ENGL 2270 - Modern Women Writers (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEL 0000 - Program Electives (3CR)
- WMST 2020 - Women and Food (3CR)


## Spring Semester (14 Credits)

- COMM 2135-Gender, Communication and Culture (3CR)
- HU 0000 - Human Behavior Requirements (3CR)
- LS 0000 - Lab Science Requirement (4CR)
- PEAC 0000 - Physical Education Requirement (1CR)
- PEL 0000 - Program Electives (3CR)


## Total Program Credits (63 Credits)

## Graduation Requirements:

A minimum of 60 approved semester credits are required for graduation. For specific graduation requirements see "Academic Information" and "Degree Requirements." Only courses numbered 1000 or above can be used toward the Associate of Arts, Associate of Science, Associate of Business, Associate of Fine Arts, Associate of Applied Science and Associate Degree in Nursing.

## World Languages, A.A.

## PROGRAM IS ON HIATUS: NO LONGER ACCEPTING STUDENTS

## Course Descriptions

## COMM 0000 - Written and Oral

 Communication Requirement (3CR)Courses used to satisfy the second communication requirement for graduation must be selected from the following departments or courses: BADM 1020, BOTK 1540, communication (COMM), COMM 2010, ENGL 1010, ENGL 1020, ENGL 2005 or ENGL 2020. Students in A.A., A.S., A.D.N., and A.B. degrees are required to complete ENGL 1010 and need to verify with their advisers which second approved English composition course they should complete for their specific degree requirements.

## CE 0000 - Cultural Environment Requirement (3CR)

The Cultural Studies requirement may be satisfied by completing classes designated as Global Studies, Foreign Language, Humanities, Social \& Behavioral Science or Visual \& Performing Arts. Some programs restrict the categories from which students may choose, or designate the course to be used to fulfill the requirement.

Courses used to satisfy the cultural environment requirement for graduation must be selected from the following departments or courses: art (ART), AAST 1000, BADM 2050, BADM 2060, COMM 2380, dance (DANC), EDCI 2250, ENGL 1030, ENGL 1040, ENGL 2006, ENGL 2011, ENGL 2020, ENGL 2050, ENGL 2055, ENGL 2060, ENGL 2080, ENGL 2130, ENGL 2140, ENGL 2150, ENGL 2185, ENGL 2210, ENGL 2220, ENGL 2225, ENGL 2230, ENGL 2235, ENGL 2270, ENGL 2310, ENGL 2320, ENGL 2350, ENGL 2440, humanities (HUMN), INST 2350, philosophy (PHIL), music (MUSC) [a maximum of four credit hours in music studio and ensembles], POLS 2290, POLS 2460, RELI 1000, theatre (THEA), WMST 1080, WMST 2020, WMST 2021, WMST 2025, WMST 2040, or world languages: ASL 1200. ASL 1220, ASL 2200, ASL 2220, French (FREN), German (GERM), Japanese (JAPN), Latin (LATN), Russian (RUSS), or Spanish (SPAN).

## GEL 0000 - General Electives

Any 1000 or 2000 level course from the general education areas of Reasoning and Inquiry in Science, Communication, Human Behavior, Cultural Environment and Math Computation

## HU 0000 - Human Behavior Requirements (3CR)

Courses used to satisfy the human behavior requirement for graduation must be selected from the following departments or courses: AGEC 1010, AGEC 1020, anthropology (ANTH), addictionology (ADDN), criminal justice (CRMJ), economics (ECON), GNDR 1000, geography (GEOG), history (HIST), political science (POLS), psychology (PSYC), or sociology (SOC).

## LS 0000 - Lab Science Requirement (4CR)

Courses used to satisfy the general education reasoning and inquiry in science requirement for graduation must be selected from the following departments or courses and must include a lab: astronomy (ASTR), atmospheric science (ATSC), biology (BIOL), chemistry (CHEM), environment and natural resources (ENR), geology (GEOL), GEOG 1010, life science (LIFE), molecular biology (MOLB), physics (PHYS), or zoology (ZOO).

## PEAC 0000 - Physical Education

## Requirement (1CR)

Courses that may be used to satisfy the physical education requirement for graduation must be selected from the following departments or courses: physical education activity (PEAC) and physical education varsity sports (PEAT).

## PEL 0000 - Program Electives

Courses used to satisfy the program electives must be selected from within your program or the selected departments, courses, or the electives list within programs.

## POLS 0000 - U.S. and Wyoming Constitutions Requirement (3CR)

Approved coursework fulfills the state legislated requirement for both U.S. \& Wyoming Constitutions requirement for graduation. HIST 1211, HIST 1221, HIST 1251, POLS 1000 or POLS 1100 (by instructor permission only).

## WL 0000 - World Language (4CR)

(4L) Courses used to satisfy the world language requirement can be selected from the following prefixes: ASL, FREN, RUSS, SPAN and complete in order by semester 1010 First Year I, 1020 First year II, 2030 Second Year I, 2040 Second Year II.

## AAST 1000 - Intro to African American Studies (3CR)

(3L) $[E]$ This course provides a historical survey of the people of Black African heritage prior to their arrival in America and thereafter.

## ACCT 1000 - Intro to Accounting (4CR)

(4L) This course focuses on the methods, processes, and strategies necessary to analyze and understand the data used in accounting. The student will practice skills of identifying, classifying, reporting, and interpreting accounting information. Students will work problems dealing with preparation of financial statements, adjustment of information at end-of-period accounting cycles, and interpretation of the results thereof.

## ACCT 1005-Practical Accounting (4CR)

(3L, 2LB) Examines the fundamental concepts and procedures used in the preparation of basic financial statements of business entities. This course also covers some of the basic procedures for QuickBooks software and employer payroll taxes. This course will provide you with a good foundation for ACCT 1010. No credit will be given for ACCT 1005 if the student has previously earned credit in ACCT 1010 or its equivalent.

## ACCT 2010 - Principles of Accounting I (4CR)

(4L) $[E]$ Examines the fundamental concepts and procedures used in the preparation of the basic financial statements of business entities. Covers generally accepted accounting principles, accounting terminology, the usefulness of financial statements, and the role that judgment plays in accounting. Prerequisites: A " C " or better in ACCT 1000, ACCT 1005 or MATH 0930, or an ACT Math Score of 23 or better, or an appropriate Placement exam score within the past year.

## ACCT 2020 - Principles of Accounting II (4CR)

(4L) [E] A continuation of ACCT 2010. Accounting for corporations and partnerships. Examines reports and information needed by the management of a business to make good decisions. The role accounting information plays in aiding the functions of planning, budgeting, and control is examined. Prerequisites: ACCT 2010.

## ACCT 2110 - QuickBooks Accounting (3CR)

(2L, $2 L B$ ) This course combines the use of QuickBooks Desktop and the cloud-based version of QuickBooks Online. QuickBooks Desktop will be used to create a
company and record Sales, Receivables, Payables, and Purchases for a service type business. These files will then be converted to QuickBooks Online software and similar entries will be recorded for merchandising transactions. End of period accounting will be covered in both types of software. Prerequisites: ACCT 1005 or ACCT 1000, or ACCT 2010 and CMAP 1200, or permission of the instructor.

## ACCT 2115 - Advanced QuickBooks (3CR)

$(2 L, 2 L B)$ This course is an advanced course that combines the use of QuickBooks Desktop and the cloud-based version QuickBooks Online. It is a continuation of ACCT 2110 that will include managing inventory, budgets, payroll and other advanced functions of both QuickBooks Desktop and QuickBooks Online. At the conclusion of this course, the student should be prepared to take the certifying exam and become certified in both types of software. Prerequisites: ACCT 2110 or prior
QuickBooks experience

## ACCT 2120 - Computer Spreadsheet

 Accounting (2CR)(2L, 2LB) This course prepares students to interact with computerized accounting systems. Major concepts of computerized accounting will be introduced including trial balance maintenance and financial statement generation. A commonly used spreadsheet program will be used throughout the course. Prerequisites: ACCT 2010

## ACCT 2230 - Intermediate Accounting I (4CR)

(4L) [E] A study of accounting principles and procedures with emphasis on analysis, interpretation, and controls. Financial statements are studied in detail from both the theoretical and practical standpoints, with a critical examination and evaluation of areas covered. (Fall semester.) Prerequisites: ACCT 2020 or ACCT 2510

## ACCT 2420 - Intermediate Accounting II (4CR) <br> (4L) [E] A continuation of ACCT 2230. (Spring semester.) Prerequisites: ACCT 2230.

## ACCT 2430 - Income Tax (3CR)

(3L) This course is an introduction to federal taxation of the income of individuals. Examples and problems illustrate tax laws. Computer applications may be used to illustrate specific examples.

## ACCT 2460 - Payroll Accounting (3CR)

(3L) This course examines the fundamental concepts and procedures used in payroll accounting. Usually, payroll is the largest expense of most businesses and a continuing management challenge in terms of cost control. This course will explore payroll laws and recordkeeping requirements, running a payroll, payroll reporting and accounting procedures, and payroll systems and policies. Prerequisites: ACCT 2010, or permission of the instructor.

## ACCT 2480 - Cooperative Education (1-3CR)

 (Max. 6)The student is afforded the opportunity to gain practical, on-the-job experience under the supervision of the accounting program coordinator and employer. A minimum of 80 hours of on the-job training represents one semester hour. The student must maintain 12 credit hours with a 2.0 GPA during the semester. Prerequisites: Full-time accounting major and permission of the program coordinator.

## ACCT 2510 - Accounting for Bookkeepers (4CR)

(4L) This course is designed to provide a foundation in financial accounting and tax for individuals wishing to have a career in bookkeeping. It completes the financial accounting topics started in ACCT 2010. Prerequisites:
ACCT 2010

## ACCT 2800 - Certified Bookkeeper Exam Review (3CR)

(3L) The Certified Bookkeeper Exam Review is a course that will prepare students for the Certified Bookkeeper Exam that is administered by the American Institute of Professional Bookkeepers. Topics covered include adjustments, error correction, payroll, depreciation, inventory and internal controls.

## ADDN 1020 - Foundations of Substance Use Disorders Counseling I (3CR)

(3L) The history of addictive disorders along with the contexts in which prevention and treatment evolved, provide a foundation for understanding the present conditions in the profession, and the framework for understanding future evolution. This includes the knowledge of how the profession developed from various non-professional experiences, how other disciplines succeeded or failed in dealing with addictive disorder, as well as the social and political forces that impacted upon service delivery.

## ADDN 1050 - Crime and Drugs (3CR)

(3L) This course provides students with an opportunity to explore human behavior from an addiction and criminal justice perspective. This course will provide an in-depth analysis of evidence-based crime policy with coverage of drug use, crime victimization, and incarceration trends.

## ADDN 1520 - Anger, Addiction and Trauma (3CR)

(3L) This course provides students with an opportunity to explore anger and trauma from an addiction perspective.

## ADDN 2005-Group Process (3CR)

(3L) This course provides students with an opportunity for the study of groups and group process. These topics include, but are not limited to: development of groups, group work, group dynamics, group leadership, group process, groups for children, adolescents, adults and elderly, and specialty groups and theoretical perspectives of groups. Prerequisites: PSYC 2155

## ADDN 2010 - Addictions Assessment (3CR)

(3L) Provides an overview of the process of assessment of addictive behaviors including alcohol and drugs, smoking, and eating disorders. Foci are on the behavioral, psychological/cognitive-expectational, and physiological components of specific addictive behaviors. Prerequisites: Seven credit hours of psychology.

## ADDN 2015-Ethics and Professional Issues (3CR)

(3L) Provides an opportunity for study of selected ethical and professional topics in counseling.

## ADDN 2100 - Foundations of Substance Use Disorder Counseling II (3CR)

(3L) Introduces the profession of addictive disorders and the development the knowledge of the local health and social service delivery systems (especially the addiction and prevention systems), educational systems, criminal justice systems, and related professional, to better provide comprehensive services to clients/patients. Legal requirements and professional attitudes regarding these systems and the skills to accept, and make, appropriate referrals are essential for providing quality prevention and treatment services.

## ADDN 2155-Motivational Interviewing (3CR)

(3L) Behavioral change is a goal of many human service professionals. This course will examine the process of how change occurs and how to apply evidence-based practices to assist clients with the change process thorough the use of motivational interviewing. Through a combination of lecture, skill practice, discussion, and personal exploration, this course will serve as a 'hands on' experience for the change process. Cross-listed: PSYC 2155

## AECL 1000 - Agroecology (4CR)

(3L, 2LB) [E] Introduces ecological interactions that affect food producing (agricultural) systems. Lectures and laboratory exercises study the various biological components and the science of sustainable agricultural production. Features differences between developed and developing countries. Explores crises and challenges facing agriculture and global society. Prerequisites: None

## AGEC 1010 - Agricultural Macroeconomics (3CR)

(3L) $[E]$ Introduces students to the field of economics and how human behavior drives markets. Key macroeconomic concepts of financial markets, inflation, unemployment, gross domestic product, and national income are evaluated. Agricultural examples are primarily utilized with some non-agricultural examples.

## AGEC 1020 - Agricultural Microeconomics (3CR)

(3L) [E] Introduces students to how firms and households behave economically in the environment in which they operate. Key microeconomic concepts of production and consumption theory, market structures, and governmental impact on firms and households are evaluated. Agricultural examples are primarily utilized with some non-agricultural examples.

## AGEC 1100 - Introduction to Computerized Ag Records (3CR)

(3L) This course is an introduction to farm and ranch computerized records management. It covers basic farm/ranch accounting functions including all financial statements (flow of funds, income statement and balance sheet). The course compares cash versus accrual accounting and the benefits of each. The focus of this course is to develop and reinforce accounting and record management principles by utilizing the microcomputer and entering case farm/ranch data.

## AGEC 2010-Farm-Ranch Business Records (3CR)

(3L) [E] The mechanics of farm record keeping and its use as a management tool. The laboratory exercises are actual problems in farm and ranch management and record keeping.

## AGEC 2020 - Farm-Ranch Business Management (4CR)

(3L, 2LB) $[E]$ Economic principles and business methods applied to analyze firms and operations. Will utilize practical problem-solving techniques for variety of management problems.

## AGEC 2300 - Agricultural Marketing (3CR)

(3L) An introduction to agricultural markets and marketing. Topics include the structure of United States agriculture, prices and marketing costs, government policy's influence on marketing, effects of supply and demand on marketing, livestock and crop marketing, and risk management. Prerequisites: Sophomore standing.

## AGRI 1010 - Introduction to Agricultural Technology (2CR)

(1L, $2 L B$ ) $[E]$ Introduces and familiarizes students with computer applications and programs that can practically be used in agriculture. This course exposes students to other types of technology used in agricultural practices such as UAS and precision agriculture.

## AGRI 1020 - GPS and GIS in Agriculture (2CR)

(1L, 2LB) A look at applications of GIS and GPS technology as it pertains to the agricultural industry. Students will learn basic GIS, GPS and cartographic principles and apply them to help solve problems or answer questions in the Ag industry. Also, will use other technologies such as GPS collars to track livestock grazing and remote sensed satellite imagery to help ascertain the health of grazing lands and estimate AUMs. Prerequisites: AGRI 1010 or permission of the instructor.

## AGRI 2000 - Agricultural Chemicals I (3CR)

 (3L) Designed to develop an understanding of agricultural chemicals, their principles and safety. Because agriculture is said to be the nation's most dangerous industry, a special emphasis will be given to chemical safety, environmental and consumer hazards, and impacts along with federal and state laws governing agriculture chemicals. (Fall semester.)
## AGRI 2010 - Agricultural Chemicals II (3CR)

(3L) A course designed to develop an understanding of agricultural chemicals and their principles that are reviewed and applied to herbicides, insecticides, and fertilizers as they relate to crop and livestock production. The students become familiar with selection methods, rates, and methods of application.

## AGRI 2475 - Independent Study in

 Agriculture (1-3CR) (Max. 3)A comprehensive research studies. Upon completing the project, the student should present a paper and oral seminar to a committee selected by the project instructor. The problem and amount of credit received must have the approval of the instructor. Prerequisites: Permission of the instructor.

## AGRI 2485 - Ranch Management Seminar (2CR)

( $1 L, 2 L B$ ) This seminar style course will bring together all of the RMC candidate's coursework, professional interests and focus into one course. The CC faculty and successful professionals from around the United States will be used as resources and guest speakers in order to ready and push the candidates for their internship and professional career. Candidates of the RMC Program will be required to make a major presentation and defense, of a subject/self-study, decided upon themselves and their major professor, to the CC Agriculture Department during this course Only offered in the Spring Semester

AGTK 1560 - Horse Hoof Trimming (1CR)
(. $5 L, 1 L B$ ) A complete course in horse foot trimming, including the physiology of the feet and legs, unsoundness, hoof care, equipment and the actual trimming and shoe removal on live horses and mules. Offered once per year in the Fall semester.

## AGTK 1570 - Horseshoeing (2CR)

(1L, 2LB) (Max. 2) A complete course in horseshoeing, including the physiology of the feet and legs, unsoundness, hoof care, shoeing equipment, and the actual shoeing of live horses. Taught by a graduate of an accredited horseshoeing school.

## AGTK 1580 - Introduction to Outdoor Recreation: Guide Outfitting (3CR)

(3L) This course is designed to familiarize the student with the outdoor recreational guide industry. Emphasis will be placed on the use of horses and mules in the outdoor
guiding industry. This course is meant to be a preliminary course to an actual hands-on Outfitting/Guide Curriculum.

## AGTK 1590 - Packing and Outfitting (2CR)

( $0.5 L, 3.5 L B$ ) A course dealing with the principles and techniques involved in the use of horses as a form of transportation on the ranch or in the wilderness. Covers equipment and general procedures used in packing.

## ANSC 1010 - Intro to Animal Science (4CR)

$(3 L, 2 L B)$ Course covers the scope of the livestock industry with particular emphasis on breeds and types and management of beef cattle, sheep and wool, swine, dairy cattle, poultry and horses.

## ANSC 1020 - Livestock Production II (3CR)

(3L) Course covers fundamental principles of genetics and animal breeding, reproductive physiology, principles of nutrition, and digestion in domestic animals. Topics also include animal health and diseases, and grading and marketing methods of slaughter and feeder animals.

## ANSC 1030 - Equine Management (3CR)

(3L) $[E]$ A basic course covering the equine industry, including classes and breeds, selection with form to function, care and management, conformation and unsoundness, health and diseases, reproduction, and feeding and nutrition.

## ANSC 1100-Artificial Insemination (1CR)

(2LB) A complete course in artificial insemination, including class work in animal breeding, physiology, nutrition, and beef cattle management, as well as actual insemination work with animals.

## ANSC 1130 - Equine Management II (3CR)

(3L) A basic course covering the equine industry, including the history, care and management, reproduction, care and prevention of equine diseases, equine facilities and general equine practices.

## ANSC 1150 - Animal Diseases (2CR)

(2L) A survey of the diseases common to this area in cattle, sheep, and horses. Special attention is given to sanitation, prevention, control, and eradication of disease.

## ANSC 1160 - Issues in Agriculture (3CR)

(3L) Consists of investigations and discussions with respect to current topics in animal science. Prerequisites: None.

## ANSC 1200 - Livestock Fitting and Showing (2CR)

(1L, $2 L B$ ) Designed to provide students with the necessary skills to fit and show cattle, sheep, and swine. Emphasis will be placed on the clipping of feeder calves. This course is required for all students planning to exhibit feeder calves at the Arizona National.

## ANSC 1210 - Livestock Judging I (3CR)

(1L, 4LB) Comparative appraisal and selection of beef cattle, sheep, hogs, and light horses. Students will be chosen from this class to represent Casper College at regional and national judging contests.

## ANSC 1220 - Livestock Judging II (Advanced) (3CR)

( $1 L, 4 L B$ ) Advanced study in the principles of livestock selection with emphasis on judging and giving reasons. Prerequisites: ANSC 1210, or permission of the instructor.

## ANSC 1470 - Livestock Practicum (3CR)

( $1 L, 4 L B$ ) This course is designed to provide experiential learning with livestock management techniques. Areas of focus will include livestock handling and care; evaluation; classification and production of feedstuffs; terminology; care and prevention of illness; animal husbandry; market analysis; equipment management and care. Offered only in the fall

## ANSC 2020 - Feeds and Feeding (4CR)

(3L, 2LB) [E] Principles of animal nutrition with emphasis upon practical feeding of livestock. Particular attention is given to feeding livestock in relation to recent discoveries in nutrition, including the functions and importance of vitamins and minerals, and the necessity for proper quantity of protein rations of livestock. Economy in feeding emphasized throughout the course.

## ANSC 2110 - Beef Production (3CR)

(3L) A detailed study of the feeding, breeding, marketing, and pedigrees of all major breeds of beef cattle with emphasis on problems peculiar to the beef cattle industry in Wyoming. Prerequisites: ANSC 1010 and ANSC 1020.

## ANSC 2120 - Sheep Production (3CR)

(3L) A detailed study of care and management of sheep flocks in the Western states, with particular emphasis on problems peculiar to the range sheep industry in Wyoming. Prerequisites: ANSC 1020.

ANSC 2130 - Swine Production (3CR)<br>(3L) Swine production in the United States including production of purebred and commercial swine: breeds, breeding, feeding, marketing, and management. Emphasis is on problems encountered in the production of swine in Wyoming. Prerequisites: ANSC 1010 or ANSC 1020. Offered periodically.

## ANSC 2230 - Livestock Judging III (2CR)

(4LB) A concentrated study of livestock selection with major emphasis on team competition and national livestock shows. Prerequisites: ANSC 1220, or permission of the instructor.

## ANSC 2470 - Ranch Management Internship (3CR)

(6LB) Supervised work and learning experience in ranch management related fields that are relevant to student's desired areas of interest. The internship provides an extension of the academic learning and includes the opportunity to: 1) apply substantial knowledge and skills gained in the academic setting in a supervised, professional work environment, 2) learn and develop new skills outside the classroom, and 3) explore a career field or prepare for a chosen career field through a work experience opportunity. The internship includes a collaborative team consisting of the student, faculty supervisor (course instructor), and a field (site) supervisor who develop acceptable learning objectives, experiences, and evaluation procedures which enable the student to work with in a professionals/mentoring setting. Only offered in the Summer following completion of core Ranch Management Certificate courses.

## ANTH 1100 - Introduction to Biological Anthropology (3CR)

(3L) Presents basic concepts relating to the origin, evolution, biological nature, and adaptation of the human species.

## ANTH 1200 - Introduction to Cultural Anthropology (3CR)

(3L) [E] Using an ethnological approach, (comparative study of culture), this course surveys the basic concepts of cultural anthropology including cross cultural investigations of kinship, marriage, language, religion, politics, economics, and culture change.

## ANTH 1300 - Introduction to Archaeology (3CR)

(3L) Provides a background in archaeological theories and methods and explores the ways in which prehistoric material remains can provide an understanding of human behavior.

## ANTH 2000 - Introduction to Linguistic Anthropology (3CR)

(3L) [E] This course introduces anthropological approaches for understanding language use and interpretation within a social context.

## ANTH 2210 - North American Indians (3CR)

(3L) [E] A survey of North American Indian societies from prehistory to the present. Covers selected prehistoric cultural sequences as well as a general culture-area survey of known historic tribes and a consideration of current issues facing Native American groups.

## ANTH 2475 - Independent Studies in Anthropology (1-3CR) (Max. 6)

Provides opportunity for independent reading and more indepth study in various fields of anthropology. Prerequisites: Previous anthropology coursework and permission of the instructor.

## ART 0200-Convocation (0CR)

(1LB) The participant will learn about the department programs, guest artist lectures, workshops, art gallery offerings, special topics courses and other opportunities at Casper College. Grading will be $\mathrm{S} / \mathrm{U}$. Prerequisites: Associate of Fine Art: Art Education, Fine Arts, Graphic Design, Photography majors and Associate of Art majors only.

## ART 1000 - General Studio Art (3CR)

(2L, $4 L B$ ) $[E]$ General Art is an introductory art class for non-art majors designed to give a personal, improvisational, and welcoming art experience to everyone. Boost your skill set, leading to new adventures in work and creativity. A variety of media will be covered in this class including, drawing, ceramics, printmaking, and metalsmithing.

## ART 1005 - Drawing I (3CR)

(2L, 4LB) Introductory drawing emphasizing a wide range of drawing materials and methods of visual study. Fundamentals are stressed.

ART 1010 - Intro to Art (3CR)
(3L) $[E]$ A survey of the arts produced by humans from pre-history through contemporary trends. Emphasis on the basic elements of art and visual literacy through review of a variety of media and architecture. For non-art majors only.

## ART 1110 - Foundation: Two-Dimensional (3CR)

(2L, $4 L B$ ) $[E]$ Studies and sequential exercises in the basic elements of design: shape, line, value, color, and texture. Exploration of the relationships of these elements with emphasis on composition.

## ART 1115 - Digital Media (3CR)

( $2 L, 4 L B$ ) An introductory course in the use of the Macintosh computer as a design tool to create and manipulate images and combine them.

## ART 1120 - Foundation: Three Dimensional (3CR)

(2L, $4 L B$ ) $[E]$ In this course, students are introduced to the fundamental principles of three-dimensional design and their relationship to objects in space. This hands-on course emphasized creative problem solving, employs design strategies, and develops manual building skills. The relationship of the body to the built environment, narrative, and a greater correlation between object and concept are explored. This course encourages exploration, the exchange of ideas, and builds skills that can be applied to a variety of disciplines.

## ART 1130 - Foundation: Color Theory (3CR)

(2L, 4LB) [E] Studies and sequential exercises in color theory. Exploration of the relationships of hue, value, and chroma, studied in progressive exercises to enhance student's awareness of color and its aesthetic relationships.

## ART 1150 - Black and White Film Photography I (3CR)

( $2 L, 4 L B$ ) A beginning course in still photography covering the operation of cameras and photographic equipment, processing of black and white films and prints, design and the history of photography. Assignments stress a variety of subjects emphasizing the fine art of photography. Prerequisites: ART 2245 Digital Photography I.

## ART 1160 - Black and White Film Photography II (3CR)

(2L, 4LB) A continuation of ART 1150 covering advanced camera and darkroom techniques including the Zone System, manipulated processes such as solarization, multiple printing, photograms, and toning. Emphasis is on the fine print and art of photography. Prerequisites: ART 1150.

## ART 1300 - Museum Studies (3CR)

(3L) The course provides an understanding of basic operations of a museum or gallery such as exhibit design, education, collections management, marketing, and an overview of the history and changing role of these facilities in society. The course also involves travel to Casper museums to explore their missions, services and collections.

## ART 2005 - Drawing II (3CR)

(2L, 4LB) Continuation of the principles of drawing, including contemporary esthetics and the human figure. Prerequisites: ART 1005.

## ART 2010 - Art History I (3CR)

(3L) [E] A study of the visual arts produced by humans from prehistoric times to the Gothic Era. This course required for all art majors.

## ART 2016 - Field Sketching (3CR)

( $2 L, 4 L B$ ) This course presents the basic drawing skills needed to record accurate observations of the natural environment. These skills can benefit other visual art disciplines and/or serve as a foundation for drawing itself as a major discipline.

## ART 2020 - Art History II (3CR)

(3L) $[E]$ A study visual arts and architecture produced throughout the world from the 13th - 18th centuries. Political, social, and economic factors relative to the visual arts will be considered. This course is required of all art majors.

## ART 2023 - Collections Management (3CR)

(3L) This course is a practical study of the duties of a museum collections manager, including the documentation, loaning, digitization, preservation, storage and care of collections.

## ART 2025 - Women in Art (3CR)

(3L) A general introduction to depictions of women in art from the earliest known artifacts produced by humans to
understand how women were viewed in ancient societies, as well as women's involvement in the visual arts from the Middle Ages to the present with emphasis on the 20th century. Questions that will be posed include: "how does gender affect art?" and "how do stereotypes of women affect viewing works of art?" Political, social, and economic factors will be examined in relation to women artists and their times to further understand artistic production.

## ART 2035 - Art History III (3CR)

(3L) A study of the visual arts produced throughout the late 18th to 21st century in Europe and America. Political, social, and economic factors will be considered as they affected artistic style.

## ART 2073 - Introduction to Art Education (3CR)

(3L) A survey of the history of art education focusing on influential 20th century educators, as well as discussion of contemporary theories in the field such as DBAE, Critical Theory, and Visual Thinking Strategies. This class will also focus on developing curriculum for the art education classroom with discussion of the stages of aesthetic development as well as assessment within an art course.

## ART 2090 - Printmaking (3CR)

(2L, 4LB) This course is an introduction to a variety of printmaking processes. Students explore new ways of creating imagery and surfaces unique to printmaking. Gaining expertise and control over a range of tools and materials will enable students to explore both consistent and variable editions. Students will study historical and contemporary approaches to printmaking by viewing historical and contemporary works. The course culminates in an editioned print portfolio exchange. (Fall semester.)

## ART 2105 - Digital Design II (3CR)

(2L, $4 L B$ ) Continued study of the Macintosh computer as a design tool to create and manipulate type and images and combine them. Prerequisites: ART 1110, ART 1115

## ART 2110 - Typography (3CR)

(2L, $4 L B$ ) [E] This course offers students a comprehensive introduction to typography through exploration and experimentation with letterforms and page layout for expressive communication. The course will cover the fundamental typographic principles, font recognition, and analysis of both historical and post-modern design theory. Emphasis will be placed on content, form and technique for effective use of typography in ads, posters, newsletters and other visual communications.

## ART 2112 - Graphic Design I (3CR)

$(2 L, 4 L B)$ [E] Graphic Design is a communication of ideas using type and images. This course offers students a comprehensive introduction to the field of graphic design that stresses theory and creative development in disciplinespecific information, hands-on practice, and an understanding of time-honored principles. Although graphic styles and the tools of the graphic design field are constantly evolving, the fundamental structures and principles of good design remain constant. Prerequisites: ART 1110, ART 1115.

## ART 2125 - Graphic Design II (3CR)

( $2 L, 4 L B$ ) This course examines complex and multi-faceted commercial design problems as a means of developing dynamic and innovative solutions. Design projects are analyzed according to their conceptual and graphic composition, and are developed to effectively and creatively communication a message to a specific audience. May be taken concurrently with Graphic Design Solutions. Concurrently: ART 2110, ART 2112 and ART 1115.

## ART 2130 - Graphic Design III (3CR)

$(2 L, 4 L B)$ This course offers students further exploration of concept development and the language of symbols combined with further exploration into the aesthetic issues of type. Emphasis will be placed on content, form and technique for effective use of graphic design and typography in ads, posters, newsletters, desktop publishing and other visual communications. Prerequisites: ART 2112 and a working knowledge of current software.

## ART 2141 - Professional Practice in the Arts

 (1CR)(1L) This seminar will focus on practical aspects of artistic practice such as preparing a professional portfolio and resume, generating an exhibition, understanding careers in art and preparing work for museum and/or gallery consideration. This course is required of all art majors.

## ART 2210 - Painting I (3CR)

$(2 L, 4 L B)$ An introductory painting course presenting a variety of methods and subjects.

## ART 2220 - Painting II (3CR)

(2L, 4LB) [E] An intermediate painting course presenting a variety of methods and subjects. Prerequisites: ART 2210

## ART 2230 - Painting III (3CR)

$(2 L, 4 L B)$ [E] A painting course in which emphasis is on the aesthetic concepts of contemporary movements. Students are encouraged to experiment within the framework of selected projects and to explore individual ideas and broaden experience. Prerequisites: ART 2210, ART 2220, and permission of the instructor.

## ART 2240 - Painting IV (3CR)

$(2 L, 4 L B)$ [E] A painting course in which emphasis is on the aesthetic concepts of contemporary movements. Students are encouraged to experiment within the framework of selected projects and to explore individual ideas and broaden experience. Prerequisites: ART 2210, ART 2220, ART 2230, and permission of the instructor.

## ART 2245 - Digital Photography I (3CR)

$(2 L, 4 L B)$ Investigation and application of some of the fundamentals of pictorial arrangement and expression within the realm of digital photography. Assignments are based on compositional problems. Some of the primary concerns are pictorial structure, balance, movement, contrast, theme, spatial relationships and color relationships. Additionally, the design and conceptual development of an assignment are emphasized coupled with high quality execution, originality and clarity of presentation. Prerequisites: ART 1110 - Foundation: TwoDimensional (3CR)

## ART 2255 - Digital Photography II (3CR)

 $(2 L, 4 L B)$ A continued investigation and application of some of the fundamentals of pictorial arrangement and expression within the realm of digital photography. Assignments are based on compositional problems. Some of the primary concerns are pictorial structure, balance, movement, contrast, theme, spatial relationships and color relationships. Additionally, the design and conceptual development of an assignment are emphasized coupled with high quality execution, originality and clarity of presentation. Prerequisites: ART 2245 or permission of instructor.
## ART 2310 - Sculpture I (3CR)

$(2 L, 4 L B)$ Introduces students to the expansive field of sculpture, while also teaching fundamental skills upon which to build a studio practice. Students learn basic woodworking, casting techniques, and conduct various material studies. This course addresses contemporary issues and promotes an atmosphere that is balanced between conceptual development and material explorations.

## ART 2320 - Sculpture II (3CR)

$(2 L, 4 L B)$ This course exposes students to traditional and contemporary methods of working sculpturally. In this course, students develop a critical dialogue about sculpture and extended media while developing a personal direction in the medium. This course introduces advanced sculpture techniques, and encourages the deep exploration of ideas, techniques, and materials. Prerequisites: ART 1120 and ART 2310.

## ART 2341 - Sketches in Clay (3CR)

$(2 L, 4 L B)$ This is an introductory class in the fundamentals of traditional and contemporary ceramic making by means of hand building and throwing on the wheel. Students study some of the rich history and traditions of ceramics as well as developing techniques and different firing possibilities. An emphasis on sketching and journaling creative through processes before, during and after lab time has been added to the class. Prerequisites: None

## ART 2345 - Art Metal Casting (3CR)

( $2 L, 4 L B$ ) This course offers a technical perspective on casting's unique possibilities, its place in history, and its role in contemporary object creation. Casting introduces students to diverse methods of casting and mold making. Techniques needed to cast rigid and flexible molds will be addressed through a variety of assignments and samplebased experiments. Students will have the opportunity to cast a variety of materials while being inspired to create concept-driven work in the sculptural format. Prerequisites: ART 1120 and ART 2310 or permission of the instructor.

## ART 2350 - Metalsmithing I (3CR)

( $2 L, 4 L B$ ) This course serves as an introduction to the fabrication of non-ferrous metals. In this course, students will engage with materials, techniques, and craft while focusing on innovation and experimentation. This technical approach will include an investigation into the rich history of metalsmithing in conjunction with that application of contemporary techniques. Career development and professional practice skills are an integral part of the curriculum.

## ART 2360 - Metalsmithing II (3CR)

$(2 L, 4 L B)$ This course expands the potential of working with non-ferrous metal through the introduction of various methods of casting, fabricating, and stone setting. Throughout the semester, students will work to develop technical skills while developing a personal direction in the medium. This course encourages a deep exploration of ideas and materials. Career development and professional
practice skills are an integral part of the curriculum. Prerequisites: ART 2350.

## ART 2370 - Metalsmithing III (3CR)

$(2 L, 4 L B)$ This course focuses on a combination of surface treatments and hollowware fabrication processes for nonferrous metals. Emphasis is placed on form and surface. Students are introduced to metal forming and raising through a variety of assignments and sample-based experiments. Further examination of surface treatments involving enameling, heat treatments, patination, and other diverse processes in the introduction of color on metal. Students are encouraged to explore both the jewelry and sculptural formats as they work with assignments that inspire personal imagery and conceptual ideas. Students improve their fabrication and design skills while practicing innovative experimentation and ideation. Prerequisites: ART 2360.

## ART 2375 - Metalsmithing IV (3CR)

( $2 L, 4 L B$ ) This course focuses on diverse methods of creating forms and moveable parts in metal through complex fabrication techniques. Students investigate die forming, hinging and clasping mechanisms, tap \& die processes, and anticlastic/synclastic raising through a variety of assignments and sample-based experiments. Through these techniques, students gain skills that allow for the creation of lightweight hollow forms, enclosed and moveable containers, and an array of fabrication possibilities for complex forms. Throughout the semester, students are expected to work conceptually as they combine new technologies with previously learned skills. Prerequisites: ART 2370.

## ART 2410 - Ceramics I (3CR)

$(2 L, 4 L B)$ [E] This is an introductory class in the fundamentals of traditional and contemporary ceramic making by means of hand building and throwing on the wheel. Students study some of the rich history and traditions of ceramics as well as decorating techniques and different firing possibilities.

## ART 2420 - Ceramics II (3CR)

$(2 L, 4 L B)[E]$ This is a continuation of Ceramics I, expanding techniques of throwing on the wheel as well as hand building, with more complex assignments. Students start to learn about loading and firing kilns and take more responsibility for firing their projects. Prerequisites: ART 2410 or permission of the instructor.

## ART 2430 - Ceramics III (3CR)

$(2 L, 4 L B)$ [E] This course offers advanced throwing on the wheel and hand building assignments with more independence in kiln firing. High temperature firing techniques and different styles of kilns become available for study. Prerequisites: ART 2420 or permission of the instructor.

## ART 2440 - Ceramics IV (3CR)

$(2 L, 4 L B)$ [E] Students are challenged with advanced throwing or hand building assignments and are required to fire their own work with a technique best suited for the assignments. Prerequisites: ART 2430 or permission of the instructor.

## ART 2445 - Wood Firing (1CR)

$(1 L B)$ This is an advanced course teaching different aspects about wood firing techniques. Focus will be on the technical skills needed to load and fire a large wood fire kiln. Prerequisites: Permission of instructor

## ART 2460 - Art Field Studies: [Title]

The relationships between visual art and its surroundings are inevitable. Artists have created their work with the very earth beneath their feet for centuries. The subject matter is shaped by the political and religious forces in an environment as well as the landscape itself. Thus, reviewing the material culture and the landscape, in situ, provides the greatest sensory impact and allows for maximum cognitive understanding of inspiration, process, and product.
Travel expenses must be paid by stated deadlines to complete the course abroad.

## ART 2470 - Art Museum Training Internship

 (1-3CR) (Max. 6) The internship gives the student exposure to museum work through firsthand experience. Prerequisites: Student must be enrolled in the art department, permission of the instructor, and interview with Nicolaysen Art Museum staff member and instructor.
## ART 2480 - Special Projects: Drawing

(*LB,1-3CR) (Max. 6) *Laboratory to be arranged. Advanced drawing emphasizing individualized interests and projects. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 1005, ART 2050 and permission of the instructor.

## ART 2481 - Special Projects: Illustration

(1-3CR) (Max. 6) An advanced course in methods and techniques used in illustration with emphasis on developing individual style. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2076 and permission of the instructor.

## ART 2482 - Special Projects: Painting

(1-3CR) (Max. 6) An advanced painting class for the student wishing to take further painting credit with a specific instructor. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2210, ART 2220, and permission of the instructor.

## ART 2483 - Special Projects: Printmaking

 (1-3CR) (Max. 6) Special problems in advanced relief, intaglio and monotypes, and other printmaking techniques with approval and directional guidance of the instructor. The course involves the development of a total idea and project and the completion of a portfolio of prints. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2150, and permission of the instructor.
## ART 2484 - Special Projects: Photography

(1-3CR) (Max. 6) Students will work on special problems or projects of their own choosing with approval and directional guidance of the instructor. The course involves the development of a total idea and project and the completion of a portfolio of prints. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 1160, ART 2095, and permission of the instructor.

## ART 2485 - Special Projects: Ceramics

(1-3CR) (Max. 6) Assignments are of the student's choice with approval and guidance of the instructor based on credit hours. All work is done and finished at their own pace, meeting with the instructor as needed and at mid-term and finals. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2440 or permission of the instructor.

## ART 2487 - Special Projects: Sculpture

 (1-3CR) (Max. 6) Special problems of the student's own choosing with directional guidance by the instructor. Emphasis will be placed on the development of a total idea, whether it is one work or several. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2320 and permission of the instructor.
## ART 2488 - Special Projects: Metals

(1-3CR) (Max. 6) Special problems in jewelry of the student's own choosing with directional guidance by the instructor. Emphasis on design and technical skills. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2360 and permission of the instructor.

## ART 2489 - Special Projects: Graphic Design

 (1-3CR) (Max. 6) An advanced study further exploring specific design problems with emphasis on development of ideas and flexibility of approach. This course is designed for the student who has recently completed all the offered courses in a given area and still requires or wishes continued exploration of an advanced study in that area. The special projects are designed only as a continuation of previous courses, not personal endeavors of the student. Prerequisites: ART 2112 and permission of the instructor.
## ART 2970 - Museum Training Internship (6CR)

(18LB) This course is designed for practical experience in a museum in areas such as collections management, education, development, or exhibition design. For museum/gallery studies majors only. Prerequisites: ART 1300.

ASL 1010 - American Sign Language I (4CR)<br>(4L) This course will provide beginning level knowledge of American Sign Language, fingerspelling, deafness, and deaf culture. Emphasis will be on developing receptive and expressive language skills within the parameters of sign language using the American Council on the Teaching of Foreign Language 5C's to include: Communication, Culture, Connections, Comparisons and Community.

## ASL 1020 - American Sign Language II (4CR)

(4L) This course will provide intermediate level instruction in American Sign Language, fingerspelling, deafness, and deaf culture. Emphasis will be on developing receptive and expressive language skills within the parameters of sign language. Prerequisites: Successful completion (C or better) of ASL 1010.

## ASL 2030 - American Sign Language III (4CR)

(4L) This course will provide advanced level instruction in American Sign Language, fingerspelling, deafness and deaf culture. Emphasis will be on developing receptive and expressive language skills within the parameters of sign language using the American Council on the Teaching of Foreign Language 5 C's to include: Communication, Culture, Connections, Comparisons and Community. This course will continue developing American Sign Language. Advanced vocabulary and ASL grammar will be taught and reinforced through classroom presentations and activities, cultural models and visual media presentation. Discussions will focus on deafness, deaf history, current trends and related topics. The direct experience method (using ASL with no voice) will be used to enhance language acquisition. Prerequisites: Successful completion (C or better) of ASL 1020.

## ASL 2040 - American Sign Language IV (4CR)

(4L) This course will continue advanced level instruction in American Sign Language, fingerspelling, deafness and deaf culture. Emphasis will be on receptive and expressive language skills within the parameters of sign language
using the American Council on the Teaching of Foreign Language 5 C's to include: Communication, Culture, Connections, Comparisons and Community. This course will continue developing American Sign Language. Advanced vocabulary and ASL grammar will be taught and reinforced through classroom presentations and activities, cultural models and visual media presentations. Discussions will focus on deafness, deaf history, current trends and related topics. The direct experience method (using ASL with no voice) will be used to enhance language acquisition. Prerequisites: Successful completion (C or better) of ASL 2030 or equivalent coursework.

## ASTR 1000 - Descriptive Astronomy (3CR)

 (3L) [E] Designed to give a general understanding of modern astronomy. A background in historical astronomy will open the course. From there, a survey of the solar system and the objects in it will be discussed. An overview of the life and death of a star will follow. Finally, a description of the galaxy will be covered along with a study on the various theories of the origin of the universe. (Taken with ASTR 1015, equivalent to ASTR 1050 [SE].)ASTR 1015-Astronomy Laboratory (1CR)
(2LB) $[E]$ An optional supplement to ASTR 1000 and designed to familiarize the student with tools and procedures of fundamental astronomical observations. Prerequisites: MATH 0920. (Taken with ASTR 1000, equivalent to ASTR 1050 [SE].)

## ASTR 1050 - Survey of Astronomy (4CR)

 $(3 L, 2 L B)[E]$ A survey of astronomy and the universe. Topics will include astronomical concepts, terms and history, as well as a study of stellar evolution, galaxies, cosmology, and the solar system. The lab is an exercise into the concepts and methods used by astronomers in their study of the universe. Prerequisites: MATH 0900.
## ASTR 1100 - Planets Around Stars (4CR)

(3L, 2LB) A survey of the planets and moons of our solar system; the physical laws governing their motions; the theory of their formation and evolution to the present time. Includes comparative studies of the interiors, surfaces, and atmospheres of the planets, and comparison of our solar system to recently discovered extrasolar planets. Prerequisites: A grade of "C" or better in MATH 0920. ASTR 1000 recommended.

## ATSC 2000 - Introduction to Meteorology (4CR)

(3L, 2LB) [E] This first course in meteorology is for students with minimal background in math and science. It
provides general and practical understanding of weather phenomena, and emphasizes observational aspects of the science, meteorological view of the physical world and the impact the science has on life and society. The course will include discussion of atmospheric composition and structure, radiation, winds and horizontal forces, stability and vertical motions, general circulation, synoptic meteorology, clouds and precipitation, severe storms and atmospheric optics.

## AUBR 1540 - Auto Body Welding (3CR)

(1L, 4LB) A course in the application of basic welding techniques in replacement and repair of auto body panels. Prerequisites: WELD 1820 or concurrent enrollment.

## AUBR 1550 - Auto Body Repair I (5CR)

(2L, $6 L B$ ) Course covers shop and tool safety; service information and measurements; mechanical repair of power train, suspension, steering, brake, cooling, heater and air conditioning, exhaust, emission control, and fuel systems.

## AUBR 1560 - Auto Body Repair II (5CR)

(2L, $6 L B$ ) A continuation of AUBR 1550, covering the automotive electrical/electronic systems, and restraint system operation and service. Prerequisites: AUBR 1550.

## AUBR 1710 - Frame and Chassis I (2.5CR)

(1L, $3 L B$ ) An introduction to frame repair including impact on its effect on a vehicle, measurement of body dimensions, unibody straightening, and realigning techniques. Prerequisites: AUBR 1550 and AUBR 1810.

## AUBR 1760 - Rod and Custom Restoration I (4CR)

(2L, 4LB) Introduction to street rods and custom vehicles. Course consists of planning and designing a custom project, fabrication techniques, paint and refinishing, external body modifications, and suspension modifications. Bi-annually Prerequisites: None

## AUBR 1770 - Rod and Custom Restoration II (4CR)

(2L, 4LB) A continuation course to AUBR 1760 Rod and Custom Restoration I. Areas of instruction will include electronics, welding metalworking, custom paint and graphics, and engine and drivetrain modifications. Biannually Prerequisites: AUBR 1760

AUBR 1810 - Collision Damage Repair I (4CR)<br>( $2 L, 4 L B$ ) Introduction to the collision repair industry, vehicle construction technology, tool usage, materials, fasteners, working sheet metal, and the use of body fillers.

## AUBR 1820 - Collision Damage Repair II (4CR)

( $2 L, 4 L B$ ) A continuation of AUBR 1810, covering the service and replacement of fenders, hoods, panels, bumpers, trim, doors, glass, and passenger compartment components. Prerequisites: AUBR 1810.

## AUBR 1910 - Auto Paint I (5CR)

$(2 L, 6 L B)$ A course in auto painting, with emphasis on material and equipment handling.

## AUBR 1920 - Auto Paint II (5CR)

$(2 L, 6 L B)$ A continuation of AUBR 1910, stressing theoretical and practical aspects of final finishing procedures for complete car refinishing and spot repairs. Prerequisites: AUBR 1910.

## AUBR 1975 - Independent Study - Auto Body Repair <br> (1-3CR) (Max. 6) This course provides an option for students with sufficient background to pursue special interests in the auto body lab under contract with the instructor. Prerequisites: Permission of the instructor.

## AUBR 1980 - Cooperative Work Experience

( $1-8 C R$ ) This course is designed to provide an opportunity for students with sufficient entry level auto body skills to work off-campus, in weld related areas, while attending classes on campus part-time. Prerequisites: Demonstrate proficiency of auto body skills, and permission of the instructor.

## AUTO 1502 - Automotive Survey I (6CR)

$(2 L, 8 L B)$ For an entry level into automotive repair. For those students with little or no automotive background. Provides general theory and repair in the following automotive systems: electrical, engine performance, brakes, suspension and steering.

## AUTO 1503 - Automotive Survey II (6CR)

(2L, $8 L B$ ) A continuation of AUTO 1502 to provide third year high school students theory and exposure to the following automotive systems: engine repair and overhaul,
heating and air conditioning, manual transmission, drive train and axles, and automatic transmission.

## AUTO 1510 - Engine System Fundamentals (6CR)

(2L, $8 L B$ ) This course will cover engine design and operation, engine sub-systems including ignition, fuel, cooling, oiling, intake and exhaust, and timing systems. Emphasis is placed on the proper usage of diagnostic tools and equipment, base engine diagnosis, engine performance, and tune-up procedures. Prerequisites: Instructor permission required

## AUTO 1515 - Basic Automotive Technology (3CR)

(1L, 4LB) This course will provide students with little or no automotive background a practical look at working in the automotive industry with general theory and repair in the areas of electrical systems, engine performance, brake systems, suspension systems, and steering systems.

## AUTO 1690 - Manual Power Train Fundamentals (4CR)

( $2 L, 4 L B$ ) This course is designed to provide automotive students with the general theory, operation and component service involved in the transmission of mechanical power. The primary emphasis of the course deals with an introduction to drive shafts, drive axles, clutches, manual transmissions/transaxles and four-wheel/all-wheel drive components. Prerequisites: Instructor permission required

## AUTO 1740 - Brake Systems (4CR)

(2L, 4LB) An introduction to braking systems, this course will cover basic theory and service of hydraulic systems, power brake systems, parking brakes, and antilock systems. Diagnostics, service and repair procedures are emphasized. Prerequisites: Instructor permission required

## AUTO 1760 - Heating and Air Conditioning (4CR)

( $1 L, 6 L B$ ) The course will cover heating and air conditioning theory, regulations, troubleshooting, component service, evacuation, recharging and retrofitting procedures. Prerequisites: AUTO 1510 and AUTO 1765 and permission of instructor.

## AUTO 1765 - Automotive Electrical (5CR)

$(2 L, 6 L B)$ Introductory course designed to cover the theory, operation, testing and service of automotive electrical systems, battery, starting and charging systems. Prerequisites: Instructor permission required

AUTO 2500 - Advanced Engine Rebuilding (4CR)<br>(1L, $6 L B$ ) Designed to provide students with the background and hands-on practice necessary to diagnose, repair and overhaul gasoline engines. Prerequisites: Instructor permission required

## AUTO 2550 - Auto Alignment and Suspension(4CR)

( $2 L, 4 L B$ ) This course is an introduction to automotive alignment and suspension, and will cover chassis and steering system components, service procedures, alignment theory, and four-wheel alignments.

## AUTO 2565 - Advanced Automotive

 Electrical (5CR)( $2 L, 6 L B$ ) A continuation of the vehicle electrical system operation and testing, covering lighting circuits, instrumentation, accessories, body computers, electronic chassis controls and passive restraint systems. Prerequisites: Instructor permission required

## AUTO 2580 - Automotive Electronic Theory

 (2CR)(2L) Intended for advanced automotive students who have a desire to increase their knowledge of basic electronics. The course is intended to introduce electronics and on-board microprocessors as they are currently used on production vehicles. Prerequisites: AUTO 1765.

## AUTO 2610 - Computerized Fuel Systems (5CR)

( $2 L, 6 L B$ ) This course is intended for automotive students who have the need to increase their background on electronically controlled engine management systems. Students will begin with an overview of concepts that are applicable to understanding and diagnosing systems on all vehicles; then will move on to the study of individual systems. Prerequisites: AUTO 1510 and AUTO 1765, Instructor permission required

## AUTO 2800 - Problems in Automotive

## Technology

(1-3CR) (Max. 6) Designed to provide the opportunity for advanced automotive students to pursue an independent problem in advanced areas of automotive repair. Students electing this course will develop, under supervision of an instructor, a problem, which is of specific interest to them. Prerequisites: Advanced standing in the automotive program, and permission of the instructor.

## AUTO 2810 - Diagnosis and Tune-up Procedures (4CR)

(2L, 4LB) Provides students with the theory, diagnosis, adjustment and repair of the systems that affect engine performance. Includes basic engine condition, distributor ignition, carburetion, and emission control systems. Emphasis is placed on accurate use of diagnostic tools, equipment, proper tuning procedures, use of specifications, and interpretation of test results. Prerequisites: AUTO 1510 and AUTO 2610.

## AUTO 2980 - Cooperative Work Experience (Automotive)

(1-6CR) (Max. 8) On the job training with in automotive technology. Prerequisites: Instructor permission required

## AUTO 2995-Automotive Workshop: (Subtitle) (1-3CR)

Overview of basic automotive systems, light service work and used vehicle inspection.

## AVTN 1980 - Cooperative Work Experience

(1-8 CR) Students are afforded the opportunity to gain practical on-the-job experience in their specialties. Students will be supervised by the instructor and the employer. A minimum of 80 hours of on-the-job training represents one semester credit.

## AVTN 2510 - Private Pilot Ground (3CR)

(3L) Includes the study of Federal Aviation Regulations, flight dynamics, meteorology, navigation, and airport operations. Designed to fulfill the ground school requirements for the FAA Private Pilot Certificate. FAA private pilot written test is class outcome.

## AVTN 2520 - Private Pilot Flight (3CR)

(3L) Requires flight instruction as listed by the Federal Aviation Administration (FAA) for a private pilot license which will be paid by students directly to a FAA recognized flight school based on the flight school's regularly published costs. Students will receive an $\mathrm{S} / \mathrm{U}$ grade based on the results of a final check flight as required by the FAA. Prerequisites: Concurrent enrollment in AVTN 2510 and third-class medical certificate or permission of instructor.

## AVTN 2600 - Instrument Pilot Ground (3CR)

 (3L) Includes the study of aircraft altitude control, flight maneuvers, and flight based solely on instrument reference. Also covered are hazardous weather, interpreting weather data, FAA regulations and IFR procedures. FAAinstrument rating written test is outcome. Prerequisites: AVTN 2520, or permission of the instructor.

## AVTN 2620 - Instrument Pilot Flight (3CR)

(3L) Teaches the application of aircraft altitude control, flight maneuvers, and flight based solely on instrument reference. (Stage I-III). The course also includes advance navigation, IFR/ATC procedures and night flying. Requires flight and hood instruction as listed by the Federal Aviation Administration (FAA) for an instrument rating which will be paid by students directly to a FAA recognized flight school based on the flight school's regularly published costs. Students will receive an $\mathrm{S} / \mathrm{U}$ grade based on the results of a final check flight as required by the FAA. Prerequisites: AVTN 2520, or permission of the instructor.

## AVTN 2705-Commercial Pilot Ground (3CR)

(3L) Includes the study of aircraft altitude control and flight maneuvers applicable to the commercial pilot certificate. Federal Aviation Administration commercial pilot written test is outcome. Prerequisites: AVTN 2620, or permission of the instructor.

## AVTN 2720 - Commercial Pilot Flight I (3CR)

(3L) Advanced flight instruction teaching abilities such as precision altitude flying, commercial maneuvers, radio navigation, and night flying. Requires flight instruction as listed by the Federal Aviation Administration (FAA) for a Commercial Pilot License which will be paid by students directly to a FAA recognized flight school based on the flight school's regularly published costs. Students will receive an $\mathrm{S} / \mathrm{U}$ grade based on the results of an intermediate check flight as required by the FAA. Prerequisites: Completion of AVTN 2620, or permission of the instructor.

## AVTN 2730 - Commercial Pilot Flight II (3CR)

(3L) Advanced flight instruction teaching abilities such as precision altitude flying, commercial maneuvers, radio navigation, and night flying. Requires flight instruction as listed by the Federal Aviation Administration (FAA) for a Commercial Pilot License which will be paid by students directly to a FAA recognized flight school based on the flight school's regularly published costs. Students will receive an $\mathrm{S} / \mathrm{U}$ grade based on the results of a final check flight as required by the FAA. Prerequisites: AVTN 2720 Commercial Pilot Flight I (3CR) Completion of AVTN 2720, or permission of instructor.

## BADM 1000 - Intro to Business (3CR)

(3L) [E] An orientation to the field of business: types of business organizations, financing of businesses, marketing functions, and business environment.

## BADM 1005 - Business Mathematics I (3CR)

(2L, $2 L B$ ) Designed to review basic mathematics skills and build a proficiency in the operation of electronic calculators. These skills are applied to practical business problems in bank services, payroll, taxes, risk management, mark-up, discount, depreciation, financial analysis, simple and compound interest. Prerequisites: MATH 0920 or Algebra Domain 40-65.

## BADM 1020 - Business Communications (3CR)

(3L) Helps students to compose, edit, and rapidly revise business messages on microcomputers. Group interaction is emphasized with written communications, reports, and other communications resources such as speaking and listening, and use of the Internet and e-mail.

## BADM 1025 - Entrepreneurial Finance (3CR)

(3L) The successful management of a company's finances is fundamental to success in today's competitive business environment. This course covers key economic concepts, management functions, financial statements and financial analysis used for a business.

## BADM 2010 - Legal Environment of Business (3CR)

(3L) [E] An introductory survey course providing a broad overview of business-related legal topics. Students will be familiarized with the nature and sources of law, court systems, jurisdictions of state and federal courts, small claims court, common law, statutory law, constitutional law, criminal law, torts, contracts, (especially as they are affected by the Uniform Commercial Code), social responsibility and business ethics, property law, estate planning, and how to avoid probate.

## BADM 2025 - Employment Law (3CR)

(3L) $[E]$ This is an introductory survey course providing a broad overview of employment related topics. The course will cover both state and federal employment law.

## BADM 2030 - Business Ethics (3CR)

(3L) $[E]$ This course focuses on the importance of ethics in business considerations as well as ethical issues in the news today. This course will examine how ethics is an essential
part of all business elements, from management to employee development.

## BADM 2040 - E-commerce (3CR)

(3L) To prepare for the rapid changes in electronic commerce, students will be exposed to multifaceted business issues such as: the role of independent thirdparties, the regulatory environment, risk management, Internet security standards, cryptography and authentication, firewalls, e-commerce payment mechanisms, intelligent agents, and web-based marketing. Prerequisites: INET 1895

## BADM 2050 - Film Business and Legal Aspects (3CR)

(3L) An introductory survey course providing a broad overview of business and legal topics in the film industry. Students will be familiarized with the nature of the film industry with special focus on independent films. Students will also learn copyright and trademark law associated with the film industry. Students will also explore new changes in the industry brought about by the digital age and new approaches in marketing through the internet.

## BADM 2055 - Media and Entertainment Law (3CR)

(3L) An introductory survey course providing a broad overview of business and legal topics in the media and entertainment industry. Students will be familiarized with the beginnings of freedom of speech, press, and expression. Students will explore cutting edge, current events that highlight areas such as copyrights, advertising, pornography, censorship of the media, cable and satellite television, digital and satellite radio, and the internet. Students will also study and analyze media and entertainment law ethics issues.

## BADM 2060 - Music Business and Copyrights (3CR)

(3L) An introductory survey course providing a broad overview of business and legal topics in the music industry. Students will be familiarized with the nature and sources of the three income streams in the music industry: music publishing, recordings, and live entertainment. Students will also learn copyright law associated with music. Students will explore new changes in the industry brought about by the digital age and new approaches in marketing through the internet and mobile applications

## BADM 2065 - Entrepreneurial Cyberlaw and E-Commerce Regulation (3CR) <br> (3L) An introductory survey course providing a broad overview of business and legal topics in cyberspace with a focus towards entrepreneurs. Students will not only be familiarized with the fundamentals of cyber law and ecommerce regulation in a global business context, but also the impact of the law on the technology sector firm itself. Prerequisites: None.

## BADM 2100 - Small Business Practices (2CR)

(2L) For the person interested in starting his or her own business. Emphasis will be on the development of a "business plan" and the finance, accounting, management, and marketing after the business has been established.

## BADM 2195 - Entrepreneurship (3CR)

(3L) This course is designed for those students who have always wanted to start their own business, or for those that just want to explore the possibilities.

## BADM 2245 - Real Estate Law (3CR)

(3L) [E] This is an introductory survey course providing a broad overview of real estate related legal topics. More specifically, the course will cover the differences between real and personal property, define fixtures and their significance, and explore the scope of real property to the sky, air, and natural resources. There will be a section on easements, profits, and licenses. There will be discussions on the types of ownership such as joint tenancy or tenancy in common. We will discuss real estate agents, brokers, and the duties attending to those positions.

## BADM 2340 - Business Organizations and Government Regulations (3CR)

(3L) A study of the principles of agency and employment law, independent contractors, wrongful termination, worker's compensation, civil rights act, administrative law, environmental law, antitrust, partnerships, limited partnerships, joint-ventures, corporations, subchapter S corporations, limited liability companies, franchises, security regulation, lender liability and consumer protection, and international law.

## BADM 2350 - Commercial Law (3CR)

(3L) A study of the basic principles of the law of personal and real property and its financing, water law, landlord and tenant, bailments, Uniform Commercial Code, sales, commercial paper, secured transactions, Uniform Consumer Credit Code, creditor's remedies and suretyship,
bankruptcy and reorganization, exemptions, enforcement of judgment, garnishment, and execution.

## BANK 1500 - Principles of Banking (3CR)

(3L) An introduction to the banking services. Includes history and evolution, the documents and language of banking, the deposit function, check processing and collection, bank bookkeeping, bank loans and investments, trust department services, specialized services to foreign traders and other banks, and bank regulations and examination.

## BIOL 1000 - Introduction to Biology I (4CR)

$(3 L, 3 L B)$ A study of the cell as the unit of life, the chemistry of life, and an overview of the functioning of organs and organ systems of vertebrates. General biological principles such as genetics, homeostasis, and structure/function relationships are emphasized. This course is appropriate for biology and biology-related majors, especially those pursuing health-related degrees such as nursing, medical technology, occupational therapy, physical therapy, etc. It also fulfills the laboratory science requirements of such majors as education, social and behavioral sciences, humanistic studies, English, etc. Biology at the high school level is desirable but not required.

## BIOL 1010 - General Biology I (4CR)

(3L, 3LB) [E] Fundamental concepts including basic chemistry, cell structures and functions, tissues, energy reactions, genetics, molecular biology, population dynamics, and evolutionary theory. Designed for life science majors and pre-professional life science curricula. It is anticipated that students have had one year of high school biology.

## BIOL 2022 - Animal Biology (4CR)

(3L, $3 L B$ ) This course addresses the evolution, anatomy, physiology and ecology of animals. It is intended as a continuation of BIOL 1010, generally for students majoring in the sciences. Prerequisites: BIOL 1000 or BIOL 1010

BIOL 2023 - Plant and Fungal Biology (4CR) (3L, 3LB) An introduction to the principles of botany and mycology. Topics discussed include cell structure, anatomy, diversity, taxonomy, physiology, reproduction, genetics, evolution, and ecology of plants and fungi. Prerequisites: BIOL 1000, BIOL 1010, or equivalent.

## BIOL 2110 - Yellowstone Field Science (3CR)

(3L) A field approach to the ecology, natural history and politics of Yellowstone National Park. Students spend a hiking-intensive week and write about the experience under the guidance of an English instructor (ENGL 2055). Concentration will be on plant and animal identification, natural history, and interactions with each other and their environment. Political issues in Yellowstone, i.e., snowmobiles, bison migration and wolf restoration will be discussed.

## BIOL 2120 - Biomedical and Environmental Ethics (3CR)

(3L) This course will examine ethical issues related to medicine, biology technology and the natural environment. During the first half of the course, ethical theory is introduced, and the class will read, discuss and debate material on medical and technological issues such as defining life, abortion, euthanasia, biomedical research, genetic engineering and speciesism. The second half of the course will be devoted to issues such as animal rights, land ethics, crop engineering and the value of wilderness and biodiversity. Much class time is devoted to debate and discussion. College biology recommended.

## BIOL 2325 - Tropical Ecology (3CR)

(6LB) Tropical Ecology utilizes on-site instruction to introduce students to the fundamental principles of tropical biology, the natural history of important tropical plants and animals, and their conservation. Students will be introduced to a variety of habitats, depending on the country visited. Field orientation at each site visited includes identification of plants and animals and general ecology and natural history, area management, history and cultural considerations necessary for conservation and research in the tropics. Financial assistance may be available for interested and qualified students. Prerequisites: BIOL 1000 or BIOL 1010, and permission of the instructor. Students must complete an application form, available from the instructor.

## BIOL 2400 - General Ecology (3CR)

(3L) $[E]$ An introduction to the principles of ecology. Topics stressed include ecosystems, communities, populations, succession, aquatic and terrestrial habitats, natural selection, abiotic interactions, and speciation. Prerequisites: BIOL 1000, BIOL 1010 or equivalent. Cross-listed: LIFE 2400

## BIOL 2410 - Intro to Field Ecology (2CR)

(5LB) A field and laboratory course to introduce research methods in general ecology. Includes required field
trips. Prerequisites: BIOL 1010, or permission of the instructor. Cross-listed: LIFE 2410

## BIOL 2465 - Research Problems in Biology

(1-3CR) (Max. 3) A comprehensive research study is required. Upon completing the project, the student should present a paper and oral seminar to a committee selected by the project instructor. The problem and amount of credit received must have the approval of the instructor. Prerequisites: Permission of the instructor.

## BOTK 1540 - Business English (3CR)

(3L) For those who need a review of basic communication skills. Students study the fundamentals of grammar, punctuation, and spelling. These skills are applied to situations that occur in business offices.

## BOTK 1655-Keyboarding Speed and Accuracy (1CR)

(2LB) This course provides students with proven techniques for improving their precision and performance. The drills are designed to increase keying speeds while maintaining a high degree of accuracy. This class offers the students the opportunity to move their keyboarding efficiency to the next level. Extra laboratory work may be required. Students need to know the keyboard. A student may take a departmental exam to challenge this course. Students successfully completing the exam will receive a grade of "S" for 1 credit.

## BOTK 1660 - Document Formatting (2CR)

(.5L, 3LB) This course emphasizes development of document formatting skills using word processing software. Students will learn to properly format those documents used in the working world: letters, memos, reports, tables, and other common and/or specialized formats. Some extra laboratory work may be necessary. Minimum keyboarding skills of 30 wpm needed.

## BOTK 1955-Professional Development

 (3CR)(3L) Designed to provide an awareness of the "people" skills essential for job success. Topics include developing a positive self-image, a professional self-image, business ethics, time management, human relations and communication skills, organizational dynamics, and career management.

## BOTK 1980 - Cooperative Work Experience I

(1-3CR) (Max. 6) The student is given the opportunity to gain practical, on-the-job experience within the student's
area of business specialization. Supervision will be by program coordinator and employer. A minimum of 80 hours of on-the-job training represents one semester hour. The student must maintain 12 credit hours with a 2.0 GPA during the semester. Prerequisites: Student must be a fulltime business information system major and have permission of the instructor.

## BUSN 2000 - Intro to International Business (3CR)

(3L) $[E]$ Students develop knowledge of the diverse cultural impact on multinational trade, marketing, finance, management, and government policies. Emphasis will be on the cultural dynamics of cultural business.

## CE 2070 - Engineering Surveying (3CR)

(2L, 4LB) [E] Principles and theory of land surveying for engineering students. The use and care of the surveyor's chain, level, and theodolite. Error theory and propagation of errors in measurement and calculations. Traverse measurement and adjustment, stadia for mapping, and solar angle for line bearing. Methods of public land and municipal surveying. Prerequisites: MATH 1450 or high school equivalent

## CHEM 1000 - Intro to Chemistry (4CR)

(3L,2LB) [E] Designed primarily for students who have not had high school chemistry or feel that they need a review, this course consists of a study of matter, atomic structure and bonding, the periodic table, chemical symbols, nomenclature and chemical equations, quantitative composition of compounds, calculations from chemical equations. Provides acceptable credit for students enrolled in agriculture, forestry, home economics, nursing, and petroleum technology. Not recommended for engineering, pre-medicine, pre-dentistry, pre-pharmacy, pre-veterinary medicine or any of the physical science majors. Prerequisites: C or better in MATH 0900 Concurrently: (equivalent to UW CHEM 1000.)

## CHEM 1020 - Chemistry I (4CR)

$(3 L, 2 L B) *$ One problem class per week. The first semester of a general course designed to meet the requirements of pre-professional, engineering, science, and liberal arts majors. Covers fundamental principles, atoms, subatomic particles, periodicity of elements, stoichiometry, bonding, oxidation states, states of matter, and solutions. Includes chemistry laboratory used to introduce the student to laboratory equipment and technique and to demonstrate some of the chemical laws and concepts. Lecture and Lab Prerequisites: A 'C' or better in MATH 0930, or an

ACT math score of 23 or better. (High school chemistry strongly recommended or a ' C ' or better in CHEM 1005)

## CHEM 1030 - Chemistry II (4CR)

$(3 L, 2 L B) *$ One problem class per week. The second semester of a general course designed to meet the requirements of pre-professional, engineering, science, and liberal arts majors. Covers thermodynamics, kinetics and mechanism of chemical reactions, equilibrium situations, complex equilibria, electrochemistry, descriptive chemistry, and organic chemistry. Prerequisites: A 'C' or better in both CHEM 1020 and MATH 1400, or permission of the instructor.

## CHEM 2230 - Quantitative Analysis (4CR)

( $2 L, 6 L B$ ) $[E]$ The study and practice of the principles and techniques of quantitative isolation and determination of some of the elements and their compounds. The applications and limitations of the theories and operations of analytical chemistry. The solutions of problems of all types are a major part of the two weekly class periods. Prerequisites: CHEM 1030 or permission of the instructor.

## CHEM 2300 - Intro to Organic Chemistry (4CR)

(4L) [E] A one-semester introduction to organic chemistry with a biological emphasis. Topics covered are bonding, structure, intermolecular attractions, common and systematic nomenclature, hydrocarbons, alcohols, phenols, mercaptans, ethers, aldehydes, ketones, carboxylic acids and their derivatives, amines, stereochemistry, carbohydrates, lipids, amino acids, proteins, nucleic acids, heterocycles, natural products, and polymers. Students needing organic laboratory credit should enroll concurrently in CHEM 2325. Prerequisites: CHEM 1000 or CHEM 1020.

## CHEM 2420 - Organic Chemistry I (4CR)

 (3L,2LB) One problem class per week. First of a twosemester sequence in modern organic chemistry. Topics covered are bonding, structure, alkanes, alkenes, alkynes, kinetics, stereochemistry, cycloaliphatic compounds, aromaticity, and arenas. Includes laboratory instruction in fundamental organic laboratory techniques including extraction, recrystallization, distillation and simple synthesis. Prerequisites: CHEM 1030, or permission of the instructor.
## CHEM 2440 - Organic Chemistry II (4CR)

( $3 L, 2 L B$ ) One problem class per week. A continuation of CHEM 2420. Topics covered are spectroscopy (mass
spectrometry, infrared, ultraviolet, and nuclear magnetic resonance) haloalkanes, alcohols, ethers, aldehydes, ketones, carboxylic acids, and their derivatives, phenols, carbohydrates, polymers, and natural products. Includes laboratory instruction in detailed synthetic preparations and spectral and chemical analysis of the products. Prerequisites: CHEM 2420.

## CHEM 2465 - Research Problems in Chemistry (1CR)

(3LB) A comprehensive research study in which the student performs under graduate chemical research under the direction of a principal investigator. Prerequisites: Permission of instructor.

## CHIN 1010 - First Year Chinese I (4CR)

(4L) [E] This course is intended for students who have never studied Chinese at the college level. Students will learn the fundamentals of the Chinese language through listening, speaking, reading, and writing activities at the ACTFL (American Council on the Teaching of Foreign Languages) Novice Low Level. The course will also introduce students to the culture of various Chinesespeaking countries and areas. Language laboratory times are required as needed. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: None

## CHIN 1020 - First Year Chinese II (4CR)

(4L) [E] This course is a continuation of the objectives in CHIN 1010. Students will become more proficient in basic listening, speaking, reading, and writing Chinese and will further their grammatical study of the Chinese language at the ACTFL (American Council on the Teaching of Foreign Languages) Novice Mid- Level. The course will continue to introduce students to the cultures of various Chinesespeaking countries and areas. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in CHIN 1010, CLEP test result, equivalent of 6-8 semesters of high school Chinese with a cumulative "B" average or better in those classes, or instructor's permission.

## CMAP 1200-Computer Information Systems (3CR)

(2L, 2LB) An introduction to computers and information processing. Computer concepts covered include: the merger of computer and communication technologies, hardware, software, ethics, and security. Students develop basic software skills in: word processing, spreadsheets, databases, presentations, Web designing, and integrating
software. Keyboarding skills equivalent to 20 wpm is needed to succeed.

## CMAP 1500-Computer Keyboarding (1CR)

( $2 L B$ ) This course will give students hands-on experience with the microcomputer keyboard for application in computer usage. Designed for students with no previous keyboarding instruction. Extra laboratory work may be required. Available for $\mathrm{S} / \mathrm{U}$ or letter grade.

## CMAP 1505-Technology Literacy (1CR)

(.5, $1 L B$ ) This course is designed as an introductory course for students new to the computer realm. It is a general overview of pertinent aspects computer users need to know. Topics include different types of computers and the features that make them unique, computer networking, computer hardware and peripheral devices, an overview of operating systems and the tasks they provide, an introduction to computer software applications, the role of privacy and security in the digital environment, how to use the World Wide Web by navigating and searching the web, concepts related to ecommerce and consumer safety, and exposure to the social aspect of the web.

## CMAP 1506-Computer Keyboarding II (1CR)

(.5, $1 L B$ ) This course is designed for students with limited typing skills who need to improve technique, speed or accuracy. This course is intended to give students additional hands-on experience using the computer keyboard to improve speed and accuracy while learning word processing skills. Students need to know proper keyboarding techniques and keyboard layout. Extra laboratory work may be required. Prerequisites: CMAP 1500 or permission of the instructor.

## CMAP 1550 - E-Portfolio Development (1CR)

(. $5 L, 1 L B$ ) This course is designed for students to create a developmental electronic learning record that will provide reflection upon their learning and evidence of achievement in their particular field of study. Professional items will be added such as a resume, cover letter, and other pertinent examples to substantiate learning of assessment purposes for prospective employment. Technical skills include file management, media creation and upload. Information relevant to the aesthetics and functionality of e-portfolios will also be provided.

## CMAP 1610 - Windows I (2CR)

$(1 L, 2 L B)$ This course is an introduction to the Windows operating system. The fundamentals of the Windows operating system will be explored. Students will learn to
use the help, my computer, and Internet features of Windows. In addition, they will learn how to manage files and organize disks, how to customize the desktop, how to share data between programs, how to perform primary system maintenance, and they will be exposed to the multimedia/Internet functions of Windows. Windows experience is recommended.

## CMAP 1615 - Operating Systems (3CR)

(3L) This course is an introductory course on the basics of computer operating systems including file systems, configuration, inter-process communication, security, administration, interfacing, multitasking, and performance analysis. The effect of additional technologies such as multi-core processing, wireless technologies, PDA and telephone operating systems are also explored. Specific information related to Linux, Windows and UNIX operating systems will be examined at the end of the semester.

## CMAP 1700 - Word Processing Basics (1CR)

(. $5 L, 1 L B$ ) The following techniques will be presented: creating documents, deleting and inserting text, moving, copying, printing, formatting, using multiple documents, finding and replacing text, and running a spelling check. Extra laboratory work may be required. Keyboarding ability recommended.

## CMAP 1705 - Word Processing II (1CR)

(. $5 L, l L B$ ) The following techniques will be presented: additional editing and formatting skills, some DOS features, page numbering, boilerplates, special printing effects, math maneuvers, merge printing of form letters and envelopes, and producing mailing labels. Extra laboratory work may be required. Keyboarding ability.

## CMAP 1710 - Word Processing III (1CR)

(. $5 L, 1 L B$ ) The following techniques will be presented: preparing fill-in documents, conditional merge printing, automating document assembly, merging with math, creating tables of contents and indexes, adding soft fonts, working with data bases and spreadsheets, keyboarding macros and using additional advanced features. Extra laboratory work may be required. Prerequisites: CMAP 1705.

## CMAP 1715 - Word Processing Applications (3CR)

(1L, 4LB) Will cover basic through advanced functions of word processing software. Training will be provided on microcomputers in the origination, processing, editing, and output of the document cycle. Various formats,
applications, and exercises will be utilized to produce a variety of professional documents. Extra laboratory work may be required. A keyboarding speed of 30 wpm is needed to succeed. Completion of CMAP 1700, CMAP 1705 and CMAP 1710 (for a total of 3 credits) is equivalent to CMAP 1715.

## CMAP 1750 - Excel Basics (1CR)

(.5L, $1 L B$ ) Designed to integrate information processing and spreadsheet problems and to create applications for the modern business environment. Extra laboratory work may be required.

## CMAP 1755 - Spreadsheet Applications II (1CR)

(. $5 L, 1 L B$ ) This course is designed to integrate information processing and intermediate level spreadsheet problems and to create applications for the modern business environment. Prerequisites: CMAP 1750 or permission of the flex lab instructor.

## CMAP 1760 - Spreadsheet Applications III (1CR)

(. $5 L, 1 L B$ ) This course is designed to integrate information processing and advanced level spreadsheet problems and to create applications for the modern business environment. Prerequisites: CMAP 1755 or permission of the flex lab instructor.

## CMAP 1765 - Spreadsheet Applications (3CR)

(2L, 2LB) This course covers the features of Microsoft Excel. Topics include creating worksheets, charts, formulas; developing functions, formatting, Web queries, What-If analysis; creating static and dynamic Web pages, data tables, financial schedules; creating, sorting, and querying a list; creating templates; working with multiple worksheets and workbooks, object linking and embedding (OLE), using macros, importing data, and working with Pivot Charts. Completion of CMAP 1750, CMAP 1755 and CMAP 1760 (for a total of 3 credits) is equivalent to CMAP 1765.

## CMAP 1800 - Database Basics (1CR)

(.5L, lLB) The following operations will be presented: designing, creating, editing, sorting, indexing, and searching database files. Database files will be used with Wizards to create queries, tables, forms, and reports. Keyboarding skill equivalent of 20 wpm is needed to succeed.

CMAP 1805 - Database Applications II (1CR)
(. $5 L, 1 L B$ ) This course is designed to integrate information processing and intermediate level database problems and to create applications for the modern business environment. Prerequisites: CMAP 1800 or permission of the flex lab instructor.

## CMAP 1810 - Database Applications III (1CR)

(. $5 L, 1 L B$ ) This course is designed to integrate information processing and advanced level database problems and to create applications for the modern business environment. Prerequisites: CMAP 1805 or permission of the flex lab instructor.

## CMAP 1815 - Database Applications (3CR)

( $2 L, 2 L B$ ) The following operations will be presented: designing, creating, editing, sorting, indexing, and searching database files. Database files will be used with Wizards to create queries, tables, forms, and reports. Students will apply operations and learn to use multiple databases, create advanced queries and custom forms and reports, integrate documents with other programs, and use the World Wide Web and hyperlink fields. Keyboarding skills equivalent to 20 wpm are needed to succeed. Completion of CMAP 1800, CMAP 1805 and CMAP 1810 (for a total of 3 credits) is equivalent to CMAP 1815.

## CMAP 1850 - Document Publishing I (1CR)

(.5L, $1 L B$ ) This is an introductory course to desktop publishing using current desktop publishing software. Students will learn desktop publishing concepts necessary to create flyers, brochures, and newsletter. They will also learn to create custom publications from scratch. Individual skills will be developed related to text editing, graphic design and editing, the use of placeholders, editing templates; and the creation of color schemes, font schemes, and customized building blocks. Extra laboratory work may be required. Keyboarding and work processing skills are strongly recommended for successful completion of this course.

## CMAP 1851 - Document Publishing II (1CR)

(. $5 L, 1 L B$ ) This class builds upon the skills learned in Document Publishing I. Students will learn how to build business information sets, create letterhead templates, business cards, work with tables for the creation of calendars, merge publications with data files, and create data driven catalogs. New skills will include the creation of new styles, working with master pages, Word Art, editing and embedding tables, and managing merged publications.

Extra laboratory work may be required. Prerequisites: CMAP 1850

## CMAP 1852 - Document Publishing III (1CR)

(.5L, $1 L B$ ) This class builds upon the skills learned in Document Publishing I and II. Students will learn the more advanced concepts such as editing large scale publications, sharing and distributing publications, and creating an interactive web site including the creation of web forms. Individual student skills will include the ability to create a table of content, bookmarks, hyperlinks, and generation of html and Visual Basic code. Extra laboratory work may be required. Prerequisites: CMAP 1850 and CMAP 1851

## CMAP 1855 - Desktop Publishing (3CR)

( $2 L, 2 L B$ ) This is a comprehensive course using current desktop publishing software to creating a wide variety of documents. Students will learn how to create flyers, brochures, newsletters, custom publications, business information sets, data-driven catalogs, and large-scale publications. Additionally, they will learn how to merge a publication to a data source to create multiple documents and create an interactive web site including the creation of web forms. Students will develop skills in object linking, embedding, editing text, color editing, graphic design of objects, and template design. They will be introduced to html code and Visual Basic. Keyboarding and word processing skills are strongly recommended for successful completion of this course. Completion of CMAP 1850, CMAP 1851 and CMAP 1852 (for a total of 3 credits) is equivalent to CMAP 1855.

## CMAP 2630 - Presentation Graphics (2CR)

 ( $1 L, 2 L B$ ) This course is designed to provide a working knowledge of presentation software. Procedures include authoring multimedia projects to include animation, sound files, object linking and embedding technology. Topics include using/creating/customizing design templates and themes, adding effects to shapes and objects, modifying visual elements, animation with motion paths, and the design/delivery of presentations. Extra laboratory work may be required. Completion of CMAP 2635 and CMAP 2636 (for a total of 2 credits) is equivalent to CMAP 2630.
## CMAP 2635 - Presentation Graphics I (1CR)

(. $5 L, 1 L B$ ) This course is designed to develop techniques necessary to design appropriate presentations focusing on purpose and intended audience. Students will create presentations using a template, customize themes, insert objects, create SmartArt objects, and add special effects to a presentation. Extra laboratory work may be required. Completion of CMAP 2635 and CMAP 2636 (for a total of

2 credits) is equivalent to CMAP 2630. Prerequisites:
Completion of or concurrent enrollment in CMAP 1615 and CMAP 1715 are recommended.

## CMAP 2636 - Presentation Graphics II (1CR)

(. $5 L, 1 L B$ ) This course is designed to incorporate the advanced features of PowerPoint. Students will integrate presentations with other programs, customize handouts, publish a presentation as a Web page, add action buttons, add hyperlinks, incorporate advanced special effects and create special types of presentations. Extra laboratory work may be required. Completion of CMAP 2635 and CMAP 2636 (for a total of 2 credits) is equivalent to CMAP 2630. Prerequisites: CMAP 2635 or permission of the instructor.

## CNSL 2200 - Introduction to Student Leadership I (2CR)

(2L) This course will acquaint students with the leadership skills and competencies necessary for successful service in the college community and beyond. While required of students elected to the ASCC Student Senate, enrollment is open to all students. Prerequisites: Election to ASCC Student Senate, or permission of the instructor.

## CNTK 1520 - Blueprint Reading for Construction (2CR)

(2L) Interpreting building plans and specifications. Types of drawings, scales, symbols, types of construction, electrical, mechanical, and various other details.

## CNTK 1525 - Materials Handling and Construction Equipment (3CR)

(3L) The new art and science of moving and storing all types of materials and products of the construction industry including machines, equipment, and systems.

## CNTK 1530 - Architectural and Construction Planning (3CR) <br> (3L) A survey of architectural construction administration including planning and scheduling as practiced in the building industry. Codes, specifications, and contractual documents as they apply to building projects.

## CNTK 1560 - Construction Safety (3CR)

(3L) Understanding safety and planning preventative measures is crucial to the modern construction firm. You will receive in-depth information concerning specific areas of safety management. This program emphasizes the importance of managing safety and productivity with equal emphasis.

## CNTK 1630 - Basic Cabinet Making (2CR)

$(1 L, 2 L B)$ For anyone wishing to learn basic cabinet making skills. Cabinet design, construction techniques, finishing procedures, and machine operation are included in classroom and laboratory instruction. Students construct an appropriate cabinetry unit of their choice.

## CNTK 1640 - Furniture Refinishing Methods (2CR)

(IL, 2LB) This course covers different types of wood finishes, application methods and appropriate uses. Topics include stains, dyes, fillers, paints and special wood treatment techniques. Students will gain an understanding of these various processes as they produce sample blocks of these finishes. Also covers the procedures for refinishing and restoring furniture.

## CNTK 1670 - Woodworking (1.5CR)

(3LB) This course is designed to provide the student with the basic knowledge of woodworking tools, materials, processes in construction, and finishes with the main emphasis on the correct usage, set-up, and safe operation of both stationary and hand-held woodworking tools. The student chooses their own project(s) and provides their own materials to construct project(s) using the shop facilities during the extent of the 10 -week class. $\mathrm{S} / \mathrm{U}$ grade.

## CNTK 1700 - Introduction to Construction

 (4CR)(2L, 4LB) Basic concepts of residential and light commercial construction. This will include hands-on training in the safe operation and use of both hand and power tools, concrete testing and grading, and careers in the construction industry.

## CNTK 1850 - Construction Techniques (2CR)

(2L) A survey course to introduce the student to the world of construction, including residential, commercial, and industrial projects with a chronological study of the development of architectural form.

## CNTK 1860 - Woodworking Fundamentals I (4CR)

(2L, 4LB) A course for those wanting to learn or further their woodworking skills. An emphasis will be placed on safety, problem solving, material selection, and practical approaches to woodworking. In the lab, students will receive an introduction to the safe and correct use of both hand and stationary power tools and equipment to build a project of the student's choice.

## CNTK 1865-Woodworking Fundamentals II (4CR)

( $2 L, 4 L B$ ) This course provides an enhanced knowledge of techniques and materials used in the design and construction of wood furnishings. Emphasis on problem solving, multi-joining technology and custom finishing. Prerequisites: CNTK 1860.

## CNTK 1870 - Construction Materials and Methods (3CR)

(3L) Building materials and structural systems as they relate to the construction industry. Methods of construction, environmental impact and code requirements.

## CNTK 1875 - Wood Carving and Turning (2CR)

(1L, 2LB) This course covers the fundamentals of turning and of wood carving as related to furniture making. Topics include wood-forming, chip carving, high-relief carving and bas-carving. Emphasis is placed on selection and safe use of tools, tool sharpening and carving techniques of both hand and power tool carving. Students will learn skills in the use of the wood lathe both faceplate and spindle turning. Green-wood turning and segmented turning will be introduced. Prerequisites: None

## CNTK 1905 - Carpentry (4CR)

( $2 L, 4 L B$ ) This course is designed to build upon previously learned skills in carpentry, roofing, concrete, and work site safety, through hands-on construction techniques in a lab setting. Typically, the material covered will relate to residential construction, but commercial and industrial applications will be covered. Prerequisites: CNTK 1700.

## CNTK 2500 - Advanced Furniture Projects (4CR)

(2L, 4LB) This class will focus on material selection, esthetic design, advanced joinery techniques, selection of hardware and consideration of grain and color to compliment the design. Coopering, bent lamination, veneering will be covered. Emphasis is placed on a high degree of craftsmanship, design and professionalism as demonstrated by the student through an independent furniture project of their choice and approved by the instructor. Prerequisites: CNTK 1860

CNTK 2510 - Construction Estimating (3CR)
(3L) A study of the core functions of estimating and job preplanning. Plans and specifications are used for quantity survey. Economic factors of time, cost, production control, overhead, and profit are considered.

## CNTK 2525 - Construction Project Management (3CR)

(3L) An introduction to construction project management, focused on the utilization of commercial computer software packages. Prerequisites: CNTK 2510.

## CNTK 2980 - Cooperative Work Experience

 (Construction)(1-4CR) (Max. 6) Practical construction experience on the job, with required written reports on the field experience. See "Unit of Credit."

## COMM 1000 - Intro to Mass Media (3CR)

(3L) $[E]$ Explores the nature and function of the mass media in contemporary society. Begins by examining some major theoretical conceptions of the communication process, concentrating on how communication creates and sustains culture. Other topics include the effects of the media on media consumers, special characteristics of the various media, and public policy issues in regard to mass media.

## COMM 1020 - Workplace Communication (3CR)

$3 L$ Designed to introduce students to best communication practices for the 21 st century workplace. This course is presentation-centered, but also introduces pertinent communication theory. Yearly in the fall semester

## COMM 1030 - Interpersonal Communication

 (3CR)(3L) [E] Focuses on face-to face relationships in interpersonal communication settings. Self-concept, perception, language, nonverbal channels, listening, and emotions are presented as factors in dyadic relationships.

## COMM 1040 - Intro to Human

## Communication (3CR)

(3L) $[E]$ An introduction to the nature and function of human symbolic communication in its various settings. The role of symbolic communication on the interpersonal level as a method of establishing and defining human relationships will be examined, as will the relationship of symbolic communication to the establishment and maintenance of larger behavioral, economic, and cultural processes and structures.

## COMM 1060 - Forensics I (1CR)

(2LB) For those students interested in competing in events sponsored by the National Community College Speech
Association.

## COMM 1080 - Talking With: (Subtitle) (1CR)

(1L) (Max. 3) This course will focus on unique or specific communication situations, for which there are often special strategies or rules for effective communication.

## COMM 1505-Communication for Professional Success (1-2CR)

A practical approach to improving communication in the workplace. This course presents principles and practices for business and professional employees in three areas: personal skills (Interpersonal Communication), group skills (Small Group Communication), and presentation skills (Public Speaking and Interviewing). The course may be taken for three credits as a whole, or individually for one credit each.

## COMM 2010 - Public Speaking (3CR)

(3L) An introductory course in public speaking. The emphasis is on theory, speech development, and practice as the student is introduced to a variety of speaking situations from impromptu talks to platform speeches. This course will fulfill the C 2 requirement for the University of Wyoming.

## COMM 2060 - Forensics II (1CR)

(2LB) (Max. 2) For those interested in competing in those events sponsored by Phi Rho Pi, the national community college speech association. Students will attend and participate in intercollegiate forensics as members of the forensics squad of Casper College. Prerequisites: Permission of the instructor.

## COMM 2090 - Intro to Persuasion (3CR)

(3L) [E] Human communication as a change agent is studied along with relationships of attitudes to behavior with emphasis on behavioral research and contemporary theories. Prerequisites: COMM 2010 or permission of instructor.

## COMM 2100 - Reporting and News Writing (3CR)

$3 L$ This course focuses on an introduction to basic news writing, reporting, editing, interviewing, PR and advertising. Strong writing, deadlines, accuracy, news judgment, ethical practices and sensitivity of our pluralistic
society are expected. This course provides skills necessary for various media careers including media writing, PR, marketing and magazine writing. Prerequisites: ENGL 1010 or permission of instructor.

## COMM 2110 - Nonverbal Communication (3CR)

(3L) [E] This course focuses on the elements, functions, and impacts of nonverbal communication in human communication. Students are introduced to the research and theory, as well as the practical applications, in their interactions with others. Prerequisites: ENGL 1010 or permission of instructor.

## COMM 2120 - Small Group Communication (3CR)

(3L) [E] Communication behavior in small group situations is explored; networks, dynamics, leadership roles, member functions, and decision-making behavior. Prerequisites:
COMM 2010 or COMM 1030 or permission of instructor.
COMM 2125 - Family Communication (3CR)
(3L) Designed to explore the role that communication plays in family functioning. Prerequisites: COMM 1030 or permission of instructor.

## COMM 2135 - Gender, Communication and Culture (3CR)

(3L) This course provides both a theoretical and real-life view, for both genders, on how our communication in work, school, social and relationship settings help shape and design our gender constructs.

## COMM 2145 - Mentoring Communication (12CR)

This course will focus on unique or specific communication situations associated with serving as a mentor for elementary students between the ages of 8-11 and the application of special strategies or rules for effective communication in those situations. This course is associated with the Help Yourself Academy, an afterschool program designed to offer Title 1 NCSD elementary students (grades 3-6) the opportunity to focus on a math and science curriculum. Prerequisites: Permission of the instructor.

## COMM 2150 - Argumentation (3CR)

(3L) [E] Students will be introduced to the elements of effective argument - including evidence, reasoning, case construction and presentation skills to bring about changes in belief and conviction. Warning: This course focuses on
current controversial issues and students may be asked to present arguments that differ from their own personal positions on those issues. The intent of the course is not to change students' minds, but they will critically evaluate their own political and philosophical beliefs and opinions. Prerequisites: COMM 2010 or permission of instructor.

## COMM 2190 - Basic Video Production (3CR)

(2L, 2LB) Basic camera operation, sound, lighting, scriptwriting, planning, and editing introduce the fundamentals of video production. Students will work in a variety of crew positions to create private or institutional video projects.

## COMM 2200 - Broadcast Production (3CR)

( $2 L, 2 L B$ ) Introduction to the fundamental technical and production concepts in planning, producing, and disseminating media related content. Actual experience with equipment and an understanding of its operation are emphasized. Prerequisite: COMM 2190 or permission of the instructor. Prerequisites: COMM 2190 or permission of the instructor.

## COMM 2310 - Public Relations (3CR)

(3L) This course provides a foundation of the nature and purpose of proper public relations skills and programs in any given business, organization, or situation. Students will develop writing skills and techniques using various public relations tools/tactics and understand the importance of research and planning in creating a public relations program. Identification of publics, persuasive techniques, media ethics and law, message strategies, and research methods pertaining to public relations are topics emphasized. NEW DESCRIPTION: Studies how organizations can improve their relationships with their publics. Explores public opinion and how to research audiences. Explains different skills needed in the field, including its relationship to advertising and marketing. Prerequisites: COMM 2100 or permission of the instructor

## COMM 2320 - Intro to Social Media (3CR)

(3L) This course will introduce methods for analyzing and understanding how people apply social media technologies and their societal implications. The course will offer real world examples to help students use tools like Facebook, Twitter, Pinterest, Tumblr and YouTube in creating content and communication plans for organizations and businesses. In addition, students will learn how to manage their own identity or brand through various forms of social media. Prerequisites: None

## COMM 2340 - Editing and Production (3CR)

(3L) Evaluation, selection and preparation of news copy for publication. Practice in copy reading, proof reading, headline writing, and page layout. Use of photography and advertising in page layout. Prerequisites: COMM 2100.

## COMM 2355 - Intro to Photography (3CR)

(3L)3 This course is designed for students to gain a general understanding of digital camera operation and the development of photojournalism and its role in a visuallyoriented world. Students will use both film and digital cameras for their photographs and will learn how to manipulate them in Adobe Photoshop. NEW DESCRIPTION: Basic course in still photography. Includes practice in techniques of camera use, composition and use of photographs in media-related applications.

## COMM 2380 - Cinema History (3CR)

(3L) [E] A study of the development of film from 1895 to the present in relation to historical forces shaping the film industry in the form of artistic movements, world history, popular taste, technology, economics, and politics. Weekly screening of historically significant films supplement readings, lectures, and discussions. Prerequisites: ENGL 1010 or permission of instructor.

## COMM 2390 - Independent Publications (1CR)

(2LB) (Max. 3CR) Students interested in producing the student newspaper (The Chinook) will have the opportunity to complete interviews and write, work in sales and advertising, use social media and web promotion, shoot photography, develop editorial and column writing. Prerequisite: Permission of the instructor. Prerequisites: Permission of the instructor.

## COMM 2470 - Communication Internship

(1-3CR) (Max. 6) This course is designed for students wishing to gain work experience using communication skills. The student will complete 80 hours of work for 1 credit hour. The student will be evaluated by his/her supervisor at work as well as several visits by the instructor. This course may be repeated to a maximum of 6 credit hours. Prerequisite: Permission of the instructor. Prerequisites: Permission of instructor.

## COMM 2475 - Independent Study (1-3CR)

## (Max. 6)

An opportunity for students to develop projects in their particular area of interest within the communication discipline. Prerequisites: COMM 1040, consent of
instructor, and completion of at least six hours of 2000 level $\mathrm{CO} / \mathrm{M}$ credits.

## COMM 2480-Cooperative Work Experience

(1-3CR) (Max. 6) Designed for students working in the communication field who actively apply skills and content from prior coursework. Work consists of paid on-the-job training. The student will be evaluated by his/her supervisor at work as well as several visits by the instructor. This course may be repeated to a maximum of 6 credit hours. Prerequisite: Permission of the instructor. Prerequisites: Permission of instructor.

## COSC 1010 - Introduction to Computer Science (4CR)

$(3 L, 2 L B)[E]$ Introduction to problem solving and programming using structured program development techniques applied to a high-level programming language.
Students will participate in software experimentation in a closed laboratory setting. Additional programming exercises will be assigned for student to complete in open laboratories or on their own equipment. Prerequisites: Typing skills.

## COSC 1030 - Computer Science I (4CR)

(3L, 2LB) [E] Study of algorithmic problem-solving using principles of structured programming and object-oriented design. Algorithms are implemented in a high-level, objectoriented language. Programming assignments and experimentation with software in a closed laboratory supplement the discussion. Prerequisites: Previous programming experience required and COSC 1010 or instructor permission.

## COSC 2030 - Computer Science II (4CR)

$(3 L, 2 L B)$ [E] Studies the use and implementation of abstract data structures in an object-oriented programming environment. Topics include lists, stacks, queues, tables, binary trees, graphs, space and time complexity, recursion, and recursive data types. Programming exercises and experimentation with software in a closed laboratory supplement the discussion. Prerequisites: COSC 1030.

## COSC 2150 - Computer Organization (3CR)

(3L) [E] Foundations class for advanced coursework in computer science. Use of assembly and high-level languages to study the structure and operations of computers. Topics include the logical organization of computers, structured data and instruction representation in various types of languages, and extensive study of the assembly language of a modern microprocessor. Most programming is done at the assembly language
level. Prerequisites: COSC 2030 (or concurrent enrollment) or permission of instructor.

## COSC 2240 - Systems Analysis and Design (3CR)

(3L) How to analyze existing information processing systems and prepare user specifications for improved systems. The systems development life cycle, from investigation through installation and review, and an actual systems analysis.

## COSC 2300 - Discrete Structures (3CR)

(3L) [E] Applications in computer science of set theory, counting techniques, Boolean algebra, mapping, relations and functions, propositional logic and graphing. Additional topics include induction, proof methods, and propositional calculus. Prerequisites: COSC 1030 or MATH 2200. (Dual listing MATH 2300.)

## COSC 2405 - User Interface Design (2CR)

(2L) An intermediate-level course in developing graphical applications for a modern operating system. Through a series of hands-on activities, students will gain experience in designing, implementing, and debugging user interfaces for practical applications. The use of a wide variety of user interface components will be covered together will best practices for the platform of interest. The emphasis of this course is on creating clean, usable interface designs rather than producing the most technically capable implementation. Prerequisites: COSC 1030.

## COSC 2406 - Object-oriented Programming

 (4CR)(3L, $2 L B$ ) [E] Students will study algorithmic problemsolving techniques using an object-oriented programming language. Topics include encapsulation, inheritance, and composition. Applications are drawn from graphical user interfaces, user interfaces, input/output, and network communication. Prerequisites: COSC 1030

## COSC 2409 - Programming:

(2-4CR) Describes various computer languages focusing on their differences from prerequisite languages and the uses of these new features. This course will give the student the chance to study new and unusual languages and their uses. Prerequisites: COSC 1030 or instructor permission.

## COSC 2418 - Web App Development (3CR)

(3L) Development of interactive, database-driven web applications. Some light web design is included, but the focus is on the back-end server software. Students use a
web app framework such as Django or Rails to quickly develop rich web-based applications. Topics covered include object-relational models, authentication and authorization, and Ajax. Knowledge of web design is beneficial but not required. Biannually Prerequisites: COSC 1030, Computer Science I

## COSC 2480 - Cooperative Experience

 (Computer Systems and Applications) (1-3CR) (Max. 6) The student is afforded the opportunity to gain practical, on-the job experience within the student's area of business specialization. Supervision of program coordinator and employer, if required. A minimum of 80 hours of on-the job training represents one semester hour. The student must maintain 12 credit hours with a 2.0 GPA during the semester this course is taken. Prerequisites: Computer systems and applications or computer science major and permission of the program coordinator.
## COSC 2495 - Computer Workshop (1CR)

(3LB) (Max. 3) Offers practical experience in programming and in using the computer to process various types of jobs. Intended for those students who wish to obtain additional programming experience. Prerequisites: COSC 2030.

## COTA 2020 - Human Occupations and Life Roles (2CR)

( $1 L, 2 L B$ ) The foundation of occupational therapy is purposeful activity related to development and life roles. This course provides an in-depth exploration of occupations and life roles throughout the life cycle while exploring occupational therapy theory, analysis and synthesis of occupations as performed in the various life stages. Provides discussion of influences of disability and culture to occupational performance. Prerequisites: Permission of OTA program director.

## COTA 2100 - Psychosocial Aspects (3CR)

(2L, 2LB) This course addresses acute and chronic psychosocial dysfunction conditions and occupational therapy's role in providing service. Various developmental concerns and mental health settings are discussed. The OTA's role in interventions is presented including theory, evaluation, treatment planning and intervention. Psychosocial issues in physical dysfunction are also explored. Prerequisites: COTA 2200, COTA 2300, COTA 2310, COTA 2420, and PSYC 1000. Concurrently: Taken concurrently with COTA 2210 and COTA 2320.

## COTA 2150 - Group Dynamics (1CR)

(2LB) This course is designed to develop effective interpersonal communication to prepare students for professional/patient interactions in clinical practice and the engagement of therapeutic use of self. An emphasis is placed on the development of basic listening skills, providing meaningful feedback, and group membership skills. This course provides an environment, which promotes sharing of ideas, attitudes and feelings, peer feedback and support of group members. Prerequisites: Admission into the OTA program, or permission of the OTA program director.

## COTA 2160 - Leadership Skills (2CR)

( $1 L, 2 L B$ ) This course promotes effective interpersonal communication for group and professional leadership, evaluation of self and others, and therapeutic-use of-self techniques necessary for effective occupational therapy service provision. Group leadership and interactive skills are practiced along with activity analysis, adapting and grading of group activities. Prerequisites: COTA 2150 , COTA 2200, COTA 2300, COTA 2310, COTA 2420. Concurrently: Taken concurrently with COTA 2100 and COTA 2210.

## COTA 2200 - Therapeutic Approaches and Media I (2CR)

(4LB) Exploration of a variety of media and therapeutic approaches for special needs populations. Activity analysis and adaptation of activities are practiced extensively. Types of activities explored include play, education, daily living skills, social participation, work and leisure. Use of the Occupational Therapy Practice Framework is introduced and applied to practice.

## COTA 2210 - Therapeutic Approaches and Media II (2CR)

(4LB) Continuation of implementation of the Occupational Therapy Practice Framework. A variety of media will be explored for implementation with psychosocial and pediatric populations. Activity analysis, adapting, and grading of interventions for therapeutic application for these populations is the focus of this class Prerequisites: COTA 2020, COTA 2200, COTA 2300, COTA 2310, COTA 2420 Concurrently: Taken concurrently with COTA 2100 and COTA 2350.

## COTA 2220 - Therapeutic Approaches and Media III (3CR)

(6LB) This course continues the exploration of service implementation for the occupational therapy assistant in the
physical disability's settings. Areas studied include daily living skills, work, leisure, education, and social participation. Techniques applied in physical disabilities settings are practiced. Prerequisites: COTA 2020, COTA 2200, COTA 2210, COTA 2300, COTA 2310, COTA 2320, COTA 2350, and COTA 2420. Concurrently: Taken concurrently with COTA 2330 and COTA 2400.

## COTA 2300 - Fieldwork Integration I (2CR)

$(1 L, 2 L B)$ An introduction to the role of working with special needs populations in the community. The role and professional expectations of occupational therapy assistants are introduced. This course provides fieldwork preparation integrated with classroom discussions. Students will complete 20 hours of clinical experience. Beginning knowledge of medical terminology is studied.

## COTA 2310 - Fieldwork Integration II (2CR)

(4LB) A continuation of pre-fieldwork course work and beginning preparation for Level I fieldwork. Primary focus on professional skills in community experiences and with special needs populations. Begin clinical documentation for OTA practitioner. Prerequisites: COTA 2300.

## COTA 2320 - Fieldwork Integration III (2CR)

(4LB) Designed to prepare students for Level I and II fieldwork experiences. Students will complete Level I fieldwork in psychosocial and pediatric settings. Continuation of documentation concepts. Prerequisites: COTA 2020, COTA 2300, COTA 2310, and COTA 2420. Concurrently: Taken concurrently with COTA 2100 and COTA 2350.

## COTA 2330 - Fieldwork Integration IV (2CR)

(4LB) A continuation of clinical readiness skills. Includes Level I experience in developmental disabilities, physical disabilities and geriatric settings as well as preparation for Level II experiences. Clinical reasoning skills for transition from student to practitioner are an integral part of the course. Prerequisites: COTA 2020, COTA 2100, COTA 2200, COTA 2300, COTA 2310, COTA 2320, COTA 2350, and COTA 2420. Concurrently: Taken concurrently with COTA 2220 and COTA 2400.

## COTA 2350 - Clinical Theory and Practice I (3CR)

( $1 L, 4 L B$ ) Course examines occupational therapy theory and practice for individuals aged birth through 21 with a focus on physical disabilities and developmental
dysfunction. Explores implementation of occupational therapy in a variety of settings including theory, assessment, planning treatment plan and intervention. Prerequisites: COTA 2020, 2050, COTA 2200, COTA 2300, COTA 2310, and COTA 2420. Concurrently: Taken concurrently with COTA 2210 and COTA 2320.

## COTA 2400 - Clinical Theory and Practice II (3CR)

(1L, 4LB) Course examines occupational theory and practice for individuals over the age of 21 with a focus on physical disabilities, neurological impairment and aging dysfunction. Explores implementation of occupational therapy including theory, assessment, treatment planning and implementation, in a variety of settings. Prerequisites: COTA 2020, COTA 2200, COTA 2210, COTA 2300, COTA 2310, COTA 2320, COTA 2350, and COTA 2420. Concurrently: Taken concurrently with COTA 2220 and COTA 2330.

## COTA 2420-Clinical Conditions (3CR)

(3L) Specific diagnoses commonly seen by the occupational therapists are examined and application of occupational therapy techniques and theory are discussed. Prerequisites: Admission into the OTA Program or permission of the OTA Program Director and ZOO 2015, ZOO 2015L, and KIN 2050.

## COTA 2450 - Health Care Systems (3CR)

(3L) Course provides exploration of the health care system and the delivery of occupational therapy services. Topics include: reimbursement, team concepts in health care, the role of the OTA within the OT department and health care environments, levels of authority and responsibility, and familiarity with alternative health care choices. Prerequisites: COTA 2020, COTA 2100, COTA 2150, COTA 2160 , COTA 2200 , COTA 2210 , COTA 2300 , COTA 2310 , COTA 2320 , COTA 2350 , and COTA 2420.

## COTA 2475 - Independent Study in OT

(1-3CR) (Max. 6) This course provides occupational therapy assistant students the opportunities to complete independent research/study in areas of interest within the field of occupational therapy. Prerequisites: Permission of the instructor.

## COTA 2500 - Fieldwork A (3CR)

(2L, $2 L B$ ) First of two Level II fieldwork placements. Eight weeks of fieldwork in contracted facility. Includes a minimum of 40 hours a week of on-site skill practice. On-
line integration of learning experiences with instructor and class members is expected. Prerequisites: Must have successfully completed all academic course work and Level I fieldwork. Concurrently: (May be taken concurrently with COTA 2550 and/or COTA 2600.)

## COTA 2550 - Fieldwork B (3CR)

(2L, $2 L B$ ) Second of two Level II fieldwork placements. Eight weeks of fieldwork in contracted facility. Includes a minimum of 40 hours a week of on-site skill practice. Online integration of learning experiences with instructor and class members is expected. Prerequisites: Must have successfully completed all academic coursework and COTA 2500. Concurrently: (May be concurrently taken with COTA 2500 and/or COTA 2600.)

## COTA 2600 - Fieldwork Options

(2-3CR) Six to eight weeks fieldwork optional for students wishing further specialized training in a particular facility. Length of training to be prearranged with school and clinical setting. On-line integration of learning experiences with instructor and class members is expected. Prerequisites: Must have successfully completed all academic coursework, Level I fieldwork and COTA 2500 and COTA 2550. Concurrently: (May be taken concurrently with COTA 2500 and COTA 2550.)

## CRMJ 1705 - Firearms (3CR)

(1L, 4LB) This course will address range safety procedures and legal issues concerning the use of deadly force by law enforcement officers. In addition, the course will introduce students to basic defensive handgun techniques. Students will also be introduced to the proper handling, firing and maintenance of police pump action shotguns, semiautomatic patrol rifles and precision rifles. Students must furnish ammunition, ear and eye protection and pay an access fee for use of the shooting range. This is considered to be a vocational skills course and as such it may not transfer to the University of Wyoming or other four-year institutions that offer a bachelor degree in criminal justice. Enrollment is open to all interested students provided they can lawfully possess firearms. Prerequisites: None

## CRMJ 2005 - Introduction to Automated Fingerprint Identification Systems (1CR)

(. $5 L, 1 L B$ ) Exploration of areas of contention, which occur within the criminal justice system in America today. To include such topics as bail, plea-bargaining, Supreme Court decisions of a controversial nature, police discretion, and others. Prerequisites: Permission of the instructor.

## CRMJ 2120 - Introduction to Criminal

 Justice (3CR)(3L) $[E]$ The agencies and processes involved in the criminal justice system legislature, the police, the prosecutor, the public defender, the courts, and corrections. An analysis of the roles and problems of law enforcement in a democratic society with an emphasis upon intercomponent relations and checks and balances.

## CRMJ 2130-Criminal Investigation I (3CR)

(3L) Theory of criminal investigation: relations of the detective with other law enforcement divisions, modus operandi, sources of information, surveillance, personal identification, interrogation, preliminary and follow-up investigations, collection and preservation of evidence. Enrollment limited to majors in law enforcement except by permission of the instructor.

## CRMJ 2210 - Criminal Law I (3CR)

(3L) [E] Comparative study of criminal laws; origins of laws; review of Wyoming criminal laws and procedures; elements of a crime; parties to a crime; elements of specific crimes; arrest, jurisdiction of criminal courts and criminal procedures. (Spring semester.) Prerequisites: Completion of, or concurrent enrollment in CRMJ 2120.

## CRMJ 2230 - Law of Evidence (3CR)

(3L) Leading rules and principles of exclusion and selection, burden of proof, nature and effect of presumptions, proof of authenticity, and contents of writings; examination, competency, and privilege of witnesses. (Fall semester.) Prerequisites: CRMJ 2120.

CRMJ 2250 - Police Administration (3CR)
(3L) Principles of organization and management as applied to law enforcement agencies. Theoretical and practical aspects of management factors such as organizations, decision-making, values, human relations, and power. Prerequisites: CRMJ 2120, or permission of the instructor.

## CRMJ 2280 - Criminal Procedure (3CR)

(3L) This course will familiarize the student with the state of Wyoming and federal criminal process. The fourth, fifth, sixth, and fourteenth amendments to the United States Constitution will be emphasized, along with applicable Supreme Court cases. The laws of arrest, search, seizure, pretrial identification procedures and confessions will be studied. An overview of the criminal court system as it relates to individual rights protected under the Constitution and key Supreme Court holdings will be taught.

## CRMJ 2350 - Introduction to Corrections (3CR)

(3L) A general overview of the correctional process describing the history and evolution of the American corrections system. This course covers all aspects of institutional and community-based corrections. Meets only in spring semester of even-numbered years.

## CRMJ 2430 - The Community and the Police (3CR)

(3L) The course delves into the areas of police professionalism and the concept of community relations. Areas discussed will include use of power, prejudice, race relations, civil rights, police political relations and police media relations. Prerequisites: CRMJ 2120, or permission of the instructor.

## CRMJ 2570 - Criminalistics (3CR)

( $2 L, 2 L B$ ) This course will delve into the aspects of crime scene management. From the first initial contact with the crime scene, the student will learn to gather physical evidence, document, photograph, and diagram the scene to scale. They will identify fibers, hairs, paints, tool markings, fingerprints and other impressions. We will also look into what the future holds in the area of crime scene management.

## CRMJ 2895 - Capstone Directed Studies in Criminal Justice (1CR)

This capstone course is the conclusion of the student's criminal justice academic experience and is the final course completed by students in the Criminal Justice Associate of Arts (A.A.) degree or the Criminal Justice Associate of Applied Science (A.A.S.) degree. The course is designed to assess the student's understanding of the Criminal Justice System and his/her readiness to become employed by a criminal justice agency. Prerequisites: All major requirements or concurrent enrollment in any remaining major requirement courses and permission of the instructor.

## CRMJ 2965 - Directed Studies in Criminal Justice <br> (1-3CR) (Max. 6) Faculty-guided research in an area of mutual interest to the student and instructor within the law enforcement or corrections major.

## CRMJ 2970 - Criminal Justice Internship (13CR) (MAX 3)

(*1-3CR) (Max. 3) *Thirty hours of participation per credit hour. This course will place a student in a criminal justice
agency for a few hours per week for one semester as an observer. It will afford the pre-service student the opportunity to observe the workings of the criminal justice system, and the in-service student an opportunity to work in a collateral criminal justice agency. Prerequisites:
Sophomore standing and permission of the instructor.

## CRMJ 2980 - Cooperative Work Experience (Law Enforcement)

(*2-3CR) *(see "unit of study") Supervised work and project experience for the purpose of increasing student understanding of law enforcement problems and procedures. Supervision is provided by both the instructional staff of the college and the cooperating agencies. Analysis and reports of student's performance; regular group meetings. Enrollment limited to majors in law enforcement with sophomore standing except by permission of the instructor.

## CROP 2200 - Forage Crop Science (4CR)

( $3 L, 2 L B$ ) This course provides a comprehensive introduction to the biology, propagation and management of forage and farm crop plants. Many topics (e.g., plant ecophysiology, cropping practices in agro ecosystems, plant genetic improvement) will be covered.

## CSCO 2000 - Beginning Internetworking (3CR)

(3L) This class focuses solely on networking fundamentals and is not specific to Cisco products or technologies. Student learning will include an understanding of the OSI networking model, networking components, premises wiring, industry standards, networking topologies and designs, and professional practices. Project learning experiences will include designing networks and the installation of network premises cabling.

## CSCO 2010 - Advanced Internetworking I (3CR)

( $2 L, 2 L B$ ) This course is the second semester of a four semester CCNA (Cisco Certified Network Associate) certification-based training program. This class focuses on router configuration and applying the networking principles outlined in CSCO 2000 to real world situations. Specific topics include router components and features, intermediate IP addressing, routing protocols, router modes and functions, access control lists and network design. Prerequisites: CSCO 2000 or permission of instructor

## CSCO 2020 - Advanced Internetworking II (4CR)

(4L) This course is the third and fourth semesters of a four semester CCNA (Cisco Certified Network Associate) certification-based training program. This class focuses on the application of advanced routing protocols such as OSPF and EIGRP, advanced IP addressing, LAN switching and VLAN design, and the configuration of wide area network access using the point-to-point protocol (PPP), ISDN, and frame relay. Prerequisites: CSCO 2010.

## CSCO 2035-CCNA Certification Exam Review (1CR)

(1L) This course will be a thorough review of the Cisco CCNA Certification Exam requirements. Using lectures, flash cards and electronic testing, students will be presented with a complete outline of exam requirements and will be able to accurately gauge their level of preparedness to take the exam. Prerequisites: None (should be preparing to sit for the CCNA Exam)

## CSEC 1501 - Network Security Fundamentals (3CR)

(2L, $2 L B$ ) This course examines current standards for information security through examination of security technologies, methodologies and best practices. Topics include evaluations of security models, risk assessment, threat analysis, attack types, encryption technologies, organizational technology, security implementation, disaster recovery planning, and security policy formulation and implementation. Prerequisites: CSCO 2000

## CSEC 1510 - Network Defense Principles (3CR)

(2L, $2 L B$ ) This course introduces students to the various methodologies used for attacking a network. Students are introduced to the concepts, principles and techniques, supplemented by hands-on exercises for attacking and disabling a network. These methodologies are presented within the context of properly securing the network. Students are provided with updated security resources that describe new vulnerabilities and innovative ways to protect networks by using the skills and tools of an ethical hacker. Prerequisites: CSEC 1501.

## CSEC 1520 - Network Attack Principles (3CR)

(2L, 2LB) This course will provide students with information about ongoing threats in cyber space. Students will be able to identify cyberspace threats to compare/contrast their resources, capabilities, motivations
and aversion to risk. Students will learn valuable skills related to preventing attacks, detecting when attacks have occurred, and recovery from an attack. This course provides comprehensive review of hacking concepts and industry best practices. Prerequisites: CSCO 2000

## CSEC 1530 - Computer Forensics (3CR)

(2L, 2LB) The universal use of technology in every aspect of our lives has provided the need for the recovery of evidence in a digital format. In today's technology driven world most crimes and civil disputes involve the use of some form of a digital device. This course is designed to teach students how to perform computer crime investigations by identifying, collecting and maintaining digital artifacts to preserve their reliability for admission as evidence.

## CSEC 1980 - Cooperative Work Experience Internship <br> (1-3CR) (3CR Max) Students will have the opportunity to gain on-the-job experience to improve and develop new skills in the area of cyber security. Students will be supervised by the program coordinator and the hosting employer. A minimum of 80 hours of on-the-job training represents one semester hour of work. Students must maintain a 2.0 GPA during the semester for which they are enrolled in this course. Prerequisites: Student must be a Computer Security major and have permission of the program coordinator.

## CULA 2050 - Culinary Food Production I (4CR)

( $1 L, 6 L B$ ) This course will teach students basic culinary skills which will include: basic kitchen safety and sanitation, knife skills, stocks and soups, mother sauces, small sauces and modern sauces, basic meat fabrication, basic dressings: vinaigrettes and marinades, grains and pastas, and breakfast cookery.

## DANC 1015 - Introduction to Dance (2CR)

(2L) (Max 2CR) This course will take a look at the formation of genres within dance history. It will be an overview of the beginnings of modern dance, ballet, jazz dance, and tap dance.

## DANC 1210 - Dance Ensemble I (1CR)

(3LB) This class covers technique and performance focusing specifically on technique skills and performing at an intermediate level (various styles and genres). This class can be repeated up to two times with a total of two
credits. Prerequisites: Permission of the instructor and previous dance experience.

## DANC 1300 - Dance Improvisation I (1CR)

(2LB) This course will investigate improvisation in dance at the beginning level. It will incorporate improvisational exercises that will lead to short phrase work.

## DANC 1320 - Dance Improvisation II (1CR)

(2LB) This course will investigate improvisation in dance at the intermediate level and really allow the student to explore movement connected to emotional output and with musical enhancement. This course will also help the student/dancer to understand musical meter and tempo varieties within an improvisational exercise. In addition, there will be game playing that will open the world of improvisation wider. It will incorporate improvisational exercises that will lead to phrase work.

## DANC 1410 - Beginning Ballet I (1CR)

(3LB) This course will emphasize the fundamentals of ballet. Will focus on technique, terminology, and the execution of the basic steps.

## DANC 1420 - Beginning Ballet II (2CR)

(4.5LB) (Max 4CR) A continuing course in the principles and techniques of classical ballet. Emphasis is placed on the continuation of broadening the dancer's movement vocabulary while refining acquired technical skills. This course can be repeated once. Prerequisites: DANC 1410 in good standing, or permission of the instructor.

## DANC 1425 - Ballet Studies (1CR)

(3LB) This course will emphasize various areas of ballet techniques. There will be in-depth focus on specific skills found in the genre of ballet. Previous ballet experience required.

## DANC 1450 - Beginning Tap Dance I (1CR)

(3LB) This course will emphasize the fundamentals of tap dance. Will focus on technique, terminology, and the execution of the basic steps.

## DANC 1460 - Beginning Modern Dance I (1CR)

(3LB) This course is an introduction to the principles and techniques of modern dance. Dancers will focus on technique, terminology and the execution of the basic steps, as well as the discovery of movement in space and time. This class will serve the student as a study in exploration of the basic ideas of modern dance. Cross-listed: PEAC 1460

## DANC 1470 - Beginning Modern Dance II (1CR)

(3LB) This course will be a continuation of study in the principles and techniques of modern dance. Dancers will focus on linking technique with terminology and execute combinations made up of the basic-intermediate steps, as well as the continued discovery of movement in space and time. Prerequisites: DANC 1460/PEAC 1460 Cross-listed: PEAC 1470

## DANC 1480 - Beginning Jazz Dance I (1CR)

(3LB) This course will emphasize the fundamentals of jazz dance. It will focus on technique, terminology, and the execution of the basic jazz steps.

## DANC 1500 - Dance Performance (1-2 CR) (Max. 5) <br> (2-4LB) [E] Individually supervised practical training in performance and production during the rehearsal and performance of the fall and spring productions of the dance concert. Open entry. Prerequisites: permission of the instructor.

## DANC 2200 - Backgrounds of Dance (3CR)

(3L) $[E]$ A survey of ethnic and theatrical dance forms from primal society to the 20th century. The course examines the place of the arts as a reflection of the culture. The course emphasizes dance from a global point-of-view and includes a look at social dances as well as the performance dances. Prerequisites: ENGL 1010, DANC 1015, or permission of the instructor.

## DANC 2210 - Dance Ensemble II (1CR)

(3LB) (Max. 2) [E] This class covers technique and performance focusing specifically on technique skills and performing at an advanced level (various styles and genres).
This class can be repeated up to once for a total of 2 credits Prerequisites: permission of the instructor and previous dance experience.

## DANC 2212 - Beginning Composition (2CR)

 ( $1 L, 2 L B$ ) This course is a beginning level composition course that will give the student various exercises in which to better understand choreography and its principles. The student will explore ways in which to make a dance with a completed beginning, middle, and end. Prerequisites:DANC 1320 Improvisation II

## DANC 2215 - Intermediate Dance <br> Composition (3CR)

( $2 L, 2 L B$ ) This course further develops the student's abilities to compose and choreograph their own ideas into dance works. The student will develop a better understanding of choreographic skill through short assignments and full works. Prerequisites: DANC 2460, DANC 2212, or permission of the instructor.

## DANC 2410 - Intermediate Ballet I (2CR)

(5LB) A continuing course in the principles of classical ballet. Emphasis is placed on continuing to broaden the dancer's movement vocabulary while refining acquired technical skills. Pointe work will be started with those students who are ready along with partnering skills, more advanced Barre and Centre skills, including Tours and Beats. Prerequisites: Successful completion of DANC 1420.

## DANC 2420 - Intermediate Ballet II (2CR)

(5LB) A continuing course in the principles and techniques of classical ballet. Emphasis is placed on refining the dancer's movement vocabulary while increasing the level of difficulty of acquired technical skills. Dancers will continue in both partnering and Pointe work. Ballet conditioning will be a part of every class. Prerequisites: Successful completion of DANC 2410.

## DANC 2450 - Intermediate Tap Dance I (1CR)

(3LB) This course will review the basic tap steps and then move on to more intermediate rhythms, clarification of sounds and more complicated footwork. Prerequisites: DANC 1450, or permission of the instructor.

## DANC 2460 - Intermediate Modern Dance I (2CR)

(4LB) A second level course covering the principles and techniques of modern dance. This course will expose the students to deeper investigation to various techniques of modern dance including but not limited to Horton, Ailey, Cunningham, Graham, and
Humphrey/Limon. Prerequisites: DANC 1470, or permission of the instructor.

## DANC 2470 - Intermediate Modern Dance II (2CR) <br> (4LB) A third level course covering the principles and techniques of modern dance. This course will continue to look at post-modern techniques/styles and be a link from the historical modern dance to the contemporary

explorations and modern dance trends. Prerequisites: DANC 2460, or permission of the instructor.

## DANC 2480 - Intermediate Jazz Dance II (1CR)

(3LB) A second level course furthering the student's knowledge of jazz dance and its origins. Dancers will focus on techniques, terminology, and the execution of jazz steps from the intermediate to the advanced level. Prerequisites: DANC 1480, or permission of the instructor.

## DESL 1540 - Heavy Duty Electrical Systems

 (3CR)( $2 L, 2 L B$ ) Introductory course to electrical systems used in heavy diesel engines. Course will cover fundamental electrical quantities, components and basic circuits. Additional content will cover heavy diesel engine electrical systems.

## DESL 1580 - Power Train, Braking, and Steering (3CR)

(3L) (5 weeks) Manual clutches, drive lines, manual transmissions, and final drive units.

## DESL 1600 - Diesel Engines (3CR)

(2L, 2LB) Introductory course covers medium to heavy diesel engines. The course is intended to provide an overview of engine construction, fuel systems and general maintenance.

## DESL 1610 - Engine Rebuilding I (9CR)

(4L, 10LB) (10 weeks) Disassembly procedures, evaluating serviceability of components, preparing the engine block for overhaul; the assembly procedure for crankshafts, bearings, pistons, seals, and valve train; the servicing of cylinder heads including valve grinding and seating; bolt torqueing, timing, and run-in checks.

## DESL 1620 - Engine Rebuilding II (9CR)

(3L, 12LB) ( 5 weeks L, 15 weeks Lab) Live engines and drive-in work are used for instruction. The students make up the estimates and deal with the customer directly. Students are evaluated on their ability to handle the entire operation from meeting the customer to unit performance on completion. Prerequisites: DESL 1610.

DESL 1650 - Diesel Fuel Systems and Tuning
I (5CR) (5 weeks)
(3L, 4LB) ( 5 weeks) Basic fuel systems, fuel pumps, injectors, and evaluating system failure. Prerequisites: DESL 1610.

## DESL 1660 - Diesel Fuel Systems and Tuning II (3CR) ( 5 weeks) <br> (3L) (5 weeks) Air induction systems, injector and fuel pump operations. Troubleshooting and electronic fuel controls.

## DESL 1680 - Natural Gas Engine Technology (10.5CR) <br> ( $6 L, 9 L B$ ) Course is designed to cover the principles and service procedures for the natural gas engine and equipment pertinent to the natural gas industry. Course will cover fuels, ignition systems, combustion, lean combustion theory, exhaust gas analysis, lubrication systems, cooling systems, mounting and alignment, and gas compression concepts. Prerequisites: DESL 1605 or DESL 1610.

## DESL 1850 - Basic Hydraulics (3CR)

(2L, $2 L B$ ) Principles of hydraulic systems and components used in mobile equipment. Factors of consideration in the selection, installation, operation, and maintenance of hydraulic systems.

## DESL 1980 - Co-op Work Experience (Diesel)

 (1-8CR) (Max. 8): 8 hours/week for 16 weeks - Total 128 hours. Designed to give students hands-on training in diesel equipment maintenance and repair in a production shop setting. A student working for an employer is responsible for employment verification and documentation of hours worked and jobs done. Students staying on campus will meet the training requirements of the department.
## ECON 1010 - Macroeconomics (3CR)

(3L) $[E]$ An introduction to our present mixed capitalistic economic system. Emphasis is on the role of markets, the determination of national output, inflation and unemployment, the banking system, and the economic role of government.

## ECON 1020 - Microeconomics (3CR)

(3L) An introduction to the economics behavior of firms and households in a market economy and the environment in which they operate. Also studies the roles of government and foreign trade, as it relates to the decisions of firms and households. Prerequisites: Minimum ACT Score of 21,

Placement Test Score in the Algebra domain of 40, or a C or better in MATH 0920 or higher in the last two years.

## ECON 2400 - Environmental Economics (3CR)

(3L) This is a three-credit introductory course in environmental economics. This course will cover such traditional environmental topics as pollution control, externalities and public lands. Issues of sustainability of the current economic system with respect to fossil fuel use and environmental destruction will be addressed. A balance between theory and institutional background will be presented in this course. Prerequisites: ECON 1010 and ECON 1020.

## EDCI 1430 - Life Science in the Elementary School (1CR) <br> (2LB) [E] Covers selection of basic life science concepts, materials and curricula appropriate for elementary school. Concurrently: LIFE 1020, or permission of the instructor.

## EDCI 1440 - Physical Science in the

 Elementary School (1CR)(2LB) $[E]$ Covers selection of basic physical science concepts, materials and curricula appropriate for elementary school. This course parallels the content of PHYS 1090 and should be taken the same semester.

## EDCI 1450 - Earth Science in the Elementary School (1CR)

(2LB) [E] Covers selection of basic earth science concepts, materials, and curricula appropriate for elementary school. This course parallels the contents of GEOL 1070.

## EDCI 1500 - Introduction to Teaching (1CR)

(1L) This course will provide an overview of the professional expectations of education students. Topics to be addressed will include efolio development, academic program planning, the skills and strategies necessary to proceed successfully through pre-service teacher education and a career in early childhood, elementary and/or secondary education.

## EDCI 2050 - Introduction to Outdoor Education (3CR)

( $1 L, 4 L B$ ) This practicum course addresses pedagogies specific to teaching in outdoor settings. Students will teach field science in this outdoor course. Prerequisite: This is a practicum course that includes some classroom and field
(outdoor) experiences. Culmination of this course will include an outdoor teaching experience in an on-site camp environment that will be 3-5 days in length. Students should be comfortable walking and teaching in an outdoor environment. This is a companion course to EDUC 2100, which should be taken concurrently with or prior to taking this course. This course is intended for secondary science education majors or other students with advisor or instructor approval.

## EDCI 2250 - Diversity in Education (3CR)

(3L) This course is designed to introduce students to the conceptualization, design and implementation of a multicultural education that respects and honors diversity as well as promotes national unity.

## EDCI 2495 - Workshop (Subtitle)

( $1-2 C R$ ) Special topics in education offered in response to specific needs or public interest.

## EDEC 1020 - Introduction to Early Childhood Education (3CR)

(3L) $[E]$ Introduces the student to the field of early childhood education through lecture discussion, observation, and participation. The student will be exposed to different programs in the community. Topics to be explored include components of quality programs, child development theory, curriculum development, learning environments, classroom management, parent-teacher relationships, importance of play, and teaching as a profession.

## EDEC 1030 - Infant and Toddler Care (2CR)

(2L) This course provides information on growth and development of children under the age of three along with curriculum implications; defines the interactive role of the caregiver, and explores other components of infant toddler care including implementation of quality programming and adult interactions. The course along with EDEC 1035 Infant and Toddler Care Lab (1CR) meets the criteria for the Wyoming Infant Toddler Credential.

## EDEC 1035 - Infant and Toddler Care Lab (1CR)

(2LB) Supervised experience in the care of infants and toddlers at an approved early childhood program. This course along with EDEC 1030, Infant and Toddler Care, meets the criteria for the Wyoming Infant Toddler Credential. Prerequisites: EDEC 1030 (or concurrent enrollment).

## EDEC 1100 - Observation and Guidance of Young Children (2CR)

(2L) Effective methods of observation and guidance to meet the children's needs individually and in groups with an emphasis on promoting a positive and constructive climate in the early childhood setting. Topics include assessments, recording behaviors, planning environments, materials and equipment, scheduling, discipline and parentteacher communication. Prerequisites: EDEC 1020, FCSC 2122, PSYC 2300, or permission of the instructor.

## EDEC 1105 - Observation and Guidance of Young Children Lab (1CR)

(2LB) Supervised experience in the observation and guidance of young children at an early childhood center. (Spring semester.) Prerequisites: EDEC 1100 (or concurrent enrollment).

## EDEC 1200 - Administration in Early Childhood Programs (3CR)

(3L) Designed to provide students with the opportunity to develop skills in both the business and human relations components of administering centers for young children. Includes procedures in establishing early childhood centers; administrative forms; fiscal management; selection, development, and motivation of staff; parent and community involvement; and program regulations and evaluation. (Fall semester.) Prerequisites: EDEC 1020, or permission of the instructor.

## EDEC 1300-Curriculum Planning and Development for Young Children (2CR)

(2L) Development of skills in planning, implementing and evaluating developmentally appropriate experiences to encourage intellectual, physical, social, emotional, and creative growth in young children with the focus on the concept of the whole child. Prerequisites: EDEC 1020, FCSC 2122, PSYC 2300, or permission of the instructor.

## EDEC 1305-Curriculum Planning and Development for Young Children Lab (1CR)

 (2LB) Supervised experience in planning, implementing and evaluating curriculum activities at an early childhood center. Prerequisites: EDEC 1300 or concurrent enrollment.
## EDEC 2200 - Early Childhood Practicum (6CR)

( $2 L, 8 L B$ ) By actively participating in the care and education of young children in an early childhood program, students should become more proficient in administrative
skills, increase their awareness of contemporary issues in early childhood, and demonstrate a high level of competence as a head teacher. Students will serve in directed field experience; one eight-hour day per week for a total of 120 clock hours. Students will also serve 30 hours in seminar during the semester. Enrollment is limited to majors in early childhood education except by permission of the instructor. Prerequisites: EDEC 1100 and EDEC 1105, EDEC 1300 and EDEC 1305, or permission of the instructor.

## EDEL 2100 - Family, School, and Community Engagement (3CR)

(3L) This course examines the relationship between the child, the family, the community, and teachers. Topics include strengthening adult-child relationships and parentstaff relationships in the home, school, and community settings, an awareness of strategies in developing positive and supportive relationships with families of elementary school children with special needs, including the legal and philosophical basis for family participation; familycentered services; and strategies for working with socially, culturally, and linguistically diverse families will be included. The importance of family involvement in school programs and parent education will be stressed. Prerequisites: No prerequisites

## EDEL 1410 - Theory I Seminar: Education (1CR)

(1L) This seminar is a hands-on application course designed to accompany and enhance MATH 1100 Number and Operations for Elementary School Teachers (3CR). This is a required course for all prospective elementary teachers. Prerequisites: Concurrent enrollment in MATH 1100.

## EDEL 2010 - Mentoring in Education

(1-2CR) This course will focus on specific teaching techniques and strategies utilized when mentoring third, fourth and fifth grade elementary students. Students in this course will also reflect upon strategies to continually improve teaching techniques. This course is associated with the Help Yourself Academy, an afterschool program designed to offer students the opportunity to focus on a math and science curriculum. Prerequisites: Permission of any Education Faculty Member required.

## EDEL 2140 - Teaching Literacy in the Elementary School (3CR)

(3L) Provides an acquaintance with basic assumptions underlying curriculum and processes in literacy and to give
opportunity for selecting and using instructional materials. Prerequisites: ENGL 1010, EDFD 2020

## EDEL 2280 - Literature for Children (3CR)

(3L) [E] A survey course designed for reading and discussion of works of literature for children. Selection of children's books for school, home, and library is stressed. In order to establish criteria for evaluation, students are expected to become acquainted with a wide sampling of children's literature including classics, both old and new. Prerequisites: ENGL 1020.

## EDEL 2410 - Elem School Math Seminar II (1CR)

(1L) This seminar is a hands-on application course designed to accompany and enhance MATH 2120 Geometry and Measurement for Elementary School Teachers (3CR). This is a required course for all prospective elementary teachers. Prerequisites: Concurrent enrollment in MATH 2120.

## EDEX 2484 - Intro to Special Education (3CR)

(3L) $[E]$ This course is designed to meet the needs of education majors for a required course in special education. It provides a broad overview of effective intervention models of instruction and/or behavior techniques for special needs students within an inclusion setting and/or other continuum of special education options which meet the least restrictive environment. Finally, this class would be helpful for individuals in other fields who need an introduction to the field of special education. Prerequisites: EDFD 2020, ITEC 2360 and PSYC 2300.

## EDFD 2020 - Foundations of Education (3CR)

(3L) A foundations course designed to provide a general survey of educational thought and practice. Emphasis is given to critical thinking about numerous educational points of view. Prerequisites:

## EDFD 2100 - Educational Psychology (3CR)

 (3L) [E] Provides an overview of the field of educational psychology, its theoretical bases, and classroom application to the teaching-learning process and examines research design in education. Prerequisites: EDFD 2020 and PSYC 2300.
## EDST 2550 - Educational Assessment (3CR)

$3 L$ This course is designed to introduce students to key concepts and issues in classroom assessment and large-
scale, standardized educational assessment. Topics include, but are not limited to standards and benchmarks, reliability and validity of norm-referenced and criterion-referenced assessments, standardized tests, performance assessments, and special issues surrounding the assessment of students with special needs. Additionally, this course addresses the basic ideas of classroom test design and planning. Prerequisites: EDFD 2020- Foundations of Education

## EDUC 2100 - Practicum in Teaching (2-4CR)

( $2 L, 4 L B$ ) This course is for prospective educators and a capstone course for education majors at the sophomore level. Students will participate in a practicum experience in a public-accredited school under the supervision of a certified mentor teacher for a minimum of 60 hours. Students will also attend one weekly 110 -minute class session. Electronic portfolios are used extensively in this course to demonstrate student proficiencies in content knowledge, skills and preparation to be an effective teacher. Assignments, projects, and classroom experiences are aligned with NCATE accreditation and InTASC standards. Students enrolled in this course must be 18 years of age or older. Fall and Spring
semesters Prerequisites: EDFD 2020, ITEC 2360 and PSYC 2300.

## ELAP 1510 - Union Electrical Apprentice I (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1510 is a first-year course scheduled for completion during the fall semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory, wiring methods and important information about Wyoming Joint Apprenticeship Training Council (WJATC), National Electrical Contractors Association (NECA), and the International Brotherhood of Electrical Workers (IBEW). Prerequisites: Acceptance into the WJATC apprenticeship program, recommended status as a first-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and

Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1515-Electrical Apprentice 1A (5CR)

(5L) This is the first semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job training received by electrical apprentices. This course is designed to provide the beginning electrical apprentice with the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include safety, introduction to the National Electrical Code, basic electrical theory, lighting and appliance circuits, and wiring methods. Prerequisites: Recommended status as a first-year Electrical Apprentice with and Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1520 - Union Electrical Apprentice II (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1520 is a first-year course scheduled for completion during the spring semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. Additionally, this course will cover Ohm's Law, power law, Kirchhoff's current law to electrical currents. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1510, recommended status as a firstyear Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1525 - Electrical Apprentice 1B (5CR)

(5L) This is the second semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job-training received by electrical apprentices. This course is designed to provide the beginning electrical apprentice with the necessary skills
and knowledge to ensure safe and efficient work practices on the job. Topics of study include safety, introduction to the National Electrical Code, basic electrical theory, lighting and appliance circuits, and wiring methods. Prerequisites: Recommended status as a first-year Electrical Apprentice with an Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1530 - Union Electrical Apprentice III (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1530 is a first-year course scheduled for completion during the summer semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. Additionally, students will learn how to differentiate between parallel and series paths in electrical circuits. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1520 , recommended status as a first-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1535 - Electrical Apprentice 2A (5CR)

(5L) This is the third semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job-training received by electrical apprentices. This course is designed to provide second year electrical apprentice with the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include safety, the National Electrical Code, electrical theory, and industrial wiring methods. Prerequisites: Recommended status as a secondyear Electrical Apprentice with an Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1540 - Union Electrical Apprentice IV (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1540 is a second-year course scheduled for completion during the fall semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. The course will teach students to properly read and interpret residential blueprints. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1530, recommended status as a second-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1545 - Electrical Apprentice 2B (5CR)

(5L) This is the fourth semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job-training received by electrical apprentices. This course is designed to provide the 2nd or 3rd year electrical apprentice with the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include industrial applications and the National Electrical Code.

Prerequisites: Recommended status as a second-year Electrical Apprentice with an Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1550 - Union Electrical Apprentice V (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician
to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1550 is a second-year course scheduled for completion during the spring semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. Additionally, the course will cover grounding, bonding and transformers. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1540, recommended status as a second-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1555 - Electrical Apprentice 3A (5CR)

(5L) An in-depth study of commercial installations, including NEC requirements and calculations for same. Prerequisites: Recommended status as a second- or third-year Electrical Apprentice with an Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1560 - Union Electrical Apprentice VI (5CR)

(5L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1560 is a second-year course scheduled for completion during the summer semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. Additionally, the course will cover grounding and bonding and transformers II. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1550, recommended status as a second-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board
of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1565 - Electrical Apprentice 3B (5CR)

(5L) An in-depth study of commercial installations, including NEC requirements and calculations for same. Prerequisites: Recommended status as a second- or third-year Electrical Apprentice with an Independent Electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1570 - Union Electrical Apprentice VII (6CR)

(6L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1570 is a third-year course scheduled for completion during the fall semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. This course will cover magnetism and induction, alternators, three-phase motors and basic level I motor operation in addition to motor controls. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1560, recommended status as a third-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1575 - Electrical Apprentice 4A (5CR)

(5L) This is the seventh semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job-training received by electrical apprentices. This course is designed to provide the 4th year electrical apprentice with the necessary skills and knowledge to ensure safe and efficient work practices on the job. The National Electrical Code and journeyman type questions will be covered along with individual review topics. Prerequisites: Recommended status as a fourth year Electrical Apprentice with an electrical contractor, and
registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1580 - Union Electrical Apprentice VIII (6CR)

(6L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1580 is a third-year course scheduled for completion during the spring semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. This course will also cover motors level I, which includes all aspects of motors and motor control. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1570, recommended status as a third-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1585 - Electrical Apprentice 4B (5CR)

(5L) This is the eighth semester class of a series of classes mandated for electrical apprentices. This series of classes is designed to complement the on-the-job-training received by electrical apprentices. This course is designed to provide the 4th year electrical apprentice with the necessary skills and knowledge to ensure safe and efficient work practices on the job. The National Electrical Code and journeyman type questions will be covered along with individual review topics. Prerequisites: Recommended status as a fourth year Electrical Apprentice with an electrical contractor, and registered with the State of Wyoming Electrical Board of the Department of Fire Prevention and Electrical Safety, as an apprentice electrician.

## ELAP 1590 - Union Electrical Apprentice IX (6CR)

(6L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1590 is a fourth-year course scheduled for completion during the fall semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. This course will cover instrumental level I and instrumentation level II in addition to code work. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1580, recommended status as a fourth-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELAP 1600 - Union Electrical Apprentice X (6CR)

(6L) Casper College partners with the Wyoming Electrical Joint Apprenticeship and Training Committee (WJATC) to provide extensive training designed to complement on-thejob training received by electrical apprentices. Classes meet several times a year for a week at a time over the 4 -year apprenticeship program duration. The combination of course work and training prepare an apprentice electrician to take the journeyman electrician exam administered by the State of Wyoming Department of Fire and Electrical Safety. Course ELAP 1600 is a fourth-year course scheduled for completion during the spring semester. This course is designed to provide the beginning electrical apprentice the necessary skills and knowledge to ensure safe and efficient work practices on the job. Topics of study include: safety, introductions to the National Electrical Code, basic electrical theory and wiring methods. This class will also include code calculations, applied codeology and information about the journeyman examination. Prerequisites: Acceptance into the WJATC apprenticeship program, successful completion of ELAP 1590, recommended status as a fourth-year Electrical Apprentice with a WJATC approved contractor and registered with the State of Wyoming Electrical Board of
the Department of Fire and Prevention and Electrical Safety as an apprentice electrician.

## ELTR 1540 - Basic AC/DC Electronics (2CR)

(1L, 2LB) Groundwork in electrical fundamentals needed for an understanding of modern electronics. Prerequisites: High school Algebra and English

## ELTR 1545 - Utility Locator Certification (2CR)

(1.5L, $1 L B$ ) Fundamentals of underground utility location will be covered. This will include the methods used to change the transmitter current levels, change the shape of the magnetic field, how to measure the magnetic field with the receiver, and how to produce a round magnetic field and verify depth. Successful completion of this course will result in certification as an underground utility locator.

## ELTR 1570 - Electric Circuits (4CR)

(4L) Fundamentals of DC and AC circuit analysis, electromagnetics, and single-phase transformers. Prerequisites: ACT score of 19 or placement exam score 45 or higher; completion or concurrent enrollment in ELTR 1620 or permission of the instructor.

## ELTR 1620 - Electrical Concepts Laboratory (1CR)

(2LB) An introductory laboratory course for electronics technicians. Emphasizes analysis and troubleshooting of simple AC and DC circuits. Additional topics covered include magnetism and electromagnetism. Prerequisites: Completion of or concurrent enrollment in ELTR 1570.

## ELTR 1645 - Accelerated Utility Locator Certification (1.5CR)

(1.5L) This course is designed for utility locators that have two years or more of utility locating experience. The course will cover the fundamentals of utility locating, practical demonstrations of concepts covered in the lectures, Wyoming state law for utility locating, and the federal law for utility locating. Successful completion of this course will result in certification as an underground utility locator.

## ELTR 1700 - Introduction to Solid State Electronics (4CR)

( $2 L, 4 L B$ ) This course explores the principles of operation and behavior of solid-state devices including diodes, BJTs, FETs, MOSFETS and Operational
Amplifiers. Prerequisites: ELTR 1570, or permission of the instructor.

## ELTR 1750 - Electronic Design and Fabrication (2CR)

( $1 L, 2 L B$ ) A course using industrial processes to design and fabricate electronic circuitry. Topics include soldering, computer-generated schematics, computer-designed PC boards, industrial etching processes, and sheet metal fabrication.

## ELTR 1760 - Introduction to Digital Electronics (3CR)

(2L, $2 L B$ ) Logic circuits associated with the control and operation of a digital computer. Application of the specific logic circuits through selected laboratory experiments.

## ELTR 1770 - Microprocessor Fundamentals (4.5CR)

(3L, $3 L B$ ) Microprocessors, their architecture, language, and capabilities. Students will have an opportunity to work with those that are most commonly used in industry and will be expected to develop individual projects in addition to the required laboratory experiments.

## ELTR 1980 - Cooperative Work Experience (Electronics)

(Max. 8) (1-8CR) (Max. 8) On-the-job training with a cooperative industrial or commercial electronics maintenance, fabrication or service facility. Eighty hours of work per semester earns one hour of credit. Prerequisites: Permission of the instructor.

## ELTR 2515 - Licensing for Electronics (1CR)

 (1L) This course is for electronic, electrical, industrial and educational technicians who need to be certified. The course will focus on the FCC, Certified Electronics Technician, and other national certification exams.
## ELTR 2570 - Process Control (3CR)

(2L, 2LB) Fundamentals of process control systems using PID control. Students will control single and multivariable processes and calibrate sensors. Other topics include valve actuators and industrial data
communications. Prerequisites: Completion of ELTR 1570, or permission of the instructor.

## ELTR 2600 - Electronic Communication (3CR)

(2L, $2 L B$ ) Emphasis on radio receivers and transmitters, antennas, amplitude and frequency modulation FM stereo multiplex circuits, and FM radios. Prerequisites:
ELTR 1700 or permission of instructor.

## ELTR 2610 - Advanced Microprocessors (3CR)

(2L, 2LB) Programming microcontrollers to read inputs and control outputs. Students will use common microcontrollers such as Arduino and Raspberry Pi. Prerequisites: ELTR 1770, or permission of the instructor.

## ELTR 2815 - Programmable Logic Controllers (3CR)

( $1 L, 4 L B$ ) Assembly, programming and troubleshooting programmable logic controllers in industrial processes. This course will include variable frequency drives, robotics and data communications. Prerequisites: Completion or concurrent enrollment in ELTR 1540 or ELTR 1570 or permission of the instructor.

## ELTR 2840 - Motor Controls (3CR)

(2L, 2LB) Fundamentals of AC electrical machines and transformers. Topics covered are electromagnetism, transformers, AC motors and motor control. Prerequisites: Completion or concurrent enrollment in ELTR 1540 or ELTR 1570, or permission of the instructor.

## ELTR 2870 - CCD Cameras and Security Systems (2CR)

(1L, 2LB) This course will cover the construction and use of charged coupled device (CCD) camera sensors, which are used in digital cameras, machine vision cameras, and surveillance cameras. Other areas covered will be lighting, image acquisition and storage, surveillance systems and security cameras. Prerequisites: ELTR 1570 or permission of the instructor.

## ELTR 2910 - Computer Networking (2CR)

( $1 L, 2 L B$ ) This is an introduction to the technical and software aspects of local area networks. The course will include Windows Server software installation, use, and maintenance, network cable systems, and system troubleshooting.

## ELTR 2920 - Small Computer Repair Techniques (3CR)

(2L, $2 L B$ ) Techniques used to install and maintain microcomputers. Emphasis will be on basic computer trouble-shooting techniques, both at the system and board level with representative small computer systems. Mass storage techniques for small systems, their strong and weak points and repair. Basic Internet connectivity via both modems and NICs will also be covered.

## ELTR 2925 - Fiber Optics (4CR)

( $2 L, 4 L B$ ) Fundamentals of light-wave communications and transmission. Includes the fundamentals of light, light sources, optical fiber characteristics, splices, connectors, couplers, receiver, and driver systems. System maintenance and splicing will be stressed. Safety procedures will be stressed throughout the course of instruction.

## ELTR 2945 - Fiber Optic Workshop (2CR)

 (1L, 2LB) An introductory course in the use of fiber optic technology as it applies to industry and education. This course is designed to instruct representatives from industry and secondary education in the area of fiber optics.
## ELTR 2975 - Independent Study in

## Electronics

(1-3CR) (Max. 6) Electronics majors who have completed the introductory courses may be permitted to contract with the instructor for special advanced problems in electrical applications to be pursued as independent
study. Prerequisites: sophomore standing and permission of the instructor.

## EMT 1500 - Basic Emergency Medical Technician (9CR)

( $6 L, 9 L B$ ) An entry level education of emergency medical services to prepare the student for a career as an emergency medical technician. Prerequisites: basic emergency care (Preferred).

## EMT 2500 - Advanced Emergency Medical Technician (8CR)

( $6 L, 6 L B$ ) This course is designed to provide the student with an expanded an enhanced knowledge of Emergency Medical Services and how to provide advanced care for the sick and injured. This course follows the current National EMS Education Standard. Prerequisites: Successful completion of EMT 1500 and permission of instructor.

## EMT 2750 - Wyoming Emergency Medical Technician-Intermediate (6CR)

( $5 L, 3 L B$ ) This course is designed to provide the student with an expanded and enhanced knowledge of Emergency Medical Services and how to provide advanced care for the sick and injured. This course follows the current Wyoming EMS Education Standard. Prerequisites: The student must contact the instructor for approval prior to enrollment. Successful completion of EMT 2500 is required.

## ENGL 0800 - Introduction to College

Reading and Writing I (5CR)
(5L) Reading and writing are both processes of composing and are requisites to success in all college courses. This first level developmental English course provides instruction for critical reading and critical thinking skills used to compose a variety of effective writings. Students will have the opportunity to practice writing skills, review grammar and mechanics, read a variety of materials, and learn methods of responding to readings. Prerequisites: Acceptable placement score.

## ENGL 0850 - Accelerated Writing and

 Reading (5CR)(5L) This course will combine the skills learned in ENGL 800 and ENGL 900. Combined writing skills seeks to strengthen the student's writing fluency through a study of selected elements of basic composition. These include grammar, spelling, and punctuation as well as sentence development, paragraph development, and essay development. The course introduces students to different patterns of organization and various types of writings through assigned readings and multiple-draft writing assignments. Prerequisites: Acceptable placement score or completion of the pre-requisite course with a "C" or better.

## ENGL 0900 - Introduction to College Reading and Writing II (4CR)

(4L) Reading and writing are both processes of composing and are requisites to success in ENGL 1010. This upper level developmental English course provides instruction for active reading and critical thinking skills used to compose effective essays. Students will have opportunities to practice a recursive writing process and will be introduced to using outside texts as a way to generate ideas. Students are given the option of receiving $\mathrm{S} / \mathrm{U}$ grades. Students receiving "C" or better in any 1000 or 2000 level English course may not subsequently earn credit in ENGL 0900. Prerequisites: Acceptable placement score or completion of ENGL 0800 with a "C" or better.

## ENGL 0910 - Enhancement for Comp 1 (3CR)

(3L) ENGL 910 is a course devoted to improving students' writing and critical reading as a corequisite to ENGL 1010. This course provides intensive instruction writing expository essays for specific audiences as well as instruction in reading and working with college level texts. It emphasizes the process of drafting, revising, and editing, as well as comprehending and interpreting a variety of texts. This course enables students who place into the
higher-level developmental English to complete the college level composition sequence more quickly.
Students are given the option of receiving $\mathrm{S} / \mathrm{U}$ grades. Students receiving "C" or better in any 1000 or 2000 level English course may not subsequently earn credit in ENGL 0910. Fall and Spring semesters Prerequisites: Acceptable placement score or a grade of "C" or higher in ENGL 0800. Concurrently: Students enrolled in this course must be concurrently enrolled in the corresponding section of ENGL 1010

## ENGL 1010 - English Composition I (3CR)

(3L) [E] A study of the fundamentals of purposeful communication in English. The course focuses on reading and writing expository essays, on using effective language for exposition of ideas, and on thinking clearly. Students are to practice synthesizing information, organizing it coherently, and writing clearly. Prerequisites: Acceptable placement score or completion of ENGL 0850 or ENGL 0900 with a " C " or better.

## ENGL 1020 - English Composition II (3CR)

(3L) An extension of ENGL 1010. Further refines the student's abilities to gather and synthesize material from independent reading. Students study language both to appreciate its precise control and to interpret the experience of others. College-level essays (including a research paper) and two oral presentations are required. Prerequisites: A grade of "C" or higher in ENGL 1010.

## ENGL 1040 - Intro to Creative Writing (3CR)

(3L) A study and workshop in the technique of the craft of writing poetry, fiction, non-fiction, and drama for the purpose of self-expression and cultural understanding. As needed

## ENGL 2005-Writing in Technology and the Sciences (3CR)

(3L) [E] Technical Writing further refines the student's abilities to gather and synthesize material from independent reading. In addition, the course develops writing styles and techniques, document design and formats, and audiences/readership considerations specifically suited to technological and scientific fields of study. Two oral presentations that incorporate visual rhetoric. The course concludes with a student directed research proposal or other research project, culminating in one of the two required presentations. Prerequisites: A grade of " C " or higher in ENGL 1010 within the last ten years.

## ENGL 2006 - Environmental Literature (3CR)

(3L) Environmental literature is a survey course that will explore the major environmental texts and some of the writers of our time. Students interested in nature writing, literature and environmental politics will appreciate this course. Essay writing and group work will be required to complete this study. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2011 - Literature for Young Adults (3CR)

(3L) This course will be a study of the origin, development, and cultural underpinnings of the field of Young Adult fiction, and an overview of many of the subgenres of the field. Prerequisites: ENGL 1010.

## ENGL 2045 - Conferencing with Writers (3CR)

(3L) This course covers methodology of one-to-one and one-to-small group writing tutoring. The course introduces writing tutors to the education principles and Writing Center goals underlying common tutoring techniques. Topics addressed are theories of learning, principles of memory, learning styles, successful tutoring techniques, online tutoring, and writing across the curriculum. Writing tutors will observe and participate in tutoring sessions in the Casper College, UW/CC Writing Center. This course is required for, but not restricted to, Writing Center Staff. Non-Writing Center staff must make arrangements with the director to provide for alternative tutoring situations. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2046 - Conferencing with Writers II (3CR)

(3L) This course is a continuation of ENGL 2045 and covers theories underlying one-to-one and small group responses to writing. The course introduced writing tutors to writing center and peer tutor theories that inform uniformly accepted best practices. Topics addressed are theoretical constructs of collaboration, interpersonal dynamics, responding to students and student texts, and online tutoring. This course is required for, but not restricted to, Writing Center staff. Non-Writing Center staff must make arrangements with the director to provide for alternative tutoring situations. Prerequisites: ENGL 1010. ENGL 1020 recommended.

ENGL 2050 - Creative Writing: Fiction (3CR)<br>(3L) [E] Analysis of the elements of fiction and practice of writing fiction at the introductory and intermediate level. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2055 - Creative Writing: Writing in the Wild (3CR)

(3L) Student-centered, week-long field experience in Yellowstone National Park focuses on reading and writing imaginative verse and prose inspired by nature. Class days are devoted to collecting journal observations during daily hikes, engaging in a variety of writing exercises, and discussing readings and each other's writing. The course culminates in the submission of a writing portfolio. Prerequisites: ENGL 1010 or permission of the instructor, alert senses, and the ability to hike moderate distances ( $6-12$ miles a day) over uneven terrain. ENGL 1020 recommended.

## ENGL 2060 - Creative Writing: Nonfiction (3CR)

(3L) As the enormous popularity of national bestsellers demonstrate, the creative nonfiction genre has far-reaching appeal for the millions of readers. In this course the student will analyze the elements of nonfiction and practice writing nonfiction at the introductory and intermediate level. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2080 - Creative Writing: Poetry (3CR)

 (3L) [E] Analysis of the forms of poetry, and practice of writing poetry at the introductory and intermediate level. Prerequisites: ENGL 1010. ENGL 1020 recommended.
## ENGL 2130 - Creative Impulse (Twentieth Century Humanities) (3CR)

(3L) [E] Focuses on the visual arts, literature, music, and philosophy of the 20th century. Attention is given to the influence of history upon our culture and the changes in thinking brought about by scientific discovery. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2140 - World Literature I (3CR)

 (3L)Exploring literature from a wide array of time periods and language backgrounds, this course examines great works of world literature, ancient and modern. This course also
engages themes as explored through various time periods, cultures, and visual genres like cinema and the visual arts. Through discussion and analysis, this course explores the diverse ways that cultures attempt to express themselves through written and artistic expression. Prerequisites: ENGL 1010. ENGL 1020 recommended. Cross-listed: (Cross-listed as HUMN 2140.)

## ENGL 2145 - War Literature (3CR)

(3L) War stories exist at the nexus of two fundamental human drives: the drive to create, and the drive to destroy. In an effort to better understand these human impulses, students in War Literature will examine a range of texts that deal with complex, multivalent experiences of war. Texts will include letters, poems, stories, songs, speeches, propaganda, and film. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2150 - World Literature II (3CR)

(3L) Although primarily a study of the literature of the Middle Ages and beyond, attention will be paid to the other arts, to religion, and to philosophy. Literary values and the qualities of the greatness of selected works of Western Civilization, including any ideas embodied in those works, will be our focus. We may include works, including modern works, late in the semester. Prerequisites: ENGL 1010. ENGL 1020 recommended. Cross-listed: (Crosslisted as HUMN 2150.)

## ENGL 2185 - Classical Mythology (3CR)

(3L) Focuses on Greek myth and legend. Included as background are geography, history, excerpts from literature, and theories of interpretation. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2205 - Intro to Literature (3CR)

(3L) Introduction to Literature further refines the student's abilities to gather and synthesize material from independent reading. The course focuses on teaching the specific skills, techniques, and terminology necessary for writing effectively about literature and writing literary criticism. This course will devote significant time to the discussion of writing and to its application in addition to engaging students with a variety of readings that may come from a variety of literary periods and movements. College- level essays, including a research paper and, and two oral presentations are required. Prerequisites: ENGL 1010 Concurrently: ENGL 1020

## ENGL 2210 - English Literature I (3CR)

(3L) A survey of British literature from the Anglo-Saxons to the 18th century. Emphasis is on reading, discussing, and
writing about important works in our literary heritage. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2220 - English Literature II (3CR)

(3L) A survey of British literature from the early 19th century to the modern period. Emphasis is on reading, discussing, and writing about important works in our literary heritage. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2230 - Intro to Shakespeare (3CR)

(3L) Students are introduced to the works of Shakespeare through careful reading (and re-reading) of representative major plays and/or sonnets in order to become acquainted with Shakespeare's dramatic and poetical art. Both formal lecture and discussion will cover each reading. From time to time the class will watch tapes of scenes from the plays in order to understand how the plays might be staged and actors interpret roles. In addition to reading between eight and 12 plays and a dozen or so sonnets, students will take mid-term and final objective and essay examinations, report on the interpretation by a major critic (Johnson, Coleridge, Hazlitt, Bradley, Harrison, and so on), and write one short and one extended (possibly research) essay. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2235 - Literature of Horror (3CR)

 (3L) $[E]$ A study of the development and traditions, and conventions of horror and the supernatural in English and American literature. Readings will consist mostly of prose fiction, though there will be a few assigned readings of non-fiction. Prerequisites: ENGL 1010. ENGL 1020 recommended.
## ENGL 2270 - Modern Women Writers (3CR)

(3L) An introductory level course, which will focus on women writers of the late 19th century and of the 20th century. Works by earlier writers demonstrate the traditional roles of women in society as well as questions about and challenges to those roles, while works written since the middle of the 20th century image women in a changing society. These works are the background to contemporary literature which presents positive and powerful images of women as recent writers revise traditional roles and envision new realities for women and for society. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2310 - American Literature I (3CR)

(3L) A survey of major American writers and their significant contributions from the Colonial Era to the Civil

War. Prerequisites: ENGL 1010. ENGL
1020 recommended.

## ENGL 2320 - American Literature II (3CR)

(3L) A continuation of ENGL 2310: American writers from the Civil War to the mid-20th Century. Prerequisites:
ENGL 1010. ENGL 1020 recommended.

## ENGL 2350 - African American Literature (3CR)

(3L) A chronological and thematic survey of African American writers and their works, from the earliest slave narratives to contemporary writings. This course will explore one specific sector of the diversity of American literature. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2440 - Literary Genres: Short Story (3CR) <br> (3L) [E] A study of several short stories with emphasis on the development of the genre as a modern art form, from its structural crystallization in the early 19th century to the experimental techniques of the latter 20th century. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2475 - Independent Study

(*I-3CR) (Max. 6) *Individual appointments with instructor. Books and periodicals studied independently by student in consultation with instructor. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENGL 2495 - Workshop: (Subtitle)

(.5-2CR) (Max. 4) Offered in response to needs and interests of students and members of the community. The topic varies but focuses on reading, writing and analyzing contemporary literature. Guest scholars and writers give lectures, readings, and workshops about different genres including poetry, fiction, and nonfiction. A student may repeat this course twice under different subtitles to a maximum of four credit hours. Prerequisites: ENGL 1010. ENGL 1020 recommended.

## ENR 1200 - Environment (4CR)

( $3 L, 3 L B$ ) This course fulfills a lab science requirement for both science and non-science majors by introducing key concepts in the life sciences through analysis of environmental and natural resource issues. It is appropriate for all students seeking a deeper understanding of environmental challenges. This course is intended to cultivate informed citizens capable of understanding both
the scientific basis of environmental challenges as well as an appreciation for the importance of the non-scientific dimensions of those challenges. This course uses complex, real-world environmental challenges to explore fundamental scientific principles such as hypothesis testing, energy flow, nutrient cycling, ecosystem structure and function, population ecology, community ecology, and the role of humans in systems.

## ENR 1500 - Water, Dirt, and Earth's Environment (4CR)

(3L, $3 L B$ ) Introductory environmental geology course focusing on water and soil both as hazards and as lifesustaining resources; exploring surface processes and climate change over geological and human timescales. Case studies illustrate the environmental tradeoffs of resource use. Cross-listed: (Cross-listed with GEOL 1500)

## ENR 2000 - Environment and Society (3CR)

(3L) This course explores environmental and social interactions-that is, how we relate to non-human nature and how we represent these relationships. During the semester you will evaluate texts and other media from a variety of fields. We will also address some of the core issues impacting the relationship between the environment and society.

## ENR 2450 - Principles of Fish and Wildlife Management (3CR)

(3L) $[E]$ Emphasizes principles of habitat and population biology and management, human dimensions of wildlife management, as well as law and policy. Prerequisites: LIFE 1010/BIOL 1010 Cross-listed: ZOO 2450

## ENR 2465 - Research Problems in

 Environmental Sciences(1-4CR) (Max 4) This is an independent research study course. A comprehensive research study is required. Upon completing the project, the student should present a paper and an oral seminar to a committee selected by the project instructor. The problem and amount of credit received must have the approval of the instructor.

## ENR 2480 - Cooperative Work Experience

( $1-8 C R$ ) This course provides the opportunity to gain life science and/or wildlife management concepts from a vocational or employment experience within the student's area of specialization. A minimum of 80 hours of on-thejob training represents one semester credit hour. The instructor and the employer will supervise students.

Prerequisites: Preapproval/consent of instructor. Must be Life Science, Environmental Science, or Wildlife Management Major. Student must have at least a 2.0 GPA.

## ENTK 1010 - Elements of Surveying (3CR)

( $2 L, 3 L B$ ) The principles of land surveying include distance measurement, elevations and angles. This course includes fundamentals of trigonometry, the necessary review of algebraic principles, and a thorough introduction to the surveying instruments and their use. Lecture material is accompanied by field measurements providing adequate practical experience. Following the course, students should be able to assist with a survey crew or lay out a simple construction site. An introduction to the U.S. public land system and the principles of the GPS system are included.

## ENTK 1021 - Descriptive Geometry (3CR)

(2L, $2 L B$ ) Emphasis is on the graphic solutions to engineering and design problems. Topics will include: visibility, notation, auxiliary views, true lengths and angles, bearing, grade, intersecting lines, lines on planes, point views, normal views piercing points, intersection of planes, contour mapping, outcrop, cut and fill, revolution of lines, vectors and perspective. Prerequisites: ENTK 1500, or permission of the instructor.

## ENTK 1060 - Excel Technical Applications (3CR)

(3L) This course will focus on the technical application of Microsoft Excel and its use in an engineering/drafting office environment. Students will learn productivity tools in Excel and explore how to integrate Excel with computer aided drafting software to increase productivity.

## ENTK 1500 - Engineering Graphics (4CR)

(2L, 4LB) An introductory course in industrial communications through technical drawing and computeraided drafting. Topics include, sketching, lettering, plan geometry, Multiview and axonometric projections dimensioning using traditional drafting instruments and computer aided drafting equipment.

## ENTK 1710 - Architectural Drafting I (4CR)

(2L, 4LB) [E] Designing homes with emphasis on today's residential designs and construction methods. Develop documents for construction purposes using sketching and computer-aided design techniques. Designs will follow local, state and national code specification. Prerequisites: ENTK 1500, or permission of the instructor.

## ENTK 1720 - Architectural Drafting II (4CR)

(2L, 4LB) Develop documents for architectural presentations and graphics using sketching, various CAD techniques, and building information modeling. Prerequisites: ENTK 1500 and ENTK 1710, or permission of the instructor.

## ENTK 2010 - CAD 3D Modeling and Mechanical Design I (4CR)

( $2 L, 4 L B$ ) An introductory course in 3-D solid modeling. The student will learn basic part and assembly modeling techniques with an emphasis on design intent. Standard 3 view part prints including section, detail and exploded views will be created. Prerequisites: ENTK 1500, or permission of the instructor.

## ENTK 2020 - CAD 3D Modeling and Mechanical Design II (4CR)

$(2 L, 4 L B)$ A continuation of the instruction received in ENTK 2010, this is an intermediate mechanical design course focusing on assembly modeling using both topdown and bottom-up techniques. Application of design intent on part and assembly models instructs the student to predict how design changes will impact the model. In addition, students realize the importance of file management tools in assemblies. Prerequisites: ENTK 2010 , or permission of the instructor.

## ENTK 2030 - CAD 3D Modeling and Mechanical Design III (4CR)

$(2 L, 4 L B)$ This is an advanced mechanical design course focusing on design and marketing tools used with solid modeling of parts and assemblies. The students learn to integrate weldments, fasteners, sheet metal parts and web base design tools into assemblies. These tools aid the designer during the product development phase of a project. Prerequisites: ENTK 2020.

## ENTK 2525 - Design and Manufacturing Methods I (4CR)

( $2 L, 4 L B$ ) A course emphasizing solid modeling and manufacturing techniques involved with various CNC equipment and the impacts of CAD on design and production. Manufacturing techniques utilizing CNC plasma, CNC router, laser engraver, machining/turning center and 3D printer will be covered in this course. Prerequisites: ENTK 1510 or ENTK 2510 or Instructor Approval. Concurrently: None. Cross-listed: MANF 2525

## ENTK 2530 - Design and Manufacturing

 Methods II (4CR)$(2 L, 4 L B)$ This course is a continuation of Design and Manufacturing Methods I. This course will emphasize solid modeling and manufacturing techniques involved with various CNC equipment and the impacts of CAD on design and production. Manufacturing techniques utilizing CNC plasma, CNC router, laser engraver, machining/turning center and 3D printer will be covered in this course. Prerequisites: ENTK 2525, or permission of instructor.

## ENTK 2550 - Civil Drafting I (4CR)

(2L, 4LB) This course introduces principles and techniques of civil drafting using Autodesk's Land Development Desktop to create engineering maps. This course includes an overview of mapping, surveying, and earthwork. Prerequisites: ENTK 1500, or permission of the instructor.

## ENTK 2600 - Construction Documents (4CR)

(2L, 4LB) Design, planning, and construction documents of existing and new commercial buildings. Topics include construction methods and materials, drawing conventions, the AIA drawing standards, the National CAD Standards, the Uniform Drawing System, and the International Building Code. Prerequisites: ENTK 1500, or permission of the instructor.

## ENTK 2975 - Independent Study in Drafting

(2-6LB) (1-3CR) (Max. 3) Drafting majors who have substantial background in drafting may be permitted to contract with the instructor for special advanced problems in drafting to be pursued on an independent study basis. Prerequisites: Permission of instructor.

## ENTK 2976 - Independent Study in

## Computer-Aided Drafting

(2-6LB) (1-3CR) Students who have substantial background in drafting may be permitted to contract with the instructor for special advanced problems in computer aided drafting to be pursued on an independent study basis. Prerequisites: Permission of the instructor.

## ENTK 2980 - Cooperative Work Experience (Drafting)

(1-8CR) (Max. 8) A minimum of 80 hours of on-the-job training per credit hour with college supervision. Training must be in the area of drafting or a closely related field such as surveying. Prerequisites: Permission of the instructor.

ENTO 1001 - Insect Biology (4CR) (3L, $3 L B$ ) This course provides students with an introduction to insects and related arthropods. Aspects of insect biology, ecology, behavior and life history will be covered, with emphasis on their effect on humans. The lab will cover insect anatomy, taxonomy and diversity, with an insect collection required of all students Prerequisites: BIOL 1000 or equivalent.

## ENVT 1500 - Applied Math for Operators (2CR)

(2L) Practical and realistic applications of mathematical formulas and problems related to the operations of water and wastewater treatment plants and collection and distribution systems. Prerequisites: MATH 0930, or permission of the instructor.

## ENVT 1510 - Distribution Systems (3CR)

(3L) Introduction to the basics of distribution system operation and maintenance and key system components. Topics covered include storage, cross connections, water quality, regulations, chlorination, piping, meter, pumps, hydrants and safety.

## ENVT 1520 - Collection System Operation/Maintenance (3CR)

(3L) Introduction to the basics of collection system operation and maintenance and key system components. Topics to be covered include inspecting and testing, cleaning methods, lift stations, safety and administration.

ENVT 1530 - Trenching and Shoring (1CR) (1L) Introduction to the Occupational Safety and Health Administration's Construction regulation subpart P: Excavations 1926.650-652 known as the Trenching and Shoring Rule. Topics covered are causes of cave-ins, soil classifications, determining soil types and protection systems.

## ENVT 1540 - Confined Spaces (1CR)

(1L) Introduction to the Occupational Safety and Health Administration's (OSHA) permit required confined space entry regulation. Class focuses on understanding the regulations and the required elements of a confined space program.

## ENVT 1550 - Safety in Water Quality (2CR)

(2L) Introduction to safety issues that affect water quality system operators. The course will review general safety issues and specific Occupational Safety and Health Administration (OSHA) regulations. Topics to be covered include hazard communication, blood borne pathogens,
chemical safety, respiratory protection, lockout-tag out, and general safety practices.

## ENVT 1560 - Water Treatment Plant Operation I (3CR)

(3L) This course is an introduction to the basics of water treatment plant operation and key system components. Includes water sources, coagulation, flocculation, sedimentation, filtration, disinfection, Safe Drinking Water Act rules and regulations, fluoridation and iron and manganese removal.

## ENVT 1570 - Wastewater Treatment Plant Operation I (3CR)

(3L) Introduction to the basics of wastewater plant operation and maintenance. Topics covered include package plants, oxidation ditches, waste stabilization ponds, trickling filters, primary and preliminary treatment and chlorination.

## ENVT 1600 - Industrial Safety (4CR)

(4L) This course is an introduction to safety issues that affect personnel in the electric power industry. It will review general safety issues and specific Occupational Safety and Health (OSHA) regulations for General Industry. Topics to be covered include: Introduction to OSHA, exit routes, emergency action plans, fire protection plans and fire protection, electrical, personal protective equipment, walking/working surfaces and fall protection, hazard communication, powered industrial trucks, bloodborne pathogens, working in extreme weather environments, and electric power generation, transmission, and distribution. All subjects will emphasize hazard awareness. An OSHA Ten-Hour general industry card will be awarded to all students successfully completing the mandatory OSHA requirements contained in this curriculum. Each student will be required to compose a three to five-page essay on personal safety.

## ENVT 1625 - Small Water Systems (3CR)

(3L) This course is an introduction to the basics of small water system operation and maintenance and key system components. Topics to be covered include surface water treatment, groundwater systems, storage, monitoring, emergency response preparedness, financial considerations and managerial responsibilities. Course uses a combination of DVD based video presentations and workbook assignments completed at home prior to class as well as classroom lectures and field trips.

## ENVT 1650 - Waste Stabilization Ponds/Lagoons Operation and Maintenance (1CR) <br> (1L) This course will cover wastewater composition, lagoon types, facultative and aerated lagoon operational theory, dissolved oxygen and pH measurement, calculating hydraulic and organic loading, detention time, geometric mean, average flow and percent removal and NPDES permits. Course will also include a field trip to a local lagoon system.

## ENVT 2510 - Applied Math for Water Plant Operators (2CR)

(2L) Practical and realistic applications of mathematical formulas and problems related to the operations of a water treatment plant and distribution system. Prerequisites: ENVT 1500, or permission of the instructor.

## ENVT 2515 - Applied Math for Wastewater Plant Operators (2CR)

(2L) Practical and realistic applications of mathematical formulas and problems related to the operations of a wastewater treatment plant and collection system. Processes covered will include activated sludge, trickling filters, waste stabilization ponds, chemical dosages and laboratory calculations. Prerequisites: ENVT 1500, or permission of the instructor.

## ENVT 2525 - Water Treatment Plant Operation II (3CR)

(3L) Builds on the concepts presented in Water Treatment Plant Operation I and introduces advanced treatment concepts such as softening, iron manganese control, demineralization, instrumentation, laboratory procedures and drinking water regulations.

## ENVT 2535 - Wastewater Treatment Plant Operation II (3CR)

(3L) Builds on the concepts presented in Wastewater Treatment Plant Operations I and introduces advanced treatment concepts such as sludge handling and digestion and nutrient removal.

## ENVT 2981 - Cooperative Work Experience

 (1-8CR) (Max. 16) (Environmental Science students) Supervised work and project experience for the purpose of providing an understanding of a specific topic area related to environmental science. Supervision is provided by both the instructional staff of the college and the cooperating agencies. Enrollment limited to majors in water qualitytechnology or environmental science. See "Unit of Credit." Prerequisites: Permission of the instructor.

## ES 1000 - Orientation to Engineering Study (1CR)

(1L) [E] Orientation course to provide students with exposure to all forms of engineering.

## ES 1040 - A Gamer's Road to Engineering (3CR)

( $2 L, 2 L B$ ) Electronic entertainment has become a ubiquitous form of pastime for citizens around the world. It can be experienced on a singular level or as part of a collaborative or competitive effort. The barrier to entry is low, and it can also serve as a gateway towards the higher-level function of collaboration and problem-solving. The hands-on application will include dedicated immersion periods in PC and/or console content. Course presentation will be a combination of lecture/lab approaches to promote collaborative and cooperative learning.

## ES 1060 - Intro to Engineering Problem Solving (3CR) <br> (3L, *) $[E]$ * One problem class each week. An introduction to engineering documentation and reports, computing tools for data presentation and graphics, equation solving, and manipulation of tabular data. Concurrently: MATH 2200.

## ES 1100 - Introduction to Rocketry (2CR)

( $1 L, 2 L B$ ) This introductory course in rocketry will provide an overview of various rocket propulsion concepts such as solid, hybrid, liquid, nuclear and antimatter. It will focus on composite solid rocket motors and cover their design, ballistic analysis, structural analysis, and thermal analysis. The course will discuss the design, analysis and constructor of rocket bodies including structural analysis, flight stability and recovery systems.

## ES 2110 - Statics (3CR)

(3L, *) $[E]$ *One problem class each week. Analysis of force systems in equilibrium while at rest. Includes forces as vectors acting at a point and on structures, distributed forces, and friction. Centroid and moment of inertia of areas and solids. Prerequisites: MATH 2205 or concurrent enrollment. Students should be enrolled concurrently in PHYS 1310 and ES 1060 is recommended. Concurrently: PHYS 1310 and ES 1060

## ES 2120 - Dynamics (3CR)

(3, *) $[E]$ *One problem class each week. The study of particle and body motion. Includes the study of translation and rotation and the related concepts of work, energy, impulse, and momentum. Prerequisites: ES 2110 and MATH 2205, PHYS 1310, or concurrent enrollment.

## ES 2210 - Electric Circuit Analysis (4CR)

( $3 L,{ }^{*}, 2 L B$ ) $[E]$ *One problem class each week. A basic course in electrical engineering circuit analysis for all engineering majors. Emphasis is placed on basic circuit theory, circuit modeling, analytical methods, network theorems, and first order circuits. Prerequisites: MATH 2205. Concurrently: ES 2120.

## ES 2310 - Thermodynamics (3CR)

(3L) [E] A first course in classical thermodynamics governing processes related to heat work and equilibrium of gaseous liquid, and solid systems. Prerequisites: MATH 2205 and PHYS 1310, or permission of the instructor.

## ES 2330 - Fluid Dynamics (3CR)

(3L, *) $[E]$ *One problem class each week. Characteristics and behavior of fluids. Applications of Bernoulli and Euler equations of equilibrium. Study of surface tension, vapor pressure, viscosity, and shear stress of fluids. Analysis of laminar and turbulent flow in pipes. Prerequisites: ES 2120 and MATH 2205, or permission of instructor.

## ES 2410 - Mechanics of Materials I (3CR)

$(3 L, *)[E]$ * One problem class each week. The mechanics of deformable bodies. Topics include stress and strain of structures and machine components. The course will include an introduction to the design process. Prerequisites: ES 2110 and MATH 2205.

## EXTR 1500 - Geology of Extractive Resources (3CR)

(3L) The study of the basic concepts associated with understanding the geology of the occurrence of oil, gas, oil shale, coal, coal bed methane, uranium, trona, bentonite, industrial minerals, and precious minerals in Wyoming.

## EXTR 2510 - Introduction to Well Drilling (3.5CR)

(3L, $1 L B$ ) An introduction to the basics of drilling in the extractive industries. Topics will include an overview of the purpose, type and mechanics of drilling. Emphasis will be placed on Wyoming industries such as oil and gas, coal bed methane, uranium, and soda ash. The type and size of various rigs will be discussed. Drilling operations including
the selection of rigs, bits, well control, and logging will be introduced. The course will include the discussion of casing runs, cementing, and a brief introduction to completion operations. Prerequisites: Permission of the instructor.

## EXTR 2520 - Introduction to Well Logging (3CR)

(3L) An introduction to the basics of modern electric well logs. Topics will include a quick overview of how a well is drilled and a brief history of logging tools. The main focus will be on modern electric log types and their interpretation and application, including resistivity and porosity logs. Specialty logs including dipmeters and borehole televiewers will be examined.

## EXTR 2530 - Oil and Gas Production (3.5CR)

(3L, $1 L B$ ) An introduction to the basics of oil and gas production. Topics will include a quick overview of the history of production, oil and gas reservoirs, drilling, testing, and completing wells. The main focus will be on oil and gas properties, production methods, enhanced recovery methods, field processing, and well maintenance. Prerequisites: Permission of the instructor.

## EXTR 2540 - Petroleum Refining (3CR)

(3L) This course will cover the process, technology and operations that are necessary for the refinement of petroleum products. Prerequisites: EXTR 2530.

## EXTR 2550 - Geologic Computing Methods (3CR)

(1.5L, $3 L B$ ) This course is a beginner to intermediate level instructional course on how to use the geologic mapping software, Petra. Topics will include utilization of the various modules that comprise the Petra software (i.e. the mapping module, cross section module, etc.). Advanced subjects will include uses of other software such as Microsoft Office to facilitate data manipulation and integration into Petra. Basic computing skills recommended.

## EXTR 2555 - Advanced Geologic Computing Methods (3CR)

$(1.5,3 L B)$ This course is intended as a follow-up to EXTR 2550 Geologic Computing Methods. It is an advanced level instructional course on how to use the geologic computing software package, Petra. The course will feature advanced methods of geologic mapping, cross-section creation, well $\log$ interpretation, and the many special functions of the software. Data manipulation and integration techniques will
be addressed. Prerequisites: EXTR 2550 or permission of the instructor.

## EXTR 2560 - Energy Policy and Economics

 (3CR)(3L) Introduction to energy policy and economics. This course is designed to provide the student a basic understanding of the energy industry, current socioeconomic and political conditions in the marketplace and future supply/demand scenarios based on policy initiatives. The student will be exposed to material through a large degree of research and self-discovery. The instructor will facilitate discussion, dialogue, and critique writing and presentation skills.

## EXTR 2570 - Introduction to Seismic Interpretation (3CR)

(2L, 2LB) Intended to introduce the interpretation of seismic reflection data. Seismic interpretation is currently the leading method for the exploration and development of oil and gas reserves. Students will learn to understand the seismic process, identify different structural styles from seismic data, interpret seismic sections in both two and three dimensions, relate subsurface stratigraphy to well data, develop a geologic model, create a basic stratigraphic framework using seismic stratigraphy, and prepare structure and other geological/geophysical maps. A basic knowledge of geology and physics is helpful.

## FCSC 1100 - Introduction to Food Science (4CR)

(3L, 3LB) This course will utilize food and food preparation as a model to examine basic scientific principles core to the life and physical sciences. Students will learn about food's nutritive value and basic biologic, chemical and physical concepts in food science. Basic skills in food preparation and food processing will be introduced. Fundamental concepts in consumer science such as food choice and selection, unit pricing and meal planning are also explored.

## FCSC 1141 - Principles of Nutrition (3CR)

(3L) [E] This course is designed to give students a general understanding of nutrition concepts. The course content emphasizes key nutrients and the human body's need for and utilization of those nutrients. Students will be informed of the importance of individualized nutrition plans, and will be exposed to some of the latest research in nutrition. Also addressed are nutritionally relevant topics such as eating disorders, nutritional supplements, dieting and food safety. Recommended for nutrition majors, physical education and early childhood education majors and other interested nonmajors.

## FCSC 1150 - Scientific Study of Food (3CR)

( $2 L, 3 L B$ ) Comprehensive introduction to the study of food. Food science concepts relevant to composition, physical, chemical and biological properties are applied through laboratory experiences. Prerequisites: FCSC 1141.

## FCSC 2122 - Child Development Lab (1CR)

 (2LB) This course will serve as a bridge between theory and application through experience in the observation of child growth and development from birth to 12 years of age. Prerequisites: PSYC 2300, or concurrent enrollment.
## FCSC 2141 - Nutrition Controversies (2CR)

(2L) This course expands upon nutrition concepts covered in FCSC 1141 by exploring current nutrition-related controversies. Skills related to the interpretation of research literature will be emphasized. Fall semesters Prerequisites: FCSC 1141, or permission of the instructor

## FDSC 2040 - Principles of Meat Animal Evaluation (3CR)

(2L, 2LB) [ $E]$ Live animal and carcass evaluation of beef, sheep, and swine. Slaughter, meat inspection and anatomy are discussed. Prerequisites: ANSC 1010 or instructor permission.

## FDSC 2100 - Principles of Meat Science (3CR)

(2L, 2LB) [E] Muscle growth, structure and metabolism, pre-harvest animal care, fabrication of carcasses into cuts and associated processing techniques; conversion of muscle into meat; fresh meat properties and quality; chemical properties of meat; meat processing; meat microbiology and safety. Prerequisites: CHEM 1000 or CHEM 1020 and FDSC 2040 or instructor permission.

## FIN 1000 - Personal Finance (3CR)

(3L) The efficient management of money is a prime requirement for a happy and successful family life. This course is designed to aid the student in planning a program for such major items as inflation, budgeting, insurance, savings and investment, home buying, and income taxes. Recommended as an elective for business and nonbusiness majors.

## FIN 2100 - Managerial Finance (3CR)

(3L) [E] Managerial finance deals with two main decisions that must be confronted by those managing the financial operations of corporations. First, there is the decision on which investment projects to undertake. Second, there is the decision on the best way to enhance projects. For the
first task, the managers must forecast cash flows that might be generated by prospective projects and then select the appropriate discount rate with which to value such cash flows. The second task involves selecting the capital structure of the firm and includes for example, the choice between debt and equity. Prerequisites: ACCT 2010, STAT 2050, or permission of the instructor.

## FIRE 1500 - Introduction to Fire Science

 (3CR)(3L) A broad overview of fire service covering historical and modern fire protection services including department organization, equipment, extinguishing agents, tactics, and detection systems.

## FIRE 1510 - Fire Fighting Strategy and Tactics I (3CR)

(3L) An introductory course that covers a range of management principles and practices to help students develop effective decision-making skills at the fire scene.

## FIRE 1520 - Fire Fighting Strategy and Tactics II (3CR)

(3L) An advanced course emphasizing skill development for effective decision making in fire and related emergency situations. Includes case studies and simulations. Prerequisites: FIRE 1510, or fire service experience.

FIRE 1550-Causes and Investigation (3CR)
(3L) An in-depth study of the causes and investigation of fires of all types and descriptions from the fire science point of view.

## FIRE 1670 - Basic Emergency Care/First Responder (3CR)

(3L) Training in the fundamentals of emergency care. The course follows the state of Wyoming Office of Emergency Medical Services outline for basic emergency care. Excellent for students who are planning to enter the fire service or emergency medical services. Prerequisites: Fire science or criminal justice major, or permission of the instructor.

## FIRE 1700 - Fundamentals of Fire Prevention (3CR) <br> (3L) The history and philosophy of fire prevention and administrative functions. Evaluation of prevention programs and research provide insight into the fire problem in modern societies.

## FIRE 1760 - Building Construction (3CR)

(3L) A practical approach to assessing hazards in various types of buildings. Construction types and classes are examined with firefighter safety and occupant viability as the foremost considerations.

## FIRE 1810 - Introduction to Wildland Fire Fighting (3CR)

(3L) Designed to expose the student to all of the classroom material required to be qualified as a wild-land firefighter Type Two (Basic) including introductory fire behavior, methods, tactics and safety.

## FIRE 1818 - Wildland Leadership (3CR)

(3L) This course is designed to provide intermediate level instruction on wild-land firefighting tactics, safety, and leadership.

## FIRE 1830 - Intermediate Wildland Fire Behavior (3CR)

(3L) Designed to expose the students to a more in-depth look at wild-land fire behavior. Incorporates the relations between fuels, weather, and topography. Also, a more indepth look into firefighter safety is taken. Prerequisites: FIRE 1810.

## FIRE 1975 - Independent Study

(1-3CR) An opportunity for students to develop projects in their particular area of interest within the fire science discipline. Course is self-paced with individualized instruction.

## FIRE 2515 - Advanced Firefighting (3CR)

(3L) This course prepares the student with the required skills needed in the fire service. This course assists students in developing an understanding of the physical and practical skills required to become a career firefighter. Prerequisites: Sophomore level in fire science program.

## FIRE 2525 - Rescue Practices for the Fire Service (3CR)

(3L) Designed to offer the student first-hand experience in the areas of high angle rescue, water rescue, and vehicle rescue/extrication.

## FIRE 2530 - Hazardous Materials (3CR)

(3L) This course involves the application of NFPA 472 and OSHA's HAZWOPER Standard (29 CFR 1910.120)
towards student involvement in hazardous materials
emergency response. In order to pass this course each student must pass both state tests (Awareness and Operations). However, passing both state certified exams does not guarantee a passing grade in the class. Prerequisites: General understanding of emergency response.

## FIRE 2560 - Apparatus and Procedures (3CR)

(3L) Designed to acquaint the student with the evolution of fire apparatus and to provide an understanding of the uses for different pieces of fire-fighting vehicles.

## FIRE 2570 - Managing Fire Service (3CR)

(3L) Designed for the pre-service student as well as the fire officer in management or preparing for a managerial position. The course includes budget forecasting, facility and equipment planning, personnel activities, and fire protection productivity.

FIRE 2960 - Firefighter Development (3CR)
(3L) To prepare the student for fire department entry-level testing through various exercises and community service projects.

## FIRE 2970 - Fire Service Field Internship (3CR)

(1L, $3 L B$ ) To prepare the student for fire department entrylevel testing through various exercises and community service projects.

## FREN 0900 - French for Travelers (1CR)

 (1L) A course of simple French to help the traveler make plans, obtain tickets, order meals, ask for and understand general information as needed for travel in a Frenchspeaking country.
## FREN 1010 - First Year French I (4CR)

(4L) [E] This course is intended for students who have never studied French at the college level. Students will learn the fundamentals of the French language through listening, speaking, reading, and writing activities at the ACTFL (American Council on the Teaching of Foreign Languages) Novice High Level. The course will also introduce students to the culture of various Frenchspeaking countries. Language laboratory times are required as needed. Students who want to take for credit the next course in the sequence must complete this course with grade of a ' C ' or better. Prerequisites: A grade of " C " or better in FREN 1010, CLEP test result, equivalent of 6-8 semesters of high school French with a cumulative "B"
average or better in those classes, or instructor's permission.

## FREN 1020 - First Year French II (4CR)

(4L) $[E]$ This course is a continuation of the objectives in FREN 1010. Students will become more proficient in listening, speaking, reading, and writing French and will further their grammatical study of the French language at the ACTFL (American Council on the Teaching of Foreign Languages) Intermediate Low Level. The course will continue to introduce students to the culture of various French-speaking countries. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in FREN 1010, CLEP test result, equivalent of 6-8 semesters of high school French with a cumulative "B" average or better in those classes, or instructor's permission. FREN 2030 - Second Year French I (4CR) (4L) $[E]$ This course focuses on the increased development of listening, speaking, reading, and writing skills in French. Students review and expand upon grammar points which facilitate successful communication at the ACTFL (American Council on the Teaching of Foreign Languages) Intermediate-Mid Level. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in FREN 1020, CLEP test result, equivalent of 5-6 years of middle/junior high and high school French with a cumulative "B" average or better in those classes, or instructor's permission.

## FREN 2040 - Second Year French II (4CR)

(4L) $[E]$ This course further emphasizes the development of all four communicative aspects of the French language through composition, conversation, oral presentations, and grammar study. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in FREN 2030, CLEP test result, or instructor's permission.

## FREN 2475 - Independent Study

(1-4CR) (Max. 4) Students meet with the instructor to discuss independently assigned reading and reports from sources of special interest to the student(s) and pertaining to francophone culture and/or current events which are selected in consultation with the French instructor or record. All coursework will be done in French. Some oral/aural work will be required and grammatical topics may be revisited and expanded upon. Students much pass with a "C" or better. Prerequisites: FREN 2040 or permission of instructor.

## FREN 2495 - Workshop: Topic

(.5-4CR) (Max 12) This class provides a specialized course of study in French to meet particular interests of students
and community members. Various topics focus on the development of practical French speaking skills and/or cultural awareness. This course may be repeated for a total of 12 credits under different topics. Student must pass with a "C" or better. Prerequisites: Permission of instructor

## GEOG 1000 - World Regional Geography (3CR)

(3L) [E] An overview of the world's major physical regions: the physical features, climates, and natural resources of each region, and how the people living in each region have adapted to, and are affected by, their physical environment. GEOG 1010 - Introduction to Physical Geography (4CR)
(3L, 2LB) $[E]$ An introductory course that draws on many scientific fields to examine interactions between humans and their physical environment. Geology, meteorology, climatology, pedology, biology, and hydrology supply the background material, but the key word is interaction: how and why the weather affects our lives, food supply and soil formation, and where and how we can live within the limits imposed by the various environments of the earth. Because we live on the surface of the earth, the course will examine the major processes involved in shaping and landscape.

## GEOG 1015 - Projects in GIS (1CR)

(2LB) Students will participate and work alongside GEOG 2100 students assisting them with their GIS/GPS projects.

## GEOG 1040 - Snow and Ice Field Class (4CR)

( $3 L, 2 L B$ ) Of all of the environmental factors which shape the physical world in which we live, the snow and the ice (cryosphere) component is probably the least understood and appreciated by the layman and the scientist alike. At the same time, our existence is tremendously impacted in both positive and negative ways by these factors. Students will be required to attend field components including two local weekend excursions and a week-long field course in a location to be determined. Some field work may be physically strenuous; however, participation in these activities will be optional. Other approved exercises may be substituted if necessary. Prerequisites: Permission of the instructor.

## GEOG 1050 - Introduction to Environmental and Natural Resources (3CR)

(3L) Addresses the impact from natural and human interactions with the environment. Will discuss regional to global scales on issues such as: hazardous earth processes, human interaction with the environment, cultural and ethnic responses to the environment, minerals and energy extraction and use, land use and decision-making. The class
will view both sides of environmental issues and approaches to environmental management.

## GEOG 1060 - Introduction to Remote

 Sensing and Drones (3CR)$3 L$ This course will give students an introduction in collecting and analyzing remote sensed data. The data will include remote sensed imagery taken from orbiting satellites, aerial flights, and drone data. Special attention will be given to flying Casper Colleges drones and learning how to collect their own remote sensed imagery and data, and applying the analysis of that data to real world projects. Fall Semesters Prerequisites: A working knowledge of a graphical computer user interface such as Windows or the MAC desktop.

## GEOG 1080 - Introduction to GPS and Maps (3CR)

(3L) An introductory course in maps and satellite-based global positioning systems (GPS). The course provides a project-based introduction to geographic information systems (GIS), for individualized investigations into geography, cultural diversity and/or cultural evolution. This course introduces historic navigation techniques, and the cartographic concepts of scale, elevation, and coordinate systems. We examine how GPS work, and were first developed, and perform exercises that introduce the basic skills of using a handheld global positioning device.

## GEOG 1100 - Introduction to GIS (4CR)

(4L) An introductory course in geographic information systems (GIS) and an accompanying laboratory session. The course will discuss different types of GIS and their capabilities; GIS data collection and input; GIS data types and basic mapping concepts. The laboratory session will introduce students to ArcView 8 software.

## GEOG 1110 - Management and Implementation of GIS (4CR)

(4L) This course addresses strategies for successful GIS management and implementation in an organization-wide context and is organized around three primary issues: implementation planning, data management, and GIS problem solving in the workforce. Prerequisites: GEOG 1100.

## GEOG 2100 - Advanced GIS (4CR)

(2L, 4LB) An advanced GIS course. The students will be split into teams and given a case study from an outside client and solve the case study using GIS. At the end of the semester, the teams will present the solution to the client in
a presentation. Prerequisites: GEOG 1100 and GEOG 1110, or concurrent enrollment in GEOG 1110.

## GEOG 2150 - Map Use and Analysis (3CR)

(3L) Survey of the use of maps to communicate ideas and opinions about places, and the analysis and presentation of mapped data to solve spatial or geographic problems.

## GEOG 2475 - Independent Study

(1-3CR) An opportunity for students to develop projects in their particular area of interest within the
GIS field. Prerequisites: Permission of instructor

## GEOG 2480 - GIS Cooperative Work

 Experience(1-8CR) (Max. 8) Students are afforded the opportunity to gain practical on-the-job experience in their specialties. The program coordinator and the student's employer will supervise the student. A minimum of 80 hours of on-thejob training represents one semester hour. Students must maintain 12 credit hours with at least a 2.0 GPA during the semester. Prerequisites: Enrollment in GIS certificate, degree, or minor program; permission of the program director.

## GEOL 1010 - DEEP Impact (1-3cr)

(1L) Students can repeat the course to earn up to 3 credits DEEP Impact is a mentoring course for geoscience students regardless of major who participate in the Diverse Earth Education Project (DEEP Impact). The course is designed to assist students with their career and educational goals while students engage with undergraduate research projects. Student should take the course multiple times to earn up to 3 credits total. This course will be offered every semester starting in the Spring of 2020. Prerequisites: None. Concurrently: None Cross-listed: None

## GEOL 1015 - Geology in the Field (2CR)

(1L, $2 L B$ ) This course is designed to be lecture in the field about the spectacular geology of Wyoming. A great variety of Wyoming's minerals, rocks, fossils, and scenic geology will be explored during field trips.

## GEOL 1020 - Geology of Wyoming (1CR)

(1L) Topics in the geology of Wyoming; lectures and field trips which illustrate a major facet of Wyoming's natural geological laboratory. Topics have included volcanoes, glaciers, Wyoming gem stones and precious metals, plate tectonics, and the oil and gas business.

## GEOL 1021 - Geology of Wyoming Field Trip (1CR)

(2LB) Lecture in the field to observe first-hand the unique geological features of Wyoming. Concurrently: Optional field trip to be taken concurrently with GEOL 1020.

## GEOL 1040 - Gemstones and Their Geologic Origins (1CR)

(1L) This course is designed to acquaint the student with gemstone identification, faceting and the geology which produces these rare specimens.

## GEOL 1045 - Lapidary (1CR)

(2LB) This is a general interest science course teaching skill needed to cut and polish rocks and gemstones. Students will learn to use various machines to cut, grind, polish, drill, facet, and make thin sections for easier hand sample identification, creating thin sections for microscopes, and improving the aesthetic value of various Wyoming gemstones and rocks. Concurrently: GEOL
1046 - Field Trips to Collect Gemstones of Wyoming

## GEOL 1046 - Field Trips to Collect

 Gemstones (1CR)(2LB) This lab course consisting of 4 all-day field trips will complement GEOL 1040 (Gemstones) and GEOL 1045 (Lapidary) by letting the students collect their own samples of gemstones and various rocks throughout Wyoming. Jade, opals, sapphires, aquamarines, beryl, tourmaline, iolite, lepidolite, labradorite, and agates are some of the common samples to be collected. Concurrently: Best if taken concurrently with either GEOL1045 (Lapidary) or GEOL1040 (Gemstones of Wyoming)

## GEOL 1070 - Earth Science for Elementary Education Majors (4CR)

(3L, 2LB) $[E]$ Covers processes that resulted in the present topography and the past events and the fossil or evolutionary response to changing geography through time. Includes energy reserves, pollution, ecology, mineral resources, the earth framed as a planet, and the solar system.

## GEOL 1100 - Physical Geology (4CR)

(3L, 2LB) [E] A lecture and laboratory survey of the composition and geologic features of the earth and the processes which have formed them.

## GEOL 1200 - Historical Geology (4CR)

$(3 L, 2 L B)$ [E] A lecture and laboratory survey of the physical and biological history of the earth as interpreted from the sequence of rocks and fossil remains. Field trips will be included in the spring semester. Prerequisites: GEOL 1100 recommended.

## GEOL 1250 - Paleontology and Geology Field Work (1CR)

Wyoming is one of the richest fossil regions in the world. This course offers the student an opportunity to look for and collect fossils from various field sites near Casper. These sites include fossils of early mammals as well as dinosaurs. All fossil specimens collected are the property of the Tate Geological Museum at Casper College. Exceptions for souvenir specimens can be made at the discretion of the Tate Museum staff.

## GEOL 1500 - Water, Dirt, and Earth's Environment (4CR)

(3L, 3LB) Introductory environmental geology course focusing on water and soil both as hazards and as lifesustaining resources; exploring surface processes and climate change over geological and human timescales. Case studies illustrate the environmental tradeoffs of resource use. Cross-listed: (Cross-listed with ENR 1500)

## GEOL 2000 - Geochemical Cycles and the

 Earth System (4CR)(3L, $2 L B$ ) Geology applied to the complete Earth system including Lithosphere, Hydrosphere, Atmosphere and Biosphere, emphasizing rock associations and geochemical cycles on a global scale. Prerequisites: GEOL 1100.

## GEOL 2005 - Introduction to Geophysics

 (4CR)(3L, $2 L B$ ) Introduction to the processes and properties of the physical earth. Topics to be covered include: gravity and magnetics, heat flow, seismo-tectonics, earthquakes, global earth structure, electro-magnetism, and seismology. Prerequisites: GEOL 2000 - Geochemical Cycles and the Earth System (4CR)
GEOL 1100 or GEOL/ENR 1500 or permission from instructor

## GEOL 2010 - Mineralogy (3CR)

(2L, 3LB) $[E]$ An in-depth introduction to the mineralogy of rock-forming minerals and minerals of economic interest. Lectures and labs will cover the chemical, physical and optical properties of minerals. The class will systematically cover minerals and mineral associations.

Great emphasis will be placed on hand sample and microscopic identification of rock forming minerals. Generally offered in the spring semester. Prerequisites: GEOL 1100 Physical Geology or permission from instructor. Concurrently: Concurrent enrollment in GEOL 2020 Introduction to Petrology is required.

## GEOL 2020 - Introduction to Petrology (2CR)

(1L, $2 L B$ ) Introduces the study of igneous, sedimentary, and metamorphic rocks in hand specimens and thin sections. Covers textural and mineralogic classification of rocks and the tectonic environments in which they occur. Prerequisites: GEOL 1100 or instructor permission. Concurrently: Concurrent enrollment in GEOL 2010 is required

## GEOL 2030 - Introduction to Hydrology (3CR)

(2L, 2LB) Introduction to Hydrology covers the physical and chemical properties of water on Earth, processes of flow at the surface and in the subsurface, as well as fresh water as a finite global resource. Prerequisites: GEOL 1100 recommended, or permission of the instructor.

## GEOL 2050 - Principles of Paleontology (3CR)

(3L) [E] A systematic look at the evolution of life forms on Earth from the earliest traces of organic material in Archaean rocks billions of years ago to the great diversity of life we see today.

## GEOL 2070 - Oceanography (4CR)

( $3 L, 2 L B$ ) Deals with the ocean as a major environment of the earth. Includes the physical make-up of the ocean and the ocean as a climate controller and a resource for humans. Future pollution factors will also be discussed.

## GEOL 2080 - General Field Geology (4CR)

(3L, 2LB) [E] General Field Geology teaches students basic concepts of geology, field mapping, and sampling technique. Emphasizes recognition, recording, and interpretation of geologic and paleontological features in the field. Prerequisites: GEOL 1100 and at least two other geology classes.

## GEOL 2100 - Stratigraphy and Sedimentation (4CR)

(3L, 3LB) $[E]$ A basic course in stratigraphy and sedimentation which stresses depositional, environmental,
and age relationships of sedimentary rock. Prerequisites: GEOL 1100, or permission of the instructor.

## GEOL 2150 - Geomorphology (4CR)

Geomorphology is the study of the forces and processes that shape Earth's surface, and the examination and classification of the resulting landforms. This course covers the basic concepts and terminology of fluvial (stream), glacial, arid (desert), coastal, groundwater, and mass wasting (landslide) environments. Through the use of maps, aerial and satellite imagery, and field and laboratory work, students gain understanding of the complex interaction between the deep earth, the surface environment, and the external forces of weather, climate, and incoming solar energy. Prerequisites: none

## GEOL 2320 - Petroleum Geology (3CR)

(3L) The origin and properties of petroleum reservoirs with methods of exploring for structural and stratigraphic traps by subsurface and surface geologic techniques. Mode of petroleum genesis, preferential, habitat and migration, and accumulation will be discussed in depth. Prerequisites: GEOL 1100 or EXTR 1500, or permission of the instructor.

## GEOL 2465 - Research Problems in Geology

(1-3CR) (Max. 3) A comprehensive research study in geology is required, the topic must be selected in consultation with the instructor. Upon completing the project, the student will present a written and an oral report to the instructor.

## GERM 0900 - German for Travelers (1CR)

(1L) A course of simple German to help the traveler make plans, obtain tickets, order meals, and ask for and understand general information as needed for travel in a German-speaking country.

## GERM 1010 - First Year German I (4CR)

(4L) [E] This course is intended for students who have never studied German at the college level. Students will learn the fundamentals of the German language through listening, speaking, reading and writing activities of the ACTFL (American Council on the Teaching of Foreign Languages) Novice-High Level. This course will also introduce student to the culture of various Germanspeaking countries. Language laboratory times are required as needed. Students who want to take for credit the next course in the sequence must complete this course with grade of a 'C' or better. Prerequisites: None; however, the course is strongly recommended for students who have completed the equivalent of $0-5$ semesters of high school German.

## GERM 1020 - First Year German II (4CR)

(4L) [E] This course is a continuation of the objectives in GERM 1010. Students will become more proficient in listening, speaking, reading, and writing German and will further their grammatical study of the German language at the ACTFL (American Council on the Teaching of Foreign Languages) Intermediate-Low Level. The course will continue to introduce students to the culture of various German-speaking countries. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in GERM 1010, CLEP test result, equivalent of 6-8 semesters of high school German with a cumulative "B" average or better in those classes, or instructor's permission.

## GERM 2030 - Second Year German I (4CR)

(4L) [E] This course focuses on increased development of listening, speaking, reading, and writing skills in German. Students review and expand upon grammar points which facilitate successful communication at the ACTFL (American Council on the Teaching of Foreign Languages) Intermediate-Mid Level. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in GERM 1020, CLEP test result, equivalent of 5-6 years of middle/junior high and high school German with a cumulative " B " average or better in those classes, or instructor's permission.

## GERM 2040 - Second Year German II (4CR)

(4L) $[E]$ This course further emphasizes the development of all four communicative aspects of the German language through composition, conversation, oral presentations, and grammar study. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in GERM 2030, CLEP test result, or instructor's permission.

## GERM 2420 - Aktives Deutsch: Travel (2CR)

(2L) This travel course will focus on the unique culture found in the German-speaking countries. It will help students to more fully appreciate that culture while living in the midst of it as they attend full-immersion German language lessons. Students will be guided to negotiate the processes of ordering and paying for food, using public transportation, shopping and making purchases, and converting currency in real-life, hands-on situations. Also included are instructor-led tours and history lessons, which are given mostly in German. In response to the interests of students, various topics will focus on specific cultural aspects/sites and on cultural awareness. This course is required for all students participating in short-term study abroad trips to Germany sponsored by Casper College. Prerequisites: Successful completion of GERM

1010 with a grade of C or better, or instructor's permission (based upon demonstration of equivalent German language skills). Students must be 18 years old by the trip's departure date.

## GERM 2475 - Independent Study, German

(1-4CR) (Max. 4) Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: GERM 2030, or permission of the instructor.

## GERM 2495 - Workshop: (Subtitle)

(.5-3CR) (Max. 12) Offered in response to needs and interests of students and members of the community. Various topics will focus on development of practical German speaking skills and on cultural awareness. A student may repeat this course under different subtitles for a maximum of 12 credit hours. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better.

## GNDR 1000 - Introduction to Gender Studies (3CR)

(3L) This course is an introduction to the study of gender as a category for social and cultural analysis. We will study the intersections of gender, class, race/ethnicity, nationality, age and sexuality and will examine how those intersections shape our experiences, our culture, and the social institutions we inhabit. This course is a survey of gender construction and will use critical theory to examine gender within the areas of social institutions, literature, history, visual art, film, biological theories, psychology, and popular culture.

## GNDR 2000 - Gender Studies Service

## Learning

(.5-1L, 1-4LB) (1-3CR) This course will provide students with the opportunity to apply their theoretical understanding of gender studies to practical and concrete situations in their community settings. Students will work in a variety of agencies including educational, political, and/or social service agencies; students will choose their site according to their interests and according to faculty recommendations. In addition to the on-site experience, students will meet regularly with the faculty and their classmates to share and analyze their service-learning experience and to engage in critical reflection about gender theory. Prerequisites: WMST 1080, GNDR 1000, PSYC 2060 or permission of the instructor.

## HIST 1110 - Western Civilization I (3CR)

(3L) [E] A general survey of the significant political, social, economic, cultural, and intellectual concepts and institutions of the West, from the Paleolithic origins of humans through the Reformation.

## HIST 1120 - Western Civilization II (3CR)

(3L) [E] A general survey of the modern world, from the Reformation to the present. Emphasis is equally divided between national histories and the development of Europe as a whole, including the impact of the West on the entire world.

## HIST 1211 - United States to 1865 (3CR)

(3L) [E] A survey of the economic, social and political development of the United States from earliest exploration through the Civil War, with some emphasis on the American Constitution and its development as well as the Wyoming Constitution. This course will satisfy the statutory requirement of the U. S. and Wyoming Constitutions for Casper College and the University of Wyoming.

## HIST 1221 - United States from 1865 (3CR)

(3L) [E] A survey of the economic, social, and political development of the United States from reconstruction to the present. This course will satisfy the statutory requirement of the U.S. and Wyoming Constitution.

## HIST 1251 - Wyoming History (3CR)

(3L) [E] A survey course which examines aspects of Wyoming's frontier history. This course will also satisfy the statutory requirement of the U.S. and Wyoming Constitution.

## HIST 2080 - Holocaust (3CR)

(3L) [E] This course will explore the foundations of the Third Reich beginning immediately after World War I and ending in May 1945. Among the issues that will be discussed are the economic, military and social factors that led to the rise of National Socialism, Adolf Hitler and the other members of the NSDAP hierarchy that influenced the development of political and social doctrine in Germany, the legal maneuvering that legitimized genocide, the role of the SS including concentration camp administration and mobile killing operations in the East. The process of deportation, ghettoization and liquidation of the Jews of Europe in the death camps will be a central area of emphasis.

## HIST 2115 - Twentieth Century Europe (3CR)

(3L) History 2115 analyzes European history from 19001991. Special attention will be paid to the Great War, Russian Revolution, World War II and the Cold War.

## HIST 2240 - History of Russia Since 1855

 (3CR)(3L) General survey of modern Russian history from 1855 to present.

## HIST 2300 - World War II (3CR)

(3L) The Second World War is, arguably, the most significant military, political and social event of the Twentieth Century. The millions of military and civilian deaths, the destruction of infrastructure and the postwar Allied military governments in Germany and Japan all affected the way that the world was shaped. In this class we will examine the Second World War including the political and social upheaval in Europe following World War One that made possible the rise of National Socialism in Germany and Bolshevism in Russia. The expansionist goals of Imperial Japan and the resulting Pacific war will also be discussed as will the Holocaust and the Nazis' war against the Jews of Europe.

## HIST 2310 - American Women's History (3CR)

3L3CR Examine women's history, the activities and circumstances specific to women in America, and their contributions, influences, and significance. Cross-listed: WMST 2310

## HIST 2450 - History of Ireland (3CR)

(3L) This course surveys the history of Ireland beginning with the Celtic invasion of the island to 21 st century efforts to establish a lasting peace in the North. Major topics include the impact of invasions (Celtic, Viking, and especially English) early modern, and modern Irish History.

## HIST 2475 - Independent Study

(1-3CR) An opportunity for students to develop projects in their particular area of interest within the history discipline

## HLED 1006 - Personal Health (3CR)

(3L) [E] Designed to develop the understanding, attitudes, and practices which contribute to better individual and community health.

## HLED 2006 - Health for Elementary Educators (1CR)

(1L) This course acquaints elementary education students with methods of teaching and assessing health education standards to elementary students.

## HLTK 1000 - Principles of Healthcare Calculations (2CR)

(2L) A review of basic arithmetic, an introduction to the metric and apothecary systems, and computation of medication dosages.

## HLTK 1200 - Medical Terminology (3CR)

(3L) An introduction to medical vocabulary and terminology. The use of abbreviations, suffixes, and combining forms are stressed to give the student a working knowledge of medical terms.

## HLTK 1300 - Nursing Boot Camp (1CR)

 (1L) Provides students with academic skills and strategies for successful transition into the Casper College Nursing Program. Topics include resources available at Casper College, strategies for studying and test-taking, review of teaching-learning modalities used in the nursing program, introduction to the Nursing Student handbook, review of the application process, and development of an action plan to support success. Course has online, campus and group activities. Prerequisites: HMDV 1300 or concurrent enrollment.
## HLTK 1500 - Introduction to Health Care and Services (2CR)

(2L) Concepts of health care organization, finance, and delivery in the United States. Explores interrelationships among agencies, organizations, and personnel in the delivery of health care. (Fall semester.)

## HLTK 1620 - American Heart Association Heart Saver First Aid, CPR and AED (.33CR) <br> (.33LB) Provides training in adult, child and infant cardiopulmonary resuscitation (CPR), foreign body airway obstruction, and the use of an automated external defibrillator (AED). Also provides training for laypeople in first aid assessments and actions. S/U grading only.

## HLTK 1625 - American Heart Association BLS for the Provider (.33CR)

(.13L, .2LB) Designed to introduce the student to the cardiopulmonary resuscitation techniques needed by
providers for adult, child and infant including use of the automatic external defibrillator (AED). S/U grading only.

## HLTK 1660 - Advanced Cardiac Life

## Support (.66CR)

(.26L, . $66 L B$ ) This course is designed to introduce the Allied Health Professional to the concepts and techniques of Advanced Cardiac Life Support and includes both lecture and hands on practical application of knowledge and skills necessary to provide Advanced Cardiac Life Support to a patient in need. S/U grading only. Prerequisites: This course is designed for Allied Health students in their final semester of discipline-specific instruction. Participants must have a current AHA BLS for HCP Provider certification. Students are also required to complete a precourse self-assessment prior to the beginning of class. Those not completing the assessment will not be allowed into the class.

## HLTK 1675 - AHA Pediatric Advanced Life Support (.66CR)

(.66LB) This course is designed to introduce the Allied Health Professional to the concepts and techniques of Pediatric Advanced Life Support and includes both lecture and hands on practical application of knowledge and skills necessary to provide Pediatric Advanced life Support to a patient in need. S/U grading only. Prerequisites: This course is designed for Allied Health students in their final semester of discipline-specific instruction. Participants much have a current AHA BLS for HCP Provider certification. Students are also required to complete a precourse self-assessment prior to the beginning of class. Those not completing the assessment will not be allowed into the class.

## HLTK 1855 - Assistive Technology Practicum (3CR)

(6LB) This course is designed to provide hands-on experience with various areas of assistive technology. Students will participate in general assistive technology (AT) evaluation concepts, exploration of different types of assistive technology equipment and application of AT to various populations. Prerequisites: HLTK 1625 or equivalent CPR certification.

## HLTK 1860 - Introduction to Human Disease (3CR)

(3L) This course is designed to provide a general overview of common diagnoses and conditions addressed in healthcare settings. Emphasis will be on considerations of
symptoms, ethical and safety considerations as well as organizational and healthcare collaboration.

## HLTK 1865 - Equine Assisted Therapy Practicum (3CR) <br> (6LB) This course is designed to provide hands-on experience with various aspects of equine assisted therapy. Students will participate in activities to incorporate concepts of general equine care and handling, utilizing riding and equine management from a therapeutic perspective and addressing mental health and physical disability through equine assisted therapy. Prerequisites: <br> HLTK 1625 or equivalent CPR certification.

## HLTK 1870 - Professionalism in Healthcare (3CR)

(3L) This course is designed to introduce students to the concepts of professional interactions by facilitating a positive work environment. Emphasis is placed on learning aspects of effective communication, application of the team process, awareness and management of ethical dilemmas, utilizing professional boundaries, rapport building and crisis management.

## HLTK 1875 - Gerontology Practicum (3CR)

(6LB) This course is designed to provide a general overview of the effects of aging, and the common diagnoses and conditions seen in geriatric clients. The course practicum will focus on educating the students about the importance of health, wellness, and safety of the geriatric population. Students will participate with community partners to immerse themselves in the needs of an aging population. Prerequisites: HLTK 1625 or equivalent CPR certification.

## HLTK 1975 - Spanish for Health Care Workers (3CR)

(3L) A course designed for health care workers or students in the health care industry who have little or no background in Spanish. The course presents the student with health care terminology, basic grammar and aspects of Hispanic culture. There is an emphasis on the basic language skills of conversation and comprehension to prepare individuals to work with Spanish-speaking clients in a variety of health care settings.

## HLTK 2400 - Complementary and Alternative Therapies (CAT) and Nursing (3CR) <br> (3L) This elective course introduces the nurse or nursing student to the ever-expanding areas that are

Complementary and Alternative Therapies (CAT) or Complementary and Alternative Medicine (CAM). The impact of these therapeutic modalities is explored as well as the implications for nursing practice. This course is informative only. You will not learn to be a practitioner of any of these modalities; you will be learning only about said therapies. This course will encompass many therapeutic modalities: music therapy, aroma therapy, massage therapy, acupuncture, acupressure, herbal remedies, and reflexology. Other information covered will include Reiki, therapeutic touch, and guided imagery. Additional topics will be covered as well.

## HLTK 2550 - Understanding the Economics,

 Ethics, and Policies Influencing Health Care (3CR)(3L) Legal, ethical, economical, and political issues related to health policy that impact the care of patients by health care providers. Rural and urban health care issues will be emphasized. Utilization of professional associations will be included.

## HLTK 2560 - The Interprofessional Health Care Team (3CR)

(3L) This course covers leadership and development concepts that apply to the interprofessional health care team. Concepts covered will include team and group development, relationship-centered leadership, and building and sustaining collaborative interprofessional teams. Application of concepts will include: health care informatics, evidence-based practices, interprofessional simulation activities, and behaviors that foster a collaborative culture.

## HMDV 1025 - Introduction to Online Learning (1CR)

(1L) This fully online course is designed to teach students how to use and navigate through the Moodle4Me course management system, learn the basics of internet use, email communication, file management, college resources, and library use. Students will use various tutorial materials and corresponding hands-on activities to complete requirements.

## HMDV 1101 - First-Year Seminar (3CR)

(3L) A first-year seminar focused on critical thinking and college success strategies. As individuals, and in groups, students examine the personal, social, civic, and economic goals of a college education, with emphasis on cognitive, moral, aesthetic, and identity development. During the class, students do research, they think through complex
issues, consult with others, and in the end, present samples of their work to the instructor and classmates. Each semester, multiple sections

## HMDV 1200 - Academic and Career Orientation (2CR)

(2L) This course consists of three primary components: self-assessment, including assessment of the student's interests, aptitudes, and values; job search skills, including learning how and where to look for employment, devising cover letters and a resume, proper completion of employment applications, interview skills, and follow-up techniques; and a series of guest speakers who lecture and answer questions concerning a variety of careers, thereby expanding the student's knowledge about occupations.

## HMDV 1300 - On Course (2CR)

(2L) Provides students with academic and personal strategies for a successful transition to the college. Topics include study skill techniques such as reading, note taking, test taking and organizing and rehearsing study materials. Other topics touched on include accepting responsibility, motivation, self-management, interdependence, and selfawareness. This course will also introduce students to campus resources.

## HOSP 1520 - Introduction to Hospitality and Tourism Management (3CR)

(3L) Overview of the components of the hospitality and tourism industry from a historical, social, philosophical, and organizational perspective. Includes the study of the industry from regional, state, national and international perspectives for those who want to pursue a career in the industry and for those who want to develop their job skills.

## HOSP 1540 - Hotel Operations Management (3CR) <br> (3L) Examines the basic management functions of planning, budgeting, controlling, staffing, and operating a hotel property. Includes topics such as front office operations, night audit and financial procedures, hospitality management information systems, and legal and human resources practices.

## HOSP 1560 - Convention Sales and

 Management (3CR)(3L) Defines the scope and various segments of the convention market, explains what is required to meet individual needs, and explores methods and techniques which lead to better sales and service.

## HOSP 1570 - Human Resource Hospitality Management (3CR)

(3L) This course presents a systematic approach to human resource management in the hospitality industry. Students will analyze contemporary issues and practices, as well as the trends that transform the way people are managed.

## HOSP 2320 - Food and Beverage Management (3CR)

(3L) Provides a basic understanding of food production and service management, reviewing sanitation, menu planning, purchasing, storage, and beverage management.

## HOSP 2330 - Food and Beverage Services

 (3CR)(3L) Provides students with practical skills and knowledge for effective management of food and beverage services in outlets ranging from cafeteria and coffee shops to room service, banquet areas, and high check average dining room. Presents basic service principles while emphasizing the special needs of guests.

## HOSP 2520 - Marketing of Hospitality Services (3CR)

(3L) This course teaches how to use proven marketing techniques to improve business, and how to discover, identify and reach the desired customer by using marketing tactics specific to hospitality services.

## HOSP 2525 - Recreation and Tourism Planning and Development (3CR)

(3L) Investigates the policy, planning, development, and management practices related to recreation; outdoor conservation practices; state and national park regulations; and other tourism opportunities.

## HOSP 2530 - Tourism Management (3CR)

(3L) Explores major concepts in tourism and how tourism is an important factor in economic development on the local, state. regional, national and global stages. Provides an overview of the principles, practices, and philosophies that affect the cultural, social, economic, psychological, and marketing aspects of human travel and the tourism industry.

## HOSP 2535 - Planning and Control for Food and Beverage Operations (3CR)

(3L) Students will be exposed to the most up-to-date control processes used to reduce costs in food and beverage operations worldwide. The course provides an increased
focus on multi-unit-management and technology applications and exposing students to cutting-edge resources.

## HOSP 2540 - Bar and Beverage Management (3CR) <br> (3L) This course introduces bar and beverage management; planning, equipping, staffing, operating, and marketing a facility; how beverages are made, purchased, controlled, and mixed into different kinds of drinks.

## HOSP 2600 - Leadership and Management in the Hospitality Industry (3CR)

(3L) This course explores quality and leadership issues in today's hospitality industry. Topics include power and empowerment; communication; goal setting; highperformance teams; diversity; managing organizational change; and strategic career planning. Students will learn why traditional management theories don't fit today's industry, and how a company's service strategy relates to guest perception of value.

## HOSP 2620 - Training and Development for the Hospitality Industry (3CR)

(3L) Training is the key to keeping pace with the hospitality industry's changing demands for a qualified workforce. Learn how to develop, conduct, and evaluate one-on-one and group training that will reduce turnover, improve job performance, and help any organization attain its goals. Students will discover why training is an important investment for their property, how to train various levels of employees and how to implement effective instructional design techniques and processes.

## HOSP 2980 - Cooperative Work Experience (Hospitality Management)

(1-3CR) (Max. 9) Students are afforded the opportunity to gain practical on-the-job experience in their area of hospitality management. Students will be supervised by the program coordinator and the employer. A minimum of 80 hours of on-the-job training represents one credit hour. Student must maintain 12 credit hours with a 2.0 GPA during the semester. Prerequisites: full-time hospitality management major and permission of program coordinator.

## HUMN 2020 - Introduction to American Culture (3CR)

(3L) This course is designed as an overview of American culture. All students will develop a framework for a better understanding of some specific aspects of American life, such as family, education, religion, politics and business.

This course will be particularly beneficial for students who have a limited knowledge of the values, perspectives, institutions, and traditions which bind Americans together.

## HUMN 2045 - Asian Art and Culture (3CR)

 (3L) A survey of the visual arts produced in Asia and the Pacific region from the Neolithic era forward. Emphasis will be placed on understanding the cultural, political and/or religious significance of the works in addition to the styles and methods employed in their creation.
## HUMN 2140 - World Literature I (3CR)

(3L) Although primarily a study of the literature of the Classical Period of ancient Greece and Rome, some attention will be paid to the other arts, to religion, and to philosophy. Literary values and the qualities of the greatness of selected works of Western civilization, including any ideas embodied in those works, will be the focus. Prerequisites: ENGL 1010. Cross-listed: (Crosslisted as ENGL 2140.)

## HUMN 2150 - World Literature II (3CR)

(3L) Although primarily a study of the literature of the Middle Ages and beyond, attention will be paid to the other arts, to religion, and to philosophy. Literary values and the qualities of the greatness of selected works of Western Civilization, including any ideas embodied in those works, will be the focus. The class may also include works, including modern works, late in the semester. Prerequisites: ENGL 1010. Cross-listed: (Cross-listed as ENGL 2150.)

## HUMN 2230 - Humanities in Europe: Study of the Origins of Western Culture (3CR)

(3L) A study of the origins of Western culture by participating in Casper College's "Humanities Program in Europe." Students will read certain European literary classics before leaving for Europe (Decameron, Autobiography of Benvenuto Cellini, Life of St. Francis of Assisi, etc.). In Europe, students will take trips to historical and cultural sites, primarily in Florence, Italy and other nearby cities (Assisi, Rome, Venice, Pisa, etc.) in order to study Western cultural origins by directly experiencing the visual arts: painting, sculpture, and architecture. Lectures will be given in Europe in which an attempt will be made to integrate what students have read and experienced.

## HUMN 2250 - Ideas in Ancient Literature, Greek, Roman, Hebrew

(2-3L) (2-3CR) The study of representative literary classics selected from Greek, Roman and Hebrew literature.

## HUMN 2251 - Ideas in Medieval Literature

(2-3L) (2-3CR) The study of representative literary classics selected from Medieval literature.

## HUMN 2252 - Ideas in Renaissance

## Literature

(2-3L) (2-3CR) The study of representative literary classics selected from Renaissance literature.

## HUMN 2253 - Ideas in Modern Literature

(2-3L) (2-3CR) The study of representative literary classics selected from modern literature.

## HUMN 2320 - The Quest for American Identity (3CR)

(3L) This interdisciplinary seminar explores the question of what it means to be an American. By learning from earlier debates over immigration and the African American experience, we will shed light on the role of race and ethnicity in the quest for American identity in the postmodern era. Prerequisites: admission into the honors program.

## HUMN 2425 - World Health (3CR)

(3L) Health is defined by culture and is manifested in the daily life of a society through values, beliefs, health practices, family systems, finances, politics, education, arts and the environment. In addition, the ongoing issues of access, quality and cost of healthcare affect the health of individuals and communities. They also have an impact on the economy and the quality of life of a society. Students must enroll in the college tour attached to this course independently, to ensure travel arrangement to make this learning experience possible.

## HUMN 2475 - Independent Reading in

## Humanistic Values

(1-3CR) (Max. 6) of credit under the tutelage of an instructor who agrees to work with the student. The instructor may also require some written work from the student, but this is left to the instructor's discretion.

## HUMN 2485 - Seminar in Humanities:

## (Subtitle)

(1-3L) (1-3CR) (Max. 12) Offered in answer to specific need or public interest. Includes intensive seminars with a concentrated focus.

## IMGT 2400 - Introduction to Information Management (3CR)

(3L) $[E]$ Concerned with managing the use of information systems to make organizations more competitive and efficient. Specific topics include organizational and technical foundation of information systems and building and managing systems. Prerequisites: CMAP 1200.

## IMGT 2410 - Data Analytics (1CR)

(.5L, $1 L B$ ) Students learn the fundamentals of data analytics with Tableau. Students will work with the Tableau desktop software to analyze specific scenarios and form conclusions based on the data.

## IMGT 2420 - Advanced Data Analytics (1CR)

(.5L, $1 L B$ ) Students learn advanced data analytics using software and develop an understanding of advanced data literacy. Students will work to analyze specific scenarios and form conclusions based on the data. Prerequisites: IMGT 2410, Data Analytics, or permission of the instructor.

## INET 1590 - Web Page Design (3CR)

(2L, 2LB) This course is an introduction to web page authoring. Students develop basic skills in: designing, formatting, managing collections of related web pages, finding WWW resources, and publishing to a server. Extra laboratory work may be required. Windows and Word experience are recommended.

## INET 1610 - Dynamic Web Graphics (3CR)

(2L, 2LB) This course introduces students to dynamic web graphics. Upon completion of this course, participants will have the skills to design and deliver low-bandwidth dynamic websites that incorporate vector graphics with bitmaps, audio, animation, and advanced interactivity to create web experiences that attract and engage visitors. Keyboarding ability is recommended.

## INET 1650 - Web Programming I (3CR)

(2L, 2LB) This course covers the essential concepts of HTML, XML, CSS and beginning JavaScript. Students begin by developing a basic Web page and move on to developing a basic web site. Topics include: working with page design, tables, and frames, creating Web page forms; working with cascading style sheets using multimedia on the Web; HTML and elementary JavaScript; working with objects special effects; windows and frames, and forms.

## INET 1885 - Adobe Photoshop for the Web (3CR)

(2L, 2LB) This course will teach students key Photoshop concepts and techniques utilizing the industry standard digital imaging software, Adobe Photoshop CS3. Using clear, step-by-step, project-based lessons, students will walk through the creation of a specific project with each class building on the student's growing knowledge of the program. The information will be geared toward GUI (Graphic User Interface) specifically based on current WC3 web standards and best practices.

## INET 1890 - Introduction to Web Design (3CR)

( $2 L, 2 L B$ ) This course will allow students to explore and discuss, among many topics, the history of web design, web constraints and advantages, web vs print, design basics, site purpose/location/content, matrix design, accessibility, usability, style, look and feel, fixed vs liquid, liabilities, copyrights, inspiration and trends, etc. Students will also learn what is considered "good" vs "bad" in the subjective and ever-changing world of web design.

## INET 1980 - Cooperative Work Experience

1-3 (Max 6) Students will have the opportunity to gain on-the-job experience to improve and develop web design and development skills. Students will be supervised by the program coordinator and the hosting employer. A minimum of 80 hours of on-the-job training represents one semester hour of work. Students must maintain a 2.0 GPA during the semester for which they are enrolled in this course. Prerequisites: Student must be a Web Design major and have permission of the instructor

## INET 2665 - New Media Communication (3CR)

(2L, $2 L B$ ) Students will receive an introduction into the field that includes all forms of computer-enhanced communication. They will be exposed to the possibilities of utilizing facets of this realm within business and marketing initiatives. Mediums such as television and radio stand to gain from the advantages of two-way dialogue with consumers primarily through the Internet. Examples include video games and virtual worlds as they impact marketing and public relations, multimedia CD-ROMs and DVDs, interactive websites, blogs and vblogs, podcasting, mobile devices, streaming video and streaming audio, online communities, and much more as the technology progresses. Prerequisites: permission of the instructor.

## INET 2670 - Internet Ethics and Cyber Law (3CR)

(3L) This course will discuss current statutes and possible future trends in Internet ethics and cyber law. We will discuss such topics as intellectual property law vs the first amendment, copyrights, trademarks and the Web, cookies, email privacy, censorship, seminal legal cases and much more.

## INET 2675 - Web Design Business <br> Fundamentals (3CR)

(3L) This course will present proven techniques for building a successful web design business. It will include strategies to win more business and boost income and will assist students in overcoming the fear of selling themselves and their business. It will also offer practical advice on organizing a business and techniques to maximize revenue from existing and new clients. Prerequisites: permission of the instructor.

## INET 2895 - Web Design Capstone/Seminar (3CR)

(2L, 2LB) The student will participate in an individual or group class project whereas they research, design, construct and maintain a complete interactive website for a local nonprofit agency or group that is approved by the instructor. This will serve as a culminating activity implementing all appropriate modalities taught within the degree parameters. The website(s) will be handed over to the nonprofit at the end of the course free of charge for them to carry forward. Prerequisites: permission of the instructor.

## INST 1200 - Non-Western Political Cultures (3CR)

(3L) This course gives students an appreciation of nonWestern political cultures and how these cultures have created different political institutions and practices. NonWestern nations of Asia, Africa, and the Middle East are used as case studies. Cross-listed: POLS 1200

## INST 2310 - Introduction to International Relations (3CR)

(3L,) A theoretical and practical survey of the international political system, including concepts of power and power relationship, elements of international organizations and contemporary international relations. Prerequisites: Must have completed POLS 1000 or HIST 1120 or have permission of the instructor. Cross-listed: POLS 2310

## INST 2350 - Introduction to Global Studies (3CR)

(3L) This course introduces students to the main components of the interdisciplinary major in International Studies and to provide preparation for further study of key issues related to globalization.

## ITEC 2360 - Teaching with Technology (3CR)

(3L) Introduction to effective use of computers and other instructional technologies for instruction;
software/hardware selection; integrated, professional, and instructional applications as applied to all areas and levels of P-12 education. Prerequisites: EDFD 2020

## ITEC 2525 - Teaching Online with Moodle (3CR)

(2L, $2 L B$ ) The purpose of this course is to assist faculty in becoming more familiar with the Moodle Learning Management System (LMS). Faculty will study the skills required for constructing and delivering a course in the Moodle platform.

## JAPN 0900 - Japanese for Travelers (1CR)

(1L) This course uses a multi-skill approach; listening, speaking, reading and writing of vocabulary appropriate to travelers who visit Japanese-speaking areas. Students will also become familiar with the culture of Japan.

## JAPN 1010 - First Year Japanese I (4CR)

(4L) This course provides an introduction to the Japanese language through a multi-skill approach and understanding of the Japanese culture/society. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better.

## JAPN 1020 - First Year Japanese II (4CR)

(4L) This course is a continuation of JAPN 1010. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better. Prerequisites: JAPN 1010.

## JAPN 2030 - Second Year Japanese I (4CR)

 (4L) [E] This course is a continuation of Japanese language study at a higher level. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: JAPN 1020.
## KIN 1005 - Introduction to Kinesiology and Health Promotion

(2L) Provides a general concept of the meaning and interpretation of kinesiology, giving specific information for the professional student of kinesiology, the nature of the field, its professional opportunities, personal rewards and satisfactions, and requirements of a sound program of professional preparation.

## KIN 1020 - Taping and Wrapping of Injuries (1CR)

(2LB) This course introduces students to basic taping and wrapping techniques used to prevent and treat common orthopedic pathologies. Students will obtain both didactic information and practical application of taping and wrapping techniques, splinting and ambulatory devises, as well as guidelines for fitting protective equipment.

## KIN 1052 - Introduction to Athletic Training (3CR) <br> (3L) $[E]$ The purpose of this course is to provide the prospective athletic trainer with the skill and knowledge necessary to implement a risk management and preventative program for athletes and others involved in physical activity.

## KIN 1058 - Emergency Management of Athletic Injury/IIIness (3CR)

(3L) $[E]$ The purpose of this course is to provide the prospective athletic trainer with the skill and knowledge necessary to provide for emergency care, triage, and management of emergencies and life-threatening situations for the physically active. Concurrently: Concurrent Enrollment in KIN 2068 is required

## KIN 1960 - Kinesiology and Health Promotion Experience I (1CR)

(2LB) This course introduces students to basics of Health Club / Fitness Center Operations. Students will obtain both didactic information and practical application of the day to day operations in all areas of a Health Clubs / Fitness Centers. Students will have experiences in each of the following areas: 1) Front Desk 2) Programming / Group Ex. / Fitness / Social 3) Facilities / Maintenance 4) Back of House / Business Operations 5) Sales / Marketing 6) Management. As needed

KIN 2050 - Functional Kinesiology (3CR) (2L, 2LB) Building from anatomy knowledge, this course provides a study of normal mechanics of human movement
and functional limitations related to disabling conditions. Upper and lower extremity function is studied. Range of motion and manual muscle testing of kinesthetic movement are practiced. Neuroanatomy concepts related to disabling conditions are presented. Prerequisites: ZOO 2015/ZOO 2015L.

## KIN 2057-Assessment and Evaluation of Athletic Injuries/Illness I (3CR)

(3L) This course provides the prospective athletic trainer with the skill and knowledge necessary to evaluate and recognize upper extremity, cervical spine, and head injuries that occur to the athlete and the physically active.

## KIN 2058 - Assessment and Evaluation of Athletic Injuries/IIIness II (3CR)

(3L) This course provides the prospective athletic trainer with the skill and knowledge necessary to evaluate and recognize lower extremity and spine injuries that occur to the athlete and physically active.

## KIN 2068 - Athletic Training Clinical I (1CR)

(2LB) This course provides clinical and field experience for the athletic training student. Skill and knowledge learned in KIN 1052 and KIN 1058 are applied in the clinical and field settings.

## KIN 2078 - Athletic Training Clinical II (1CR)

(2LB) This course provides clinical and field experience for the athletic training student. Skill and knowledge learned in KIN 1052 and KIN 1058 are applied in the clinical and field settings.

## KIN 2098 - Athletic Training Clinical III (1CR)

(2LB) This course provides clinical and field experience for the athletic training student. Skill and knowledge learned in KIN 1052, KIN 1058 and KIN 2057 are applied in the clinical and field settings.

## KIN 2130 - Directed Study in Human Prosection (3CR)

( $1 L, 4 L B$ ) In this course students will engage in detailed regional dissection of the human body with an emphasis on dissection techniques. It is designed to provide students who already have experience working with a human anatomical donor an additional opportunity to enhance their knowledge of human structure. The donor used for this course will serve as the prosection specimen in ZOO
2140. Prerequisites: ZOO 2140, or permission of the instructor.

## KIN 2960 - Kinesiology and Health

## Promotion Experience II (2CR)

(4LB) This course will build on the knowledge gained from KIN 1960. The students will pick 3 areas of the previous experience to get a more in-depth training and instruction in each of those areas. As needed Prerequisites: KIN 1960: Kinesiology and Health Promotion Experience I

## KIN 2970 - Kinesiology \& Health Promotion Experience III (4CR)

( $8 L B$ ) This course provides a clinical / field internship experience where the student will be able to apply the skills and knowledge previously learned. This can be a rotating offering depending upon where the individual student is in their program Prerequisites: KIN 1960 and KIN 2960

## LEGL 1610 - Introduction to the Paralegal Profession (3CR)

(3L) An introduction to the skills necessary to perform paralegal tasks such as briefing cases and interviewing clients. Will introduce students to substantive legal concepts, ethics, and to careers in the paralegal profession.

## LEGL 1620 - Transactional Law (3CR)

(3L) Transactional law for the paralegal cover's contracts, corporations, probate, and real property skills necessary for the practicing paralegal. Students also participate in a job search seminar. Prerequisites: LEGL 1610.

## LEGL 1700 - Legal Analysis (3CR)

(3L) Covers briefing, legal analysis, and synthesizing skills. Students will brief, analyze and synthesize cases on substantial law issues. Prerequisites: LEGL 1610 or concurrent enrollment.

## LEGL 1710 - Legal Research and Writing I (3CR)

(3L) Covers the basic tools of legal research: citation, federal and state decisions, digests, statutes, law reviews, the use of Shepard's and Westlaw. Students complete research exercises and write an interoffice memorandum. Prerequisites: LEGL 1610, or permission of the instructor.

## LEGL 1720 - Legal Research and Writing II (3CR) <br> (3L) Covers legal writing, fact investigation, interviewing fact witnesses, drafting witness statements and legal drafting. Prerequisites: LEGL 1710.

## LEGL 2500 - Civil Procedure (3CR)

(3L) Uses the Federal Rules of Civil Procedure and the Wyoming Rules of Civil Procedure to teach service of process, filing, discovery, and execution of judgments. Includes the drafting of pleadings and discovery documents, digesting depositions, compiling a medical chronology and case management. Prerequisites: LEGL 1610.

## LEGL 2550 - Litigation Support (3CR)

(3L) Covers substantive tort law in the framework of a trial. Students learn skills necessary to perform as litigation assistants by organizing a trial notebook, working with experts, preparing exhibits, and researching motions. Prerequisites: LEGL 2500.

## LEGL 2610 - Family Law (3CR)

(3L) Covers the substantive law of domestic relations with specific emphasis on the role of the paralegal in these cases.

## LEGL 2970 - Legal Assistant Internship

 (1-3CR) (Max. 6) Students are placed in a law firm, clerk's office, public defender's office, district attorney's office, or other appropriate legal environment. Students will be provided the opportunity to work as paralegals under the supervision of a lawyer and the instructor. Prerequisites: LEGL 1710 and LEGL 2500.
## LEGL 2975 - Independent Studies for the Legal Assistant

(1-3CR) (Max. 6) Faculty-guided research in areas of law relevant to a paralegal career. Students will be given the opportunity to research legal cases, law review articles and other materials. Students will be required to complete projects which will refine their paralegal skills. Prerequisites: LEGL 1710.

## LIFE 1020 - Life Science (4CR)

(3L, 3LB) [E] Life Science is an introductory course emphasizing principles of biology including cell structure and function, genetics, ecology, evolution and organismal biology. The applications of these principles to societal issues such as the conservation of biodiversity, overpopulation and global environmental changes,
biotechnology, and human wellness and disease are also considered. This course fulfills a laboratory science requirement for non-biology majors such as those in the social and behavioral sciences, humanistic studies, etc. Concurrently: This course is a requirement of elementary education majors and should be taken prior to or concurrently with EDCI 1430.

## LIFE 2400 - General Ecology (3CR)

(3L) $[E]$ An introduction to the principles of ecology. Topics stressed include ecosystems, communities, populations, succession, aquatic and terrestrial habitats, natural selection, abiotic interactions, and speciation. Prerequisites: BIOL 1000, BIOL 1010 or equivalent Cross-listed: BIOL 2400

## LIFE 2410 - Field Ecology I (2CR)

(5LB) [E] A field and laboratory course to introduce research methods in general ecology. Includes required field trips. Prerequisites: BIOL 1010, or permission of the instructor. Cross-listed: BIOL 2410

## LIFE 2480 - Cooperative Work Experience

 (1-8CR) This course provides the opportunity to gain life science and/or wildlife management concepts from a vocational or employment experience within the student's area of specialization. A minimum of 80 hours of on-thejob training represents one semester credit hour. The instructor and the employer will supervise students. Prerequisites: Preapproval/consent of instructor; Life Sciences, Environmental Science, or Wildlife Management major. Students must have a 2.0 GPA. Crosslisted: ENR 2480
## MANF 1060 - Excel Technical Applications (3CR)

(3L) This course will focus on the technical application of Microsoft Excel and its use in an engineering/drafting office environment. Students will learn productivity tools in Excel and explore how to integrate Excel with computer aided drafting software to increase productivity. Crosslisted: ENTK 1060

## MANF 1610 - Introduction to Robotics (2CR)

(4LB) Students will explore the principles of robotics by building, programming, and modifying a robot. Students will gain experience in the following areas: fabrication, electronics, computer programming, physics, and teamwork.

## MANF 1616 - Robot Construction (2CR)

(4LB) Advanced class in robotics. Students will be working on complex projects in designing, building, and programming a robot. Students will gain advanced experience in fabrication, electronics, computer programming, physics, and teamwork.

## MANF 2525 - Design and Manufacturing Methods (4CR) <br> (2L, 4LB) A course emphasizing solid modeling and manufacturing techniques involved with various CNC equipment and the impacts of CAD on design and production. Manufacturing techniques utilizing CNC plasma, CNC router, laser engraver, machining/turning center and 3D printer will be covered in this course. Concurrently: ENTK 2010 or instructor approval. Cross-listed: ENTK 2525

## MANF 2550 - Automation Control (3CR)

(2L, $3 L B$ ) Students will design, assemble, and program an automated system. Every other spring semester Prerequisites: ELTR 2815 and ENTK 2525 or Permission of Instructor

## MANF 2690 - Robot Welding (4CR)

( $2 L, 4 L B$ ) Students will learn the fundamentals of safely programming a robot for welding
applications. Prerequisites: WELD 1770 or WELD 1820 or permission of the instructor.

## MANF 2975 - Independent Study Manufacturing

(1-3CR) Manufacturing majors who have completed the introductory courses may be permitted to contract with the instructor for special advanced problems in manufacturing applications. Prerequisites: Sophomore standing and permission of instructor.

## MATH 0000 - Math Computation (3CR)

Courses used to satisfy the math computation requirement for graduation must be selected from the following departments or courses: business administration BADM 1005 (AAS degree only), mathematics (MATH), or statistics (STAT).

## MATH 0900 - Pre-Algebra Arithmetic (4CR)

(4L) The study of rational numbers, the operations of addition, subtraction, multiplication and division of same without a calculator, also includes the study of basic order of operations, unit conversion and percent problems, and linear equations. Prerequisites: ACT Math score of $0-18$, or
an appropriate placement score within the last year. A ' $\mathrm{C}^{\prime}$ or better in this class allows the student to take MATH 0920, MATH 0934 or MATH 1000 within the next academic year.

## MATH 0920 - Elementary Algebra (4CR)

(4L) The study of integer exponents and their properties; linear equations and inequalities: to solve and to graph; also includes the study of function notation and system of equations; and the study of the four basic operations of polynomials and factoring of polynomials. Prerequisites: ACT Math score of 19-20, or an appropriate placement score within the past year, or a "C" or better in MATH 0900. A 'C' or better in the class allows the student to take MATH 0930 or MATH 1000 within the next academic year.

## MATH 0925 - Math Study Skills (1CR)

(1L) Research-based procedures and skills to improve student's math learning and grades and reduce test anxiety. $\mathrm{S} / \mathrm{U}$ grading only.

## MATH 0930 - Intermediate Algebra (4CR)

(4L) The study of rational expression; the operations of addition, subtraction, multiplication and division of same; also includes the study of solutions and properties of rational, quadratic, exponential and logarithmic equations; in addition, students will study applications of same. Prerequisites: ACT Math score of 21-22, or an appropriate placement score within the past year, or a C or better in MATH 0920. A 'C' or better in this class allows the student to take MATH 1100, MATH 1400 or MATH 1450 within the next academic year.

## MATH 0934 - Elementary and Intermediate Algebra (5CR)

(5L) The study of integer exponents and their properties; linear equations and inequalities: to solve and to graph; also includes the study of function notation and system of equations; and the study of the four basic operations of polynomials and factoring of polynomials; also includes the study of rational expressions; the operations of addition, subtraction, multiplication and division of same; also includes the study of solutions and properties of rational, quadratic, exponential and logarithmic equations; in addition, students will study applications of same. This class is an accelerated course that combines MATH 0920 and MATH 0930 content in one semester and is designed for the student who needs a review of these topics. Prerequisites: ACT Math score of 19-20, an appropriate placement score within the past year, or a "C" or better in MATH 0900. A 'C' or better in this class allows
the student to take MATH 1100, MATH 1400, or MATH 1450 within the next academic year.

## MATH 1000 - Problem Solving (3CR)

(3L) $[E]$ Focuses on the strategies of problem solving. Topics in the course are taken from financial mathematics, set theory, logic, probability, statistics and discrete mathematics and "just in time" algebra topics, such as exponents that are necessary to students in their success in this class and in their major. Prerequisites: A " C " or better in MATH 0900; or an ACT Math score of 19 or better; or an appropriate placement score within the past year.

## MATH 1100 - Number and Operations for Elementary School Teachers (3CR)

(3L) This course is for prospective elementary school teachers. Its purpose is to prepare students to be competent in teaching the major concepts of the real number system with the four arithmetic operations. The course includes a study of problem solving, patterns, the origin of numeration systems, sets, number theory, the properties of whole, integer, rational and real numbers, and algorithms for addition, subtraction, multiplication and division. Students will use manipulatives to model/explore mathematics and apply their knowledge through service
learning. Prerequisites: A "C" or better in MATH 0930 or MATH 0934 or an ACT Math score of 23 or better; or an appropriate placement score within the past year.

## MATH 1105 - Data, Probability and Algebra for Elementary School Teachers (3CR)

(3L) This is for prospective elementary school teachers. Its primary emphasis is asking and answering questions intelligently about our world through the use of algebra, probability, and data analysis in order to prepare students to be competent in teaching these major concepts.
Explorations focus on representing, analyzing,
generalizing, formalizing, and communicating patterns and the chances of future events. Students will use manipulatives to model/explore mathematics and apply their knowledge through service-learning. Prerequisites: A "C" or better in MATH 1100.

## MATH 1400 - College Algebra (4CR)

(4L) [E] Elementary functions and graphing for mathematics, science, business, and engineering majors preparing for the regular calculus sequence. Includes exponential and logarithmic functions. Prerequisites: A "C" or better in MATH 0930 or MATH 0934; or an ACT Math score of 23 or better; or an appropriate placement score within the past year.

## MATH 1405 - Trigonometry (3CR)

(3L) $[E]$ The study of the Unit Circle and right triangle approaches, including identities, trigonometric equations, applications of trigonometric functions, and conics. Designed for mathematics, science and engineering majors preparing for the regular calculus sequence. Prerequisites: A "C" or better in MATH 1400; or an ACT score of 26 or better; or an appropriate placement score within the past year. Deletes two hours credit from MATH 1450.

## MATH 1450 - Algebra and Trigonometry (5CR)

(5L) [E] Elementary algebraic and trigonometric functions and graphing for mathematics, science, and engineering majors preparing for the regular calculus sequence. Includes the material in both MATH 1400 and MATH 1405 , as described above. Prerequisites: ACT Math score of $24-25$; or an appropriate placement score within the past year; or a "C" or better in MATH 0930 or MATH 0934. Deletes credit for MATH 1400, and two hours of MATH 1405.

## MATH 2120 - Geometry and Measurement for Elementary School Teachers (3CR)

(3L) This course is for prospective elementary school teachers. Its primary emphasis is on the development of spatial reasoning. Explorations focus on the investigations of two- and three-dimensional shapes, including their properties, measurements, constructions, and transformations with the intent of preparing students to be competent in teaching these major concepts. Students will use manipulatives to model/explore mathematics and apply their knowledge through service learning. Prerequisites: A "C" or better in MATH 1100

## MATH 2200 - Calculus I (4CR)

( $5 L$ ) $[E]$ Introduction to the calculus of single variables. Covers derivatives of polynomial, trigonometric, exponential and logarithmic functions. Includes limits, applications of derivatives and related theorems. Prerequisites: A "C" or better in MATH 1405 or MATH 1450; or an ACT Math score of 27 or better; or an appropriate placement score within the past year.

## MATH 2205 - Calculus II (4CR)

(5L) [E] Completion of the calculus of single variables. Cover integrals of polynomial, trigonometric, exponential and logarithmic functions. Theory includes applications of integration, methods of integration, elementary differential equations, and infinite sequences and series. Prerequisites: A "C" or better in MATH 2200.

## MATH 2210 - Calculus III (4CR)

(5L) [E] Multivariable calculus, including limits and continuity of functions of several variables, partial differentiation, multiple integration, and introduction to vector calculus. Prerequisites: A "C" or better in MATH 2205.

## MATH 2250 - Elementary Linear Algebra (3CR)

(3L) $[E]$ The study of matrices, systems of equations, vector spaces, linear transformations, eigenvectors and applications of linear algebra. Prerequisites: A "C" or better in MATH 2355 or MATH 2200.

## MATH 2300 - Discrete Structures (3CR)

(3L) Dual listing. See COSC 2300 for course description.

## MATH 2310 - Applied Differential Equations I (3CR)

(3L) $[E]$ Solution of first order differential equations, differential operators, LaPlace transforms, systems, power series solutions, and applications. Prerequisites: A "C" or better in MATH 2210.

## MATH 2350 - Business Calculus (4CR)

(4L) The study of single variable calculus emphasizing applications in business and economics. The topics that will be covered include the review of functions, limits and continuity, derivatives with applications and integrals with applications. Prerequisites: A "C" or better in MATH 1400; or an ACT Math score of 26 or better; or an appropriate placement score within the past year.

## MATH 2355 - Mathematical Applications for Business (4CR)

(4L) This course continues business and economics applications of mathematics from MATH 2350. The topics that will be covered include finance, matrices, linear programming, least squares, probability, statistics and use of spreadsheet software. Prerequisites: A "C" or better in MATH 2350.

## MATH 2800 - Math Majors Seminar (2CR)

(2L) Introduces mathematics majors to mathematical investigation, proof, and problem-solving techniques. Students will reinforce skills from previous mathematics courses and will be introduced to concepts from more advanced courses. Emphasis is placed on oral and written communication skills in mathematics. Prerequisites: Completion of MATH 2250 with a C or better.

## MCHT 1570 - Machine Trades Computations (2CR)

(2L) Practical application of mathematical problems and formulas directly related to the machine shop.

## MCHT 1610 - Machine Tool Technology I (2CR)

(1L, $2 L B$ ) An introduction to machine tools and processes. Includes theory and operation of the engine lathe, vertical and horizontal milling machines, bore development and conditioning, sawing, grinding, threading, layout, and machine maintenance.

## MCHT 1620 - Machine Tool Technology II (2CR)

(1L, 2LB) A continuation of MCHT 1610 with more complicated operations and in-depth theory. Topics include shapers, indexing, boring, and broaching. Prerequisites: MCHT 1610.

## MCHT 1640 - Basic Machining Practice (10CR)

(4L, 12LB) Introduction to bench work and machining processes. Includes work on saws, drilling machines, engine lathes, and milling machines.

## MCHT 1650 - Intermediate Machining Practice (10CR)

(4L, 12LB) A continuation of MCHT 1640 with more complicated machining operations and theory. Prerequisites: MCHT 1640.

## MCHT 1680 - Blueprint Reading (2CR)

(2L) Introduces the student to the fundamentals of blueprint reading and freehand sketching as it applies to the machine shop.

## MCHT 1700 - Introduction to CNC Plasma Operations (2CR)

(1L) (2LB) An introduction to the operation and basic programming of the CNC Plasma cutting machine. Also covered will be a beginning class on simple CAD software (utilized with the plasma machine). Prerequisites: None

## MCHT 1900 - Basic Machine Shop for Gunsmithing (4CR)

(2L, 4LB) An introduction to machine tools and processes with an emphasis on gunsmithing applications. Class will include theory and operation of the lathe, milling machines,
sawing, grinding, threading, layout, precision measuring devices and tool sharpening.

## MCHT 1980-Cooperative Work Experience

 (Machine Shop)(1-8CR) (Max. 8) On-the-job training with a cooperative machine shop. Weekly work reports and 80 hours of work for each hour of credit. Prerequisites: permission of the instructor.

## MCHT 2650 - Advanced Machining Practice (5CR)

(2L, $6 L B$ ) Advanced theory and machine operation for second year students. Prerequisites: MCHT 1650

## MCHT 2680 - Metallurgy (3CR)

$(2 L, 2 L B)$ Introduction in different grain structures of commonly used metals and their reaction to heat treatment, welding, machining, surface treatments, and mechanical stress. Various laboratory exercises on stress relief, shrinkage, fatigue, and cooling rates will be presented. The course is designed for anyone interested in welding, machining or technical education requiring knowledge of classification and characteristics of metals.

## MCHT 2780 - Computer Numerical Control (CNC) Machining Center (4CR)

(2L, 4LB) An introductory course in 3-axis CNC machining center programming and 2 -axis CNC plasma cutter programming. The course is structured so no prior experience with CNC machining center or CNC plasma programming or operation is required. The time will be divided between classroom and shop.

## MCHT 2790 - Computer Numerical Control (CNC) Turning Center (4CR)

(2L, $4 L B$ ) An introductory course in two-axis CNC turning center programming. The course is structured so no prior experience with CNC lathe programming or operation is required. The time will be divided between classroom and shop.

## MCHT 2800 - Computer Assisted Manufacturing (3CR)

(2L, $2 L B$ ) Computer applications in programming machine tools. CNC Machining Center and CNC plasma cutter software will be used to acquaint students with CAD/CAM systems.

## MCHT 2965 - Directed Studies

(1-2CR) (Max. 8) An option for students with sufficient background to pursue special problems in the machine shop under contract with the instructor. Prerequisites: MCHT 1610 and permission of the instructor.

## MGT 1000 - Introduction to Supervision (2CR)

(2L) A practical course in business supervision covering communication, attitude perception and modification, group dynamics, orientation and training, discipline, grievances, and termination. Role playing is emphasized as a learning tool. Prerequisites: BADM 1000 or MGT 2100, or permission of the instructor.

## MGT 2050 - Leading Organizational Change (3CR)

(3L) This class will combine leadership concepts with models of organizational change. Change will be examined at the individual, team, and organizational or systems level. The focus is on uncovering traps that create stress, waste resources, slow change efforts, or lead to outright failure and discovering how to lead, cope and win in the face of great change. Class participants become familiar with a variety of change models as they are utilized in real organizations attempting change. The class will examine how organizational culture is an ever-present barrier to lasting change and how that impacts the decision on the part of organizations to initiate change. Prerequisites: MGT 2100 and completion of or concurrent enrollment in MGT 2150.

MGT 2100 - Principles of Management (3CR) (3L) [E] Analyzes objectives, policies, organizational structure, material and human resource utilization, human relations, planning, innovating, and controlling as management responsibilities. Students also study and discuss current activities in specific areas of business and industry.

## MGT 2110 - Organizational Behavior (3CR)

(3L) This is an introductory course exposing students to theoretical assumptions of organizational change. Students will be introduced to such topics as organizational structure, recruitment, retention and succession planning, employee motivation, and diversity and culture within the workplace. Students will explore how diversity and culture impact individuals, organizations and society. Students will learn practical operations of recruiting, retention and development of employees by focusing on matching employees' needs and aspirations within the organization. They will study the different types of organizational
structures and their influence on organizational intelligence, employee development, learning and performance. Prerequisites: MGT 2100.

## MGT 2150 - Leadership (3CR)

(3L) This course will focus on the application of leadership skills in the classroom and in the context of management. There will be a thorough study of leadership theory up to the present, with a focus on how this theory has to be modified to accommodate our changing global environment in business. This course will also focus on how leadership will play a role in restructuring of our organizations, both profit and nonprofit, as business moves into the 21st century. Prerequisites: MGT 1000 , MGT 2100, or permission of the instructor.

## MGT 2200 - Strategic Human Resource Management (3CR)

(3L) Designed to present the methods, functions, and techniques of personnel administration. Emphasis is placed in recruiting, interviewing, selecting, placement, training, and evaluation of personnel. Class discussions and projects will include topics of job design and analysis, compensation and benefit administration, human resource planning, and union/management relations. Prerequisites: MGT 2100, or permission of the instructor.

## MGT 2480 - Cooperative Work Experience (Management)

(1-3CR) (Max. 6) Students are afforded the opportunity to gain practical, on-the-job experience in their specialties. Students will be supervised by the program coordinator and the employer. A minimum of 80 hours of on-the-job training represents one semester hour. Students must maintain 12 credit hours with a 2.0 GPA during the semester. - Prerequisites: full-time management major and permission of the program coordinator.

## MKT 1010 - Sales and Customer Relationship Management (3CR)

(3L) A survey of the principles and methods of the selling process and customer relationship management strategies. Covers topics needed to develop and manage long-term relationships with customers and suppliers. An emphasis is placed on relationship selling, presentation, prospecting, handling objectives, closing techniques, customer service, and service recovery strategies.

## MKT 1100 - Retailing (3CR)

(3L) The fundamentals of retail store organization and management such as the types of retail stores, site
selection, store layout, pricing, display, promotion, and personnel policies.

## MKT 1300 - Integrated Marketing

Communication (3CR)
(3L) National, regional, and local media, layouts, and promotional policies.

## MKT 2000 - Introduction to Digital Marketing (3CR)

(3L) This course will teach students about the everchanging world of e-marketing on the internet. The internet is the first marketing tool on earth that allows for instant networking to billions of potential customers within a personalized relationship model. As businesses all over the world transitions their marketing resources to take advantage of this phenomenon, e-marketing has become a necessary and powerful tool. Students will incorporate contemporary software platforms related to digital marketing and apply foundational knowledge as it relates to the foundation of e-commerce, the role of independent third-parties, security standards and payment systems and software.

## MKT 2100 - Principles of Marketing (3CR)

(3L) [E] Management's approach to analyzing and solving problems in product planning, pricing, promotion, and distribution of goods and services. Consumer orientation and marketing's key role in profitable business operations are emphasized.

## MKT 2200 - Consumer Behavior (3CR)

(3L) This course is an analysis of the psychological and sociological aspects of consumer decision-making and behavior including learning, consumer perception, influence of individual predispositions or buying processes, and group influences. Prerequisites: MKT 2100, or permission of the instructor.

## MKT 2480 - Cooperative Work Experience (Marketing)

(1-3CR) (Max. 9) Students are afforded the opportunity to gain practical on-the-job experience in their specialties. Students will be supervised by the program coordinator and the employer. A minimum of 80 hours of on-the job training represents one semester hour. The student must maintain 12 credit hours with a 2.0 GPA during the semester. Prerequisites: full-time retail merchandising major and permission of the program coordinator.

## MLTK 1500 - Clinical Hematology and Hemostasis (3CR)

(2L, 4LB) An introductory course in the theoretical principles and procedures of hematology and hemostasis combined with relevant application to clinical laboratory medicine. This course provides background knowledge and opportunities to develop technical competencies for laboratory testing of blood, blood products, coagulation, and anticoagulant therapy. Emphasis is on the formed elements of the blood and components of the coagulation cascade and their correlation with
pathophysiology. Prerequisites: BIOL 1000 or BIOL 1010, or MOLB 2210 or MOLB 2240 or instructor permission.

## MLTK 1600 - Clinical Immunohematology (3CR)

(2L, $4 L B$ ) Introductory course on the theoretical principles and procedures in immunohematology and serology (immunology) and their application in the medical laboratory. Emphasis is on blood banking procedures and potential problems that may be encountered in blood bank testing relative to antibody identification, compatibility testing, transfusion reactions and maternal/neonatal screening for hemolytic disease of the newborn. Course provides students with lectures and laboratory experience on immunohematology techniques. Prerequisites: BIOL 1000 or BIOL 1010, or MOLB 2210, or MOLB 2240 or instructor permission.

## MLTK 1700 - Microscopy: Urinalysis and Body Fluids (2CR)

(1L, $4 L B$ ) A variety of microscopic techniques are demonstrated and the advantages of each discussed. Theory and laboratory practice of routine and specialized procedures in analysis of urine and selected body fluids is presented. Clinical correlation between test results and disease states is emphasized. Prerequisites: BIOL 1000 or BIOL 1010, or MOLB 2210, or MOLB 2240, or instructor permission.

## MLTK 1800 - Principles of Phlebotomy (3CR)

(2L, $4 L B$ ) This didactic and laboratory course will introduce the student to the profession and practice of phlebotomy. Course activities and projects provide the student with knowledge and skills necessary to perform a variety of blood collection methods using proper techniques and precautions including: vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture specimen collection on adults, children and infants. Emphasis will be placed on infection
prevention, universal precautions, proper patient identification, specimen acquisition, handling, processing, labeling, and quality assurance. Professional conduct, certification and federal regulatory issues will be covered as well.

## MLTK 1970 - Clinical Practicum: <br> \section*{Phlebotomy (2CR)}

(120 Clinical Hours) This clinical laboratory practicum will introduce the student to the profession and practice of phlebotomy. Students will observe and practice phlebotomy skills and job tasks. Emphasis is placed on the application of phlebotomy knowledge and skills necessary to perform a variety of blood collection methods using proper techniques and precautions including: vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture specimen collection on adults, children and infants. Infection prevention, universal precautions, proper patient identification, specimen acquisition, handling, processing, labeling, and quality assurance are essential tasks associated with the profession. Patient confidentiality must be maintained at all times and professional conduct is expected and assessed as part of the student grade. Prerequisites: MLTK 1800 or concurrent enrollment or instructor permission.

## MLTK 2500 - Clinical Chemistry (3CR)

(2L, 4LB) This course provides fundamental theory and principles of clinical chemistry, advanced instrumentation, and techniques used in clinical laboratories, pharmaceutical research and design, and biotechnology. Primary focus will be on student performance of diagnostic testing and its clinical correlation to disease states, preventive medicine and healthcare. Advanced topics in quality assurance, therapeutic drug monitoring and endocrinology will be discussed. Prerequisites: CHEM 1000 and CHEM 1006, or CHEM 1020 and CHEM 1028, MATH 1000 or MATH 1400, and MLTK 1800 or permission of instructor.

## MLTK 2600 - Clinical Microbiology I (2CR)

(1L, $4 L B$ ) Concentrated laboratory instruction in clinical microbiology including methods for recovery, identification of pathogens, culture techniques, procedures, antibiotic testing and interpretation of clinical data. Emphasis is on clinical specimens, testing algorithms and data correlation including diagnostics, public health, and quality control. This course provides the essential overview of information and technical competencies needed for the clinical experience for medical laboratory technician majors. Prerequisites: MOLB 2210 or MOLB 2240 or instructor permission.

## MLTK 2650 - Clinical Microbiology II (2CR)

( $1 L, 4 L B$ ) Concentrated laboratory instruction in clinical microbiology focusing on fastidious microorganisms, mycobacterium, parasites, viruses and pathogenic fungi. Laboratory skill will include the identification of pathogens, culture techniques, procedures, and interpretation of clinical data. This course provides an essential overview of information and technical competencies needed for the clinical experience for medical laboratory technician majors. Prerequisites: MLTK 2600 or Instructor Permission.

## MLTK 2700 - Immunology (4CR)

(3L, 3LB) Advanced biology course of immune systems: cellular and molecular mechanisms; host resistance to infectious agents; as well as hypersensitivities, autoimmunity, tumor and tissue rejection. Includes laboratory for molecular and immunological techniques. Prerequisites: MLTK 2650 or concurrent enrollment or permission of the instructor.

## MLTK 2800 - Clinical Pathophysiology (4CR)

(3L, 4LB) Advanced topics in clinical chemistry, microbiology, immunohematology, serology, hematology, laboratory management, professional development and laboratory regulatory issues. Students are presented with clinical scenarios for evaluation, interpretation, development of decision-making strategies and resolution. Clinical cases involve advanced principles of clinical laboratory medicine and management. Prerequisites: MLTK 1500 , MLTK 1600 , MLTK 1700 , MLTK 2500 , MLTK 2600, MLTK 2650 and MLTK 2700.
Access to computer technology and internet services.

## MLTK 2971 - Clinical Practicum: Hematology (2CR)

(160 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of hematology. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500 , MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2972 - Clinical Practicum: Chemistry (2CR)

(160 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of chemistry. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500, MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2973 - Clinical Practicum: Immunohematology (2CR)

(160 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of Immunohematology. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500, MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2974 - Clinical Practicum: Microbiology (2CR)

(160 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of microbiology. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500, MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2976 - Clinical Practicum: Serology (1CR)

(80 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of serology. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis
is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500, MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2977 - Clinical Practicum: Urinalysis and Body Fluids (1CR)

( 80 clinical hours) This is an advanced course and clinical laboratory experience in the principles and procedures of urinalysis and body fluid analysis. It is an online supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the application of knowledge and technical skills to clinical testing, methodology, instrumentation, quality control, correlation of laboratory data with pathophysiology, OSHA practices and medical laboratory technician professionalism are included. Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500 , MLTK 2600 , MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MLTK 2978 - Clinical Practicum: Medical Laboratory Technician Professionalism (1CR)

(1L) This is an advanced course and clinical laboratory experience in the principles, procedures, and practice of the medical laboratory technician professional. It is an on-line supported, off-campus clinical laboratory experience taught by clinical faculty. Emphasis is on the career planning, continued professionalism, patient and interdisciplinary interaction, cultural diversity, phlebotomy technical skills, and clinical laboratory testing workflow. This course will be offered in the spring and fall terms to coincide with the MLTK clinical rotation. Prerequisites: Prerequisites: MLTK 1500, MLTK 1600, MLTK 1700, MLTK 2500 , MLTK 2600, MLTK 2650 and MLTK 2700. Access to computer technology and internet services.

## MOLB 2210 - General Microbiology (4CR)

(3L, 3LB) $[E]$ The characteristics of microorganisms will be studied in lecture and laboratory. Lecture will focus on microbiology physiology and classification. Laboratory exercises will emphasize techniques used to culture, isolate and diagnose various types of microorganisms.

## MOLB 2220 - Pathogenic Microbiology (4CR)

(3L, 4LB) [E] A study of disease-producing microorganisms and the laboratory techniques used in the study of these organisms. (Spring semester.) Prerequisites: MOLB 2210.

## MOLB 2240 - Medical Microbiology (4CR)

(3L, 3LB) A study of microorganisms, focusing microbial diversity, microbial physiology, identification, medical significance, basics of immune systems, epidemiology and the laboratory techniques used to study these microorganisms. Prerequisites: A passing grade in BIOL 1000 or BIOL 1010 or the permission of the instructor. An understanding of general biological and chemical concepts is needed.

## MUSC 0200 - Convocation (0CR)

Convocation is a twice-monthly recital hour for students and guest performers. In addition to the scheduled convocations, students will be required to attend 10 additional approved concerts. Grading will be S/U. Completion of four semesters with a grade of S is required for all music majors pursuing a music degree. Full-time music students shall enroll in Convocation as long as they remain music majors. Prerequisites: music majors only.

## MUSC 1000 - Introduction to Music (3CR)

(3L) [E] A one-semester course in music appreciation designed for students with little or no music background. Covers many genres of music to aid students in developing listening skills.

## MUSC 1003 - Introduction to Life as a Music Major (3CR)

(3L) A course designed to prepare students for study in the entire music core curriculum through study of informational literacy, research methods, study skills, music technology, and the early history of the Western Music tradition. Fall semesters

## MUSC 1010 - Music Fundamentals (2CR)

(2L) A general background course in the vocabulary and terminology of music, the structure of the melodic line through scales and solfeggio, the relationship of keys through the key circle, fundamental chord structure, rhythm, and the survey of smaller forms in music.

## MUSC 1024 - The Art of Mixing (2CR)

( $1 L, 2 L B$ ) Become familiar with the steps and techniques necessary to create an audio mix that is pleasing to
listeners. Learn the different steps required in the mixing process including techniques for balancing and blending music by utilizing faders, equalizers, compressors, and digital audio workstation (DAW) controls. Prerequisites: Freshman standing preferred. Community and BOCES students welcome.

## MUSC 1025 - Introduction to Music Education (2CR)

(2L) This course is designed to help music majors explore music education. It is a required course for admission into the teacher education program. Course materials will explore: motivation for teaching; the structure of the American public school and public-school music programs; the changing nature of education; and an introduction to the historical and philosophical foundations of music education. A field experience is required. Prerequisites: music majors only, or permission of the instructor.

## MUSC 1030 - Written Theory I (3CR)

(3L) $[E]$ This course will cover: the fundamentals of music including pitch and clefs, meter and rhythm, scales and modes, intervals, triads, and seventh chords; melodic structure, including motives, cadences, and embellishments; two- and three-part counterpoint; and an introduction to harmony and figured bass. This course is designed to be taken with MUSC 1035; MUSC 1010 may also be required as a co-requisite course depending on the results of the placement exam. Required for all music majors.

## MUSC 1031 - Music Theory I for Musical

 Theatre (3CR)(3L) This course focuses on practical music theory concepts specifically designed for Musical Theatre majors. The principal goal is to build fundamental music structure understanding, music reading, and rhythmic reading. Every fall.

## MUSC 1035 - Aural Theory I (1CR)

(2LB) $[E]$ Instruction in how to hear (dictate) and read (sight-sing) music fluently. Includes simple and compound meters; basic rhythms (beats and first division of the beat); and diatonic melodies in major and minor featuring stepwise motion and skips within the tonic and dominant triads. This course is designed to be taken with MUSC 1030; MUSC 1010 may also be required as a co-requisite course depending on the results of the placement exam. Required for all music majors.

## MUSC 1040 - Written Theory II (3CR)

(3L) [E] A continuation of MUSC 1030. Covers diatonic harmony; structural schemas from the common practice era; two-, three-, and four-part writing; periods and binary forms; and variation techniques. This course is designed to be taken with MUSC 1045. Required for all music majors. Prerequisites: MUSC 1030.

## MUSC 1041 - Music Theory II for Musical Theatre (3CR)

(3L) This course continues to focus on practical music theory concepts specifically designed for Musical Theatre majors. The principal goal is to continue to build fundamental music structure understanding, music reading, and rhythmic reading. Every spring Prerequisites: MUSC 1031

## MUSC 1045 - Aural Theory II (1CR)

(2LB) [E] A continuation of MUSC 1035. Instruction in how to hear (dictate) and read (sight-sing) music fluently. Includes continued instruction in rhythms (second division of the beat and syncopation); diatonic and pentatonic melodies in major, minor, and modes featuring stepwise motion and skips within diatonic triads and seventh chords; and diatonic harmonies. This course is designed to be taken with MUSC 1040. Required for all music majors. Prerequisites: MUSC 1035.

## MUSC 1046 - Musical Theatre Voice (1CR)

(Max. 4) This course requires a one-half hour private lesson per week. This studio music course will provide instruction in both classical and musical theatre voice for musical theatre majors. A fee will be assessed.

## MUSC 1070-Composition (1-2CR)

(1-2CR) 30- or 60-minute weekly private instruction in music composition for majors and non-majors. Majors have a juried piece performed on a convocation, recital, or concert. Course content changes each semester. Prerequisites: MUSC 1030 or instructor's permission

## MUSC 1080 - Baritone Horn I (1-2CR) (Max

 8)(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1090 - Bassoon I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1100 - Cello I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1110 - Clarinet I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1120 - Double Bass I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1130 - Flute I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1140 - French Horn I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1150 - Guitar I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1160 - Harp I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1170 - Oboe I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1180 - Organ I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1190 - Percussion I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1200 - Piano I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1210 - Saxophone I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1220 - Trombone I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1230 - Trumpet I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1240 - Tuba I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1250 - Violin I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1260 - Viola I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1270 - Voice I (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 1272 - Class Voice (1CR)

(2LB) Class instruction in the fundamentals of correct breathing, tone production and diction. Laboratory course designed for students with little or no previous voice training to aid in developing a pleasing tone quality produced with ease and proper enunciation.

## MUSC 1290 - Class Piano I (1CR)

(2LB) Group instruction for music majors concurrently enrolled in MUSC 1030. Designed to equip students with the practical aspects of keyboard fundamentals including technique, rhythm, note reading, scales, intervals, and primary chords. Non-music majors must have permission of the instructor.

## MUSC 1295 - Class Piano II (1CR)

(2LB) A continuation of MUSC 1290 for the music majors concurrently enrolled in MUSC 1040. Designed to equip students with late-elementary keyboard activities including improvisation, harmonization, sight-reading, primary and secondary chords, major and minor scales, solo and ensemble literature. Non-music majors must have the permission of the instructor. Prerequisites: MUSC 1290, or permission of the instructor.

## MUSC 1330 - Public School Methods: String I (1CR)

(2LB) This course is designed to provide music education majors the opportunities for growth both as a teacher and as a player of bowed string instruments. Ample experiences will be provided for students to learn to play both cello and violin. Fall Semester Prerequisites: Co-Requisites: MUSC 1030 and MUSC 1035

## MUSC 1335 - Public School Methods: String II (1CR)

(2LB) This course is designed to provide music education majors the opportunities for growth both as a teacher and as a player of bowed string instruments. Ample experiences will be provided for students to learn to play both bass and viola. Students will also review concepts presented in MUSC 1330. Spring Semester only Prerequisites:
Prerequisites: MUSC 1030, 1035, and 1330

## MUSC 1350 - Public School Methods:

## Woodwind I (1CR)

$2 L B$ Introduction to teaching and playing woodwind instruments, geared toward music education majors. Semester 1 will focus on Flute, Clarinet, and Saxophone. Two 50-minute sessions per week. Prerequisites: Sophomore Status. Must have received a C or higher in MUSC 1030 and MUSC 1040.

## MUSC 1355 - Public School Methods: Woodwind II (1CR)

(2LB) Introduction to teaching and playing woodwind instruments, geared toward music education majors. This semester will focus on double reeds (oboe and bassoon). Two 50 -minute sessions per week. Prerequisites: Sophomore Status. Must have received a C or higher in MUSC 1030 and MUSC 1040.

## MUSC 1378 - College Band (1CR)

(3LB) (Max. 4) Open to all students with experience on brass, woodwind, and percussion instruments. Ensemble prepares standard wind band repertoire for one concert
performance per semester. Course content changes each semester. Prerequisites: permission of the instructor.

## MUSC 1380 - Wind Ensemble (1CR)

(3LB) (6CR Max) The goal of this music performance course is to provide the opportunity for you as a woodwind, brass, or percussion performer to come together with other like-minded (and like-spirited) musicians in an ensemble setting to rehearse and perform standard and emerging literature from the wind ensemble repertoire. In this course we will focus on overall concepts of self and ensemble expression, engagement, participation, and performance. We will also address musical concepts of ensemble and individual balance, blend, intonation, phrasing, dynamics, articulation, tone, rhythmic precision, color, and ensemble clarity. We are going to LISTEN - to ourselves, to each other, and to the music. Course content changes each semester. Prerequisites: Audition.

## MUSC 1388 - Jazz Combo (1CR)

(2LB) (Max. 4) Small-group performance in various jazz styles. Emphasis on ensemble play and individual improvisation. Student arrangements encouraged. Course content changes each semester. Prerequisites: MUSC 2060, concurrent enrollment in MUSC 2060, or permission of the instructor.

## MUSC 1390 - Jazz Ensemble I (1CR)

(3LB) (Max. 6) This laboratory group is open to all students with previous instrumental music experience. The jazz ensemble performs at assemblies, concerts, shows, and on tour. Course content changes each semester. This is an ensemble course and since the content is different each semester, may be repeated up to 6 times for credit. Prerequisites: Experience in music, preferably jazz. Students should be proficient on one of the following instruments: saxophone, trumpet, trombone, guitar, bass, drums, or piano.

## MUSC 1400 - Collegiate Chorale (1CR)

(3LB) (Max. 4) [E] A large non-auditioned mixed choir open to all students regardless of their field of study. Emphasis is on a wide variety of choral literature, including music of diverse cultures. The choir rehearses once each week and performs 1-2 times per semester. Course content changes each semester. Fall and Spring Prerequisites:

## MUSC 1410 - Vocal Ensemble (1CR)

(3LB) (Max. 4) A small vocal ensemble open to all students. The course provides an opportunity to study and perform a variety of diverse popular styles, and culminates in a number of performances in various venues. An
audition determines the final roster of ensemble members. Course content changes each semester. Prerequisites: audition with the instructor.

## MUSC 1412 - Chamber Singers (1CR)

A selected mixed chamber ensemble of 20-35 voices open to all students on campus regardless of their field of study. An audition with the instructor determines the final list of singers. Credit is given for attendance at four weekly rehearsals and concert performances. Emphasis is on a wide variety of choral literature appropriate for chamber choirs, including music from diverse cultures, musical time periods, and language. Course content changes each semester. Fall and Spring Prerequisites: Audition with Instructor

## MUSC 1420 - Opera Workshop (1CR)

(3LB) (Max. 4) [E] Opera Workshop is a performancebased class designed to provide experience and opportunities for singers interested in exploring the genre. Students will learn basic performance techniques and will improve their dramatic abilities through the performance of an operatic scene. Course content changes each semester. Prerequisites: Permission of the instructor.

## MUSC 1425 - History of Rock Music (3CR)

(3L) This course examines the social, cultural, and stylistic history of rock n' roll music, beginning with important musical precedents such as blues and jazz, and progresses through punk and metal into current global varieties of rock n ' roll. Throughout the history, cultural and social contexts are presented and analyzed for their impact on the art form.

## MUSC 1440 - Chamber Orchestra (1CR)

(2LB) (Max. 4) [E] A performance class open to all string players on campus. This course is designed to cover a variety of literature from primarily the Baroque era. Open to all students on campus, BOCES students and community members regardless of their field of study. Credit is given for attendance at the two weekly rehearsals and concert performances. Emphasis is placed on the study of stylistic concerns of string performance including bowings, articulations, dynamics and ensembles. Course content changes each semester. Prerequisites: permission of the instructor.

## MUSC 1450 - Percussion Ensemble (1CR)

(3LB) (Max. 4) [E] Performs selected diverse chamber music for various combinations of percussion instruments and is open to all students with previous percussion experience who can qualify by audition for participation. Course content changes each semester.

## MUSC 1480 - Chamber Music I: (Subtitle) (1CR)

(2LB) (Max. 4) [E] Designed to provide students with training in the ideal medium of chamber music (small ensembles, such as trio, string quartet, etc...), where they can apply and integrate all elements of their musical knowledge. These include, but are not limited to, rhythm, intonation, tone production, blend, musical interpretation, concept of style, etc... Subtitle will vary in accordance with student needs. Prerequisites: permission of the instructor.

## MUSC 1500 - Introduction to Digital Audio Workstation Software (1CR) <br> (1L) Introduction to Pro Tools Digital Audio Workstation Software. Familiarization with the user interface and understanding of the various features and capabilities. Prerequisites: Freshman standing preferred, community and BOCES students welcome.

## MUSC 2025 - World Music (3CR)

(3L) Students learn strategies for how to listen to and compare the sound of various musical cultures. Students will also gain a deeper understanding of the local contexts of these musical expressions and how music carries meaning through complex networks of signification (e.g., ethnic identity, race, class, political, religious, economic, historical, technological, etc.).

## MUSC 2026 - Intro to Film and Video Game Music (3CR)

(2L, 2LB) This course examines the history, musical elements, and musical styles of film and video game music. Beginning in the late 1800s with silent films and continuing to the present day, this course provides an overview of the major stylistic trends and musical influences that led to the development of film and video game scoring as a vital and living dramatic art form. Throughout the course, the interaction between sound, image, and narrative is explored. Spring semesters

## MUSC 2030 - Written Theory III (3CR)

 (3L) [E] A continuation of MUSC 1040. Covers chromatic harmony and modulation; vocal forms and analysis of art and pop songs; contrapuntal techniques including fugue; composite ternary, rondo, and sonata forms. Required for all music majors. Prerequisites: MUSC 1040.
## MUSC 2035 - Aural Theory III (1CR)

(2LB) [E] A continuation of MUSC 1045. Instruction in how to hear (dictate) and read (sight-sing) music fluently. Includes continued instruction in rhythms (super triplets
and hemiola); chromatic melodies in major and minor featuring stepwise motion and chromatic skips; and chromatic harmonies. This course is designed to be taken with MUSC 2030. Required for all music majors. Prerequisites: MUSC 1045.

## MUSC 2040 - Written Theory IV (3CR)

(3L) [E] A continuation of MUSC 2030. Covers linear chromaticism and basic neo-Riemannian theory; Impressionistic scales and modes; atonality, basic set theory, and basic serial techniques; and other rhythmic, formal, and melodic processes of 20th-century music. This course is designed to be taken with MUSC 2045. Required for all music majors. Prerequisites: MUSC 2030.

## MUSC 2045 - Aural Theory IV (1CR)

(2LB) [E] A continuation of MUSC 2035. Instruction in how to hear (dictate) and read (sight-sing) music fluently. Includes continued instruction in meter and rhythms (asymmetric and changing meters, quintuplets, and septuplets); melodies and harmonies featuring modulation; melodies featuring whole tone and octatonic scales and other common non-diatonic pitch collections; and aural recognition of musical forms. This course is designed to be taken with MUSC 2040. Required for all music majors. Prerequisites: MUSC 2035.

## MUSC 2050 - Music History Survey I (3CR)

(3L) [E] A comprehensive study of the history of music with emphasis on period method of study, beginning with the music of the ancient world. This takes the student through the Gregorian Chant and the modes of the 13th and 14th centuries, the Renaissance, church music, both vocal and instrumental, and to the closing of the period known as Baroque, at the death of J. S. Bach in 1750.

## MUSC 2055 - Music History Survey II (3CR)

(3L) [E] Beginning with the period known as the Classical following the Baroque, the course continues into the Romantic period, Beethoven, 19th-century opera, impressionism, music drama of R. Wagner, and closes with music of the 20th century.

## MUSC 2060 - Jazz Improvisation I (1CR)

(2LB) Offers the jazz-oriented student an organized approach to learning the extemporaneous creation of music in the jazz idiom. This creation is expressed by music performance. Prerequisites: permission of the instructor.

## MUSC 2063 - Blues, Jazz, and Rock (3CR)

(3L) Blues, Jazz, and Rock traces the roots of American popular music from its inception during the 16th century until the present day. The course will discuss the genres of blues, jazz, and rock and how each of these grew from the musical tradition that preceded it. Additionally, the course will explore the unique geography and cultural influences that helped inspire each of the three genres discussed in the course. Prerequisites: None Concurrently: None

## MUSC 2065 - Jazz Improvisation II (1CR)

(2LB) A continuation of Jazz Improvisation I. Students will apply skills acquired in Improvisation I to jazz standards while learning more advanced scales, chord structures and techniques. Prerequisites: MUSC 2060.

## MUSC 2071 - Vocal or Instrumental

(1-2CR) 30- or 60- minute weekly private instruction in the specific instrument for majors and non-majors. Majors attend scheduled studio classes and perform a final jury. A course fee is assessed. Course content changes each semester.

## MUSC 2080 - Baritone Horn II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2090 - Bassoon II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2100 - Cello II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2110 - Clarinet II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury
are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2120 - Double Bass II (1-2CR) (Max.

 8)(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2130 - Flute II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2140 - French Horn II (1-2CR) (Max.

 8)(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2150 - Guitar II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2160 - Harp II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2170 - Oboe II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors.

The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2180 - Organ II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2190 - Percussion II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2200 - Piano II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2210 - Saxophone II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2220 - Trombone II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2230 - Trumpet II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2240 - Tuba II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2250 - Violin II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60-minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2260 - Viola II (1-2CR) (Max. 8)

(Studio) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to non-majors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2265-Music Education Portfolio

 Review (S/U)This course is required for completion of the A.F.A. in Music Education. It serves as a capstone review and will assess competency in oral and written communication skills, sight singing, and organizational skills. Completion is in the last semester of the sophomore year. Offered satisfactory/unsatisfactory only. Offered spring semester only Prerequisites: MUSC 1025, MUSC 2030, MUSC 2035, MUSC 2302

## MUSC 2270 - Voice II

(1-2CR) (Max. 8) 30- or 60-minute weekly private instruction in the specific instrument. Scheduled studio classes and final jury are required. The 30 -minute lesson is open to non-majors. The 60 -minute lesson is open to nonmajors with the permission of the instructor. A course fee is assessed. Course content changes each semester.

## MUSC 2290 - Class Piano III (1CR)

(2LB) A continuation of MUSC 1301 for music majors currently enrolled in MUSC 2030. Designed to equip students with intermediate-level skills including improvisation, harmonization, sight reading, chord progressions, all scales and arpeggios, Baroque and Classic keyboard styles. Non-music majors must have permission of the instructor. Prerequisites: MUSC 1295.

## MUSC 2295 - Class Piano IV (1CR)

(2LB) A continuation of MUSC 2302 for music majors concurrently enrolled in MUSC 2040. Designed to introduce the student to accompanying techniques, instrumental and vocal score reading, C clefs, late intermediate skills including transposition, improvisation, harmonization, sight reading, chord progressions, all scales and arpeggios, romantic and 20th century keyboard styles. Non-music majors must have permission of the instructor. Prerequisites: MUSC 2290.

## MUSC 2320 - Diction for Singers I (2CR)

(2L) $[E]$ A course to facilitate proper enunciation in English and Italian and help voice students with their repertoire of art songs and operatic arias.

## MUSC 2395 - Piano Proficiency

The Piano Proficiency Examination is required of all music majors seeking the Associate of Arts or the Associate of Fine Arts. A student who passes the Class Piano sequence (MUSC 1300, 1301, 2302, 2303) with a "B" or better for each course must still register for MUSC 2395, but will not be required to take the exam and will receive a passing grade, "S," for the course. Every semester

## MUSC 2415 - Sound Reinforcement I (2CR)

(2L) Introduction to the theory, techniques, and equipment used in sound recording and reinforcement. Topics include acoustics, microphones, recorders, editing, mixing, and effects. (Fall semester.)

## MUSC 2420 - Sound Reinforcement II (2CR)

(2L) A study of the basic concepts, equipment and techniques used in the operation of an audio recording console. Topics include console function, mixing, effects, microphone placement and choice, patch bay, and console flow logic. (Spring semester.) Prerequisites: MUSC 2415.

## MUSC 2465 - Directed Studies in Music:

## (Subtitle)

(1-3CR) (Max. 6) Individualized investigation of selected topics under the supervision of a faculty member. Prerequisites: permission of the instructor.

## MUSC 2475 - Independent Study

 Audio/Recording(1-3CR) Students will independently produce and engineer a recording project. Prerequisites: completion of or concurrent enrollment in MUSC 2415, MUSC 2420, or permission of the instructor.

## NURS 1100 - Professional Nursing Care in Health Promotion (10CR)

( $5 \mathrm{~L}, 15 \mathrm{LB}$ ) This semester introduces the learner to the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Health promotion includes learning about self-health and health in children, adults, older adults, and the family experiencing a normal pregnancy and delivery. Learners will value evidence about healthy lifestyle patterns and risk factors for disease and illness, apply growth and development theory, develop therapeutic relationships, conduct an age appropriate and culturally sensitive health assessment, and promote health using the nursing process and standards of professional nursing. Guided learning experiences in various community settings and facilities are correlated with classroom and laboratory instruction. Prerequisites: Admission to the nursing program. Concurrently: ZOO 2025 (if not taken previously).

## NURS 1200 - Professional Nursing Care of the Patient with Chronic IIIness (10CR)

$(5 L, 15 L B)$ This semester introduces the learner to the patient and family with chronic illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Learners will use caring behaviors, therapeutic communication and advocacy when providing care to patients with chronic illness across the lifespan. The learner will identify the roles and values of the members of the interprofessional healthcare team. The patient-and family-lived experience is emphasized. Guided and/or precepted learning experiences in various community settings and facilities are correlated with classroom and laboratory instruction. Prerequisites: NURS 1100 Concurrently: Concurrent enrollment in PSYC 1000 (if not taken previously).

## NURS 2300 - Professional Nursing Care of the Patient with Acute IIIness (10CR)

( $5 \mathrm{~L}, 15 \mathrm{LB}$ ) This semester introduces the learner to the patient and family with acute illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. Learners will use caring behaviors, therapeutic communication and advocacy when providing care to patients with acute illness across the lifespan, including acute complication of pregnancy and delivery. The learner will facilitate the effectiveness of the interprofessional healthcare team. The patient-and familylived experience is emphasized. Guided and/or precepted learning experiences in various community settings and facilities are correlated with classroom and laboratory instruction. Prerequisites: NURS 1200 Concurrently:

ENGL 1020 OR ENGL 2005 OR ENGL 2020/COM2 (if not taken previously)

## NURS 2400 - Professional Nursing Care of the Patient with Complex Illness (10CR)

( $5 \mathrm{~L}, 15 \mathrm{LB}$ ) This semester introduces the learner to the patient and family with complex illness using the concepts of health promotion, safety, clinical judgment, leadership, patient centeredness, and professionalism. This semester is focused on the vulnerable patient which could include multisystem acute and chronic disease processes and physiological, mental and socioeconomic factors that put the patient at risk, including complication of pregnancy and delivery. The patient-and family-lived experience is emphasized. Guided and/or precepted learning experiences in various community settings and facilities are correlated with classroom and laboratory instruction. Prerequisites: NURS 2300 Concurrently: POLS 1000 (if not taken previously)

## OCTH 2000 - Introduction to Occupational Therapy (2CR)

(2L) This course is designed to introduce students to the occupational therapy profession. As the history, scope of practice, objectives and functions of occupational therapy are addressed, students will affirm their academic decision.

## PEAC 1001 - Health \& Wellness (1CR)

(2LB) This physical education activity course is designed as an online laboratory to allow each student the benefit of setting his or her own schedule. Emphasis in a variety of basic areas of physical fitness: program development, muscle strength, muscle endurance, flexibility, and cardiovascular conditioning and nutrition. The student is responsible for meeting the minimum exercise standards in order to receive credit. This would meet the requirements for the PE credit

## PEAC 1015 - Beginning Scuba (1CR)

(2LB) Safe diving procedures, proper use of scuba equipment, and dive tables. The course is presented in three segments: lectures, pool, and open water dives. Upon satisfactory completion of the course, the student will be certified in accordance with the Professional Association of Diving Instructors (PADI) for open water dives. Prerequisites: instructor permission only.

## PEAC 1020 - Fitness Training (1CR)

(2LB) Students will learn how to test their fitness, set goals, and develop a fitness program to specifically target their fitness goals. Students will participate in professionally
designed workouts as well as their own created workouts. Additional course topics include basic nutrition, muscular anatomy, and more. Students wishing to use the Casper College Fitness Center should sign up for the in-class option and those planning to participate off campus should register for the online section.

## PEAC 1030 - Dance Aerobics (1CR)

(2LB) A fitness class using a variety of exercises that stimulates heart and lung activity for a time period sufficiently long to produce beneficial changes in the body. Strength development by weight training is also included.

## PEAC 1041 - Basic Self-Defense (1CR)

(2LB) A basic course in self-defense covering some home self-defense breakaway techniques and how to handle general distress situations.

## PEAC 1042 - Basic Self-Defense II (1CR)

(2LB) Continuation of basic self-defense. Combination strikes, counter techniques, throws and falls, advanced kicks, takedowns and further awareness of personal safety issues.

## PEAC 1044 - Beginning Tae Kwon Do (1CR)

(2LB) A basic course in the art of Tae Kwon Do teaches the mental training and techniques of unarmed combat for selfdefense.

## PEAC 1045 - Kickboxing (1CR)

(2LB) This kickboxing course is a martial arts fitness class. Students learn proper kicking and punching techniques and self-defense skills. The course provides students an opportunity to increase martial arts skills, flexibility, and improved cardiovascular performance.

## PEAC 1048 - Kickboxing II (1CR)

(2LB) This kickboxing course is a martial arts fitness class. Students learn proper kicking and punching techniques and self-defense skills. The course provides students an opportunity to increase martial arts skills, flexibility, and improved cardiovascular performance. Prerequisites: PEAC 1045.

PEAC 1050 - Beginning Tennis (1CR)
(2LB) Beginning co-ed activity class of tennis basic skills and techniques.

## PEAC 1253 - Beginning Bowling (1CR)

(2LB) A basic activity class providing background and instruction in the lifetime sport of bowling. Instruction is given with emphasis on developing skills.

## PEAC 1255 - Beginning Golf (1CR)

(2LB) A basic activity class providing background in golf. Golf instruction is given at the driving range and in the gymnasium with emphasis on beginning skill level.

## PEAC 1257 - Beginning Racquetball (1CR)

(2LB) Will provide the student the opportunity to learn the basic skills, rules, and strategy of the game.

## PEAC 1266 - Trapshooting (1CR)

(2LB) Designed to acquaint students with firearm safety, gun anatomy, reloading techniques, and in trapshooting techniques and rules. Students provide their own ammunition and pay for the clay birds used.

## PEAC 1267 - Advanced Trapshooting (1CR)

(2LB) Designed for the more accomplished trap shooter. Singles, doubles, modified clay bird, and handicap shooting will be stressed. Gun safety and reloading techniques. Students provide their own ammunition and pay for the clay targets used. Prerequisites: PEAC 1266, or permission of the instructor.

## PEAC 1271 - Weight Loss Conditioning (1CR)

(2LB) Promotes fitness and safe weight loss techniques through exercise and diet.

## PEAC 1273 - Weight Training and Conditioning (1CR)

(2LB) Individual training in the Fitness and Wellness Center, emphasizing large muscle activity and cardiovascular development.

## PEAC 1274 - Advanced Weight Training (1CR)

(2LB) A continuation of PEAC 1273. This course is designed for students who want to set up an individualized program for large muscle activity and cardiovascular development. Prerequisites: PEAC 1273 or permission of the instructor.

## PEAC 1275-Circuit Training (1CR)

(2LB) Introduces basics of circuit training and develops improvements in cardiovascular endurance, body composition, flexibility, muscular endurance, and strength.

## PEAC 1279 - Tae Kwon Do II (1CR)

(2LB) Tae Kwon Do is a martial art that teaches the mental training and techniques of unarmed combat for self-defense as well as health involving the skilled application of punches, kicks, blocks, and dodges with bar hands and feet to neutralize opponents.

## PEAC 1281 - Fly Fishing (1CR)

( $2 L B$ ) This is an introductory course in techniques and skills essential to fly-fishing. Class will be conducted in the classroom, gym and the outdoor environment. The course will include field trips to local fishing areas. All fish caught during class will be released.

## PEAC 1290 - Mat Pilates (1CR)

(2LB) A fitness class performed on a mat using the classical method developed by Joseph Pilates.

## PEAC 1294 - Beginning Yoga (1CR)

(2LB) A basic course in yoga covering the yoga postures, some breath work, meditation and relaxation. A basic yoga class will go a long way toward retaining optimal health.

## PEAC 1387 - Indoor Rock Climbing (1CR)

(2LB) An introductory course in technical rock climbing conducted at an indoor climbing gym with a field trip to a local outdoor climbing area.

## PEAC 1460 - Modern Dance I (1CR)

(3LB) This course is an introduction to the principles and techniques of Modern Dance. Dancers will focus on technique, terminology, and the execution of the basic steps, as well as the discovery of movement in space and time. This class will serve the student as a study in exploration of the basic ideas of Modern Dance. Crosslisted: DANC 1460

## PEAC 1470 - Modern Dance II (1CR)

( $3 L B$ ) This course will be an introduction to the principles and techniques of Modern Dance. Dancers will focus on technique, terminology, and the execution of the basic steps, as well as the discovery of movement in space and time.

## PEAC 1680 - Extreme Fitness (1CR)

(2LB) This course is designed to give students an understanding of the importance of physical fitness, cardiovascular conditioning, muscular strength, muscular endurance and flexibility.

## PEAC 1681 - Extreme Fitness II (1CR)

(2LB) This course is designed to give students an understanding of the importance of physical fitness, cardiovascular conditioning, muscular strength, muscular endurance and flexibility, and its relevance to the fire service. We will focus on developing strength through weight training Spring Only

## PEAC 2001 - Physical Fitness and Wellness I (1CR)

(2LB) [E] This physical education activity course is open to all students. It is designed as an open laboratory to accommodate each student's needs. Emphasis is placed in three areas of physical fitness: strength, flexibility, and cardiovascular endurance. Pin select weight machines will be used in circuit training concept to develop more effectively one's level of physical fitness. Free weights are also available. Orientation for the class is required.

## PEAC 2002 - Physical Fitness and Wellness II (1CR)

(2LB) This physical education activity course is open to all students. It is designed as an open laboratory to accommodate each student's needs. Emphasis is placed in three areas of physical fitness: strength, flexibility, and cardiovascular endurance. Pin select weight machines will be used in circuit training concept to develop more effectively one's level of physical fitness. Free weights are also available. Orientation for the class is required.

## PEAC 2003 - Physical Fitness and Wellness III (1CR)

(2LB) This physical education activity course is open to all students. It is designed as an open laboratory to accommodate each student's needs. Emphasis is placed in three areas of physical fitness: strength, flexibility, and cardiovascular endurance. Pin select weight machines will be used in circuit training concept to develop more effectively one's level of physical fitness. Free weights are also available. Orientation for the class is required.

## PEAC 2004 - Physical Fitness and Wellness IV (1CR) <br> (2LB) This physical education activity course is open to all students. It is designed as an open laboratory to accommodate each student's needs. Emphasis is placed in

three areas of physical fitness: strength, flexibility, and cardiovascular endurance. Pin select weight machines will be used in circuit training concept to develop more effectively one's level of physical fitness. Free weights are also available. Orientation for the class is required.

## PEAC 2005 - Personal Fitness

Audit only course. Designed as open laboratory to accommodate each student's needs. Emphasis on strength, flexibility, and cardiovascular endurance. Universal equipment used in circuit training concept. Free weights also available.

## PEAC 2007 - Express Fitness (1CR)

(2LB) This physical education activity course is designed as an open laboratory to allow each student the benefit of setting his or her own schedule. Emphasis is placed in four areas of physical fitness: muscle strength, muscle endurance, flexibility, and cardiovascular endurance. The Fitness Center contains aerobic equipment, a universal circuit, and free weights to develop more effectively one's level of physical fitness. The student is responsible for meeting the minimum exercise standards in order to receive credit. All students must complete an orientation and initial meeting prior to starting their program.

## PEAC 2044 - Tae Kwon Do III (1CR)

(2LB) An intermediate course in the art of Tae Kwon Do. Teaches the mental training and techniques of unarmed combat for self-defense. Prerequisites: PEAC 1279.

## PEAC 2050 - Intermediate Tennis (1CR)

(2LB) Continuation of the basic skills and techniques of tennis. Students will learn strategies of singles and doubles play. Beginning tennis not a requirement if the student has prior tennis experience.

## PEAC 2053 - Intermediate Bowling (1CR)

(2LB) Online course for the intermediate to advanced bowler who does not need hands on instruction for practice. Material covered will include terminology, bowling history, bowling strategies, and game variations. Students will also be required to participate in bowling activities which must be signed off by a staff member at their chosen location. Any fees associated with participation will be paid by the student. It is highly recommended that students have bowling experience before taking this course.

## PEAC 2054 - Tae Kwon Do IV (1CR)

(2LB) An intermediate course in the art of Tae Kwon Do. Teaches the mental training and techniques of unarmed combat for self-defense. Prerequisites: PEAC 2044.

## PEAC 2055 - Intermediate Golf (1CR)

(2LB) Online course for the intermediate to advanced golfer who does not need hands on instruction for practice. Material covered will include terminology, golf history, and basic to advanced rules and strategies of the game. Students will also be required to participate in golf activities which must be signed off by a staff member at their chosen location. Any fees associated with participation will be paid by the student. It is highly recommended that students have golf experience before taking this course.

## PEAC 2084 - Outdoor Living Skills (1CR)

(2LB) An introductory course conducted in a back-country setting. Fitness Center orientation, a physical conditioning program, and classroom sessions are required prior to the trip.

## PEAC 2460- Service Learning Through Physical Work

. 5 Lecture, 1 Lab, 1 Credit Students will collaborate to identify a public service activity that includes physical labor. With guidance from the instructor, students will organize, plan, and carry out a physical labor project that includes at least 15 hours of physical activity. Benefits of physical activity will be discussed as well as the specific health and fitness benefits of the planned project. Every Fall and Spring Prerequisites: None

## PEAT 1000 - Varsity I (1CR)

(2LB) Team competition with regular practice sessions. Prerequisites: permission of instructor.

## PEAT 1005 - Varsity II (1CR)

(2LB) Team competition with regular practice sessions. Prerequisites: permission of instructor.

## PEAT 1010 - Cheerleading (1CR)

(2LB) Current enrollment limited to cheerleaders. Selection is to be made at fall semester. Prerequisites: permission of instructor.

## PEAT 2000 - Varsity III (1CR)

(2LB) Team competition with regular practice sessions. Prerequisites: permission of instructor.

## PEAT 2005 - Varsity IV (1CR)

(2LB) Team competition with regular practice sessions. Prerequisites: permission of instructor.

## PEAT 2025 - Rodeo (1CR)

(2LB) (Max. 4) Designed to prepare rodeo athletes for competition in the nine different rodeo events. Emphasis is put on improving and developing the techniques needed to perform in the rodeo arena along with instruction in the interpretation of the rules regulating all rodeo events. Prerequisites: must become an active NIRA member and participate in all CRMR rodeos or have instructor's approval.

## PEPR 1052 - Prevention and Care of Athletic Injuries (3CR)

(3L) Theory and practical application in the field of athletic training. Emphasizes prevention and care of athletic injuries, wrapping and taping techniques.

## PEPR 2012 - Physical Education for Elementary School (3CR)

$(2 L, 2 L B)$ [E] Fundamental skills and principles of movement and the progressions as they would be presented in the elementary education program. Students have practical experience in participation and teaching. Includes rhythmic and dance, gymnastics, games, and sports skills.

## PEPR 2030 - Motor Learning (3CR)

(3L) Exploration and explanation of material and methods that underlie the learning and performance of motor skills.

## PEPR 2090 - Foundations of Athletic

 Coaching (3CR)(3L) Provides prospective coaches with current information about scientific foundations of coaching: theory, methodology, administration, management, and psychology. Required for athletic coaching permit in Wyoming.

## PEPR 2091 - Sports Officiating I (2CR)

(1L, 2LB) For physical education majors wishing to acquaint themselves with the skills and techniques of officiating the major sports: football, basketball, volleyball and soccer.

PEPR 2100 - Theory of Coaching: (2CR)
(2L) Study of the skill analysis, strategy and training involved in coaching. Includes methods of coaching.

## PEPR 2110 - Foundations of Coaching (3CR)

(3L) Provides prospective coaches with current information about scientific foundations of coaching: theory, methodology, administration, management, and psychology. Required for athletic coaching permit in Wyoming.

## PEPR 2135 - Personal Trainer Education (3CR)

(3L) This course introduces students to exercise science principles, client assessment, and exercise program design. Students learn how to utilize multiple tools, skills, and knowledge to assess clients' health and fitness. Students will further learn how to design and implement programs to improve muscular strength, cardiovascular endurance, body composition, and other health related components of fitness.

## PEPR 2136 - Sports Nutrition (3CR)

(3L) This course introduces the student to evidence-based information relating directly effective nutrition for the active as well as Athletes looking for performance enhancement.

## PEPR 2460 - Field Experience (Physical Education) (2CR)

(2-4LB) (1-2CR) Thirty hours per credit of hands-on experience observing/assisting/instructing in various physical education activities: swimming, fitness, gymnastics, adaptive physical education, elementary physical education and coaching. Prerequisites: permission of the instructor.

## PHIL 1000 - Introduction to Philosophy (3CR)

(3L) $[E]$ An introduction to some of the main problems confronting the philosophical thinker, including those concerning truth, knowledge, language, morality, the existence of God, the nature of reality, freedom, and the meaning of life. Possible solutions to these problems will be considered. Prerequisites: ENGL 1010

## PHIL 2300 - Ethics in Practice (3CR)

(3L) [E] An in-depth examination of the two seminal questions in ethics: What is happiness? How do you achieve it? Study includes works of major ancient and modern ethical thinkers and deductions of certain ethical
principles by which we will judge contemporary ethical issues in medicine, business, environment, etc. Prerequisites: ENGL 1010.

## PHIL 2420 - Critical Thinking (3CR)

(3L) [E] The art of critical thinking: how to analyze logical arguments, to construct logical arguments, and to expose fallacies in fallacious reasoning. Prerequisites: ENGL 1010.

## PHTK 1000 - Pharmacy Calculations I (1CR)

(1L) A review of basic arithmetic, an introduction to the metric and apothecary systems, and computation of medication dosages. Prerequisites: Admission to the Pharmacy Technology program or permission of the instructor. Students must have an ACT score of 21 or better if out of high school less than two years, a COMPASS placement score of 40 or better in the algebra placement domain, or have a "C" or better in MATH 0920.

## PHTK 1600 - Pharmacy Simulation

## Laboratory I (4CR)

(2L, 4LB) This course introduces the student to the actual working of a pharmacy. Students are introduced and allowed to train towards the performance of operational procedures in the retail pharmacy setting. May be used as CE for licensed technicians. Concurrently: Concurrent enrollment in PHTK 1650 and PHTK 1710.

## PHTK 1610 - Pharmacy Simulation Laboratory II (4CR)

( $2 L, 4 L B$ ) This course introduces the student to the actual working of a pharmacy. Students are introduced and allowed to train towards the performance of operational procedures in the institutional pharmacy setting. May be used as CE for licensed technicians. Prerequisites: PHTK 1600. Concurrently: Concurrent enrollment in PHTK 1630, PHTK 1720 and PHTK 2971.

## PHTK 1630 - Pharmacy Calculations II (2CR)

(1L, 2LB) Application of basic mathematics as it applies to compounding and dispensing prescriptions. Prerequisites: PHTK 1600. Concurrently: Concurrent enrollment in PHTK 1610, PHTK 1720 and PHTK 2971 or permission of the instructor. May be used as CE for licensed technicians.

## PHTK 1650 - Pharmacy Law and Ethics

 (2CR)(2L) Provides federal and state laws for pharmacy and sets the ethical standards for pharmacy
technicians. Concurrently: Concurrent enrollment in PHTK

1600 and PHTK 1710, or permission of the instructor. Maybe used as CE for licensed technicians.

## PHTK 1710 - Pharmacology I (3CR)

(3L) This course provides an introductory study of therapeutic drug categories which will involve not only a consideration of commonly used drugs, but also basic principles of pharmacology and pharmaceutics. Prerequisites: admission to the Certificate or Associate of Science in pharmacy technology program or instructor permission. Concurrently: Concurrent enrollment in PHTK 1600 and PHTK 1650. May be used as CE for licensed technicians.

## PHTK 1720 - Pharmacology II (3CR)

(3L) The course provides an introductory study of therapeutic drug categories which will involve not only a consideration of commonly used drugs, but also basic principles of pharmacology and
pharmaceutics. Prerequisites: PHTK 1710. Concurrently:
Concurrent enrollment in PHTK 1610, PHTK 1630, PHTK 2971, or permission of the instructor.

## PHTK 2971 - Pharmacy Experiential Training I (5CR)

$(2 L, 6 L B)$ Provides the study of the theory and the practical applications of procuring, manipulating and preparing drugs for dispensing in actual pharmacy environments or college laboratory. Prerequisites: PHTK 1000, PHTK 1600, PHTK 1650, PHTK 1710. Concurrently: Concurrent enrollment in PHTK 1610, PHTK 1630, PHTK 1720, or permission of the instructor.

## PHTK 2972 - Pharmacy Experiential Training II (5CR)

$(2 L, 6 L B)$ Provides practical application and integration of pharmacy skills in an actual retail pharmacy environment (on-the-job training). Prerequisites: PHTK 1600, PHTK 1610, PHTK 1630, PHTK 1720, PHTK 2971.

## PHYS 1050 - Concepts of Physics (4CR)

(3L, $3 L B$ ) $[E]$ One semester course for those students whose curricula call for an introduction to elementary physical concepts. Prerequisites: MATH 0900.

## PHYS 1090 - The Fundamentals of the Physical Universe (4CR)

( $3 L, 2 L B$ ) $[E]$ One semester introduction to the physical sciences (physics and chemistry) designed only for students majoring in elementary education. (Does not qualify as a lab science for non-elementary education majors.)

## PHYS 1110 - General Physics I (4CR)

(3L, 3LB) [E] First course of two-semester sequence. Introduces elementary college physics without calculus. Primarily for pre-medical, pre-dental, pre-optometry, prephysical therapy, vocational, technical, and other students requiring insight into workings of the physical world. Includes classical mechanics, gravitation and heat. Required laboratory sessions will illustrate principles studied. Prerequisites: MATH 1400

## PHYS 1120 - General Physics II (4CR)

 (3L, 3LB) [E] Follows PHYS 1110 and completes introduction to physics without calculus. Includes electricity, magnetism, optics and modern physics. Required laboratory sessions illustrate principles studied. Prerequisites: PHYS 1110
## PHYS 1310 - College Physics I (4CR)

(4L, 2LB) [E] First semester course in physics designed for those majoring in physics, engineering, mathematics, or physical sciences. Topics covered are mechanics and heat. Prerequisites: MATH 2200.

## PHYS 1320 - College Physics II (4CR)

(4L, 2LB) [E] Follows PHYS 1310 and continues introduction to physics with calculus. Includes electricity, magnetism and thermodynamics. Laboratory sessions illustrate principles studied and meaning of physical measurement. Prerequisites: MATH 2205

## PHYS 2310 - Physics III: Waves and Optics (4CR)

(4L, 2LB) [E] Third-semester course primarily for majors in physics, astronomy, engineering, mathematics, and other sciences. Includes Gaussian Optics and matrix calculations, wave equations, interference, superposition principle, elementary Fourier Analysis, Fraunhofer and Fresnel Diffraction, application to optical instruments. Prerequisites: PHYS 1320 concurrently and MATH 2205.

## PHYS 2320 - Physics IV: Modern Physics (4CR)

(4L, $2 L B$ ) Fourth semester course primarily for majors in physics, astronomy, engineering, mathematics, and other physical sciences. Topics include introductory quantum mechanics, nuclear and particle physics, lasers, Planck's Blackbody Radiation, photoelectric effect, electron diffraction, wave-particle duality, deBroglie Wavelength,

Bohr Atom, Heisenberg Uncertainty Principle, Schrodinger Equation, and Einstein's Special Theory of Relativity. Prerequisites: PHYS 1320 concurrently and MATH 2205.

## POLS 0000 - U.S. \& Wyoming Constitutions (3CR)

Approved coursework fulfills the state legislated requirement for both U.S. \& Wyoming Constitutions requirement for graduation. HIST 1211, HIST 1221, HIST 1251, POLS 1000 or POLS 1100 (by instructor permission only).

## POLS 1000 - American and Wyoming Government (3CR)

(3L) $[E]$ The organization and nature of the American national government and Wyoming state government and their constitutional development. This course meets the statutory requirement for instruction in the constitutions of the United States and Wyoming.

## POLS 1020 - Issues in Foreign Relations I (3CR)

(3L) (BOCES class.) This year-long course entails an introduction to the concepts, institutions, and issues of contemporary foreign relations from the perspective of the United States. The focal point of the course are group analyses of selected prominent issues in the post-Cold War world, which will include extensive research, writing, discussions, and oral presentations of the groups' findings. Prerequisites: Application and permission of the instructor.

## POLS 1030 - Issues in Foreign Relations II (3CR)

(3L) (BOCES class.) This course is the second semester of the year-long seminar which entails an introduction to the concepts, institutions and issues of contemporary foreign relations from the perspective of the United States. The focal point of this course is the group research assignment. Prerequisites: Application, POLS 1020, and permission of the instructor.

## POLS 1100 - Wyoming Government (1CR)

(3L, *) $[E]$ If a student successfully completes a U.S. Government or U.S. History course with a grade of C or better at another institution, this course satisfies the statutory requirement of instruction in the constitutions of the United States and Wyoming for Casper College, but does not meet requirements for the University of Wyoming.

## POLS 1200 - Non-Western Political Cultures (3CR)

(3L) [E] This course gives students an appreciation of nonWestern political cultures and how these cultures have created different political institutions and practices. NonWestern nations of Asia, Africa, and the Middle East are used as case studies. Cross-listed: INST 1200

## POLS 2000 - Current Issues in American Government (3CR)

(3L) This course examines current political topics in the United States. It focuses on key public policy problems, the policy-making process and the final policy choice. Students must keep abreast of political events on a daily basis and apply basic concepts in American government to current affairs. Prerequisites: POLS 1000, or permission of the instructor.

## POLS 2128 - Terrorism (3CR)

$3 L$ This course studies the theories, psychologies, motives, methods, forms, and counter measures associated with terrorism in history and the 21st century.
Biannually Prerequisites: POLS 1000 or permission of the instructor.

## POLS 2200 - Politics of Europe (3CR)

(3L) [E] Examines formal and informal aspects of politics in Britain, other West European countries, and the European Union. Prerequisites: POLS 1000, or HIST 1120, or have permission of the instructor.

## POLS 2290 - Governments and Politics of Latin America (3CR)

(3L) This course studies chief cultural and historical factors influencing Latin American political process by drawing on six country case studies as well as regional information. It also surveys major institutions and political patterns of the region. Prerequisites: POLS 1000, or HIST 1120, or have permission of the instructor.

## POLS 2310 - Intro to International Relations (3CR)

(3L) [E] A theoretical and practical survey of the international political system, including concepts of power and power relationships, elements of international organizations and contemporary international relations. Prerequisites: HIST 1120, or POLS 1000, or permission of the instructor. Cross-listed: INST 2310

## POLS 2410 - Intro to Public Administration (3CR)

(3L) [E] Public administration involves the core activities of government that are performed, for the most part, by highly trained experts and specialized organizations; its purpose is the development and implementation of public policy. This broad definition encompasses a large dynamic portion of government at all three levels of the federal system, engaging even nonprofit and private enterprise. Prerequisites: POLS 1000 or have permission from the instructor

## POLS 2460 - Intro to Political Philosophy (3CR)

(3L) [E] A survey of selected writings in the history of Western political theory from the classical period to the present. Prerequisites: POLS 1000, or sophomore standing, or permission of the instructor.

## POLS 2465 - Directed Studies in Political

## Science

(1-3L) (1-3 CR) This course will center on faculty-guided research in an area of mutual interest to the student and instructor within the political science, international studies, or pre-law majors. This course has the option of including internship experience as part of the directed studies.

## POLS 2470 - Internship (3CR)

(3L) This course will differentiate from POLS 2465 Directed Study in POLS, which has been used in the past for students taking internships for credit. The 2470 number is in line with the transfer guide for POLS internships. POLS 2470 will be offered every semester. Prerequisites: Permission of the instructor.

## PSYC 1000 - General Psychology (3CR)

(3L) [E] One semester introductory psychology course designed to familiarize the student with the major areas of psychological research. Course orientation is directed toward understanding behavior through an experimental approach. Application of course content to everyday behavior situations is emphasized.

## PSYC 2000 - Research Psychological Methods (4CR)

(4L) [E] Introduces students to some of the methods of investigating psychological questions. Exposes students to various research strategies ranging from observational to experimental, using representative laboratory exercises, lectures, readings, films and demonstrations. Requires written and oral reports. Requires extra research time
outside of class. Prerequisites: an introductory course in psychology, completion of ENGL 1020, STAT 2050, STAT 2070 or other four-hour statistic course with lab. Earned letter grade of "C" or better is required in each prerequisite course.

## PSYC 2020 - Positive Psychology (3CR)

(3L) This course introduces one of the fastest growing subfields and an emerging shift in the field of psychology from pathology to strengths and resiliency. Positive psychology explores mental health as building on the best in life by seeking to fulfill the lives of healthy individuals. Course content includes research in the areas of happiness/well-being, optimism, creativity, resilience, meaning, and gratitude, as well as practical application of these and other strength-based psychological concepts. Prerequisites: PSYC 1000 or SOC 1000.

## PSYC 2050 - Introductory Counseling/Clinical Theories (3CR)

(3L) An introductory course featuring a review of the development of psychotherapy, a study of psychological concepts basic to the therapeutic process, and understanding of the major models and principles of psychotherapy. Prerequisites: PSYC 1000.

## PSYC 2080 - Biological Psychology (3CR)

(3L) [E] Introduces biological bases of behavior. Includes ethnology and comparative behavior, psychobiological development, physiological and sensory mechanisms of behavior and evolution and behavioral genetics. Presents basic structural and functional properties of the nervous system. Prerequisites: PSYC 1000 and BIOL 1000 or equivalent.

## PSYC 2155 - Motivational Interviewing (3CR)

(3L) Behavioral change is a goal of many human service professionals. This course will examine the process of how change occurs and how to apply evidence-based practices to assist clients with the change process thorough the use of motivational interviewing. Through a combination of lecture, skill practice, discussion, and personal exploration, this course will serve as a 'hands on' experience for the change process. Cross-listed: ADDN 2155

## PSYC 2200 - Human Sexuality (3CR)

(3L) An interdisciplinary course designed to acquaint the student with the major factors affecting human sexuality. Relevant research is reviewed in biology, psychology, sociology, and anthropology, as well as religious and
historical perspectives. Prerequisites: three to four hours of a 1000 level introductory psychology or biology course. Cross-listed: (Cross-listed as SOC 2200.)

## PSYC 2210 - Drugs and Behavior (3CR)

(3L) $[E]$ A survey of the drugs which affect behavior, emphasizing both psychotherapeutic agents and drugs with abuse potential. Includes a brief introduction to the chemistry of the brain and pharmacological aspects of each major class of psychoactive drugs will be discussed. Prerequisites: PSYC 1000 and three to four hours of 1000 level psychology or biology courses.

## PSYC 2230 - Sports and Exercise Psychology (3CR)

(3L) An introduction to the field of sport and exercise psychology that focuses on the major areas of psychological research and application regarding sports and exercise environments, processes, performance enhancement, health and wellbeing. Prerequisites: PSYC 1000.

## PSYC 2260 - Alcoholism (3CR)

(3L) Patterns of alcohol use and theories of abuse and addiction will be presented along with current knowledge on the incidence, health effects, economic costs, and trends in treatment. Theoretical concepts will be based on constitutional, psychological and socio-cultural approaches. Issues ranging from pharmacology to societal concerns with problem drinking will be covered. Prerequisites: PSYC 1000.

## PSYC 2300 - Developmental Psychology (3CR)

(3L) [E] Provides an overview of child growth and development through adolescence using a lifespan approach, the theoretical bases for the area of child study, application of solutions to developmental problems, and the physical, psychological, social and emotional aspects of child psychology, as well as current research on the topic. Prerequisites: three to four hours of 1000 level introductory psychology.

## PSYC 2340 - Abnormal Psychology (3CR)

(3L) [E] A general study of abnormal behaviors including types, etiology, and treatment approaches. Prerequisites: A grade of C or better in PSYC 1000

PSYC 2380 - Social Psychology (3CR)
(3L) [E] Social Psychology familiarizes students with the psychology of human interaction. Topics addressed include
aggression, altruism, attitudes, attraction, conformity, group dynamics, perception of self and others, prejudice, social roles and social power. Prerequisites: PSYC 1000 or equivalent.

## PSYC 2390 - Acquired Brain Injuries (3CR)

(3L) An introductory course that focuses on the major areas of research and treatment application in the field of acquired brain injuries (ABI), Various types of brain injuries, etiologies of these injuries, and treatments of these injuries will be presented. Prerequisites: PSYC 1000, BIOL 1000 (or equivalent), HLTK 1200.

## PSYC 2465-Special Problems in Psychology

(1-3CR) Directed study and research reserved for students who have successfully completed previous course work in psychology. A comprehensive research project or in-depth literature review is required. Topics must meet with the approval of the instructor the semester prior to initiating the course. Special problem work shall proceed under direct supervision of a Casper College psychology instructor. Prerequisites: PSYC 2000 or concurrent enrollment, or permission of the instructor.

## PSYC 2970 - Cognitive Retraining Practicum (3CR)

( $1 L, 4 L B$ ) Supervised experience in working with individuals who have acquired brain injuries (ABI) in community-based settings. Weekly on campus classes are conducted and students complete a minimum of 60 hours in off-campus practicum locations at cooperating treatment agencies/facilities. The class provides opportunities for students to gain practical field experience in working with individuals with brain injuries and to apply knowledge acquired in previous courses. The off-campus practicum time will be scheduled, structured, and supervised by a certified or licensed professional. S/U grading only. Prerequisites: PSYC 2390, HLTK 1625, HLTK 1620, CPR and AED.

## PTEP 2500 - Introduction to Paramedic

## Technology (8CR)

(7L, 3LB) This course covers the preparatory, airway management and ventilation, and patient assessment sections of the EMT -Paramedic National Standard Curriculum. Students will participate in classroom lecture and discussion as well as practical lab exercises designed to prepare the student to provide emergency care to those in need. Prerequisites: Students must apply for entrance, and be accepted into the paramedic technology program prior to enrollment.

## PTEP 2600 - Paramedic Technology Medical Emergencies (8CR)

(7L, 3LB) This course covers the medical emergencies section of the EMT - Paramedic National Standard Curriculum. Students will participate in classroom lecture and discussion as well as practical lab exercises designed to prepare the student to provide emergency care to those who are experiencing a medical emergency along with the appropriate care and intervention(s) necessary to insure safe, effective and efficient transport to the most appropriate facility. Prerequisites: Students must successfully complete PTEP 2500 and be concurrently enrolled in PTEP 2610.

## PTEP 2610 - Paramedic Practical 1 (2CR)

(6LB) This clinical time is dedicated to initiating intravenous access, medication administration and airway management in the clinical setting. Prerequisites: Successful completion of PTEP 2500 Concurrently: Concurrent enrollment in PTEP 2600 and permission of the instructor.

## PTEP 2800 - Paramedic Technology Trauma (7CR)

(2L, 15LB) This course covers the trauma section of the EMT-Paramedic National Standard Curriculum. Students will participate in classroom lecture and discussion as well as clinical and field experiences designed to prepare the student to provide emergency care to those who have experienced a traumatic injury along with the appropriate care and intervention(s) necessary to ensure safe, effective and efficient transport to the most appropriate facility. Prerequisites: Successful completion of PTEP 2600 and PTEP 2610 and Instructor permission is required.

## PTEP 2850 - Paramedic Advanced Placement Bridge (7CR)

(2L, 15LB) This course is for students who have applied for and been accepted into the Casper College Paramedic Technology Advanced Placement Program. This course will get students up to date and current with their classroom, lab and competencies so that they are prepared to join the current students as they enter the 2nd year. Prerequisites: Students must hold a current Wyoming Intermediate Emergency Medical Technician license; current National Registry as an Emergency Medical Technician at a minimum. Students will have successfully completed the application process as specified, including the written and practical skills evaluations.

## PTEP 2900 - Paramedic Technology Advanced Cardiology and Special

 Considerations (8CR)(7L, $3 L B$ ) This course covers the trauma and special considerations section of the EMT - Paramedic National Standard Curriculum. Students will participate in classroom lecture and discussion as well as practical lab exercises designed to prepare the student to provide emergency care to those who have experienced a traumatic injury along with the appropriate care and intervention(s) necessary to insure safe, effective and efficient transport to the most appropriate facility. This course will also explore the pediatric and geriatric populations as well as those who are technology dependent and how to best provide care and transport for those people. Prerequisites: Students must successfully complete PTEP 2800 and PTEP 2850 and be concurrently enrolled in PTEP 2910

## PTEP 2910 - Paramedic Practical 3 (3CR)

(9LB) This clinical time is dedicated to medical emergencies, respiratory emergencies, cardiology and obstetrics/gynecology with the student having exposure to and participating in the management of medical emergencies in the emergency room, Cath lab, cardiopulmonary lab, respiratory therapy and labor and deliver settings. Prerequisites: Successful completion of PTEP 2800 and PTEP 2850 Concurrently: Concurrent enrollment in PTEP 2900, and permission of the instructor.

## PTEP 2950 - Paramedic Capstone (10CR)

(3L, 21LB) This clinical time is to solidify and put into practice all that has been learned to this point. The student will be able to apply the skills and knowledge gained in previous classroom and clinical experience in order to provide quality and appropriate patient care and transportation to the most appropriate facility. This will be accomplished through extensive clinical and field internship time as well as classroom time preparing for state and national certifying examinations, both written and practical. Prerequisites: Successful completion of PTEP 2910 and PTEP 2900

## PTEP 2961 - Community EMS Technician (4CR)

$3 L$, $2 L B$ The Community Emergency Medical Services Technician course prepares the student to assist patients in the home to access appropriate healthcare resources. Community resources and needs are discussed along with advanced assessment techniques, environmental assessment and safety concerns in order to assist the patient in gaining access to the most appropriate level of medical services in a timely manner that is beneficial to the patient,
and the healthcare system as a whole. This course will be offered annually in the fall semester as long as there is a demonstrated need. Prerequisites: Students are required to be currently licensed at the EMT, AEMT, IEMT or paramedic level. Concurrently: PTEP 2962

## PTEP 2962 - Community EMS Technician Clinical (1CR)

(2LB) The Community Emergency Medical Services Technician Clinical course prepares the student to assist patients in the home to access appropriate healthcare resources by providing supervised experiences within the local community. Community resources and needs are discussed and utilized, along with advanced assessment techniques, environmental assessment and safety concerns, in order to assist the patient in gaining access to the most appropriate level of medical services in a timely manner that is beneficial to both the patient and the healthcare system. This course will be offered annually in the fall semester as long as there is a demonstrated need. Prerequisites: Students are required to be currently licensed at the EMT, AEMT, IEMT or paramedic level. Concurrently: PTEP 2961 Community EMS Technician (4CR).

## PTEP 2971 - Community EMS Clinician (8CR)

( $5 L, 6 L B$ ) The Community Emergency Medical Services Clinician course prepares the student to expand upon the CEMS Technician role by increasing the level of assistance provided to patients in the home to access appropriate healthcare resources. Community resources and needs are discussed along with advanced assessment techniques, environmental assessment and safety concerns in order to assist the patient in gaining access to the most appropriate level of medical services in a timely manner that is beneficial to the patient, and the healthcare system as a whole. This course will be offered annually as required to meet local and statewide needs. Prerequisites: Students must apply for entrance, and be accepted into the Community EMS Program prior to enrollment. Successful completion of PTEP 2961 and PTEP 2962. In addition, applicants must meet the requirements prescribed by the Community EMS program director. Concurrently: PTEP 2972 Community EMS Clinician Clinical (3CR)

## PTEP 2972 - Community EMS Clinician Clinical (3CR)

3LB The Community Emergency Medical Services Clinician course prepares
the student to expand upon the CEMS Technician role by increasing the level of assistance provided to patients in the
home to access appropriate healthcare resources. Community resources and needs are discussed along with advanced assessment techniques, environmental assessment and safety concerns in order to assist the patient in gaining access to the most appropriate level of medical services in a timely manner that is beneficial to the patient, and the healthcare system as a whole. This course will be offered annually as required to meet local and statewide needs. Prerequisites: Students must apply for entrance, and be accepted into the Community EMS Program prior to enrollment. Successful completion of PTEP 2961 and PTEP 2962. Concurrent enrollment in PTEP 2971 is required. In addition, applicants must meet the requirements prescribed by the Community EMS program director. Concurrently: Concurrent enrollment in PTEP 2972 is required.

## RDTK 1500 - Introduction to Radiologic Technology (1CR)

(4LB) An orientation of the radiologic technology profession. Emphasis is on history, medical ethics, radiology administration, certification, and professional organizations. Class size is limited so preference will be given to students applying to the program.

## RDTK 1530 - Patient Care and Management

 (2CR) *(2L) *Three-week minimester session. Orienting student health professionals into patient care methodology in the clinical environment. Emphasis is placed on the illness process and specific nursing and radiologic patient care procedures.

## RDTK 1580 - Radiographic Positioning I

 (2CR) *$(1 L, 2 L B)$ *Three-week minimester session. Positioning skills of the chest and abdomen; hand and wrist; forearm, elbow and humerus are emphasized. Prerequisites: acceptance into the Radiography Program.

## RDTK 1610 - Radiographic Imaging I (5CR)

(5L) Identifying and demonstrating essential operating principles of x-ray machines, and the factors and ancillary equipment that contribute to the production of optimum diagnostic quality radiographs. Prerequisites: MATH 1400

## RDTK 1640 - Radiographic Imaging II (5CR)

(5L) Skills that facilitate the production of quality radiographs. Analyzing different modes of imaging and intensification systems. Emphasis is placed on primary and secondary exposure factors, recording media, and special
imaging techniques. Computed radiography and digital imaging will be covered in detail. Prerequisites: RDTK 1610.

## RDTK 1680 - Radiographic Positioning II (3CR)

(2.5L, 1.5LB) Positioning skills and anatomy of the lower extremity, myelography, spine radiography and arthrography. Mobile and surgical radiographic procedures will be demonstrated when applicable. Prerequisites: RDTK 1580.

## RDTK 1710-1st Yr.-Clinical Education I (2CR)

(28LB/week) This course involves a practical learning experience in the clinical radiographic environment. Students participate at pre-scheduled time periods and practice their radiographic skills for a total of 144 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Basic skills necessary to perform entry level tasks in the clinical setting will be reviewed. Positioning skills of the chest, abdomen, hand, wrist, elbow and forearm will be covered. Radiation protection principles will be reviewed. See program policies for clinical clock hours vs credit hours description. Prerequisites: currently passing RDTK 1580.

## RDTK 1810-1st Yr.-Clinical Education II (3CR)

(13.5LB) A continuation of RDTK 1710. This course involves a practical learning experience in the clinical radiographic environment. Students participate at prescheduled time periods and practice their radiographic skills for a total of 195 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Skills necessary to perform entry level tasks in the clinical setting will be reviewed. Positioning skills of the shoulder, humerus, clavicle, scapula, AC joints, and lower extremities including the pelvic girdle will be covered. See program policies for clinical clock hours vs credit hours description. Prerequisites: RDTK 1710.

## RDTK 1830 - Pharmacology for Radiographers (1CR)

(1L) This course is designed to introduce the radiography student to common drugs the radiographer should be familiar with and those stocked for emergency use. The course will also include an overview of the laws governing drug administration. Venipuncture procedures and skill will
be reviewed. Prerequisites: current enrollment in the radiography program.

## RDTK 1910-1st Yr.-Clinical Education III

 (3CR)(13.5LB) A continuation of RDTK 1810. This course involves a practical learning experience in the clinical radiographic environment. Students participate at prescheduled time periods and practice their radiographic skills for a total of 195 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Skills necessary to perform entry level tasks in the clinical setting will be reviewed. Positioning skills of the spine and contrast studies will be covered. See program policies for clinical clock hours vs credit hours description. Prerequisites: RDTK 1610 and RDTK 1810.

## RDTK 1915 - Introduction to Computed Tomography (2CR)

(2L) This course is designed to introduce the medical imaging student to basic aspects of computed tomography. An overview of history and technical advances related to CT , patient care and assessment specific to CT procedures, contrast media, radiation protection practices, as well as screening procedures and patient education. A basic introduction to the clinical setting will also be included. Prerequisites: Admission to the Computed Tomography Program.

## RDTK 1920 - Computed Tomography Procedures I (3CR)

(3L) This course covers the anatomy and common pathology associated with computer tomography. The anatomical structures will be demonstrated in the axial, sagittal and coronal imaging planes. Scanning protocols, contrast administration, and contraindications for computed tomography of the head, neck, chest, musculoskeletal, abdomen, and pelvis will be presented. Content provides detailed coverage of procedures for CT imaging. Procedures include, but are not limited to, indications for the procedure, patient education, preparation, orientation and positioning, patient history and assessment, contrast media usage, scout image, selectable scan parameters, filming and archiving of the images. CT procedures will be taught for differentiation of specific structures, patient symptomology and pathology images studied will reviewed for quality, anatomy and pathology. CT procedures vary from facility to facility and normally are dependent on the preferences of the radiologists. Patient Care, contrast media, venipuncture, CT injection procedures, radiation safety and protection will be emphasized for each of the
scanning procedures. Prerequisites: Admission to the Computed Tomography Program, RDTK 2200.

## RDTK 1925 - Computed Tomography

 Physics and Instrumentation I (3CR)(3L) Content is designed to impart an understanding of the physical principles and instrumentation involved in computed tomography. Physics topics covered include the characteristics of X-radiation, CT beam attenuation, linear attenuation coefficients, tissue characteristics and Hounsfield numbers application. Data acquisition and manipulation techniques, image reconstruction algorithms such as filtered back-projection will be explained. Radiation protection and ethical issues associated with CT will be discussed. Prerequisites: RDTK 1610, RDTK 1640.

## RDTK 1930 - Computed Tomography Clinical I (3CR)

(13.5LB/week) Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their CT skills in a hospital or clinic setting. Students will be under the supervision of an experienced CT technologist. Emphasis will be placed on equipment utilization, exposure techniques, patient care, evaluation of CT procedures, evaluate image quality, radiation safety practices, contrast administration, positioning protocols and image acquisition. A specified number of clinical exam competencies will be required. Prerequisites: RDTK 1915.

## RDTK 1940 - Introduction to MRI (2CR)

(2L) This course introduces the basic principles of MR safety and covers the concepts of patient management during MRI procedures. Educating patients and ancillary staff on magnet safety also is presented. Patient and magnet-related emergencies represent a unique situation to an MR technologist; recommended procedures and responsibilities of the technologist will be discussed for these situations. This content also covers MR contract agents and contraindications. Prerequisites: Admission to the MRI Program.

## RDTK 1945 - MRI Clinical Education I (3CR)

(13.5LB/week) Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their MRI skills in a hospital or clinic setting. Students will be under the supervision of an experienced MRI technologist. Emphasis will be placed on equipment utilization, exposure techniques, patient care, evaluation of MR procedures, evaluation of image quality, MR safety
practices, contrast administration, positioning protocols and image acquisition. A specified number of clinical exam competencies will be required. A total of 195 supervised clinical hours will be completed. Prerequisites: Admission to the MRI Program, RDTK 1940.

## RDTK 1950 - MRI Procedures I (3CR)

(3L) This content provides the student with imaging techniques related to the head, neck, spine, chest, thorax and abdominopelvic regions. The content covers specific clinical application, coils that are available and their use, considerations in the scan sequences, specific choices in the protocols (e.g., slice thickness, phase direction and flow compensation), and positioning criteria. Anatomical structures and the plane that best demonstrates anatomy are discussed as well as signal characteristics of normal and abnormal structures. This content outlines the critical criteria relevant to acquiring high-quality images of various anatomical regions. Due to different considerations for the various regions in the body, imaging protocols vary. The student studies the variations in imaging parameters for specific body regions and the resultant effect on signal characteristics and the anatomy represented. Evaluation criteria for determining the quality of images provides MR technologists with a better understanding of what constitutes a high-quality image. In a competency-based educational system, this content is completed prior to competency examinations. Review of appropriate patient care, contrast agents, and safety considerations while working in a magnetic field will be emphasized for each procedure. Pathologies associated with the areas discussed in this course will be reviewed. Prerequisites: Admission to MRI program, RDTK 2200.

## RDTK 1955 - MRI Principles I: Physics of Magnetic Resonance Imaging (3CR)

(3L) This unit provides the student with a comprehensive overview of MR imaging principles. Topics include the history of MR, nuclear MR signal production, tissue characteristics, pulse sequencing, imaging parameters/options and image formation. This course is required to understand the basic principles of MR image acquisition. The course provides information on the fundamentals of MR image acquisition. This information is useful to enable the student to maximize MR image quality by understanding the fundamentals of MR imaging. Other areas covered include: magnetism, properties of magnetism, MR system components, MR magnets (permanent, resistive, superconducting, hybrid), radio frequency (RF) systems, gradient systems, shim systems and system shielding. Prerequisites: Admission into MRI program, RDTK 1940.

## RDTK 2200 - Sectional Anatomy (3CR)

(2L, 2LB) Comprehensive coverage of head, neck, thorax, abdomen, pelvis and extremities in sagittal, transverse and coronal planes. A background in imaging is highly recommended but not required. Prerequisites: ZOO 2015, ZOO 2015L, and ZOO 2025.

## RDTK 2550 - Mammography Fundamentals (3CR)

(3L) This course covers the anatomy, pathology, and instrumentation involved in mammographic imaging. Topics covered will include: Patient Care, preparation and education; Instrumentation and Quality Assurance; Anatomy, Physiology and Pathology; Mammographic Technique and Image Evaluation; and Breast Imaging Procedures. Procedures will be covered in depth to include exam protocol, dose considerations, special patient care issues, interventional/special examinations, and diagnostic imaging. Special exams will include Needle Localization, Breast MRI, Breast Ultrasound: imaging, biopsy or FNA, Stereotactic Procedure, Breast Implant Imaging, Ductography, and Diagnostic Work-Up. Content is designed to impart an understanding of the physical principles, technique, quality control and image evaluation involved in mammography. Analog and digital acquisition and documentation will be discussed. Image processing and display will be examined from data acquisition through post processing and archiving. Prerequisites: ARRT registered \& licensed and acceptance into the program.

## RDTK 2555 - Mammography Clinical (2CR)

( $8 L B$ ) Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their Mammography skills in a hospital or clinic setting. Students will be under the supervision of an experienced Mammo technologist. Emphasis will be placed on Mammography equipment set-up, patient care, anatomy, pathology, mass documentation, understanding image quality, radiation safety practices, position, image acquisition and Quality Control. Post processing techniques will also be included. A specified number of clinical exam competencies will be required. Prerequisites: ARRT registered \& licensed and acceptance into the program.

## RDTK 2580 - Radiographic Positioning III (3CR)

(2.5L, 1.5LB) Positioning skills of the cranium, Sella turcica; petrous pyramids; facial bones; zygomatic arches; nasal bones; mandible; temporomandibular joints; temporal bone; optic foramen; coccyx, bony thorax, digestive, and urinary systems including a study of contract media and
fluoroscopy. Pediatric studies will also be included. Prerequisites: RDTK 1680.

## RDTK 2630 - Radiographic Pathology (3CR)

(3L) General principles of pathology as well as disease processes and radiographic manifestations of specific body systems will be covered. A portion of the course will be devoted to the study of cancer and its radiographic appearance for the various systems. (Fall semester.) Prerequisites: ZOO 2015, ZOO 2015L, ZOO 2025, and RDTK 2810.

## RDTK 2640 - Radiation Biology and Protection (2CR)

(2L) The effects of ionizing radiation on biological systems and essential radiation protection guidelines to minimize radiation exposure to the radiographer, the patient, and the public. Prerequisites: RDTK 1610, RDTK 2710, and ZOO 2015, and ZOO 2015L.

## RDTK 2710-2nd Yr.-Clinical Education IV (2CR)

(28LB/week) A continuation of RDTK 1910. This course involves a practical learning experience in the clinical radiographic environment. Students participate at prescheduled time periods and practice their radiographic skills for a total of 144 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Skills necessary to perform entry level tasks in the clinical setting will be reviewed. Contrast studies, mammography, computerized tomography, myelography and arthrography will be emphasized. Students will also be scheduled in rotations through specialty imaging and therapeutic modalities. See program policies for clinical clock hours vs credit hours description. Prerequisites: RDTK 1910.

## RDTK 2810-2nd Yr.-Clinical Education V (5CR)

(22.5LB) A continuation of RDTK 2710. This course involves a practical learning experience in the clinical radiographic environment. Students participate at prescheduled time periods and practice their radiographic skills for a total of 330 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Skills necessary to perform entry level tasks in the clinical setting will be reviewed. Skull, facial bones, CT, pediatric, contrast studies, trauma, surgical and mobile procedures will be reviewed. Students will also be scheduled in rotations through specialty imaging and
therapeutic modalities. See program policies for clinical clock hours vs credit hours description. Prerequisites: RDTK 2710.

## RDTK 2910-2nd Yr.-Clinical Education VI (5CR)

(22.5LB) A continuation of RDTK 2810. This course involves a practical learning experience in the clinical radiographic environment. Students participate at prescheduled time periods and practice their radiographic skills for a total of 330 clinical education hours at various clinical locations. Students will be under the supervision of clinical instructors or registered radiographers during their experience. Skills necessary to perform entry level tasks in the clinical setting will be reviewed. Review sessions will cover all imaging procedures in preparation for graduation and the national ARRT examination. Students will also be scheduled in rotations through specialty imaging and therapeutic modalities. See program policies for clinical clock hours vs credit hours description. Prerequisites: RDTK 2810.

## RDTK 2915 - MRI Clinical Education II (3CR)

(13.5LB/week) Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their MRI skills in a hospital or clinic setting. Students will be under the supervision of an experienced MRI technologist. Emphasis will be placed on equipment utilization, exposure techniques, patient care, evaluation of MR procedures, evaluation image quality, MR safety practices, contrast administration, positioning protocols and image acquisition. A specified number of clinical exam competencies will be required. Prerequisites: RDTK 1945.

## RDTK 2920 - MRI Procedures II (3CR)

(3L) This content provides the student with imaging techniques related to the musculoskeletal system, upper and lower extremities and vascular systems. The course will also present detailed content covering MRI pediatric procedures and specialized MR imaging exams to include: Magnetic resonance angiography, MR arthrography, and fMRI. The content covers specific application, coils that are available and their use, considerations in the scan sequences, specific choices in the protocols (e.g., slice thickness, phase direction and flow compensation), and positioning criteria. Anatomical structures and the plane that best demonstrates anatomy are discussed as well as signal characteristics of normal and abnormal structures. Content outlines the critical criteria relevant to acquiring high-quality images of various anatomical regions. Due to
different considerations for the various regions in the body, imaging protocols vary. The student will study the variations in imaging parameters for specific body regions and the resultant effect on signal characteristics and the anatomy represented. Evaluation criteria for determining the quality of images provides MR technologists with a better understanding of what constitutes a high-quality image. In a competency-based educational system, this content is completed prior to competency examinations. Pathologies associated with the areas discussed in this course will be reviewed. Prerequisites: RDTK 1950.

## RDTK 2925 - MRI Principles II:

 Instrumentation and Imaging (3CR)(3L) This unit is designed to provide the student with a comprehensive overview of MR pulse sequences, image formation and image contrast. Pulse sequences include spin echo, inversion recovery, echo planar, parallel imaging and spectroscopy. In addition, tissue characteristics, contrast agents and post processing techniques are covered. This course provides the student with knowledge of the parameters and imaging options used to create MR images. In addition, the content introduces quality assurance measures used in maintaining image quality. Prerequisites: RDTK 1955.

## RDTK 2930 - Transition from Student to Radiographer (2CR)

(2L) Provides the advanced student technologist an opportunity to review previously learned radiologic material and effectively prepare for the national certification examination. Résumé preparation, interviewing skills and professional organization participation will be included. Continuing personal and professional growth will be emphasized in this course. Prerequisites: RDTK 2910.

## RDTK 2935-Computed Tomography Clinical II (3CR)

(13.5LB/week) Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their CT skills in a hospital or clinic setting. Students will be under the supervision of an experienced CT technologist. In this second clinical course students will be expected to perform more advanced procedures in a solo capacity under supervision. Emphasis will be placed on CT technique, selection, patient care, anatomy, pathology, understanding image quality, radiation safety practices, contrast administration, positioning and image acquisition. Post processing techniques will also be included. A
specified number of clinical exam competencies will be required. Prerequisites: RDTK 1930.

## RDTK 2941 - Computed Tomography

 Physics and Instrumentation II (3CR) (3L) Content is designed to impart an understanding of the physical principles and instrumentation involved in computed tomography. Physics topics covered include computed tomography systems and operations will be explored with full coverage of radiographic tube configuration, collimator design and function, detector type, characteristics and functions and the CT computer and array processor. CT image processing and display will be examined from data acquisition through post processing and archiving and patient factors related to other elements affecting image quality will be explained, as well as artifact production and reduction and imagecommunication. Prerequisites: RDTK 1925.

## RDTK 2945 - Computed Tomography Procedures II (3CR)

(3L) This course covers the anatomy and common pathology associated with computer tomography. The anatomical structures will be demonstrated in the axial, sagittal and coronal imaging planes. Scanning protocols, contrast administration, and contraindications for computer tomography of the pediatric procedures will be covered in depth to include: exam protocol, radiation protection and dose considerations, special patient care issues and contrast media and injections. Pediatric exams will cover CT of the head, neck, spine, abdomen, chest, musculoskeletal system, and CT angiography. Special applications in CT will be presented. Specialized CT procedures will include breast imaging, interventional CT studies, CT fluoroscopy, PET and CT fusion, cardiac scanning, CT angiography, CT guided biopsies, virtual colonoscopy, brain and transplant studies. Radiation therapy simulation studies will also be discussed. Content provides detailed coverage of procedures for CT imaging. Procedures include, but are not limited to, indications for the procedure, patient education, preparation, orientation and positioning, patient history and assessment, contrast media usage, scout image, selectable scan parameters, filming and archiving of the images. CT procedures will be taught for differentiation of specific structures, patient symptomology and pathology. CT images studied will be reviewed for quality, anatomy and pathology. CT procedures vary from facility to facility and normally are dependent on the preferences of the radiologists. Prerequisites: RDTK 2200, RDTK 1920.

## RELI 1000 - Introduction to Religion (3CR)

(3L) [E] This course will introduce the major world religions and the role they play in shaping cultures and societies. The class will make use of various academic approaches to study religions emphasizing similarities and differences. Instructors will draw upon research in a range of fields, including: anthropology, history, sociology, and the humanities.

## RESP 1500 - Introduction to Respiratory Therapy (3CR)

(3L) Historical, governmental, and association overview of respiratory therapy. This course will introduce the student to patient assessment concepts as well as common respiratory pathologies and an introduction to respiratory pathologies. This course will introduce the student to respiratory physics. (First year summer semester.) Prerequisites: admission into the respiratory therapy program.

## RESP 1505 - Cardiopulmonary Anatomy \& Physiology (2CR)

(2L) This course will cover the Anatomy and Physiology of the Cardiopulmonary systems of the adult human body. (First year fall semester.) Prerequisites: admission into the respiratory therapy program.

## RESP 1507 - Respiratory Therapy I (3CR)

(3L) This course will cover Oxygen supply and medical gases, as well as an overview of common respiratory pathologies. (First year fall semester.) Prerequisites: RESP 1500 RESP 1505.

## RESP 1515 - Respiratory Lab I (1CR)

(4LB) This course will be the laboratory where respiratory skills are practiced, simulated and learned before using them in the clinical rotation. Subjects covered will be patient assessment, oxygen systems and administration, aerosol and humidity therapy, medication delivery, lung expansion therapy and pulmonary hygiene. (First year fall semester.) Prerequisites: RESP 1500, RESP 1505.

## RESP 1518 - Respiratory Practicum I (3CR)

(12LB) Students will rotate to several clinical sites as well as our clinical simulation center, in order to practice skills training under direct supervision. These rotations will include patient assessment, oxygen administration, aerosol and humidity therapy, medication delivery and lung expansion therapy. Prerequisites: RESP 1500, RESP 1505.

## RESP 1523 - Respiratory Pharmacology (2CR)

(2L) This course will cover material on respiratory specific drugs and those drugs that are commonly used in association with respiratory disease. (First year fall semester.) Prerequisites: RESP 1500, RESP 1505.

## RESP 1527 - Respiratory Therapy II (3CR)

(3L) Course material will cover subjects of respiratory failure, and mechanical ventilation for the adult patient. All phases of mechanical ventilation will be introduced, including initiation, management and weaning. (First year spring semester.) Prerequisites: RESP 1507, RESP 1515, RESP 1518, RESP 1523.

## RESP 1535 - Respiratory Lab II (1CR)

(4LB) Course material will include mechanical ventilation and patient monitoring, airway management, suctioning, tracheostomy care and EKG's. (First year spring semester.) Prerequisites: RESP 1507, RESP 1515, RESP 1518, RESP 1523.

## RESP 1538 - Respiratory Practicum II (4CR)

(16LB) Continuation of skills training at our clinical sites and clinical simulation center. Additional skills in airway management and ventilator initiation will be introduced under direct supervision. Case studies will be researched and presented to the class. The student will also participate in critical thinking classes to improve their clinical decision-making skills. See program handbook for clinical clock hours vs credit hours description. (First year spring semester.) Prerequisites: RESP 1507, RESP 1515, RESP 1518, RESP 1523.

## RESP 1545 - Respiratory Pathophysiology (2CR)

(2L) This course will cover common respiratory therapy disease pathologies that require special diagnostic evaluation techniques and treatment modalities. Course subject content will include airway management, EKG's, PFT's, HBO, bronchoscopy, chest tubes and the pathophysiology of the renal system. Prerequisites: RESP 1507 , RESP 1515 , RESP 1518 , RESP 1505

## RESP 2500 - Respiratory Specialty Practicum (3CR) <br> (12LB) Continuation of skills training at our clinical sites, and clinical simulation center. During this clinical rotation, students will be exposed to mechanical ventilation in the adult critical care setting.

## RESP 2507 - Respiratory Therapy III (3CR)

(3L) This course will continue in the study of mechanical ventilation with emphasis on advanced modes and management as well as operational overviews of ABG drawing and analysis. Students should understand some common pathophysiology's associated with critical care. (Second year fall semester.) Prerequisites: RESP 2500.

## RESP 2510 - Respiratory Pediatrics and Neonatology (2CR)

(2L) Course material will cover prenatal, neonatal, and pediatric respiratory care. (First year spring semester.) Prerequisites: RESP 2500

## RESP 2545 - Respiratory Lab III (1CR)

(4LB) Course material will cover additional mechanical ventilation modalities along with ABG's drawing techniques. Clinical competencies will include newborn and pediatric respiratory care and ventilator management. The students will be required to complete NPR certification. (Second year fall semester.) Prerequisites: RESP 2500.

## RESP 2548 - Respiratory Practicum III (4CR)

(16LB) Continuation of skills training at our clinical sites and clinical simulation center, with an emphasis on ICU, critical care and advanced ventilator management. The student will also participate in critical thinking classes to improve their clinical decision-making skills. Case studies will be researched and presented. See program handbook for clinical clock hours versus credit hours description. (Second year fall semester.) Prerequisites: RESP 2500.

## RESP 2557 - Respiratory Therapy IV (3CR)

(3L) Course material will cover the transitioning from student to the respiratory care professional. Students will prepare for the national board exams, with a complete comprehensive review of respiratory care. (Second year spring semester.) Prerequisites: RESP 2507, RESP 2510, RESP 2545, RESP 2548.

## RESP 2570 - Respiratory Simulations (2CR)

(2L) Students will take and pass the NBRC level written and simulation exams. Course work will help towards the success of passing these exams. (Second year spring semester.) Prerequisites: RESP 2507, RESP 2510, RESP 2545, RESP 2548.

## RESP 2575 - Respiratory Lab IV (1CR) <br> (4LB) Laboratory skills training for passing the advanced cardiopulmonary life support (ACLS) as well as pediatric advanced life support (PALS) tests. Introduction of advanced respiratory modalities. A research paper assignment involving an aspect of respiratory care. (Second year spring semester.) Prerequisites: RESP 2507, RESP 1545, RESP 2545, RESP 2548.

## RESP 2578 - Respiratory Practicum IV (4CR)

(16LB) Continuation of skills training at our clinical sites, and clinical simulation center. Students will travel to a Level III nursery for clinical exposure to neonate and pediatric critical care. Emphasis will be on all aspects of ventilator management, the acute respiratory patient and preparation for the CSE portion of the RRT exam. Students will research, present and critique case studies. See program handbook for clinical clock hours vs credit hours description. (Second year spring semester.) Prerequisites: RESP 2507, RESP 2510, RESP 2545, RESP 2548.

## RETK 1500 - Solar Power Systems (2CR)

(2L) This course will introduce students to the basic concepts of various active and passive solar energy conversion technologies as they relate to other renewable energy technologies.

## RETK 1505 - Small Wind Turbines (2CR)

(2L) This course is designed to examine small wind generation. Students will learn how small wind generators function, their connection to loads and distribution systems and design and application considerations. Students will also explore small wind turbine siting including potential wind energy calculations and turbine performance.

## RETK 1520 - Wind Power Systems (3CR)

(2L, $2 L B$ ) This course is designed to provide students with an in-depth overview of wind power systems on the commercial size scale. The class - will explore turbine components and operations, operations of wind generating facilities, maintenance practices and system interconnect requirements.

## RETK 1525 - Blade Installation and Maintenance (3CR)

(2L, 2LB) This course is designed to introduce students to the design considerations, installation and maintenance of wind turbine blades. The course will address blade performance as a function of blade design (aerodynamics),
installation of blades for commercial size turbines and basic repair and maintenance of turbine blades.

## RETK 1530 - Crane and Rigging Operations (1CR)

(1L) This course will introduce students to crane and rigging operations and will include presentations on crane operation theory and rigging procedures.

## RETK 1535 - High Angle/Confined Space Rescue (2CR) <br> (1L, 2LB) This course will introduce students to the minimum requirements needed to safely rescue and perform elevated work.

## RETK 1980 - Cooperative Work Experience

(1-8 CR) (Max. 8) On the job training with a cooperative renewable energy business or facility. Eighty hours of work per semester earns one hour of credit. Prerequisites: Permission of the instructor.

## RETK 2500 - Basic Site Planning (3CR)

(3L) This class is designed to teach students the concepts and processes employed in evaluating and preparing sites for construction of renewable energy projects.

## RETK 2530 - Instrumentation (3CR)

(2L, 2LB) This course will introduce students to instrumentation systems used in the performance and condition monitoring and controlling of renewable energy technologies including wind power production, active and passive solar applications.

## RETK 2550 - Power Distribution (3CR)

(2L, 2LB) This course will introduce students to basic concepts in electric power distribution systems as they relate to renewable energy resources. The course will examine inter-connection equipment and process and electric power substation, transmission and distribution systems.

## REWM 2000 - Principles of Range Management (3CR)

$(2 L, 2 L B)[E]$ Basic principles of range management as they relate to livestock production, conservation practices and wildlife management, region vegetative types and range sites, and grazing systems and multiple range uses. Several field trips included.

## RUSS 0900 - Russian for Travelers (1CR)

(1L) A course of simple Russian to help the traveler make plans, obtain tickets, order meals, and ask for and understand general information as needed for travel in a Russian-speaking country.

## RUSS 1010 - First Year Russian I (4CR)

(4L) This course utilizes a multi-skill approach: listening, speaking, reading, and writing and is designed for beginners or those with a weak background in Russian. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better.

## RUSS 1020 - First Year Russian II (4CR)

(4L) This course is a continuation of RUSS 1010 and utilizes a multi-skill approach: listening, speaking, reading, and writing and is designed for beginners or those with a weak background in Russian. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better. Prerequisites: RUSS 1010 or equivalent.

## RUSS 2030 - Second Year Russian I (4CR)

(4L) [E] Grammar completion and conversation with a study of authentic cultural materials in Russian. Prerequisites: Successful completion of RUSS 1020 or permission of instructor.

## RUSS 2475 - Independent Study in Russian (1-4CR) (Max. 4 credits)

(1-4CR) (Max. 4 credits) Students will meet with the instructor to discuss independently assigned reading and reports from sources of special interest to the student(s) and pertaining to Russian culture and/or current events which are selected in consultation with the Russian instructor of record. Coursework will be done in Russian. Some oral/aural work will be required and grammatical topics may be revisited and expanded upon. Prerequisites: Successful completion of RUSS 1020 or permission of the instructor.

## SOC 1000 - Sociological Principles (3CR)

(3L) [E] A survey of the organization of human society and the impact of group membership and interpersonal relationships upon human behavior.

## SOC 1100 - Social Problems (3CR)

(3L) [E] An analysis of the causes, effects and possible avenues for eradicating the social problems of our society. Crime, delinquency, family disorganization, racial conflict,
and poverty are some areas of investigation. Prerequisites: SOC 1000 , or permission of the instructor.

## SOC 1101 - Education and the Good life: A First-Year Seminar (3CR)

(3L) [E] SOC 1101 is a first-year seminar focused on the nature and purpose of higher education. As individuals, and in groups, students examine the personal, social, civic, and economic goals of a public college with emphasis on the role of the arts and sciences. During the class, students do research, they think through complex issues, consult with others, and in the end, present samples of their work to the instructor and classmates.

## SOC 2112 - Environmental Sociology (3CR)

(3L) Environmental sociology is focused on the intersection of the social and physical worlds. The course explores the constant interaction between human societies and the environments they depend upon. The analysis includes an examination of economic patterns like consumption, production, and the use of environmental resources. The course also includes a discussion of the social mechanisms that shape our relationship to the environment - norms, roles, values, beliefs, and ideology.

## SOC 2200 - Sociology of Human Sexuality (3CR)

(3L) [E] An interdisciplinary course designed to acquaint the student with the major factors affecting human sexuality. Relevant research is reviewed in biology, psychology, sociology, and anthropology, as well as religious and historical perspectives. Prerequisites: A 1000 level introductory social science or biology course. Crosslisted: (Cross listed as PSYC 2200.)

## SOC 2325 - Marriage and Family (3CR)

(3L) The family as a major institution. The significant aspects of courtship and marriage; contemporary marital and domestic problems; changing functions of the family and the impact of major social changes on family life are studied. Prerequisites: SOC 1000, PSYC 1000, or permission of the instructor.

## SOC 2400 - Criminology (3CR)

(3L) [E] A general introduction to the nature of crime, statistics on crime, types of criminal behavior, and explorations of crime. Prerequisites: SOC 1000, or permission of the instructor.

## SOIL 2010 - Introduction to Soil Science (4CR)

(3L, 2LB) $[E]$ Introduces soil ecological processes and management in terrestrial environments. Discusses interaction of soil, biological, chemical. Morphological, and physical properties with land management in wild land and agricultural ecosystems. Emphasis is on plant response to soil conditions. (Spring semester.) Prerequisites: None

## SOWK 2000 - Intro to Social Work (3CR)

(3L) Introduces social work and social welfare through an overview of the history, philosophy, ethics, values, methods, and fields of practice to generalist social work. Concurrently: Concurrent enrollment in SOWK 2005 is optional.

## SOWK 2005 - Social Work Lab (1CR)

(2LB) This volunteer assignment is designed to acquaint the student with services and agencies providing a wide range of human services in the field of social work. This course is an optional Lab component taken in concern with SOWK 2000 - Foundations of Social Work.

## SOWK 2025 - Social Work Capstone (3CR)

(3L) In this class, students will reflect upon prior coursework in a range of social science disciplines. In addition, students will complete assignments that assist in preparation for further study in the field of social work. Prerequisites: SOC 1000, SOWK 2000, ENGL 1020, ECON 1010, and PSYC 1000

## SPAN 0900 - Spanish for Travelers (1CR)

(1L) A course of simple Spanish to help the traveler order meals, make travel plans, obtain tickets, and ask for and understand general information as needed for travel in a Spanish-speaking country.

## SPAN 1010 - First Year Spanish I (4CR)

(4L) [E] This course is intended for students who have never studied Spanish at the college level. Students will learn the fundamentals of the Spanish language through listening, speaking, reading and writing activities of the ACTFL (American Council on the Teaching of Foreign Languages) Novice High Level. This course will also introduce students to the culture of various Spanishspeaking countries. Language laboratory times are required as needed. Students who want to take for credit the next course in the sequence must complete this course with grade of a 'C' or better.

## SPAN 1015 - Novice Spanish II (2CR)

(2L) This course is a continuation of the objectives outlined in SPAN 1005. A student who needs four credits of Spanish for his/her degree must take one semester of SPAN 1005 followed by one semester of SPAN 1015 to receive credit equivalent to SPAN 1010. Should a student take SPAN 1005 followed by SPAN 1010, the student will receive credit for only SPAN 1010. Four credits maximum are allowed for SPAN 1005, SPAN 1010, and SPAN 1015. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: SPAN 1005 with a grade of "C" or better.

## SPAN 1020 - First Year Spanish II (4CR)

(4L) [E] This course is a continuation of the objectives in SPAN 1010. Students will become more proficient in listening, speaking, reading, and writing Spanish and will further their grammatical study of the Spanish language at the ACTFL (American Council on the Teaching of Foreign Languages) Novice Mid-Level. The course will continue to introduce students to the culture of various Spanishspeaking countries. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in SPAN 1010, CLEP test result, or instructor's permission.

## SPAN 2030 - Second Year Spanish I (4CR)

(4L) [E] This course focuses on increased development of listening, speaking reading, and writing skills in Spanish. Students review and expand upon grammar points which facilitate successful communication at the ACTFL
(American Council on the Teaching of Foreign Languages) Novice High Level. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in SPAN 1020, CLEP test result, or instructor's permission.

## SPAN 2040 - Second Year Spanish II (4CR)

(4L) [E] This course further emphasizes the development of all four communicative aspects of the Spanish language through composition, conversation, oral presentations, and grammar study. Language laboratory times are required as needed. Prerequisites: A grade of "C" or better in SPAN 2030, CLEP test result, or instructor's permission.

## SPAN 2140 - Introduction to Reading/Composition and Conversation (3CR)

(3L) [E] Reading of literature with emphasis on creative written expression; included is an introduction to Hispanic culture. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: SPAN 2040, or
permission of the instructor. Students speak in Spanish. Emphasis on Latin American literature.

## SPAN 2220 - Intermediate Composition and Conversation (3CR)

(3L) Reading of literature with emphasis on creative written expression; included is an introduction to Hispanic culture. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: SPAN 2140, or permission of the instructor. Students speak in Spanish. Emphasis on Spanish literature.

## SPAN 2410 - Introduction to Oaxacan Culture (1CR)

(1L) This course will focus on unique culture found in Oaxaca, Mexico. It will prepare students to more fully appreciate that culture while living in the midst of it as they attend a Spanish Language course at the Universidad Regional del Sureste (URSE) and take part in a service learning project in Oaxaca. This course is required of all students who wish to participate in the Student Exchange between Casper College and URSE. It must be passed with a grade of " C " or better and must be taken concurrently with SPAN 2420. Prerequisites: Successful completion of SPAN 1010 with a grade of " C " or better, must be 18 years old by 1 January of the year in which the exchange is offered.

## SPAN 2420 - Travel to Mexico: Oaxaca (3CR)

(3L) This course will focus on unique or specific situations associated with traveling to Mexico (specifically Oaxaca). It will prepare students to successfully complete a Spanish language course at the Universidad Regional del Sureste (URSE) and a service learning project in Oaxaca. This course is required of all students who wish to participate in the Student Exchange between Casper College and URSE. It must be passed with a grade of " C " or better and must be taken concurrently with SPAN 2410. Prerequisites: Successful completion of SPAN 1010 with a grade of "C" or better; must be 18 years old by 1 January of the year in which the exchange is offered.

## SPAN 2475 - Independent Study, Spanish

(1-4CR) (Max. 4) Individual appointments with instructor. Books studied independently by student in consultation with instructor. Students who want to take for credit the next course in the sequence must complete this course with a grade of "C" or better. Prerequisites: SPAN 2040, or permission of the instructor.

## SPAN 2495 - Workshop: Topic

(.5-3CR) (Max. 12) Offered in response to needs and interests of students and members of business and the community. Various topics will focus on development of practical Spanish-speaking skills and cultural awareness. A student may repeat this course, under different topics, for credit up to a maximum of 12 credit hours. Students who want to take for credit the next course in the sequence must complete this course with a grade of " C " or better.

## STAT 2000 - Statistics and the World (3CR)

(3L) Discusses statistical reasoning and methods as related to today's society. Emphasizes ideas rather than specific techniques. Focuses on real examples of the use (and misuse) of statistics. Includes sampling, experimentation, descriptive statistics, elementary probability and statistical inference. Prerequisites: Grade of C or better in MATH 0930 or MATH 1000 or higher.

## STAT 2050 - Fundamentals of Statistics (4CR)

(5L) [E] Primarily for the students of the life sciences, behavioral sciences, and physical sciences. Includes frequency distributions and graphics, central tendency, dispersion, useful probability models, and basic statistical inference including linear regression and correlation. Prerequisites: A "C" or better in MATH 1000 or MATH 1400 , or an ACT Math score of 23 or better, or an appropriate placement Exam score within the past year.

## STAT 2070 - Introductory Statistics for Social Science (4CR)

(5L) [E] Primarily for the students of the social sciences. Includes frequency distributions and graphics, central tendency, dispersion, useful probability models, and basic statistical inference including linear regression and correlation, with emphasis on applications in the social sciences. Prerequisites: A "C" or better in MATH 1000 or MATH 1400, or an ACT Math score of 23 or better, or an appropriate placement exam score within the past year.

## STAT 2120 - Applied Sampling Methods (5CR)

(5L) This course develops methodology of simple random sampling, stratified sampling, and multistage sampling; provides applications related to physical, social, and biological sciences; discusses single and two-variable estimation techniques, and presents estimation based on subsamples from subpopulations. Prerequisites: A "C" or better in STAT 2050 or STAT 2070.

## STAT 2150 - Applied Statistical Methods of Data Analysis (4CR)

$4 L[E]$ A continuation of statistical inference methods begun in STAT 2050 and STAT 2070. Topics include the design of experiments, multi-sample and multivariate methods, multiple regression, ANOVA, ANCOVA, MANOVA, and non-parametric methods. Emphasis is on interpretation of analyses provided by statistical software. Prerequisites: A 'C' or better in STAT 2050 or STAT 2070.

## STAT 2215 - Applied Linear Regression (5CR)

(5L) This course is intended to be an introduction to regression analysis techniques. Its focus will be on the application of linear regression models in practice but will also cover basic theory of the linear model. Topics include: the simple linear regression model, methodology for fitting models, statistical inference for linear models, diagnostics for verification of assumptions and their remedies, multiple linear regression models, binary indicators and qualitative predictors, diagnostic measures of model fit, variable selection and model building. Other topics including generalized linear models and logistic regression will be covered as time allows. once every two years; our next step is to list this as an option in which our students can choose to complete their STAT A.S. or STAT
Certificate. Prerequisites: STAT 2150

## STAT 2220 - Applied Experimental Design (5CR)

(5L) This course reviews design and analysis of one-factor experiments and introduces multi-factor experiments, Latin squares, nested designs and random effects. It also introduces topics such as polynomial response curves, trend analysis, split plots, and incomplete blocks as time permits. Prerequisites: A grade of "C" or better in STAT 2150.

## STAT 2240 - Applied Categorical Data Analysis (5CR)

(5L) This course covers applied methods for analyzing associations when some or all variables are measured in discrete categories, not continuous scales. Topics include the binomial, multinomial, and Poisson probability models, parameter estimation and hypothesis-testing and proportions, measures of association and tests for contingency tables, logistic regression, and log-linear models. Prerequisites: A grade of "C" or better in STAT 2150.

## STAT 2485 - Statistics Laboratory (2CR)

$(1 L, 2 L B)$ This course provides a real-life introduction to the elements of client consultation. The student will learn to translate the client's needs into statistical methodology under the supervision of the faculty. Client questions will include elements of design, sampling methods, analysis procedures, and interpretation of analysis, which the student will now learn to apply. Complicated issues will be discussed and resolved in a seminar format. Prerequisites: A grade of "C" or better in STAT 2220.

## THEA 1000 - Intro to the Theatre (3CR)

(3L) [E] Designed to stimulate an interest and appreciation of the role of the theatre in the modern world including a survey of major theatrical periods from the Golden Age of Greece into the 20th century, a study of the effective evaluation of theatrical performance, and the modern business of theatre.

## THEA 1005 - The Art of Sound (1CR)

(1L) A study of the basic concepts of sound in the field of theatre, radio, television, internet and live performances. Learning the art form of sound and basic techniques of the equipment for recorded and live art. Topics include: under scoring, dialog, Foley, dramatic Audio, basics of microphones, mixers and sound systems. Editing equipment for audio production. Prerequisites: None

## THEA 1010 - Fundamentals of Theatre Arts (3CR)

(3L) [E] Designed to stimulate an interest in and appreciation of the role of the theatre in the modern world including a survey of major theatrical periods from the Golden Age of Greece into the 20th century, a study of the effective evaluation of theatrical performance, and the modern business of theatre.

## THEA 1020 - Children's Theatre (3CR)

( $2 L, 2 L B$ ) This course will include a brief history of Children's Theatre, that is performance for children and youth; a study of selected plays that have been important in the development; the study and experience in the techniques employed in performing for children and youth, and will result in the development of a performance piece (play) that will be toured to local elementary schools.

## THEA 1100 - Beginning Acting (3CR)

(3L) [E] A foundation performance course with emphasis on exploring and developing sensory and emotional resources through creative exercises and improvisations
leading to performance readiness. The course uses a step-by-step 'learn by doing' methodology.

THEA 1115 - Twentieth Century Avant Garde Theatre (3CR)<br>(3L) This course will introduce students to styles and methods of performance that emerged as alternatives to mainstream theatre in the 20th century.

## THEA 1120 - Asian Theatre (3CR)

$(3 L)$ In this course, students will explore the theatrical forms of Asia, specifically the countries of China, Japan, India, Indonesia, and Burma. We will study the form and content of theatrical practices such as kabuki, noh, Chinese opera, banraku, buto, kathakali, and kyogen. Students also will study the theatrical theory underlying these practices; examples include the ancient Sanskrit treatise Natayasastra and the treatise by Zeami on the subject of Noh drama. Finally, students will read plays exemplary of these various theatrical practices. Prerequisites: None.

## THEA 1125 - Musical Theatre Performance Techniques I (3CR)

$(2 L, 2 L B)$ This course is designed to integrate the learned skills of singing, acting, movement, voice and dancing into a synthesized, cohesive musical theatre performance craft.

## THEA 1220-CAD for Theatre (3CR)

(2L, 2LB) An introductory course in computer graphics using AutoCAD software to create drafting for scenic and lighting designs. Students will be given the opportunity to learn 2-D and 3-D drawing, how to properly maintain files and how to produce hard copies.

## THEA 1471 - Technical Theatre Practicum Costuming (2CR)

(4LB) Required technical theatre lab work for all technical theatre majors not registered in THEA 2220 Stagecraft. Hands-on work constructing costumes used in Casper College Theatre and Dance Department productions. The student will develop an overview of how all the areas of technical construction overlap and support each other.

## THEA 1472 - Technical Theatre Practicum Lighting (2CR)

(4LB) Required technical theatre lab work for all technical theatre majors not registered in THEA 2220 Stagecraft. Hands-on work in lighting preparation used in Casper College Theatre and Dance Department productions. The student will develop an overview of how all the areas of technical construction overlap and support each other.

## THEA 1473 - Technical Theatre Practicum

 Properties (2CR)(4LB) Required technical theatre lab work for all technical theatre majors not registered in THEA 2220 Stagecraft. Hands-on work constructing properties used in Casper College Theatre and Dance Department productions. The student will develop an overview of how all the areas of technical construction overlap and support each other.

## THEA 1700 - Voice for the Actor (3CR)

(3L) Study of voice and articulation as a means of improving vocal expression in performance.

## THEA 2010 - Theatrical Backgrounds Drama I (3CR)

(3L) [E] First semester of a one-year course. A study of plays from the major periods of dramatic literature. This course will cover from the Greeks through the Restoration. Prerequisites: THEA 1000 or THEA 1010.

## THEA 2020 - Theatrical Backgrounds Drama II (3CR)

(3L) [E] Second semester of a one-year course. Covers major plays from the 18 th century to the present. A continuation of THEA 2010. Prerequisites: THEA 2010, or permission of the instructor.

## THEA 2030 - Beginning Playwriting (2CR)

(2L) This course helps develop the student's playwriting skills. It covers play formatting and scene writing exercises. Each exercise will be written outside of class. The student's work will then be read and discussed in the following class.

## THEA 2050 - Theatre Practice

(0-1 CR) (Max. 10) Yes Individually supervised practical training during the rehearsal and performance of facultydirected theatre productions. Open entry. Grading will be $\mathrm{S} / \mathrm{U} * *$ This course can only be taken for 0 credits if the student has already taken 2 credits of 2050, 2060, 2070 or 2080 Every semester Prerequisites: permission of the instructor.

## THEA 2060 - Production: Run Crew

(0-1CR) Repeatable E Individually supervised practical training during the rehearsal and performance of facultydirected theatre productions. Open entry. Grading will be S/U **This course can only be taken for 0 credits if the student has already taken 2 credits of 2050, 2060, 2070 or 2080

THEA 2070 - Production: Costume Crew (0-1CR) (Max. 10) Individually supervised practical training during the rehearsal and performance of facultydirected theatre productions. Open entry. Grading will be S/U **This course can only be taken for 0 credits if the student has already taken 2 credits of 2050, 2060, 2070 or 2080

## THEA 2080 - Production: Stage Management

 (0-2CR) (Max. 10) Individually supervised experience in stage management during the rehearsal and performance of faculty-directed theatre productions. Open entry. Grading will be $\mathrm{S} / \mathrm{U}^{* *}$ This course can only be taken for 0 credits if the student has already taken 2 credits of 2050, 2060, 2070 or 2080 Prerequisites: Permission of instructor.
## THEA 2090 - Production: Orchestra

( $1-2 C R$ ) Individually supervised practical training during the rehearsal and performance of faculty-directed theatre production. Open entry. Prerequisites: Permission of the instructor.

## THEA 2100 - Acting II (3CR)

(3L) A course to develop the actor's voice and body for characterization and character interaction through performance of scenes. Study of character and scene analysis. Prerequisites: THEA 1100, or permission of the instructor.

## THEA 2135 - Script Development (2CR)

(2L) In this course, the class will explore the process of bringing a play "from the page to the stage." Student playwrights with early drafts of original material will have the opportunity to workshop their plays with a group of actors and designers. As the plays are being revised, the group will examine ways in which the plays might be produced, gaining valuable insight into how the business of the theatre operates. Using only the resources available through the Department of Theatre and Dance and a production budget allocated by the Bakkhai, student directors and designers will have the opportunity to explore their visions of extant material and develop their ideas for production during the summer Theatre Brute season.

## THEA 2145 - Costume Construction (3CR)

( $1 L, 4 L B$ ) [E] Will introduce all aspects of stage costuming: costume construction and the integrating of the costume with scenery, make-up, and lighting. This class will focus on the practical construction and crafting of costumes and may include practical laboratory work on college productions.

## THEA 2155 - Movement for Acting (3CR)

$(3 L)$ This course focuses on the physical training of the actor. Aspects of physical training that will be covered are: warm ups, dynamic movement, relaxation and alignment, coordination and control, and techniques such as stage combat and mime.

## THEA 2160 - Stage Makeup (3CR)

(1L, 4LB) [E] The practice of techniques involved in stage make-up. Straight and character make-ups, the application and shaping of beards and mustaches, and other techniques of realistic and nonrealistic make-up.

## THEA 2220 - Stagecraft (4CR)

$(3 L, 2 L B)$ [E] Study of basic skills and procedures used to realize a design idea into a finished stage production. Work in design principles and techniques, set construction, color, and stage lighting. Laboratory required.

## THEA 2225 - Playing with Shakespeare:

 Literature in Performance (4CR)(4L) A fresh look at Shakespeare, aimed at engaging students' interests and increasing their appreciation and enjoyment of his works. Will include study of a variety of different performances. Will examine and respond to the interpretations of actors, directors, and literacy critics in order to arrive at a more complete understanding of Shakespeare's plays, both as literature and performance. Prerequisites: ENGL 1010, or permission of the instructor. Cross-listed: (Cross-listed as ENGL 2225.)

## THEA 2235 - Introduction to Scenic Design (3CR)

(3L) An introduction to the discipline of scenic design. Course will focus on the fundamentals of scenic design, including the history of design, fundamentals and principles of design, design process, and production of designer drawings, elevations, renderings and models. Prerequisites: THEA 2220

## THEA 2240 - Costume Design (3CR)

(3L) An introduction to the discipline of costume design. This course will focus on the fundamentals of costume design, including history of design, history of fashion, fundamentals and principles of design, design process, and position of designer drawings, renderings, and other collaborative communications. Prerequisites: THEA 2145

## THEA 2310 - Auditioning (3CR)

$(2 L, 2 L B)$ Practical experience in preparing and presenting audition material, and a preparation for a career in theatre,
film or television. Prerequisites: THEA 1100, THEA 2100, or permission of instructor.

## THEA 2311 - Portfolio Preparation (1CR)

(1L) This course is for beginning costume, makeup, set or lighting designers, stage managers and/or technical directors. It is the study and practice of the techniques and skills required to assemble a professional portfolio and to prepare the student to present their work and themselves in a professional manner when interviewing for transfer schools or jobs.

## THEA 2350 - Musical Theatre History and Analysis (4CR) <br> (4L) Understanding the history of musical theatre through the reading, listening, watching, and analyzing of specific groundbreaking musicals representative of the genre throughout the decades, and then how that information applies to each student's professional craft.

## THEA 2360 - Musical Theatre History and Analysis II (3CR)

(3L) An advanced study of the analysis of musical theatre through the reading, listening, watching, and analyzing of specific groundbreaking musicals representative of the genre, and then how that information applies to each student's professional craft. This course will fulfill the general education requirement for Cultural Environment. Prerequisites: THEA 2350

## THEA 2370 - Summer Theatre

(2-6LB) (1-3CR) $[E]$ (Max. 4) Credit for participation in the Casper College Summer Theatre Program in all phases of production. Open entry. (Summer term.) Prerequisites: permission of the instructor.

## THEA 2475 - Directed Special Projects in Theatre (3CR)

(1-3L, 2-6LB) (Max. 6) For students who wish to work in greater depth in acting, scenic design, stage lighting, costuming, research in theatre, etc. Course content will be contracted individually with each student in order to provide greater emphasis and experience in that student's area of interest.

## THEA 2790 - Stage Management (2CR)

(2L) Learn the basic techniques used by stage managers to run and organize auditions, rehearsals, technical rehearsals and performances.

## THEA 2800 - Stage Lighting (3CR)

$(2 L, 2 L B)$ This is an introduction to the discipline of stage lighting which will examine the elemental aspects of stage lighting including: history, luminaries, color theory, lighting control, principles of lighting design and fundamental electricity. Laboratory required.

## WELD 1555 - Welding Technology Safety and Problem Solving (1.5CR)

( $1 L, 1 L B$ ) Designed to increase awareness of accident prevention and to recognize potential hazards in the working environment. Emphasis in the theory and practice of hand tools and shop equipment including good working habits toward drilling, tapping, grinding, filing, letter stamping, metal cutting, drill sharpening, machine guarding, and layout.

## WELD 1650 - Print Reading and Welding Symbols (2CR)

(2L) Designed to develop technical understanding of standard American Welding Society (AWS) symbols contained on engineering drawings and to effectively use this information to communicate welding instructions from the designer to the welder and fitter.

## WELD 1700 - General Welding

$(.5 L, 1 L B)(1 C R)$ or $(1 L, 3 L B)(2.5 C R)$ Includes the study of oxyacetylene welding, cutting and brazing (OAW, OAC), and Shielded Metal Arc Welding (SMAW) processes. Students should develop skills necessary to produce quality welds on mild steel joints utilizing both processes.

## WELD 1710-Oxyacetylene Welding and Cutting (1.5CR)

( $1 L, 1 L B$ ) Instruction in welding safety, oxyacetylene cutting (OAC), oxyacetylene welding (OAW) and torch brazing (TB) processes. Identification of the most common joint designs, including joining processes using bead, fillet, and groove welds. Applications used with art forms, pipe welding, and nonferrous metals are covered.

## WELD 1755 - Shielded Metal Arc Welding (8CR)

( $4 L, 8 L B$ ) Provides the student with the technical knowledge of Shielded Metal Arc Welding (SMAW) safety, power sources, and electrode classification and selection. Training is provided to develop skills necessary to produce quality welds on mild steel in all positions using mild steel electrodes, low hydrogen electrodes, and iron powder electrodes using both AC and DC current.

## WELD 1770 - Gas Metal/Flux Core Arc Welding (5CR) <br> $(2 L, 6 L B)$ Provides the student with a technical understanding of Gas Metal Arc Welding (GMAW) equipment, trouble-shooting and adjustments, metal transfer, shielding gases, and welding safety. Will include training in the gas metal arc spray and short circuit transfer, Flux Cored Arc Welding (FCAW), and Inner shield.

## WELD 1785 - Gas Tungsten Arc Welding (GTAW) (5CR)

$(2 L, 6 L B)$ Provides the student with the knowledge and understanding of the Gas Tungsten Arc Welding (GTAW) process, welding safety, and arc characteristics. Students should develop skills necessary to produce quality fillet and open groove welds on mild steel, stainless steel, and aluminum.

## WELD 1820 - GMAW and GTAW Welding (2.5CR)

( $1 L, 3 L B$ ) Provides basic instruction in the Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW) processes. Emphasis on safety, machine set-up and trouble-shooting, and power sources. Students should develop skills necessary to produce quality welds on mild steel, aluminum, and stainless-steel joints utilizing both processes.

## WELD 1860 - Welding Fabrication (5CR)

$(2 L, 6 L B)$ Building a project of their choice, students display design, layout, and welding skills. Abilities are further developed using a variety of processes on construction of metal structures. Students are given the opportunity to compete in local and national competition with their projects. Prerequisites: WELD 1650, WELD 1710, WELD 1755, WELD 1770, AUBR 1820.

## WELD 1910 - Specialized Welding and Joining (3CR)

( $2 L, 2 L B$ ) Emphasizes unique applications of hard-to-join metals and plastics. Utilizing modern technology, students are exposed to new dimensions in welding. Various laboratory exercises will cover plasma, submerged arc welding, resistance spot welding, metal surfacing, thermal torch spraying, and thermoplastic welding. Prerequisites: WELD 1710, WELD 1755, WELD 1770, WELD 1820, AUBR 1540.

## WELD 1975 - Independent Study Welding

( $1-3 C R$ ) Provides an option for students with sufficient background to pursue special interests in the welding
laboratory under contract with the instructor. Prerequisites: Welding majors only.

## WELD 1980 - Cooperative Work Experience

 (1-8CR) (Max. 8) Advanced students are afforded the opportunity to gain practical on-the job experience in their specialties. Students will be supervised by the instructor and the employer. A minimum of 80 hours of on-the-job training represents one semester credit. Prerequisites: permission of the instructor.
## WELD 2500 - Structural Welding (3CR)

( $2 L, 2 L B$ ) A continuation of ARC welding techniques utilizing Shielded Metal Arc Welding (SMAW) Gas Metal Arc Welding (GMAW) on a variety of structural applications. Emphasis will be placed on multiple positions and joint geometry common to industry. Testing and course material will be based on the American Welding Society Structural Welding Code D1.1. Prerequisites: WELD 1710 and WELD 1770.

## WELD 2510 - Pipe Welding I (4CR)

( $2 L, 4 L B$ ) An introduction to pipe fabrication. Emphasis will be on joint preparation, formulas used in pipe layout, and uphill and downhill techniques. Welding will be done on carbon steel using the Shielded Metal Arc Welding (SMAW) process with qualification testing in accordance with API and ASME codes. Prerequisites: WELD 1710.or permission of instructor. Concurrently: Concurrent enrollment in WELD 1755 is required.

## WELD 2520 - Pipe Welding II (5CR)

( $2 L, 6 L B$ ) Designed to combine skills developed in previous courses to prepare pipe joints on carbon steel, stainless steel, and aluminum pipe. Welding will be done using the Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), and Gas Metal Welding (GMAW) processes in the 2G, 5G and 6G positions. This course includes a welder qualification performance test in accordance with Section IX of the ASME Boiler and Pressure Vessel Code. Prerequisites: WELD 2510.

## WELD 2970 - Welding Internship

(1-8CR) Students will be placed in selected welding related industries for guided learning experiences providing the students with practical application of knowledge and skills learned in the classroom. Prerequisites: permission of the instructor.

## WELD 2995 - Welding Workshop (1CR)

(2LB) A variable interest course in the welding field designed for vocational education instructors only.

## WMST 1080 - Introduction to Women's Studies (3CR)

(3L) [E] A discussion of issues central to women's studies: the psychology, sociology and acculturation of women, and women's contributions to and influence on society, culture, work, and the arts.

## WMST 2020 - Women and Food (3CR)

$(3 L)$ "Who is cooking what, for whom, under what conditions, and does it matter? Are we what we eat? A daily activity all of us must do and have done since the day we were born, eating plays a role in constructing our identities and the worlds we live in... this course will examine the complex interplay of food and the construction of identities and social structures. Focusing on women and gender within the contexts of race, class, and sexuality, we will explore food practices historically both domestically and in larger social structures including the global context. We will use historical and social analyses as well as memoir and fiction to explore these issues." (description used with permission from Dr. Avakian at 2010 WMST Conference). Prerequisites: None.

## WMST 2021 - Women in Music (3CR)

(3L) This course explores women's contribution to the field of Western music from Ancient Greece to modern times. Prerequisites: None. Cross-listed: MUSC 2021

## WMST 2025 - Women in Global Culture (3CR)

(3L) In this course, we will explore global and crosscultural perspectives on women and feminism. We will examine feminist perspectives across a range of national and international issues affecting all people, with an emphasis on the reality's women face. We will also analyze the feminist debates surrounding Western concepts of feminisms and compare Western concepts to other concepts in different geographic and cultural contexts. Prerequisites: None.

## WMST 2310 - History of Women in America (3CR)

(3L) Examine women's history, the activities and circumstances specific to women in America, and their contributions, influences, and significance. Prerequisites: ENGL 1010, (or concurrent enrollment) or permission of the instructor. Cross-listed: HIST 2310

## WMST 2480 - Directed Special Projects

(1-3L) (1-3CR) (Max. 3) Research project designed by student in consultation with instructor from the women's studies department, and with approval of the director of women's studies. Prerequisites: WMST 1080 and permission of the instructor.

## ZOO 2015 - Human Anatomy (4CR)

$(3 L, 3 L B)[E]$ This course is designed to give students a hands-on experience with the microscopic and macroscopic elements of human anatomy. Topics covered include human anatomical principles ranging from the cellular to the organ system level. This course is intended to provide students with a solid anatomical background, which may be used to assist in learning human physiology. During the laboratory portion of this class, students will be tasked with learning and identifying relevant anatomical structures which are being presented and discussed in the lecture portion of the course. Concurrently: (This course must be combined with ZOO 2025 in order to fulfill an anatomy and physiology requirement. *NOTE: a maximum of 8 credit hours in an Anatomy and Physiology course sequence may be applied toward graduation.) Cross-listed: (Cross-listed at UW as KIN 2040.)

## ZOO 2025 - Human Physiology (4CR)

$(3 L, 3 L B)$ This course is a scientific inquiry into the physiology of select organ systems in the human body during homeostasis. Physical exertion, environmental effects and pathological change will also be discussed as they pertain to physiological change in organ system function. Physiologic concepts will be related to anatomical organization. Concurrently: (This course must be combined with ZOO 2015 and in order to fulfill an anatomy and physiology requirement. *NOTE: a maximum of 8 credit hours in an Anatomy and Physiology course sequence may be applied toward graduation.)

## ZOO 2140 - Cadaver Anatomy (4CR)

( $3 L, 2 L B$ ) This course involves dissection of human anatomical donors for the purpose of studying human anatomy at the macroscopic level. The lecture portion of the course builds upon the principles of anatomy acquired in previous coursework. In the laboratory portion of the course, students will learn basic dissection techniques and will apply them to the dissection of a human anatomical donor. The course is regionally organized so that the primary focus is on the thorax, abdominal and cranial regions. Extremity, back and pelvic prosections will be studied. (Spring only.) Prerequisites: Successful completion of ZOO 2015/ZOO 2041 and ZOO 2025, or permission of the instructor.

## ZOO 2450 - Principles of Fish and Wildlife

 Management (3CR)(3L) $[E]$ Emphasizes principles of habitat and population biology and management, human dimensions of wildlife management, as well as law and policy. Cross-listed: ENR 2450

