

COURSE  
CATALOG  
2023-2024



BIG BEND  
COMMUNITY  
COLLEGE



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# General Information

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## Letter from the President



Welcome to Big Bend Community College (BBCC)!

As our vision states, we want to be our community's first choice to dream, learn, and succeed. We take our commitment to student

success seriously. Our mission is to serve as a bridge, stand as a leader and support for success. In fulfillment of that mission, we have carefully designed academic and workforce education programs as well as other structured support such as financial assistance, counseling, and tutoring, and access to food and emergency supplies. Students can also reach out to student services professionals virtually and in-person for guidance and support. Big Bend faculty offer classes virtually, in-person, as well as in a "hybrid" model—a mix of virtual and in-person. In addition to academic and support services. These class offerings allow for students with work, family, and other responsibilities to make progress towards their degree. Big Bend also offers opportunities for students to engage with one another through ASB student programs and events as well as through our athletic programs.

The 2023-24 Course Catalog is a resource designed to familiarize you with Big Bend. Know that we are here for you and our sincerest desire is your success!

All the best in your educational pursuits!

A handwritten signature in black ink, reading "Sara Thompson Tweedy". The signature is fluid and cursive, with a large initial "S" and a long horizontal line extending across the middle.

Dr. Sara Thompson Tweedy  
President of Big Bend Community College

# Academic Calendar 2023–2024

(dates subject to change without notice)

Event		Summer 2023	Fall 2023	Winter 2024	Spring 2024	Summer 2024
<i>Financial Aid Priority Deadline</i>		April 15	July 15	Nov. 15	Feb. 15	April 15
<i>Advising Begins</i>		May 1	May 1	Oct. 16	Jan 29	April 29
<i>Priority Registration</i>	<i>Students enrolled in the past year</i>	May 22–24	May 22–24	Nov. 6–8	Feb. 20–22	May 20–22
<i>Priority Registration</i>	<i>All previously enrolled students</i>	May 25	May 25	Nov. 9	Feb. 23	May 23
<i>New Student Registration</i>		New students will meet with advisors and register during New Student Registration (NSR) sessions. Complete Online Orientation to reserve your NSR date.				
<i>Open Enrollment (registrations)</i>		May 30	Aug. 28	Dec. 4	March 4	May 28
<i>Tuition Due</i>		June 15	Sept. 7	Dec. 14	March 14	June 13
<i>Instruction Begins</i>		July 3	Sept.18	Jan. 2	April 1	July 1
<i>Last day to add a class to your schedule (with instructor permission)</i>		July 7	Sept. 21	Jan. 5	April 4	July 5
<i>Last day to drop a class</i>		Aug. 4	Nov. 16	Feb 29	May 23	Aug. 2
<i>Instruction ends</i>		Aug. 11	Nov. 29	March 14	June 11	Aug. 9
<i>Final exams</i>		Last day of instruction	Dec.4–6	March 18–20	June 12–14	Last day of instruction
<i>Grades available</i>		Aug. 18	Dec. 15	March 29	June 21	Aug. 16
<i>Commencement</i>					June 14	
<i>No classes held these days:</i>		Independence Day July 4	Veterans' Day Nov. 10 Thanksgiving Nov. 22–24	Martin Luther King, Jr. Day Jan. 15 Presidents' Day Feb. 19	Memorial Day May 27	Independence Day July 4

## Accreditation

Big Bend Community College is accredited by the Northwest Commission on Colleges and Universities. Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation. Accreditation by the Northwest Commission on Colleges and Universities is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

## Board of Trustees

Mr. Gary Chandler  
(Appointed February 2022), Moses Lake

Ms. Anna Franz  
(Appointed March 2012), Moses Lake

Ms. Bethany Martinez  
(Appointed 2022), Mattawa

Ms. Amy Parris  
(Appointed September 2021), Othello

Ms. Juanita Richards  
(Appointed October 2014), Moses Lake

The above listed citizens are Trustees of BBCC and are responsible to citizens of the Big Bend Community College service district for the operation of the college. The board meets regularly every six weeks. Each is appointed by

the governor of the State of Washington and confirmed by the Washington State Senate to staggered five-year terms.

## History

Big Bend Community College was authorized by the Washington State Board of Education in 1961. Beginning fall quarter 1962 BBCC held its first regular classes at night in Moses Lake High School. The college opened classes in a new facility located a short distance southeast of the city of Moses Lake fall quarter 1963. In 1966, BBCC acquired a 159-acre tract of land on the former Larson Air Force Base, which became the permanent college campus for all programs in 1975.

The Washington State Legislature's Community College Act of 1967 designated Big Bend Community College as District 18 of the state community college system. The district includes Adams and Grant Counties, and the Odessa Consolidated School District

## Vision, Mission, and Guiding Principles

### Vision

Be our community's first choice to dream, learn and succeed

### Mission

Serve as a Bridge  
Stand as a Leader  
Support for Success

### Guiding Principles

Honor our Role as a Hispanic-Serving Institution  
Advocate for Equity, Inclusion, & Diversity  
Embrace our Workplace Norms  
Innovate Proactively  
Model Integrity  
Educate All

# Board Ends Statements

## E-1 Student Success

Big Bend Community College provides the entire district with access to learning opportunities, assists students in completion of their educational and workforce development goals, develops skills for continued learning, and maintains high academic standards.

## E-2 Community Engagement

Big Bend Community College supports economic development by nurturing community and industry partnerships to enhance access and service to our district.

## E-3 Stewardship

Big Bend Community College acts as a responsible steward of resources by promoting accountability, sustainability, ethics, and prudent resource management to provide quality and affordable resources to our district.

## E-4 Diversity, Equity, Inclusion

Big Bend Community College fosters inclusiveness for students, employees, and visitors by maintaining a safe learning environment promoting cultural inclusiveness and respect by embracing diversity, access, opportunity, and equity.

## Civil Rights Non-Discrimination Statement

Big Bend Community College District 18 provides equal opportunity in education and employment and does not discriminate against anyone on the basis of race, sex, sexual orientation, gender identity/expression, religion, age, color, creed, national or ethnic origin, the presence of any physical, mental, or sensory disability, use of a trained guide dog or service animal by a person with a disability, marital status, pregnancy status or families with children, a mother breastfeeding

her child, AIDS/HIV or hepatitis C, genetic information and/or status as a veteran, or any other legally protected status.

BBCC provides reasonable accommodations for qualified students, employees, and applicants with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Federal Rehabilitation Act of 1973.

Big Bend Community College encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact the individuals noted below as soon as possible to allow sufficient time to make arrangements. The following persons have been designated to handle inquiries regarding non-discrimination policies and requests for accommodations:

Kimberly A. Garza, Vice President of Human Resources & Labor  
Equal Opportunity Officer/Title IX Coordinator/  
Section 504 Coordinator  
Building 1400, Second Floor, Room 1449  
509.793.2010

Accommodation and Accessibility Services  
Coordinator  
Building 1400, First Floor, Room 1472  
509.793.2027 or TDD 509.793.2325

## Discrimination

Big Bend Community College provides equal opportunity in education and employment and does not discriminate against anyone on the basis of race, sex, sexual orientation, gender identity/expression, religion, age, color, creed, national or ethnic origin, the presence of any physical, mental, or sensory disability, use of a

trained guide dog or service animal by a person with a disability, marital status, pregnancy status or families with children, a mother breastfeeding her child, AIDS/HIV or hepatitis C, genetic information and/or status as a veteran, or any other legally protected status.

BBCC is prohibited from discriminating in such a manner by college policy and by state and federal law. All college personnel and persons, vendors and organizations with which the college does business are required to comply with applicable federal and state statutes and regulations designed to promote affirmative action and equal opportunity.

The following persons have been designated to handle inquiries regarding the non-discrimination policies:

Kimberly A. Garza  
VP of Human Resources  
EO/Title IX Coordinator  
7662 Chanute Street NE Building 1400, Office 1449  
Moses Lake, WA 98837 (509) 793-2010  
TDD (509) 762-6335

Aaron Glenn  
Accommodation and Accessibility Services  
Coordinator  
7662 Chanute Street NE Building 1400, Office 1473  
Moses Lake, WA 98837 (509) 793-2027

## Affirmative Action and Diversity Statement

Big Bend Community College is an equal employment opportunity and affirmative action employer. Applicants with multicultural experience and/or backgrounds which will add cultural richness and diversity to Big Bend Community College as well as protected groups are encouraged to apply.

Big Bend Community College District 18 provides equal opportunity in education and employment and does not discriminate against anyone on the basis of race, sex, sexual orientation, gender

identity/expression, religion, age, color, creed, national or ethnic origin, the presence of any physical, mental, or sensory disability, use of a trained guide dog or service animal by a person with a disability, marital status, pregnancy status or families with children, a mother breastfeeding her child, AIDS/HIV or hepatitis C, genetic information and/or status as a veteran, or any other legally protected status.

BBCC provides reasonable accommodations for qualified students, employees, and applicants with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Federal Rehabilitation Act of 1973.

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VP of Human Resources  
EO/Title IX Coordinator 7662 Chanute Street NE  
Building 1400, Office 1449 Moses Lake, WA 98837  
(509) 793-2010  
TDD (509) 762-6335

To receive this information in an alternative format, please contact:

Aaron Glenn  
Accommodation and Accessibility Services  
Coordinator  
7662 Chanute Street NE Building 1400, Office 1473  
Moses Lake, WA 98837 (509) 793-2027



## Clery Act

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act) is a federal statute codified at 20 U.S.C. § 1092(f), with implementing regulations in the U.S. Code of Federal Regulations at 34C.F.R. 668.46. The Violence Against Women Act of 2013 adds additional requirements under the Campus Sexual Violence Act (SaVE Act) provision, Section 304.

The Clery Act requires all colleges and universities that participate in federal financial aid programs to keep and disclose information about crime on and near their respective campuses. Compliance is monitored by the United States Department of Education, which can impose civil penalties (up to \$62,689 per violation) against institutions for each infraction and can suspend institutions from participating in federal student financial aid programs.

The law is named for Jeanne Clery, a 19-year-old Lehigh (Penn.) University freshman who was raped and murdered in her campus residence hall in 1986. The backlash against unreported crimes on numerous campuses across the country led to the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. The Clery Act, signed in 1990, was originally known as the Crime Awareness and Campus Security Act.

In compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Clery Act), BBCC's Annual Security and Fire Report contains statistics of Clery Act crimes that are reported and that occurred on campus, in other locations owned or controlled by BBCC, and on public property within or immediately adjacent to and accessible from the campus for the three most recent calendar years.

All students are encouraged to review the report and to report all criminal or fire related incidents promptly to the Campus Safety Department.

BBCC's Annual Security and Fire Safety Report, vis online here: <https://www.bigbend.edu/wp-content/uploads/BBCC-2021-ANNUAL-SECURITY-AND-FIRE-SAFETY-REPORT.pdf>. A printed copy of the report may be obtained by contacting Campus Safety at 509-793-2286, or visiting at 7662 Chanute St NE, Moses Lake, Washington.

## Disclaimer Statement

This catalog and its components shall not constitute a contract between Big Bend Community College and prospective or enrolled students. The information contained in this catalog reflects the current policies and regulations of the college. However, the college reserves the right to make changes in its policies and regulations at any time. If policies or regulations of the college at any time conflict with information contained in this catalog, the policies and regulations will govern, unless expressly determined otherwise by the Board of Trustees. The college reserves the right to eliminate, cancel, phase out or reduce in size courses and/or programs for financial, curricular or programmatic reasons.

## Limitations of Liability

The college's total liability for claims arising from a contractual relationship with the student in any way related to classes or programs shall be limited to the tuition and expenses paid by the student to the college for those classes or programs. In no event shall the college be liable for any special, indirect, incidental or consequential damages, including but not limited to, loss of earnings or profits.

## Areas of Interest

Our degrees and certificates largely fall within one of our six focus areas. Each of these areas may include workforce and transfer options

## Aviation

- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Commercial Pilot/Flight (AVF)
- Aviation Maintenance Technology Powerplant/Airframe (AMT)
- Uncrewed/Unmanned Aircraft/Aerial Systems Commercial Remote Pilot (Drone) (UAS/UMS)

## Business

- Accounting (ACCT)
- Agribusiness-Agriculture Programs (AGR)
- Agriculture Mechanics (AGM)
- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Business Administration (BUS)
- Business Information Management (BIM)

## Healthcare

- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Medical Assistant (MA)
- Medical Office and Billing Support Services (BIM)
- Nursing Assistant (NA-C)
- Nursing (NUR)
- Pre-Professional Transfer (Pre-MED)

## Industry, Manufacturing & Trades

- Automotive Technology (AUT)
- Aviation Maintenance Technology Powerplant/Airframe (AMT)
- Agriculture (AGR)
- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Commercial Driver's License (CDL)
- Computer Science (CS)
- Industrial Systems Technology (IST)
- Manufacturing & Process Technology (MPT)
- Mechatronics (MCT)
- Welding (WLD)

## STEM

- Agriculture (AGR)

- Astronomy (ASTR)
- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Biology (BIOL)
- Botany (BOT)
- Chemistry (CHEM)
- Computer Science (CS)
- Engineering (ENGR)
- Manufacturing & Process Technology (MPT)
- Mathematics (MATH)
- Mechatronics (MCT)
- Physic (PHYS)

## The Arts, Education and Human Services

- Anthropology (ANTH)
- Art (ART)
- Bachelor of Applied Science – Applied Management (BAS-AM degree program)
- Criminal Justice (CJ)
- Early Childhood Education (ECE)
- Economics (ECON)
- Education (EDUC)
- English (ENGL)
- History (HIST)
- Homeland Security and Emergency Management (HSEM)
- Music (MUSC)
- Philosophy (PHIL)
- Physical Education (PEH)
- Political Science (POLS)
- Psychology (PSYC)
- Religious Studies (RELS)
- Sociology (SOC)
- World Languages (Previously Foreign Languages) (FRCH, GERM, SPAN)

## Admissions

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BBCC accepts all applicants who are 18 years of age or older. Those under 18 years of age who have graduated from an accredited high school, have an equivalent certificate, e.g., the General Education Development Test, or qualify as a Running Start student will be admitted.

Applicants who are younger than 18 and who do not meet these requirements must provide BBCC with a written release from their school principal authorizing BBCC to admit them. All applicants must be 16 years of age or older unless they have graduated from high school or are part of a state approved program such as Running Start. Some programs have specific admission procedures and limited space; therefore, admission to BBCC does not guarantee availability of all programs.

Students enrolling in a degree or certificate program must apply for admission. BBCC will assign an advisor and evaluate transfer course work for officially admitted students. Registration priority is given to admitted students. Individuals who must obtain a certificate to keep a job due to a change in regulations may complete a single certificate without being admitted. This exception is limited to certificates requiring fewer than 45 credits, and does not apply to students who must have transfer credits evaluated for completion.

## Admission Checklist

1. Apply for admission online at <https://apply.ctc.edu>. (Email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089 if you need an alternative way to apply.) Once your application is processed, you will receive an acceptance letter from the college with important information via the email address provided on your application. Transfer students: Contact your previous school(s) to order official transcripts and have them mailed to: Admissions/ Registration Big Bend Community College, 7662 Chanute Street NE Moses Lake, WA 98837-3299

2. Apply for Financial Aid at [www.studentaid.gov](http://www.studentaid.gov) and learn about other funding options at <https://www.bigbend.edu/student-center/paying-for-college/>. Important dates and deadlines are located at

<https://www.bigbend.edu/academics/datesdeadlines/>. Email [faidinfo@bigbend.edu](mailto:faidinfo@bigbend.edu) or call 509.793.2088 for assistance.

3. New students are required to complete Online Viking Orientation before signing up for a New Student Enrollment session and enrolling in classes. The online orientation is a resource for you to refer back to at any time.

4. Take the math and English placement tests or submit documentation for alternative placement methods. Math and English placements are important steps for ensuring you enroll in the appropriate courses in your first quarter. Please visit <https://www.bigbend.edu/student-center/testing-center/> for more information on placement options. Email [testingcenter@bigbend.edu](mailto:testingcenter@bigbend.edu) or call 509.793.2064 for assistance.

5. Sign-up for a New Student Enrollment (NSE) session at the end of Online Viking Orientation. NSE sessions occur before fall, winter, and spring quarters. At these sessions, new students will meet with advisors to understand math and English placements, learn how to find important resources at BBCC, choose first-quarter classes, and learn how to enroll in classes.

6. Once enrolled in classes, save your spot by paying tuition or signing up for the Student Tuition Easy Payment Plan (STEPP). Enrollment in classes is not official until tuition and fees are paid! Classes could be dropped if you do not pay or sign up for the payment plan by the due date. Tuition due dates are available on the [Academic Calendar](#). Email [businessoffice@bigbend.edu](mailto:businessoffice@bigbend.edu) or call 509.793.2018 for assistance with payment or the payment plan.

## Resident Classification for Tuition

To be considered a resident for the purpose of tuition, a person must be either (1) a financially

independent student who has had a domicile in the state of Washington for a period of one year immediately prior to the commencement of the quarter for which the student has registered and has established a bona fide domicile for purposes other than educational; or (2) a dependent student whose parent(s) or legal guardian(s) has maintained a domicile in the state of Washington for at least one year prior to commencement of the quarter for which the student has registered. A nonresident student enrolled for more than six credit hours per quarter shall be considered as attending primarily for educational purposes. Such period of enrollment shall not be counted toward the establishment of domicile in this state unless the student proves domicile was established for purposes other than educational.

United States citizens or INS permanent residents who do not live in Washington State qualify for a waiver of part of the nonresident tuition.

Students who are not permanent residents or citizens of the United States but who have met both of the following conditions may qualify for resident status: have earned a high school diploma, GED, or diploma equivalent before the first term at the college AND have maintained a primary residence in Washington State for at least 12 consecutive months immediately before the first term at the college. Students who meet these criteria and have applied for admission must submit a signed WA Higher Education Residency Affidavit.

Once a student has been classified as resident or nonresident and registered, the classification will remain unchanged until satisfactory evidence showing cause for change is presented in writing. The conditions listed below, which typically must be accomplished one year prior to classification as a resident, may be required evidence of having become a Washington resident.

- Permanent full-time or part-time employment in the state of Washington.

- Purchase of property in the state of Washington.
- Registration of all vehicles in the state of Washington.
- Registration to vote in the state of Washington.
- Valid Washington State driver's license.
- Rent receipts from an apartment or home in the state of Washington.
- Establishment of bank accounts in the state of Washington.

To request a form to petition for a change in residency status, email [admissions@bigbend.edu](mailto:admissions@bigbend.edu). Detailed instructions are provided on the form. Completed and signed forms and related documentation must be submitted before the fifth day of the quarter if the change is to take effect for that quarter.

## Placement Testing

New students seeking a BBCC degree or planning to enroll in math or English courses must take placement tests or provide approved alternative placement documents. For more information on alternative placement, visit: <https://www.bigbend.edu/student-center/placement-options/>. Placement needs to be established prior to meeting with an advisor and enrolling in classes unless placement scores have been previously established at another college or university.

Students living out of the area may take math and English placement tests at a local college and scores should be sent directly to the BBCC Testing Center at [testingcenter@bigbend.edu](mailto:testingcenter@bigbend.edu).

Email the BBCC Testing Center at [testingcenter@bigbend.edu](mailto:testingcenter@bigbend.edu) or call 509.793.2064 for questions about testing options. Appointments are made through the Placement Evaluation Request, even for students who have

been out of high school for two years: <https://www.bigbend.edu/student-center/placement-options/>. The Placement Evaluation Request process ensures equity to all students applying.

## Viking Online Orientation (New Student Orientation)

All new students are required to complete an online orientation prior to attending New Student Enrollment (NSE). The orientation is self-paced. New students will gain knowledge on general college information, paying for college, connecting to support programs, student life, campus safety, and next steps. The online orientation is a resource students can refer back to any time they have questions.

## Dual-Credit Programs

Dual-credit programs, sometimes referred to as dual-enrollment programs, provides the opportunity for high school students to earn both high school and college credits in the same course at the same time. There are four main types of dual-credit programs: Running Start, College in the High School, CTE Dual Credit (formerly called Tech Prep), and Advanced Placement (AP)/ International Baccalaureate (IB).

## Running Start

Running Start allows qualified high school juniors and seniors to enroll tuition-free in college-level courses as part of their high school programs of study. Books, supplies, lab fees, and transportation are the responsibility of the student. Students are responsible to pay for any credits above their approved number and for courses numbered below 100.

Subject to total credit load limitations, high school students attending BBCC under the

Running Start program may simultaneously earn high school and college credits. Students interested in applying for entry to BBCC through the Running Start Program must first contact their local high school to determine eligibility. Application of college courses toward meeting specific high school graduation requirements is determined by local school districts. Prior to college enrollment, school district advising and approval/certification of student programs is required.

To be admitted to BBCC as a Running Start student, students must: be registered as a junior or senior in a Washington state public school, be under 21 years of age, and place into a college-level English or college-level mathematics course. (College-level classes are numbered 100 and above.)

Students who will take only professional/technical courses, such as welding, industrial systems technology, etc., may qualify by placement into the required English and mathematics for that program.

Home-schooled students and students attending private schools must be evaluated at the junior or senior level by a public high school official and enroll at that school.

Students who have passed the GED and who do not have a high school diploma may enroll through their high school and be eligible for the Running Start program until the age of 21.

For additional program information, students may contact their high school counselor, email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089 for assistance.

## Career and Technical Education (CTE)

### Dual Credit (Formerly Tech Prep)

CTE Dual Credit provides the opportunity for high school students to earn college credit in their high school career and technical education (CTE) classes without leaving their high school campus. CTE Dual Credit classes are taught at the high school or skills center and integrate academics with technical skills to help prepare students for advanced education and careers related to workforce occupations. Students should contact their high school to find out which classes qualify for CTE Dual Credit.

### College in the High School

College in the High School (CiHS) programs provide college-level academic courses in high schools for qualified students. To provide CiHS classes, a high school contracts with a college or university. CiHS courses are taught at the high school by high school teachers who have met college qualifications to teach the class. CiHS courses must be approved college curriculum, listed in the college catalog; they are the same courses offered at the college, held to the same standards of grading and evaluation, but are taught at the high school. Students should contact their high school to find out which College in the High School classes are offered.

### Advanced Placement (AP)/International Baccalaureate (IB)

Most colleges award college credit for students who achieve certain scores on the Advanced Placement (AP) or International Baccalaureate (IB) exams. Students take AP or IB classes located at the high school, but to earn college credit for those classes, students must pass an exam with a certain score. Students pay exam fees. Every college has its own policy for awarding or transferring in credits and coursework.

## Entering Transfer Students

Admitted degree-seeking students transferring to BBCC will be given appropriate credit for college level work completed at a regionally accredited institution. Students must submit official transcripts from each institution attended to the Admissions/Registration Office for evaluation. Credit will be awarded on the basis of official college transcripts only. The cumulative grade point average of all credits accepted must be 2.00 or higher. Although there is no limit on the number of credits a student may transfer to BBCC before graduating, the student must meet all BBCC degree requirements; including residency requirements (see Degree and Certificate Requirements section). Additional information about the transfer evaluation process is available on the BBCC website.

BBCC subscribes to the statewide Policy on Inter-College Transfer and Articulation among Washington Public Colleges and Universities endorsed by the public colleges and universities of Washington State and the State Board for Community and Technical Colleges and adopted by the Student Achievement Council. For more detailed information, email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089.

In programs where appropriate, credits may also be given for military service schools attended. These are normally awarded as recommended by the ACE Guide to the Evaluation of Educational Experience in the Armed Services. Current and former military members may obtain information on ordering a military transcript at the following website: <https://jst.doded.mil/smart/welcome.do>.

## CTC Reciprocity Agreement

Washington community and technical colleges (CTCs) offer reciprocity to students transferring within the CTC system who are pursuing the Associate in Arts & Science - Direct Transfer



Agreement (DTA) degree or the Associate in Science – Transfer (AS-T) degree. Students who completed an individual course that met distribution degree requirements or fulfilled entire areas of their degree requirements at a prior college will be considered to have met those same requirements at BBCC if they plan to complete the same degree when they transfer. These degree requirements include communication skills, quantitative skills, or one or more distribution area requirements. Students must initiate the review process and must be prepared to provide necessary documentation. For more information, email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089.

## Transfer Rights and Responsibilities

The following are rights and responsibilities for all students transferring from or into public colleges and universities in the state of Washington as published by the Washington Student Achievement Council ([www.wsac.wa.gov](http://www.wsac.wa.gov)).

## Student Rights and Responsibilities

1. Students have the right to clear, accurate, and current information about their transfer admission requirements, transfer admission deadlines, degree requirements, and transfer policies that include course equivalencies.
2. Transfer and freshman-entry students have the right to expect comparable standards for regular admission to programs and comparable program requirements.
3. Students have the right to seek clarification regarding their transfer evaluation and may request the reconsideration of any aspect of that evaluation. In response, the college will follow established practices and processes for reviewing its transfer credit decisions.

4. Students who encounter other transfer difficulties have the right to seek resolution. Each institution will have a defined process for resolution that is published and readily available to students.
5. Students have the responsibility to complete all materials required for admission and to submit the application on or before the published deadlines.
6. Students have the responsibility to plan their courses of study by referring to the specific published degree requirements of the college or academic program in which they intend to earn a bachelor's degree.
7. When a student changes a major or degree program, the student assumes full responsibility for meeting the new requirements.
8. Students who complete the general education requirements at any public four-year institution of higher education in Washington, when admitted to another public four-year institution, will have met the lower division general education requirements of the institution to which they transfer.

## College and University Rights and Responsibilities

1. Colleges and universities have the right and authority to determine program requirements and course offerings in accordance with their institutional missions.
2. Colleges and universities have the responsibility to communicate and publish their requirements and course offerings to students and the public, including information about student transfer rights and responsibilities.
3. Colleges and universities have the responsibility to communicate their admission and transfer related decisions to students in writing (electronic or paper).

## International Students

BBCC encourages and welcomes applications for admission from students of other countries who wish to pursue a quality educational experience in the United States. BBCC provides a variety of educational opportunities in the liberal arts and technical program areas and is committed to increasing understanding and exchange of social awareness, cultural enrichment, and sharing of ideas.

Upon successful completion of the admission requirements below, students who are approved for admission will be issued an I-20. Students must then apply for and be granted an F-1 visa.

Prospective international students will find all application requirements and required forms on the BBCC website at <https://www.bigbend.edu/i-am/international-general-information/>.

## International Student Admission Requirements

(The following admission requirements must be completed 60 days prior to the first day of class.)

- BBCC application for admission must be submitted
- Official copy of high school and/or college transcripts must be submitted with official English translation.
- Proof of adequate financial support for all expenses for one academic year (September to June) must be documented with the Declaration and Certification of Finances form and official bank documents or original, signed letters verify funds are available.
- English proficiency must be documented. One of the following is acceptable.
  - TOEFL internet based test minimum score of 12 on each section.
  - IELTS minimum score of 4 on each band
  - Successful completion of a college level English composition class (approved

upon review of your official college transcript). English as a Second Language (ESL) classes may not be substituted.

Once the I-20 is issued the prospective student must apply for their student visa at the United States Embassy or Consulate closest to their home. Their passport, bank statement or sponsorship papers and proof of payment of the SEVIS fee (I-901) will be required. Students may go to the following website for more information regarding the SEVIS fee: [www.ice.gov/sevis](http://www.ice.gov/sevis).

International students transferring from U.S. institutions must be in compliance with F-1 visa requirements as defined by the U.S. Department of Homeland Security. BBCC requires completion of an Intent to Transfer form which will be sent to students upon request.

All international students are required to take the math and English placement test prior to registration, unless they have U.S. college transfer credits in math or English. International students must enroll in an English class each term until they have reached the English level required for their major program. International students must live in a college residence hall during the first quarter of attendance.

International students are encouraged to have medical/health insurance or purchase one of the insurance plans available to them in the United States. Students who drive cars should have minimum liability auto insurance as required by state law to cover injuries to persons or damage to property.

## Student Responsibilities

Students attending BBCC on an F-1 visa must:

- Keep passport, I-20 and I-94 valid.
- Complete at least 12 college credits each quarter.
- Maintain satisfactory standards of progress.



- Obtain an official signature on the I-20 ID each time they leave the country

## Enrollment

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### Advising

Academic advisors help you understand degree requirements, select classes, and develop a balanced schedule as you work toward the completion of your educational plans. We will also assist you in accessing other departments and resources on campus that could best serve you in successfully reaching your educational and career goals.

Students with fewer than 30 earned credits must meet with their Academic

Advisor **each** quarter **prior** to enrollment. Your advisor will discuss your academic goals and help you identify possible courses for the upcoming quarter. You will have an *Advising Required* hold on your account, which your advisor will remove after you meet.

Students who are on academic probation must also see their advisor prior to enrolling in courses each quarter. Students who are on academic probation have an enrollment hold that can only be removed after meeting with an advisor.

An *Advising Required* enrollment hold will remain active each quarter until the student reaches a 2.0 cumulative grade point average.

Although advisors are available to assist with educational planning, it is the student's responsibility to be informed about their degree or program requirements and college policies.

### Dropping a Class

A student may drop classes up to ten days before the beginning of final exams without written permission of the instructor. The final date to drop is printed in the Academic Calendar. Students may drop classes via their ctLink Student Homepage under the "Manage Classes"

tile. Email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089 for assistance. Students who are receiving financial aid and wish to withdraw completely must inform personnel in the Financial Aid Office. Courses that are dropped during the first ten days of the quarter are not included on the student's academic transcript (Summer Quarter: first six days). Courses dropped after the 10th day will be recorded with a "W" on the transcript.

### Refund Policy

Students who stop attending class without completing the process to drop classes may not be eligible for refunds and may receive failing grades. Students requested to withdraw for disciplinary reasons or delinquent attendance may not be eligible for refunds. Students who withdraw from a class or from BBCC using proper procedures may be entitled to a refund on the following basis\*:

Prior to first instructional day	100% refund
During first week of quarter	80% refund
During second week of quarter	50% refund
During the third week of quarter	40% refund
After third week of quarter	No refund

\* Summer Quarter—see summer quarter Important Dates for refund dates

Financial aid recipients who complete zero credits, stop attending or withdraw from all classes may owe a repayment of the aid for which they were not eligible. This policy applies to all federal and state financial aid except work-study earnings. The last date the student attended a class or officially withdrew is used to determine the amount of the repayment. For more information, please visit the Frequently Asked Questions section at <https://www.bigbend.edu/student-center/financial-aid/>. Active military personnel or reservists in any branch of the U.S. Armed Forces who withdraw, because they are called to active

duty during a quarter, will be eligible for a 100% tuition refund for that quarter. A copy of the military orders must be provided.

Students required to withdraw during the first half of a quarter because of the student's medical condition will be eligible for a 100% tuition refund for the quarter. A doctor's statement must be provided.

## Enrollment

All students must complete the enrollment process before attending classes at BBCC. Enrollment sessions are scheduled before the beginning of each quarter for new students. At the New Student Enrollment sessions students will meet with an advisor for help with class selection. Staff members are also available to assist with the online enrollment process. A class schedule is published on the BBCC web site approximately six weeks before the beginning of each quarter. Students can enroll online via their ctLink Student Homepage under the "Manage Classes" tile.

## Enrollment Appointment Date and Time

Enrollment appointment times are for enrollment only, not advising. Students are responsible for arranging appointments with their advisors prior to their enrollment appointment time. Big Bend Community College is proud to offer priority enrollment for Veterans and Service Members. Students identified as Veterans or Service Members are eligible to enroll in classes before other student groups on the first day of priority enrollment. Please see the Academic Calendar for priority enrollment dates. Continuously enrolled students are issued priority enrollment appointment times based on the total number of credits earned. Current students may find their enrollment appointment time on their ctLink Student Homepage. Former BBCC students may email [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089 for an enrollment appointment

time. New students with 30 or more transfer credits enroll after currently enrolled students. New students with fewer than 30 transfer credits enroll after all student Veterans/Service Members, current, and former students during new student enrollment sessions or open enrollment.

## Tuition and Fees

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### Resident Student Lower Division Tuition

1-10 credits, per credit	\$123.58
11-18 credits, additional per credit	\$61.02
Over 18 credits, additional per credit	\$110.87
Over 18 credits, Prof/Tech per credit	\$10.00

### Resident Student Upper Division Tuition

1-10 credits, per credit	\$240.10
11-18 credits, additional per credit	\$12.33
Over 18 credits, additional per credit	\$227.39

### Non-Resident Waiver (U.S. Citizen) Student Lower Division Tuition

1-10 credits, per credit	\$317.95
11-18 credits, additional per credit	\$68.96
Over 18 credits, additional per credit	\$305.24
Over 18 credits, Prof/Tech per credit	\$10.00

## Non-Resident Waiver (U.S. Citizen) Student Upper Division Tuition

1-10 credits, per credit	\$674.70
11-18 credits, additional per credit	\$13.25
Over 18 credits, additional per credit	\$661.99

## Non-Resident International (Not U.S. Citizen) Student Lower Division Tuition

1-10 credits, per credit	\$317.95
11-18 credits, additional per credit	\$68.96
Over 18 credits, additional per credit	\$305.24
Over 18 credits, Prof/Tech per credit	\$33.00

## Non-Resident International (Not U.S. Citizen) Student Upper Division Tuition

1-10 credits, per credit	\$630.54
11-18 credits, additional per credit	\$13.25
Over 18 credits, additional per credit	\$661.99

- **A \$5.65 per credit technology fee will be added to the amounts above.**
- **Audit fees are the same as listed above depending on the classification of student status.**

Some courses have special lab fees in addition to normal credit hour charges. A listing of additional fees will be printed in the quarterly class schedule.

## Additional Fees

Proctor Fee	\$25.00
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General Education Development Test (GED)	\$120.00
Flight Insurance (estimate)	\$95.00
Placement Tests (each)	\$10.00

## Aviation Flight Fees

Aviation Flight Performance Deposit	\$200.00
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Students applying for the commercial pilot program must submit a deposit before being accepted into the flight program. This deposit is applicable to the first quarter flight fees.

Should an accepted student decide not to enroll, a refund will be made as follows:

- 80% refund if notice is received prior to June 1.
- 60% refund if notice is received prior to July 1.
- 40% refund if notice is received prior to August 1.
- 20% refund if notice is received prior to September 1.
- No refund is allowed on September 1 or thereafter

**Before students are allowed to fly they must have paid the required flight fees. Flight fees are based on projected flying for the quarter and must be paid in advance. Flight fees vary depending on the type of flying. For the current fee schedule, contact the Aviation Department 509.793.2241.**

## Nursing Fees

Nursing Program Deposit	\$250.00
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Students who are accepted into the Nursing program will be required to submit a deposit. The deposit will be applied to required background checks and testing fees. Should an accepted student decide not to enroll, a refund will be made as follows:

- 80% refund if notice is received prior to June 1.
- 60% refund if notice is received prior to July 1.

- 40% refund if notice is received prior to August 1.
- 20% refund if notice is received prior to September 1.
- No refund is allowed on September 1 or thereafter.

## Residence Hall Fees

Subsequent years may vary according to the cost of living increase. Meal plans are not included.

Room and Damage Deposit*	\$300.00
Shared Room (per quarter)	\$1,150.00
Single Room (per quarter, if available)	\$1,650.00

Summer quarter rates are determined each year. Rates are approximately half of the regular quarter rate.

\*The \$300.00 room and damage deposit fee must be received by the BBCC Business Office before a room assignment can be confirmed.

**NOTE:** Annual increases to tuition are subject to State of Washington Legislation. Please check the appropriate year's tuition and fee schedule at <https://www.bigbend.edu/student-center/tuition-and-fees/> for the most up-to-date rates.

In accordance with Title 38 US Code 3679 subsection (e), this school adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA. This school will not:

- Prevent the student's enrollment;
- Assess a late penalty fee to;
- Require students to secure alternative or additional funding;
- Deny their access to any resources (access to classes, libraries, or other institutional facilities) available to other students who

have satisfied their tuition and fee bills to the institution. However, to qualify for this provision, such students may be required to:

- Produce the Certificate of Eligibility by the first day of class;
- Provide a written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies

\* **GI Bill**® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at <https://www.benefits.va.gov/gibill>

The Student Center/Administration Building (1400) houses the Associated Student Body (ASB) Office, Student Activities, Student Success Center, TRiO – Student Support Services, Outreach and Recruitment, Testing Center, Student Administrative Support Services Offices (Admissions/Registration Office, Financial Aid, Student Employment, Veterans' Education Benefits, Counseling Center, the Dean of Student Services), and the Vice President of Learning and Student Success. Also located in this building are the administrative offices (Business Office, Human Resources, Institutional Research, Public Information Office, and the President's Suite) Student information such as student bulletins, event notices, announcements, etc. are posted in this building.

## Student Services

### Academic Advising

Academic advisors help you understand degree requirements, select classes, and develop a balanced schedule as you work toward the completion of your educational plans. We will also assist you in accessing other departments and resources on campus that could best serve you in successfully reaching your educational and career goals. Students with fewer than 30

earned credits must meet with their Academic Advisor **each** quarter **prior** to enrollment. Your advisor will discuss your academic goals and help you identify possible courses for the upcoming quarter. You will have an *Advising Required* hold on your account, which your advisor will remove after you meet. Students who are on academic probation must also see their advisor prior to enrolling in courses each quarter. Students who are on academic probation have an enrollment hold that can only be removed after meeting with an advisor. An *Advising Required* enrollment hold will remain active each quarter until the student reaches a 2.0 cumulative grade point average.

## Accommodation and Accessibility Services

BBCC complies with section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. BBCC is free from discrimination in the recruitment, administration, and treatment of students. The Accommodation and Accessibility Services (AAS) office at BBCC provides voluntary and confidential support services for students with documented disabilities in one or more of the following categories: Deaf/Hearing, Speech/Language, Blind/Visual, Neurological/Nervous System, Psychological/ Emotional, Mobility, Learning, Chronic/Acute Health, and Temporary/Other. To ensure maximum participation by all students with disabilities, the college will:

- Provide programs and facilities that are accessible to all students with disabilities
- Determine and implement reasonable accommodations that meet the individual needs of students with disabilities

### Contact Information

- The AAS office is located in the Administration Building (1400), Room 1473
- The telephone number for the Coordinator of Accommodation and Accessibility

Services is 509.793.2027. To schedule an appointment, call 509.793.2035 • Email: [dss@bigbend.edu](mailto:dss@bigbend.edu)

- A Telecommunications Device for the Deaf (TDD) is available in the Accommodation and Accessibility Services/ Counseling area, Room 1474, for incoming and outgoing calls. The **TDD telephone number is 509.793.2325**

## Obtaining Services/Procedures

Requests for disability services are processed through the DSS office. We value a collaborative process with students as we work to determine and implement reasonable accommodations and services.

- To begin the process, students need to contact the Coordinator of Accommodation and Accessibility Services to request services, provide information about prior use of accommodations and services in other settings, and discuss the likely impact of the disability on the student's educational experience at BBCC.
- The student will need to complete and submit an intake packet. Relevant documentation from external sources may also be requested to substantiate the disability and the student's eligibility for requested accommodations and services.
- Once the intake packet and requested documentation have been received, the student will meet with the Coordinator of Disability Services to discuss eligibility for services and accommodation requests. • The Coordinator of Accommodation and Accessibility Services will prepare a Letter of Accommodation (LOA). It is the student's responsibility to provide instructors with the LOA and discuss how the accommodations will be implemented in the classroom. LOA's need to be requested by the student each quarter. It is the responsibility of the student to inform the instructor and the Coordinator of Accommodation and Accessibility Services if there are questions regarding the

implementation of the approved accommodations. We will work collaboratively to ensure implementation.

## Accessible Parking

Students, staff, and visitors who have a state-issued disabled parking permit may use the designated accessible parking spaces in BBCC parking lots. Those who have a temporary need for accessible parking may request a temporary disabled parking permit through the AAS or Campus Safety offices.

## Disability Related Complaints

Students who have complaints regarding disability related issues should contact the Coordinator of Accommodation and Accessibility Services at 509.793.2027 or the Dean of Student Services at 509.793.2077. Complaint procedures are found in the student handbook under the Discrimination, Harassment, and/or Sexual Harassment section.

## Bookstore

Visit our website to order your textbooks online and for book buyback. The BBCC Bookstore link is <https://bncvirtual.com/bigbend.htm>.

## Career Planning Services

A wide range of occupational information and career planning publications are available in the college library. Students have access to a variety of books, brochures, videos, and computer programs describing many aspects of the work world and how to obtain a job. College catalogs and directories, representing most colleges and universities in the state of Washington, as well as many in other states, are also available for student use.

## Career Advising and Assessment

Occupational interest assessment testing, job search tips, and professional/technical program information are among the services offered.

Students may take an online career assessment and research specific occupational fields. Students may also take the Strong Vocational Interest Inventory and the Myers-Briggs Type Indicator personality profile in the Counseling Center. For more information about career planning services, please contact the Counseling Center at 509.793.2035.

## BBCC Learning Center Childcare

The BBCC Learning Center Childcare building is located on campus at 7726 Bolling Street. Opened in 2004, the BBCC Learning Center Childcare accommodates children from the age of one year through school age. The center is licensed by the Department of Social and Health Services. Trained staff provides a safe, caring and healthy environment for the children. The center is open from 7:30 a.m. until 6:00 p.m. to accommodate students enrolled for day classes. Drop in care is provided on a space-available basis. The center is available to the children of BBCC students, staff, and the community. For information regarding fees and availability of space in the Learning Center please call 509.793.2173.

## Counseling

The Counseling Center offers personal, confidential, professional assistance to students. It is open to BBCC students in all programs; a student may meet with the counselor of their choice.

Counselors use a "whole person" approach in their work. Students often find that certain personal issues need to be addressed in order to take advantage of all the college has to offer. Counselors help students explore options and teach them to make better educational decisions. BBCC counselors assist students with referrals to off campus professionals if necessary.

International students have particular needs; the Counseling Center offers specialized advising for international students. Appointments are preferred, although counselors are generally available to walk-in visitors. To see a counselor, please call 509.793.2035 or visit the Counseling Center in the Student Center Building 1400.

## Drug & Alcohol Abuse Prevention

One of the most important social decisions a college student will make is to use or not use alcohol and other drugs. The choice is an individual decision.

Before making this decision, all students should be informed about the effects of alcohol and drugs and the potential consequences of using them.

Big Bend Community College prohibits the unlawful manufacture, delivery, possession, or use of alcohol, marijuana in any form, other controlled substances, and drug paraphernalia while on college property, while conducting college business, and while participating in any college-sponsored activities whether on campus or not.

Board Policy 3019, Drug Free/Alcohol Free Workplace Policy and Administrative Process 3019, Drug & Alcohol Abuse Prevention are intended to meet, at a minimum, the requirements of all applicable federal and state laws, including but not limited to the Drug-Free Schools and Communities Act of 1989 and the Drug-Free Workplace Act Of 1988.

### Sanctions

Big Bend Community College will impose disciplinary sanctions on students found accountable for violations of BP 3019, Drug Free/Alcohol Free Workplace Policy. Sanctions will be imposed in accordance with the provisions of the Student Code of Conduct. Sanctions that may be imposed include but are not limited to:

- Warning
- Reprimand
- Prevention education program
- Disciplinary probation
- Loss of privileges
- Suspension
- Professional evaluation

As required by federal law, the college cooperates with law enforcement authorities in referring for prosecution of unlawful possession, use or distribution of alcohol and illicit drugs by students or employees on college premises or as part of any of its activities.

- **Alcohol** – Alcohol abuse is involved in the majority of violent behavior incidents: sexual assault, sexual misconduct, vandalism, fights, and driving under the influence. Alcohol (and other depressant) abuse results in impaired judgment and coordination, aggressive behavior, impairment in learning & memory, respiratory depression, coma, and possibly death when taken in excess or combined with other depressants.
- **Club Drugs (GHB, Rohypnol & Ecstasy)** – GHB is an illegal depressant (liquid or powder) which is odorless & colorless (therefore it can be easily slipped into drinks undetected). GHB can be used to facilitate rape because it causes impairments in judgment, sleepiness & amnesia. Rohypnol also known as “Roofies” is a strong depressant drug, commonly known as the “Date Rape” drug. When ingested with alcohol or other drugs, effects begin within three (3) minutes and peak within two (2) hours. MDMA/Ecstasy/XTC is a hallucinogenic mind-altering drug. Adverse effects include confusion, depression, sleep problems, severe anxiety & paranoia, nausea, blurred vision, faintness, and the possibility long-term brain damage.
- **Cannabis**– The effects associated with cannabis use include: increased blood pressure, blood-shot eyes, dry mouth,

hunger, impairment of short-term memory and concentration, altered sense of time, decreased coordination and motivation, psychological dependence, lung cancer, and possibly chronic lung disease after long-term use.

- **Methamphetamines/Amphetamines & other Stimulants** – Symptoms of stimulant abuse include: increased heart & respiratory rates, elevated blood pressure, dilated pupils, excessive perspiration, headache, dizziness, sleepiness, anxiety, and loss of appetite, coma, and death may result
- **Ritalin** – A prescription drug used to treat ADHD, ADD and other conditions. It has similar effects to those of cocaine and amphetamines. Ritalin is often abused for appetite suppression and/or to stay awake.
- **Narcotics (Heroin, Morphine, Codeine, Demerol, Percodan)** – Narcotics initially produce a feeling of euphoria followed by drowsiness, nausea, and vomiting. Overdose may cause slow and shallow breathing, clammy skin, convulsions, coma, and possibly death.
- **Hallucinogens (LSD, Mescaline, Cannabis, Magic Mushrooms)** – Hallucinogens or psychedelics are mind-altering drugs which affect the mind's perceptions, causing bizarre, unpredictable behavior and severe, sensory disturbances that may place users at risk of serious injuries or death. The combination of hallucinogens with other substances, like alcohol or marijuana, can increase the chances of adverse effects and the risk of overdose.
- **Inhalants (glue, paint thinner, gasoline, laughing gas, aerosol sprays)** – Psychoactive substances inhaled as gases. Adverse effects may include nausea, sneezing, coughing, nosebleeds, fatigue, lack of coordination, brain & nervous system damage and possibly death.
- **Cocaine** – Use produces psychological & physical dependence. Adverse effects include elevated blood pressure, heart rate,

respiratory rate & body temperature, increased risk of contracting HIV/AIDS (sharing needles), chronic use can result in ulceration and rupture of the mucous membrane.

- **Anabolic Steroids (Anadrol, Oxandrin, Durabolin, Stanozol, Dianabol)** – Man-made substances related to male sex hormones. Steroids are taken to improve physical performance as well as to enlarge muscles and increase strength. Negative effects of steroids include baldness, cysts, shrinking of testicles, oily hair and skin, acne, heart attack, stroke and change in voice. Hostility is also a frequent side effect of anabolic steroids.
- **Tranquilizers (Valium)** – Use of tranquilizers can induce calm and relaxation. Feelings will range from mild euphoria to drowsiness, confusion and light headedness. Hostility, blurred vision, hallucinations, lethargy, memory loss and irritability can also occur.

## Information, Education, and Counseling

Big Bend Community College emphasizes the importance of information and education helping to prevent alcohol and drug abuse. The college is committed to helping students prevent and address alcohol and drug abuse problems. For additional information about counseling, assessment, and referral services, contact:

- BBCC Counseling Center - 509.793.2035
- Alcoholics Anonymous - 509.664.6469
- Central WA Narcotics Anonymous - 877.664.0398
- Grant County Prevention and Recovery Center - 509.765.5402
- Dean of Student Services - 509.793.2077

## Available Counseling, Treatment or Rehabilitation

Students with alcohol or drug related problems are encouraged to contact the BBCC Counseling Office for information and referral. Students may



also take advantage of services provided by the Grant County Prevention and Recovery Center 509.765.5402. The center provides such services as alcohol and drug assessments, individual counseling, family counseling, group therapy, an intensive outpatient program and an alcohol and other drug information school. Private practitioners and agencies are listed in the local telephone directory.

## Extra-Curricular Activities

BBCC strives to provide a well-balanced program of extra-curricular activities for all students. This is in keeping with the belief that participation in college activities contributes to the development of a well-rounded personality and to the growth of leadership ability. These activities help to promote school spirit, to furnish outlets for special interests and talents of students, and to enhance their cultural development. Students interested in extra-curricular activities or serving as Associated Student Body (ASB) officers should contact personnel in the Student Activities Office, Building 1400 or call 509.793.2066.

## Intercollegiate Athletics

The athletic program gives full-time students an opportunity to participate in competitive intercollegiate sports. As a member of the Northwest Athletic Conference (NWAC), the college sponsors teams in women's volleyball, men's and women's basketball, men's baseball, and women's softball (fast pitch).

Wrestling is also available for students. As a member of the National Collegiate Wrestling Association (NCWA), the college sponsors men's and women's teams.

Students interested in being involved in intercollegiate athletics may contact one of the coaches or the athletic director at 509.793.2225. Scholarships are available.

## Intramural Activities

Intramural activities are programmed in response to student interests and may include basketball, volleyball, racquetball, pool, dodgeball, recreational gym, and softball. Opportunities for sports instruction are offered through the physical education department.

## Music

All students are eligible to participate in music performance groups. For more information about music performance groups call 509.793.2140.

## Student Government

All students enrolled at BBCC and who hold a valid ASB card are automatically members of the ASB. The ASB is officially recognized as the students' voice in the governance of the college. Student government is an integral part of the college structure. ASB officers serve on college committees, hear student complaints, entertain requests for funding student clubs, and plan and schedule activities. In addition, officers communicate student needs directly to college administrators and provide student representation at BBCC Board of Trustees meetings.

The selection process for ASB Officers is held annually in the spring quarter and every eligible student is encouraged to apply for a position. Executive officers receive a stipend for their services. ASB Executive Officers are as follows:

- President
- Vice President
- Secretary
- Public Relations Officer

## Student Organization & Areas of Involvement

Clubs and Communities are organizations developed in response to specific student interests, skills, educational programs, cultural heritage, or social causes. All students are encouraged to participate in existing

organizations or to start new organizations. Current active Clubs and Communities include Aviation Maintenance Technology Club; Professional Agriculture Students Club; American Welding Society Club; Aviation Club; Engineering Club; Sexuality and Gender Acceptance Community; LDS Student Association (LDSSA) Community; M.E.Ch.A. Club; Nursing Club; Phi Theta Kappa Club, the Rook-ies Chess Club, Earhtings Club, and Story Club. For information regarding joining or organizing a club or community, please contact the Student Activities Office in Building 1400 or call 509.793.2066.

## Financial Aid

Financial aid can lower the cost of a Big Bend Community College education. The college offers a comprehensive program which includes funding from federal, state, college and private sources. The Big Bend Foundation can provide scholarships for students pursuing the different certificate or degree programs at BBCC.

### How to Apply

**To be considered for financial aid the student should complete the applicable application:**

Free Application for Federal Student Aid, FAFSA – The FAFSA requests information about the student’s and, in some cases their parents’, income and asset information in order to determine eligibility for financial aid. Complete the FAFSA online at <https://studentaid.gov/h/apply-for-aid/fafsa>.

Washington Application for State Financial Aid, WASFA. Students who are not eligible to complete the FAFSA because they are non-citizens, may be eligible for the State Need Grant by completing the WASFA. Complete the WASFA online at: <https://wsac.wa.gov/wasfa>

The financial aid year starts July 1st and ends June 30th. Students need to reapply for financial aid every year. The financial aid applications are available October 1st each year. Check the

Financial Aid page on the Big Bend Community College website to determine the priority funding dates for each quarter.

## Eligibility Requirements

To be eligible for federal and/or state financial aid the student must meet the conditions listed below. There often are other sources of aid for students who do not meet these requirements.

- Have a valid Social Security number
- Be a U.S. citizen or eligible non-citizen
- Have high school diploma or GED
- Does not owe a loan or grant overpayment
- Does not have a Ford Direct Loan or Stafford Loan in default
- Has not borrowed in excess of loan limits
- Is maintaining satisfactory academic progress
- Is not currently enrolled in high school

Recent state laws expanded eligibility of the Washington College Grant to undocumented student who meet the program’s income and eligibility requirements in addition to one of the two criteria listed below 1079 standard:

- You must graduate from a Washington high school (or earn a GED or equivalent) after living in Washington for at least three consecutive years.
- Live in Washington after earning high school diploma or equivalent until being admitted to college.
- Sign an affidavit (written promise) saying you meet the above requirements. Non-U.S. Citizens must also promise that they will apply to become a permanent U.S. resident as soon as they are eligible. The affidavit is included as part of the WASFA.
- Both students without DACA or with DACA can qualify.

## Financial Aid Programs

- *College Bound Scholarship* – This program is an early commitment of state financial aid to eligible students who sign up in middle school and fulfill the pledge
- *Federal Work Study* – This federally funded program provides employment opportunities both on and off campus for students with financial need. Reading or math tutors for local school districts are examples of federal work study off campus jobs.
- *Federal Supplemental Educational Opportunity Grant* – This is a federal grant program for the neediest students who are eligible for Pell.
- *Ford Direct Loans* – (Subsidized and Unsubsidized) – These educational loans which must be repaid after the student graduates, provide another source of funding for the eligible student. The student must be enrolled for at least 6 credits. Loan applications and information are available in the Financial Aid office and on the Financial Aid webpage on the Big Bend website, [www.bigbend.edu](http://www.bigbend.edu).
- *Pell Grant* – Pell is the largest federal grant program for needy students. It is an entitlement program which means, if the student is eligible, the funds will be available during the school year.
- *PLUS Loans* – Parents of dependent students can borrow these non-need based loans. Additional information is available in the Financial Aid office or on the Big Bend Community College website at [www.bigbend.edu](http://www.bigbend.edu).
- *State Work Study* – This state funded program provides employment opportunities both on and off campus for students with financial need. When possible, students are placed in positions relating to their major field of study or career goals.

- *Washington College Grant* – This is a state grant program for undergraduate students who meet the program's income and Washington state residency requirements
- *Washington Tuition Waiver* – This program waives a portion of the tuition for eligible Washington residents. The tuition waiver is awarded based on the student's need.
- *Washington Tuition Grant* – The tuition grant is awarded based on the student's need

## Scholarships

All scholarship information, including application forms, may be obtained from the Financial Aid Office and online at [www.bigbend.edu](http://www.bigbend.edu).

### BBCC Foundation Scholarship

The BBCC scholarship application is online at <https://bbcc.awardspring.com> and filters applicants based on answers into scholarships whose criteria is met. At Big Bend Community College, we have over 100 scholarships and offer three different types of scholarships: Named Scholarships, Foundation General Scholarships, and Intervention Scholarships

Intervention scholarships can help cover unexpected emergencies that arise which prevent a student from completing their education and are awarded on emergency basis only. The application for the Emergency Funds Scholarship can be found online at <https://www.bigbend.edu/emergency-funding-application/>.

The BBCC Foundation governs a majority of the BBCC scholarships, and their office is located in the University Center Hallway in the ATEC/1800 building. More information, including the application, can be found online at: <https://www.bigbend.edu/admissions/financial-aid/misc-scholarships/>.

## Scholarships Awarded by Outside Organizations

A number of scholarships are awarded directly by organizations to BBCC students. These scholarships may be for students returning to BBCC the next year or for BBCC graduates pursuing a degree at a four-year institution. Information about these scholarships is posted online at [www.bigbend.edu](http://www.bigbend.edu)

## BBCC Grant & Funding Resources

### Basic Food Employment and Training

The Basic Food Employment and Training (BFET) program provides assistance with tuition, fees, books, transportation, and other support services to students who receive food benefits from DSHS. Participation in the BFET program will allow a student to keep food benefits while attending college, as well as access child care assistance through Working Connections Child Care. Students must be in a short-term (two-year or less) workforce education program of study in order to qualify.

### Early Achievers Grant

The Early Achievers Grant is for students who are working toward a certificate or degree in Early Childhood Education and are employed in a childcare center or family home that is participating in Washington Early Achievers for a minimum of 40 hours per month or 10 hours per week. (See Washington State Department of Children, Youth, & Families: <https://www.dcyf.wa.gov/services/earlylearning-childcare/early-achievers>). The program will cover tuition, fees, books, and other support services for eligible students. Must be a Washington resident in order to qualify.

### Opportunity Grant

The Opportunity Grant is for Washington State residents who meet the income criteria of 200% of poverty level. The program provides 45 credits of tuition and fee assistance, up to \$1000 per year for books and tools, and other support services for students in the following approved

workforce programs: Accounting, Automotive Technology, Aviation Maintenance Technology, Business Information Management, Business Medical, CDL, Computer Science, Early Childhood Education, Industrial Electrical Technology, Maintenance Mechanics Technology, Medical Assistant, Nursing, Nursing Assistant-Certified, and Welding. To qualify, students must have less than a two year degree, be low-income and pursuing coursework that will satisfy requirements to achieve a certificate and/or two-year professional technical degree developing workplace skills and increased wage earnings.

### WorkFirst

WorkFirst is Washington State's welfare reform program for individuals who receive Temporary Assistance for Needy Families (TANF). DSHS administers TANF, which provides temporary cash for families in need. The WorkFirst program helps participants access education and training in order to find and keep jobs. Enrolling in Adult Education classes, including GED, High School Diploma, and ESL as well as Workforce Education, qualify as WorkFirst participation. Through Workforce Education Services, participants may receive tuition and textbook assistance as well as advising and mentoring to ensure graduation and completion.

### Worker Retraining

The Worker Retraining funding is a program which provides options for unemployed or underemployed workers to access education and training to maintain employment or to re-enter the workforce. The eligibility criteria includes:

- Currently receiving unemployment benefits
- Eligible to receive unemployment benefits
- Exhausted unemployment benefits within the past 48 months •Displaced homemaker (loss of primary income due to becoming widowed, separated or divorced within the past 48 months)

- Military veteran discharged within the past 48 months. Students may be eligible to receive unemployment benefits while attending school and not participate in job search activities if the training meets the Commissioner Approved Training criteria approved by the Employment Security Department.

## Student Employment

The career services coordinator provides career counseling to help students select a major and career pathway; assists students in the process of finding employment by assessing their skills and helping them to market those skills; provides job search assistance such as training in interviewing techniques, resume writing, etc. and locates local and regional employment opportunities. Career Services is located in the William C. Bonaudi Library, ATEC Building 1800, office number 1836. For more information call 509.793.2069.

## Library

**Building 1800**

**(509).793.2350**

**<http://www.bigbend.edu/library>**

**email: [librarymail@bigbend.edu](mailto:librarymail@bigbend.edu)**

The William C. Bonaudi Library opened its doors Jan. 3, 2005. The facility includes two large multimedia equipped computer labs (rooms 1801 & 1802), lots study space and lounge seating, a number of general access computers in the library commons area, and 10 study rooms each with large monitors that can be connected to laptops or phones. Most study spaces also offer power and USB plugs to keep your tech charged and BBCC offers free WIFI access campus wide. The eLearning Coordinator, Career Services, and Writing Center share this location as well.

The library's primary purpose is to support the educational mission of the college by providing

access to information resources as well as instruction and assistance in the research process. The library also serves as a cultural and educational resource for the surrounding communities.

Please check the library's web page or call to confirm days and hours the library will be open.

In addition to standard reference and circulation services during hours the building is open the library has 24/7 chat assistance linked from any of its web pages.

The library has an extensive collection of books including children's books, young adult, graphic novels, current fiction and nonfiction, and standard research materials, but has more than just books.

The library offers a wide and growing array of online resources including eBooks, journal articles, online newspapers, reference materials, basic skills and test preparation training, and more, covering topics ranging from agriculture to philosophy, all available whenever you need them with your BBCC login and password

The library also has a collection of textbooks and laptops that check out for the quarter, as well as other technology including digital microphones, webcams, video cameras, and keyboards.

The library has printers and a scanner/copier/color printer available for use. Need to add funds to your printing account? The library is also the home to the Papercut pay station.

We welcome your use of the library and encourage you to become familiar with the library's services and policies via our webpage.

## Online Classes/Distance Education/eLearning

**eLearning Support is located in the Library Building 1800  
(509) 793-2350  
Email: [elarningadmin@bigbend.edu](mailto:elarningadmin@bigbend.edu)**

Big Bend recognizes the need to provide learning options designed for students whose educational opportunities might be limited by time or distance constraints.

Students considering taking online courses for the first time are strongly encouraged to visit [www.bigbend.edu](http://www.bigbend.edu) and click on Academics to find the Tutorials for Online classes.

In online or hybrid classes, some or all coursework is performed through the college's web-based education system. Students need to have access to a reliable Internet connection. Basic computer and internet skills will also prove helpful. Additional fees are charged to support the cost of online instruction. See the current class schedule for fee details.

## STEM Center

**Building 1200  
(509).793.2159**

The Science, Technology, Engineering, and Math (STEM) Center is dedicated to providing access to high-quality tutoring support, updated technology, and instructional services for all levels of math, science, and engineering courses. The STEM Center, located in the Math/Science Building (1200), is a collaborative study area open to all BBCC enrolled students, including GED/DVS. Aside from tutoring services, the STEM Center also provides access to Wi-Fi, computer workstations, whiteboard tables, printing and scanning, calculators for quarter checkout, laptops and calculators for daily checkout, anatomy and physiology models, a microscope, textbooks, and private study rooms.

## Student Housing/ Residence Halls

Student housing facilities are available on the BBCC campus. BBCC is one of the few community colleges in the state of Washington that has the ability to provide a traditional on-campus college living experience.

Housing facilities are well maintained, affordable, and offer students spacious rooms. Each room is furnished with twin beds, two desks, two chairs and three large locker type storage closets for clothes and personal items. Each room has high speed internet installed at no extra cost. Each floor has a TV lounge, VCR, and a microwave oven. Three kitchens are equipped with appliances which are available for students use. The laundry room is located on the first floor of the residence halls and is equipped with clothes washers and dryers; this service is also free for residents use.

Other conveniences include weekday public bus services, recreational facilities and free parking. The residence halls are located close to the main campus classrooms, vending, library and gymnasium. Intramural sports and associated student body activities are available to students. A full-time residence hall director and live-in residence assistants provide supervision. For additional information or to request a residence hall application call 509.793.2291.

## Disabled Student Access

Philips Hall is accessible to physically challenged students.

## Discrimination, Harassment, Sexual Harassment and Sexual Misconduct

Big Bend Community College (BBCC) recognizes its responsibilities pursuant to state and federal law, rules, and regulations including the

responsibility for investigation, resolution, implementation of corrective measures, and monitoring the educational environment and workplace to stop, remediate, and prevent discrimination, harassment, sexual misconduct and retaliation consistent with these provisions.

BBCC's is committed to provide equal opportunities in employment and to provide a work and academic environment that is free from conduct or behaviors that constitute discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking and/or retaliation by or against its employees, students, guests, trustees, visitors and contractors.

BBCC prohibits discrimination on the basis of a protected status that is so severe, pervasive, persistent, and objectively offensive that it effectively bars the victim from the benefit of an educational or work opportunity or benefit. Protected status includes, but is not limited to, race, sex, sexual orientation, gender identity/ expression, religion, age, color, creed, national or ethnic origin, the presence of any physical, mental or sensory disability, use of a trained guide dog or service animal by a person with a disability, marital status, pregnancy status or families with children, a mother breastfeeding her child, AIDS/HIV or hepatitis C, genetic information and/or protected veteran or military status, or any other legally protected classification.

Sexual harassment and sexual misconduct are other forms of discrimination that are prohibited. Sexual misconduct includes, but is not limited to, intimate partner/domestic violence, non-consensual sexual intercourse, non-consensual sexual contact, sexual assault, stalking, and dating violence. Sexual harassment may include unwelcome sexual advances, unwelcome requests for sexual favors or requests for sexual favors in exchange for some benefit, sexual assault, offensive remarks about a person's

gender, and/or unwelcome verbal or physical conduct of a sexual nature by a male or female, of the same or differing sex.

The following person has been designated to handle inquiries regarding non-discrimination policies and requests for accommodations:

Kimberly A. Garza, VP of Human Resources & Labor  
EO/Section 504/Title IX Coordinator  
7662 Chanute Street NE  
Building 1400, Office 1449  
Moses Lake, WA 98837  
509.793.2010 TDD 509.793.2325

Aaron Glenn, Accommodation and Accessibility Services Coordinator  
7662 Chanute Street NE  
Building 1400, Office 1473  
Moses Lake, WA 98837  
509.793.2027

## Student's Rights & Responsibilities/Student Handbook

Student's rights and responsibilities are defined in the BBCC Student Handbook. The handbook provides students with an in-depth explanation of rights and responsibilities as they pertain to the community and the college. Information contained in the document includes the Student Code of Conduct, jurisdiction of college personnel, procedures for initiating disciplinary actions, academic appeal procedures, academic grievance procedures, and all other student due process procedures. The handbook also provides information about the college community including how to access student support services, campus resources, student activities, etc. The handbook is available on the BBCC website.



## Testing Services

BBCC provides a testing service to assist students in making both academic and career choices. In addition, BBCC serves the broader community as a testing center for the General Educational Development Test (GED) examinations. The GED test battery is used to determine if an individual's educational development is equivalent to that of a high school graduate. Examinees having scores meeting state standards are eligible to receive a Washington State High School Equivalency Certificate. State residents 19 years of age or older are eligible to take the GED examination and receive the Washington State issued equivalency certificate. Applicants 16-18 may be tested with appropriate authorization. The current fee for GED testing is \$120.00. The testing center provides certification exams for PSI, Pearson VUE, and WSDA Pesticide Testing. The testing center also proctors CLEP exams as well as TEAS testing for applying to neighboring nursing schools.

Questions regarding eligibility and test scheduling should be directed to the BBCC Testing Center at [testingcenter@bigbend.edu](mailto:testingcenter@bigbend.edu) or 509.793.2064.

## TRiO-Student Support Services

The BBCC TRiO Student Support Services program is a U.S. Department of Education Title IV grant. Annual funding of \$281,462 provides extensive academic services to 190 eligible students during each grant cycle.

Student Support Services program is designed to help students find success in college. TRiO SSS students benefit from academic tutoring, academic monitoring, success workshops, and academic/financial aid/transfer/career advising.

To be eligible, students must be a U.S. Citizen or Permanent Resident and meet one or more eligibility criteria: 1) first generation, neither

parent of a student has a bachelor's degree; 2) low-income; 3) disabled-documented disability. These at-risk groups are strongly supported regardless of the degree program, however, preference is given to transfer students. For additional information, please visit our Student Support Services office in 1400 Building or call 509.793.2040.

## TRiO-Upward Bound

TRiO Upward Bound is a federally funded grant program through the U.S. Department of Education. It is a pre-college program serving high school students from low-income and/or first-generation backgrounds. The goal of the program is to increase the number of eligible students who graduate from high school, enroll in college, and complete a postsecondary degree. TRiO Upward Bound has been in operation at Big Bend Community College since 1967 and is the oldest program of its kind in Washington State.

Every year, 115 students participate in the program from the following four target high schools: Moses Lake, Othello, Royal City, and Warden. The program offers participants academic and personal advising, career planning, SAT/ACT preparation, monthly Saturday enrichment activities, college visits, tutoring, and college admission assistance including financial aid and scholarships. The program offers a six-week residential summer academy where 45 students live in the BBCC residence halls and receive academic instruction to build skills and increase knowledge with particular emphasis in math, English, and science. It also gives students a college-like experience and promotes independence and adapting to living away from home. Cultural and recreational activities and field trips enhance the value of this worthwhile experience. During the summer, a Bridge component is offered to assist recent high school graduates in their transition from secondary school to college. Bridge participants attend summer quarter at BBCC



with tuition, books, and room and board paid by the program. They also participate in a “work-study” like program and earn money for college while working at an on-campus job matched with their career choice.

Students are eligible for program services if they are enrolled in one of its (4) target high schools and have completed the 8th grade but have not yet started their senior year. Students need to be first-generation (parents have not earned a bachelor’s degree) and/or their family’s taxable income meets federal income guidelines. Students must be a U.S. citizens or legal residents and be motivated to prepare, enroll, and complete a college degree.

TRiO Upward Bound is funded on a five-year grant cycle and must reapply for funding at the end of each cycle. The program operates on a yearly budget of \$559,208 which covers 100% of its costs.

## Veterans Services

BBCC academic programs of study are approved by the Washington Student Achievement Council’s State Approving Agency (WSAC/SAA) for enrollment of persons eligible to receive educational benefits under Title 38 and Title 10 USC. Selected programs of study at BBCC are approved by the Workforce Training and Education Coordinating Board’s State Approving Agency (WTECB/ SAA) for enrollment of those eligible to receive benefits under Title 38 and Title 10, USC.

BBCC does not and will not provide any commission, bonus, or other incentive payment based directly or indirectly on success in securing enrollment or financial aid to any persons or entities engaged in any student recruiting or admissions activities or in making decisions regarding the award of student financial assistance.

The Department of Veterans Affairs (VA) will pay educational benefits to eligible students enrolled

in approved degree programs at BBCC. Students eligible for VA educational benefits must apply for benefits and receive program approval. Depending upon eligibility, the Department of Veterans Affairs will determine the number of months, and monthly amount of benefits for each applicant. The monthly amount is based upon the enrolled credits that count toward the approved program.

Enrollment status is- Fall-Spring and 7+ for Summer:

- Full Time = 12 credits or more
- 3/4 Time = 9 through 11 credits
- 1/2 Time = 6 through 8 credits
- Less than 1/2 Time = 5 or fewer credits

If a student withdraws from a class during a quarter and this reduces the certified enrollment status, the Department of Veterans Affairs may bill the student for repayment of the difference from the beginning of the quarter, unless there are mitigating circumstances as approved by the VA. This same situation may occur if a student does not complete all enrolled variable credits resulting in a reduced enrollment status. Students approved for VA benefits must contact the VA certifying official, after registering for classes each quarter, to assure proper certification.

VA recipients are responsible for providing the necessary information to the Veterans certifying official, to be informed and in compliance with the Minimum Standards of Progress requirements, and to initiate any changes in program.

The VA pays monthly allowances and book stipend benefits directly to the student for all Post-9/11 veterans up to their percentage of eligibility. All other veteran students should allow for the initial startup time and have their own funds to register and pay for books and supplies. The VA pays BAH (monthly allowance and book

stipend) benefits directly to the student. Students usually receive their BAH early in the month for the preceding month.

All veterans are encouraged to complete the Free Application for Federal Student Aid (FAFSA). Financial aid can help lower the cost of a Big Bend Community College education. Your eligibility will be calculated using the federal and state financial aid regulations based on the information submitted on the FAFSA. Awards may consist of any combination of grants, loans and/or work study. Receipt of VA educational benefits will not affect your eligibility for financial aid.

For additional information and assistance, contact the Veterans certifying official, located in the Financial Aid Office in the Student Administrative Support Services Department, located in the Building 1400 or call 509.793.2088 or 509.793.2061

## Minimum Standards of Progress for Veterans and Other Eligible Persons

There are two elements of Satisfactory Academic Progress measurement, Credits and Grade Point Average. Veterans and other eligible persons must maintain a 2.00 quarterly grade point average to graduate in their approved degree program. VA recipients who fail to maintain minimum standards of progress during any quarter enrolled will be subject to VA probation/cancellation of benefits. Depending upon enrollment status, the following requirements apply:

If your enrollment status is:	You must complete	You will be on VA Probation if you complete	Your benefits will be canceled if your cumulative GPA is less than 1.0 or you complete less than
Full Time	12 credits/quarter	6-11 credits/quarter	5 credits/quarter
¾ Time	9 credits/quarter	6-8 credits/quarter	5 credits/quarter

½ Time	5 credits/quarter	3-5 credits/quarter	5 credits/quarter
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Minimum standards of progress for less than 1/2 time enrollment requires completion of all credits enrolled and at least a 2.00 cumulative grade point average in their next quarter of attendance or their VA benefits will be canceled. Failure to do so will result in probation the next quarter enrolled. VA benefits will be canceled any quarter that no credits are completed.

Students who are on probation must complete the required credits for their enrollment status and maintain at least a 2.00 cumulative grade point average or their VA benefits will be canceled and the VA informed accordingly.

Only numerical grades of 0.7 to 4.0 and the letter grade "P" will count toward completed credits. Grades of 0.0, "I," "N," and "W" do not count toward completed credits and do not meet minimum standards of progress requirements.

The Department of Veterans Affairs will not pay a person to repeat a course except when "F" or 0.0 grades are received for courses required for graduation.

Students cannot be certified to the VA as re-enrolled in a course in which an incomplete grade was received unless an incomplete has been converted to a final grade that is unacceptable for graduation.

If there is a change in the number of credits completed or grade point, the probation/cancellation status of the student may be changed. If so, previous action for the quarter may be voided. Please contact certifying official for re-evaluation.

A student whose benefits have been canceled for not making minimum standards of progress may be reinstated if the student submits a Satisfactory Academic Progress Appeal to the Veterans certifying official.

## Writing Center

Building 1800 in the Library, Room 1832  
509.793.2361

Students can bring writing assignments from any of their classes to be reviewed in the [Writing Center](#). Help is also available with developing essays and doing research papers using MLA, APA, or CMS.

### **In-Person**

Monday.....9:00 a.m.- 6:00 p.m.

Tuesday-Thursday.....9:00 a.m.- 5:00 p.m.

Friday.....9:00 a.m.- 2:30 p.m.

### **Zoom Sessions**

Monday.....10:00 a.m. - 4:00 p.m.

Tuesday.....9:00 a.m.- 12:00 p.m.

Wednesday.....10:00 a.m. - 4:00 p.m.

Thursday & Friday.....9:00 a.m.- 12:00 p.m.

### **Summer**

Monday.....9:00 a.m. - 5:00 p.m.

Tuesday.....9:00 a.m. - 2:00 p.m.

Wed & Thur.....9:00 a.m. - 4:00 p.m.

Friday.....9:00 a.m. - 2:30 p.m.

### **Zoom Sessions**

Monday.....10:00 a.m.- 4:00 p.m.

Tuesday-Friday.....9:00 a.m. - 12:00 p.m.

## Academic Information

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### Academic Amnesty

Under the provisions of the BBCC Academic Amnesty procedure, a student may apply for Academic Amnesty if they: are currently enrolled at BBCC, did not enroll in college for at least two consecutive years following the period in which they had academic problems (grade point average below 2.00), have completed 24 or more credits with a grade point average of 2.50 or higher since returning to college, and have not withdrawn from more than five credits in any quarter since returning to college. If amnesty is approved, all grades will still appear on the transcript but will not be calculated in the BBCC cumulative grade point average. Further information may be obtained by emailing [admissions@bigbend.edu](mailto:admissions@bigbend.edu) or call 509.793.2089.

### Auditing a Course

A student may enroll in a course on an audit basis. An auditing student is not expected to take exams, but the instructor may require reasonable attendance and class participation. No college credit is received for audited courses; regular tuition charges apply. Changes from audit to credit are permitted after the 10th instructional day of the quarter with instructor approval. Changes from credit to audit are permitted up to the final date to drop a class. Changes may not be made after the last day to withdraw unless approved by the instructor.

### Course Numbering System

The following course numbers are used at BBCC:

- **010-049:** Courses in this series do not apply toward graduation from BBCC.
- **050-099:** Courses in this series are below college level. Some of the courses may be

applied toward graduation from BBCC under the Associate in General Studies degree only. (DVS prefixed courses DO NOT apply toward graduation.)

- **100-299:** Courses in this series may apply toward graduation in a degree program at BBCC. Common course numbering is designed to make course transfer between and among the 34 community and technical colleges as easy as possible for students, advisors and receiving institutions. Courses with an “&” as part of the prefix are designated as common across the Washington community and technical college system.

## Course Repeat Policy

Under the provisions of this policy, students may elect to repeat a course in an attempt to achieve a higher grade. A course may be repeated twice (enrolled a maximum of three times) and then have the highest grade received count toward their cumulative (graduation) GPA. Students must notify the Admissions/Registration Office in writing after they have repeated a class.

Students should be aware that all enrollment(s) and grade(s) received for the repeated will remain on the transcript. Only the highest graded enrollment will impact the cumulative GPA. Students who are receiving financial aid or VA benefits should consult with the Financial Aid Office prior to enrolling in any course for a second or third time as aid eligibility may be lost or reduced as a result.

## Credit by Examination

In addition to standardized tests for specific course credits, students may obtain college credit for courses listed in the current catalog by passing an examination in that course, and/or demonstrating to the department concerned that both content and method have been mastered adequately. This process does not include visiting or auditing a class followed by a request for a special examination as a means of

acquiring credit. This privilege is intended to evaluate informal and/or comparable educational experiences that may be the equivalent of organized class work.

The procedure is as follows:

1. The student obtains approval from the course instructor, advisor, and Admissions/Registration staff. Contact the instructor for the Course Challenge Approval form.
2. After approval, the student pays the required fee at the Business Office.
3. After showing the receipt to the instructor, the student may proceed with the exam. The time of giving the exam is a matter for mutual convenience between the instructor and the student.
4. After completing the exam, the instructor submits the completed form, including the grade awarded, to the Admissions/Registration Office.

A maximum of 22 credits awarded by examination of any type will be allowed toward an associate degree. Each division has different policies for which, if any, classes can be given credit by examination. Check with the division chair for details.

## Credits & Credit Load

The academic year is divided into three quarters of approximately 11 weeks each. To be considered full time a student must be enrolled in at least 12 credits per quarter. The typical course load per quarter is approximately 15 quarter hours of credit. A lecture class that meets five hours per week for one quarter will yield five quarter hours of credit. Laboratory courses require two hours of class time per week for one hour of credit. Credit is given only for classes in which the student is officially registered and passes.

## End of Term Grades

Official grades are posted to the transcript and available to view via ctcLink Student Homepage approximately one week after final exams have been completed. These are the only sources of official grades.

## General Examination Credit

Nationally standardized tests fall into two general categories: general subject matter exams, e.g. social science and natural science; and specific subject matter examinations, e.g. history of western civilization and college calculus. Current students having satisfactory scores on standardized tests may be awarded credit toward BBCC degrees. Such credit may, if appropriate, be issued to satisfy specific distribution requirements or general electives.

Official score reports must be submitted to the Admissions/Registration Office for evaluation. No fee is charged for evaluation and awarding of credit for admitted BBCC students. For more information about credits awarded for CLEP, IB, and College Board Advanced Placement Exams, please visit <https://www.bigbend.edu/student-center/admissions/>

## Grading Symbols

BBCC instructors report grades using a numerical grading system from 4.0 to 0.7 in .1 increments and also the grade 0.0. The number 0.0 is assigned for failing work for which no credit hours are earned. Letter grade equivalents are approximated by the following distribution:

4.0 - 3.8	A Excellent
3.7 - 3.5	A-
3.4 - 3.2	B+
3.1 - 2.9	B Very Good
2.8 - 2.5	B-

2.4 - 2.2	C+
2.1 - 1.9	C Average
1.8 - 1.5	C-
1.4 - 1.2	D+
1.1 - 0.9	D Below Average
0.8 - 0.7	D-
0.0	F Failing
(0.7 lowest passing grade)	

### Grade Point/Grade Point Average Calculations:

Earned grade points equal the product of the number of credits for a course and the grade given. For example: 5 (credits) X 2.7 (grade in course) = 13.5 grade points.

The grade point average (GPA) for a number of courses equals the total of grade points earned in those courses divided by the sum of the credit hours for those courses. For example, a student is enrolled in courses X, Y, and Z that are 5, 4, and 3 credit hours respectively during one quarter. The student receives a 3.1 grade in course X, a 1.5 grade in course Y, and a 2.3 in course Z.

The Total Grade Points Equals:

$$\text{Course X } 5 \times 3.1 = 15.5$$

$$\text{Course Y } 4 \times 1.5 = 6.0$$

$$\text{Course Z } 3 \times 2.3 = 6.9$$

$$28.4 \text{ Total Grade Points for Quarter}$$

$$\text{Total credits attempted} = 5+4+3 = 12 \text{ for quarter}$$

$$\text{Grade Point Average for quarter} = 28.4/12 = 2.37$$

The cumulative GPA over multiple quarters is calculated in the same way using all courses in which a numerical grade has been given.

### "I" Grade

The "I" (incomplete) grade is used to indicate a grade has been deferred. The instructor can choose to award an "I" grade to students making satisfactory progress who, for reasons beyond their control, are unable to complete their work on time. The instructor must submit on the "Incomplete Requirements" form, a written

explanation of work to be completed with any grade turned in as an "I". **REMOVAL OF INCOMPLETE:** Once a student has completed the necessary requirements for a decimal grade, the instructor will notify the Admissions/Registration Office, of the grade earned by the student. The incomplete is then removed from the student's record and the new grade is substituted. An incomplete "I" grade will revert to a failing "0.0" grade if the change of grade request is not submitted to the Admissions/Registration Office by the following dates

I" grade received:	Requirements must be completed by:
Summer Quarter	November 1
Fall Quarter	February 20
Winter Quarter	May 20
Spring Quarter	November 1

### "W" Grade

A student may withdraw from classes up to two weeks prior to the last day of instruction for each quarter. Students who stop attending classes but do not officially withdraw from classes may receive a failing (0.0) grade. Students withdrawing from classes within the time permitted will receive a "W" grade.

### "N" Grade

The "N" grade is given in courses in which a student has enrolled as an "auditor." (See "Auditing a Course").

### Pass-Fail Grading Option

A maximum of 15 credits completed with a pass "P" grade may be applied toward a BBCC degree. The "P" grade is not included in the grade point average calculation. A failing (0.0) grade earned in a class graded using the pass/fail option is included in the GPA calculation. A "P" grade in a math or science class indicates a grade of 2.0 or above was earned.

Students enrolling in a course on a pass/fail basis should indicate this at the time of registration. Students are advised to speak with the instructor before enrolling in a class on a pass/fail basis. After the 10th day of the quarter, the instructor and the student's advisor must approve changing an enrolled course to pass/fail grading. Students may not change a course to pass/fail option after the last day to withdraw.

Students intending to transfer to universities should not use the pass/fail option for courses in their intended major. Courses being used for the Associate in Science degree or as basic or breadth requirements in the Associate in Arts and Science (DTA) degree may not be taken pass/fail.

### Time Limitation to Change a Grade

A student who believes that an error has been made in the grade received for a course should contact the instructor as soon as possible to discuss the issue. Instructors may authorize a grade change within one quarter from the date the grade was issued. Summer quarter is excluded (i.e. spring quarter and summer quarter grade changes must be made by the end of fall quarter).

### Honors at Graduation

A student graduates with "Honors" if they've earned a cumulative BBCC GPA of 3.33-3.74.

A student graduates with "Highest Honors" if they've earned a cumulative BBCC GPA of 3.75-4.00.

### Quarterly Academic Honors

Students completing 12 or more credit hours in graded courses. (Excludes pass credits)

- Vice President's List: GPA of 3.33-3.74
- President's List: GPA of 3.75-4.00

## Standards of Progress

Each student must earn a cumulative grade point average of 2.00 or above to remain in good standing. A student earning a cumulative GPA below 2.00 will be placed on academic probation or suspension, depending on the criteria listed below. A student will be considered in good academic standing when her/his cumulative grade point average is raised to 2.00 or above. .

### Academic Probation

A student with a cumulative grade point average below 2.00 will be placed on academic probation status. A student in this category must work with their advisor to develop a plan for making measurable and substantial progress towards repairing their cumulative GPA prior to registering for future quarters..

### Academic Suspension – 1 quarter Suspension

A probationary student will be placed on a 1 quarter academic suspension when the student's number of cumulative graded credits at BBCC is greater than 23 credits, their cumulative grade point average is below 2.00, and their quarterly grade point average is below 2.00. A student in this category will be suspended from enrollment in classes for one quarter. If suspended at the end of spring quarter, the student may not attend summer or fall quarters. A student who has preregistered for the following quarter will be withdrawn from classes and a refund will be processed for any tuition and fees paid for that quarter. A student returning after a 1 quarter suspension is required to meet with their assigned advisor prior to registering for future quarters and must earn a 2.00 quarterly grade point average at the end of every quarter until their cumulative grade point average is above 2.00 .

**APPEALS** - A student may appeal the 1 quarter suspension and request immediate reinstatement. The student must provide proof of

extenuating circumstances and/or a plan for making measurable and substantial progress toward improving their cumulative GPA. A letter of appeal must be submitted to the Vice President of Learning & Student Success by the stated deadline. The Vice President will call a meeting of the Academic Council to hear the appeal. The Academic Council may grant the appeal, may allow the student to continue under certain conditions, or may deny the appeal. The decision of the Academic Council is final.

### Academic Dismissal – 1 year Suspension

A student who fails to meet minimum standards and is subject to suspension a second time will be placed on a 1-year academic suspension. A 1-year academic suspension results in suspension from enrollment in college credit-bearing classes for one calendar year. A student who has preregistered for the following quarter will be withdrawn from classes and a refund will be processed for any tuition and fees paid for that quarter. A student returning after a 1-year suspension is required to meet with their assigned advisor prior to registering for future quarters and must earn a 2.00 quarterly grade point average at the end of every quarter until their cumulative grade point average is above 2.00. There is no appeal.

## Student Records Confidentiality

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. They are:

1. The right to inspect and review the student's educational records within 45 days of the day BBCC receives a request for access.
2. The right to request an amendment of the student's educational records that the student believes is inaccurate or misleading.
3. The right to consent to disclosures of personally identifiable information

contained in the student's educational records, except to the extent that FERPA authorizes disclosure without consent. One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is: a person employed by BBCC in an administrative, supervisory, academic, or support staff position; a person or company with whom BBCC has contracted (such as an attorney, auditor, National Student Clearinghouse); a person serving on the Board of Trustees; or a student serving on an official committee or assisting another school official in performing his or her tasks. Unless restricted by the student, BBCC may disclose the following information without the student's written consent: student's name, major field of study, participation in officially recognized sports, enrollment status, dates of attendance, honors, degrees or certificates earned, and term degree or certificate awarded.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Big Bend Community College to comply with the requirements of FERPA.

## Transcripts

An official transcript is a copy of a student's permanent academic record that is signed by the Registrar and has the college seal imprinted on it. A transcript will be released only upon authorization of the student. Information on obtaining official BBCC transcripts is located online at <https://www.bigbend.edu/i-am/transcript-request/>. Students may view or print an unofficial copy of their BBCC transcript from their ctLink Student Homepage via the "Academic Records" tile.

## Religious Accommodations

Reasonable Accommodations for Religion/Conscience: Students who will be absent from course activities due to reasons of faith or conscience may seek reasonable accommodations so that grades are not impacted. Students seeking accommodation must submit written notice to the instructor(s) within the first two weeks of the quarter and should follow the procedures listed in the Religious Accommodations section of the Student Handbook.

## Degrees, Certificates, and Diplomas

BBCC offers the following Degrees, Certificates, and Diplomas:

### Degrees

Degrees intended for transfer to a university

- Direct Transfer Agreement (DTA) Associate Degrees
- Direct Transfer Agreement (DTA) Major Related Program (MRP) Degrees
- Associate in Science-Transfer Major Related Program (MRP) Degrees

Degrees intended for direct entry into the workforce or entering a bachelor of applied science program

- Associate in Applied Science (AAS) Degrees Degree not intended for transfer
- Associate in General Studies Degree

### Certificates

- Certificates of Achievement
- Certificates of Accomplishment



## Diploma

- High School Diploma

## Resident Credit Requirement

A minimum of 30 quarter hours must be earned through enrollment in BBCC courses. Exceptions to this policy may be granted with approval of the student's advisor and the Dean of Student Services.

## General Education

### What is General Education?

General education is the part of a college curriculum shared by all students seeking a degree. It provides broad exposure to multiple disciplines and forms the basis for developing important intellectual and civic capacities.

### Why General Education?

#### For a job:

- Business leaders and other employers tell BBCC that employees need to be able to work alongside others, to speak and write clearly, and to be able to reason quantitatively.
- More and more Americans change jobs several times during their lifetime. General education skills carry over from one job to another and enable students to be more flexible as they navigate the changing world of work.

#### For life:

- General education provides the skills students need to think through the pressing problems of today so they can be actors in their personal, national and international life, rather than victims.
- General education prepares students to enjoy the complex, multifaceted and changing world they live in-whether that's through a musical concert or a magnificent rock formation.

All degrees offered at BBCC incorporate general education. The learning outcomes that describe our general education goals are designated as Institutional Outcomes because these three outcomes are found within every degree at BBCC. The Institutional

#### Outcomes are:

- **IO1 Communication**  
Students will be able to communicate clearly and effectively.
- **IO2 Quantitative Reasoning**  
Students will be able to reason mathematically.
- **IO3 Human Relations/Workplace Skills**  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Distribution Lists – Associate in Arts & Science DTA

In this catalog, courses commonly used in the [AA&S DTA](#) are identified by their distribution category. The following lists the Distribution Category along with its abbreviation.

- **BS** Basic Requirements/Skills
- **SQR** Symbolic Reasoning
- **HU** Humanities
- **HP** Humanities Performance
- **SS** Social Science
- **NS** Non-lab Science
- **LS** Lab Science
- **MS** Math/Science
- **SE** Specified Elective
- **AC** PE Activity Credit
- **D** Course meets BBCC Diversity requirement
- -- General Elective courses carry no abbreviation

## Advising Maps

Advising maps for the AS-T degrees offered at BBCC are available on the BBCC Website. You can find information on the Advising Maps for:

- Biology AS-T Track I
- Chemistry AS-T Track I
- Engineering, Computer Science, or Physics AS-T Track II

AS-T Track 2 Pre-Engineering MRP degrees offered statewide include four pathways.

- Bioengineering and Chemical Engineering (BioE and ChemE) Pathway
- Computer and Electrical Engineering (Comp E and EE) Pathway
- Civil and Mechanical Engineering (CE and ME) Pathway
  - Note: This pathway includes Aeronautical, Environmental and Industrial Engineering.
- Materials Science and Manufacturing Engineering (MSE and MFGE) Pathway

BBCC does not offer all of the courses required within these Pre-Engineering Major Related Pathway (MRP) pathways. Students interested in one of these Pre-Engineering MRP pathways should see their advisor to develop an educational plan that would enable students to work toward one of the above listed MRPs.

The advising map is helpful to prepare for advising and registration each quarter. Students should maintain an accurate record of courses completed and bring their advising map with them for advising appointments.

Many courses are designated within the AS-T Track 1 and AS-T Track 2 degrees. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests. Refer to the Departments and Programs of Study pages for a sample schedule of courses. The full listing of courses in each

discipline is found in the Course Description section of the catalog arranged in order by discipline. Refer to the Programs and Departments of Study Course Offerings/Course Schedule tables at the back of the catalog to determine which quarter each course will be taught. See a program advisor for specific courses.

## Certificate of Accomplishment

The Certificate of Accomplishment is designed to provide recognition for the student who does not plan to complete a degree program but is interested in training and instruction in specialized areas.

This certificate does not necessarily include related instruction and varies in length from 5 credits to less than 45 credits.

Certificates of Accomplishment are offered through the following programs:

- Accounting Technician
- Automotive Technology
- Aviation (Commercial Pilot)
- Aviation Maintenance Technology
- Business Information Management
- Commercial Driver's License
- Computer Science
- Early Childhood Education
- Industrial Systems Technology
- Nursing Assistant
- Simulation Technology
- Unmanned Systems
- Welding

Refer to the Program of Study section for additional information.

## Certificate of Achievement

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete a degree program. Application

for the Certificate of Achievement must be approved by the program advisor and the appropriate instructional dean.

This certificate includes related instruction and a minimum of 45 credits in an approved program, including:

- 3–5 credits in oral communications
- 3–5 credits in written communications
- 3–5 credits in human relations
- 3–5 credits in computational skills, and
- 25–31 credits in the program major
- 45 minimum total credits

Students working toward a Certificate of Achievement need to develop a program outline with the faculty advisor in their professional/technical area of interest that includes all related instruction components.

Certificate of Achievements are offered through the following programs:

- Accounting Technician
- Agriculture
- Aviation (Commercial Pilot)
- Aviation Maintenance Technology
- Business Information Management
- Chemical Laboratory Technology
- Computer Science
- Early Childhood Education
- Industrial Systems Technology
- Manufacturing
- Medical Assistant
- Welding Technology

## High School Diploma

The high school diploma is designed to provide recognition for the student who has successfully completing a high school completion program through Big Bend Community College by demonstrating competency/mastery.

This diploma includes related instruction and a minimum of 20 credits in approved courses:

- Reading/Writing/Communication (3 credits)

- 3rd Year Math (Career or Algebra II) (1 credit)
- Algebra I (1 credit)
- Geometry (1 credit)
- Lab Science (1 credit)
- Non-Lab Science (1 credit)
- Health and Fitness (1 health & 1 fitness credit)
- US Constitution and Government (1 credit)
- WA State Government and History (0.5 credit)
- Contemporary World Problems (1 credit)
- Civics (0.5 credit)
- Fine Arts (1 credit)
- Occupational Education (1 credit)
- Electives (4.5 credits)
- Portfolio (1 credit)

## Baccalaureate Opportunities on Campus

The Bachelor of Applied Science in Applied Management (BAS-AM) degree builds upon any associate degree (2-year) degree by adding junior and senior year courses focused on applied management. The program provides customized, high-demand management skills courses geared toward the needs of various industry sectors in the local economy. Perfect for working adults who need more flexibility in their schedules and have a job and/or family responsibilities. Classes can be taken 100% online. Students will gain the knowledge and skills necessary to enter, advance in management or supervisory positions, or start their own business.

The BAS degree includes courses in:

- Accounting
- Project Management
- Human Resources
- Organizational Behavior and Leadership
- Marketing
- Business communication

Students will complete an Applied Management Capstone project in the final year of the

program. The project is an opportunity for students to develop a meaningful product as an accumulation of the course work and demonstrate their learning. For admission, registration or program information, contact Anne Ghinazzi, BAS Coordinator at 509.793.2322 or [anneg@bigbend.edu](mailto:anneg@bigbend.edu). Students in the BBCC service district also have the opportunity to complete several different baccalaureate degree programs through Central Washington University (CWU).

CWU delivers courses at BBCC via two-way interactive television with sites in Ellensburg, Wenatchee and Yakima. Students attending in Moses Lake can earn the following degrees, M.Ed. Master Teacher and B.S. Flight Technology. Students can also take courses leading to degrees in B.S. Accounting, B.S. Business Administration and Teaching Certificate. For admission, registration or program information, contact the CWU Moses Lake office at 509.793.2384.

## Faculty and Administrators

- **Salah Abed (2007)** Math B.S., M.S., Western Washington University
- **Benjamin Altrogge (2014)** Aviation/ Commercial Pilot B.S., Walla Walla University; FAA certificates include Airplane Single and Multi-Engine Land; Instrument Airplane; Commercial Pilot; Flight Instructor
- **Erika Armengol (2020)** TRiO Upward Bound Academic Advisor A.A., Big Bend Community College; B.A., University of Washington
- **Joe Auvil (2015)** Director of Purchasing A.A., Spokane Community College; B.B.A., Gonzaga University
- **Anthony “Tony” Bergen (2012)** Building & Grounds Supervisor International Union of

Painters and Allied Trades Apprenticeship Certificate, South Seattle Community College

- **Sarah Bauer (2016)** Interim Dean of Academic Transfer and Allied Health B.S., Central Washington University; M.S., Montana State University
- **Starr Bernhardt (2006)** Director of Enrollment Services & Registrar B.S., University of Washington; M.S., Western Governors University
- **Daneen Berry-Guerin (2005)** Dean of Workforce Education A.A., Spokane Community College; B.A., Eastern Washington University; M.B.A., American Intercontinental University
- **Jody Bortz (2013)** BEdA Director B.A., B.A.Ed., Central Washington University
- **Jennifer Brathovde (2007)** Advising Coordinator B.A., B.A.Ed., Central Washington University
- **Barbara Bush (2020)** Communications B.F.A., University of Illinois at Champaign-Urbana; M.A., California State University, San Diego; Ph.D., University of California, San Diego
- **Theresa Calip (2019)** Biology B.A., University of Washington; M.A., University of California at Santa Barbara; M.A., (ABD), Ohio State University
- **Astrid Chen (2019)** TRiO Student Support Services Academic Advisor B.A., Eastern Washington University
- **CarlaLouise Christian (2012)** Japanese Agriculture Training Program (JATP) Director A.A., Big Bend Community College; B.S, M.B.A., Western Governors University; TESOL Certificate

- **Katherine Christian (2004)** Director of Health Education Programs B.A., University of Southern California; B.S.N., University of New York; M.S.N./Ed, University of Phoenix
- **Steve Close (2004)** English A.A., Contra Costa Community College; B.A., San Francisco State University; M.A., Ph.D., University of Oregon
- **Jacqueline “Jacqui” Contreras (2023)** Financial Aid/Outreach Coordinator B.S. Washington State University
- **Gina Cutts (2023)** Industrial Systems Technology Washington Career and Technical Education Certificate, CWU; Instructional Strategies for Welding Educators, American Welding Society
- **Anita De Leon (1999)** TRIO Upward Bound Director B.A., M.S.W., University of Washington
- **Chris Dinges (2021)** Aviation Maintenance Technology A.A.S., Big Bend Community College; FAA certificate Airframe & Powerplant
- **Angel Dominguez (2021)** Outreach Coordinator B.A., B.S.Ed., University of Idaho
- **Johanna Doty (2019)** Math B.S., M.S., Oregon State University
- **Ryan Duvall (2016)** Business Information Management A.A., Big Bend Community College; B.S. Brigham Young University Idaho
- **Emily Eidson (2022)** Nursing A.A., Big Bend Community College; B.S.N., Western Governors University
- **Kaja Englund (2022)** Criminal Justice/ Psychology B.A., M.A., Central Washington University
- **Dawne Ernette (2015)** Developmental English B.A., M.A.Ed., University of Nevada-Reno
- **Erika Espinoza Morfin (2022)** Outreach Coordinator B.A., Teaching Certificate, Washington State University
- **Deena Farag (2008)** Event & Conference Representative A.A.S., Big Bend Community College; B.A., University of Washington
- **Eric Fleming (2019)** Math B.S., M.S., Oregon State University
- **Tiffany Fondren (2018)** Communications Coordinator B.A., Eastern Oregon University
- **Cassandra Fry (2012)** Director of Financial Aid A.A.S., Big Bend Community College
- **Tim Fuhrman (1998)** Director of Library Resources & eLearning A.A.S., Big Bend Community College; B.A., Central Washington University; M.A., University of Arizona
- **Guillermo Garza (2007)** Commercial Driver’s License Class A CDL License; Endorsements PI, T, N; Instructor Certifications
- **Jaime Garza (2015)** Counselor B.A., Central Washington University; M.A.Ed., Heritage University
- **Kim Garza (2012)** Vice President of Human Resources & Labor B.A., Eastern Washington University; M.S., Western Governors University
- **Heidi Gephart (2014)** Counselor A.A.S., Big Bend Community College; B.A., Western Washington University; M.A.Ed., Washington State University
- **Anne Ghinazzi (2017)** BAS Coordinator B.A., Augustana College; M.A., University of Iowa
- **John Gillespie (1995)** Aviation/Commercial Pilot A.A., A.A.S., Big Bend Community College; B.A., Gonzaga University; FAA certificates include Airplane Single and Multi-Engine Land, Airplane Single Engine Sea; Commercial Privileges, Instrument

Airplane/Gold Seal Flight Instructor, Airplane Single and Multi-Engine Instrument/Ground Instructor, Advanced Instrument

- **David Gillett (2015)** Systems Engineer Network Administrator A.A.S., Big Bend Community College; B.S., Western Governors University
- **Aaron Glenn (2023)** Accommodation and Accessibility Services Coordinator B.A., Central Washington University; M.S., Capella University
- **Mercedes Gonzalez-Aller (2009)** Nursing B.S.N., University of New Mexico; M.N., Whitworth University
- **Lindsay Groce (2013)** Chemistry B.A, B.A., M.S., Central Washington University
- **Veronica Guadarrama (2017)** Director of TRiO Student Support Services B.A., Central Washington University; M.A., The University of Arizona
- **Octaviano Gutierrez (2016)** English B.A., University of Washington; M.A., Central Washington University
- **Andre Guzman (2019)** Dean of Student Services A.A., Big Bend Community College; B.A., Eastern Washington University; M.P.A., Indiana University
- **Terry Haws (2016)** Aviation/Commercial Pilot A.A.S., Big Bend Community College; FAA Certificates include: Airplane Single Engine Land; Commercial; Instrument; Flight Instructor Single Engine with Instrument; Instrument Ground Instructor and Advanced Ground Instructor; Airframe and Power plant.
- **Melissa Heaps (2022)** High School Completion B.A, Utah State University; M.A., Central Washington University

- **Justin Henley (2022)** Industrial Systems Technology Drafting Technology Certificate, Wenatchee Valley College
- **Carleigh Hill (2022)** Library Consortium Services Manager B.A., Linfield College; M.A., M.L.I.S., University of Missouri-Columbia
- **David Holliway (2011)** Psychology/Sociology B.A., M.A., University of New Mexico; Ph.D., University of Washington
- **John Holthaus (2021)** Director of Facilities and Capital Projects A.A., Spokane Community College; B.B.A., Georgia State University; B.A., Georgia Institute of Technology
- **Geri Hopkins (2022)** eLearning Coordinator B.S., Eastern Oregon University; M.S., Simmons College
- **Bryce Humpherys (2016)** Vice President for Learning & Student Success B.A., M.S., Utah State University; Ed.D., Washington State University
- **Yolanda Ibarra (2020)** Director of Workforce Education Services B.A., University of Durango
- **Jeremy Kelley (2015)** Systems Engineer A.A.S., Pierce College
- **Matthew Killebrew (2016)** Director of Communications B.S., Austin Peay State University
- **Rhonda Kitchens (2019)** Librarian B.A., M.L.I.S., University of South Florida
- **Dennis Knepp (2000)** Philosophy B.A., Wichita State University; M.A., Ph.D., Washington University in St. Louis
- **Beth Laszlo (2012)** Director for the Center for Business & Industry Services B.A., M.A.Ed., Central Washington University

- **Hannah Leaf (2018)** Nursing B.S., M.S., Western Governors University;; DNP, Post University American Sentinel College of Nursing & Health Sciences
- **Angela Leavitt (2001)** Foreign Language A.A., Big Bend Community College; B.S., Brigham Young University; B.A., M.A., Washington State University
- **Reign Letkeman (2021)** [Athletic Facilities Coordinator](#) A.A., Big Bend Community College; B.A., Western Governors University
- **Cade Levine (2023)** Aviation Maintenance Technology A.P.T., Airframe Maintenance General, Airframe Mechanic I, Airframe Mechanic II Certificates, Big Bend Community College; Helicopter Mechanics, Center for Naval Aviation Technical Training Camp Pendleton
- **Delia Licona Soberanes (2021)** HEP Recruitment Coordinator B.S., Washington State University
- **Juan Loera (2023)** Director of Campus Safety & Compliance A.A., Big Bend Community College; Sergeants Major Academy, U.S. Military
- **Aaron Mahoney (2020)** Agriculture/ Chemistry B.S., Wichita State University; M.S., Western Washington University; Ph.D., Washington State University
- **Brittanie Manning (2022)** Outreach Coordinator B.S., American Public University
- **Tyrone Manning (2023)** Custodial Services Supervisor
- **Jasmine Martinez (2018)** TRiO Student Support Services Academic Advisor A.A., Big Bend Community College; B.S., Central Washington University
- **Taylor Mather (2023)** TRiO Student Support Services STEM Academic Advisor B.S., Washington State University; M.S., Graduate Certificate, Kansas State University
- **David Mayhugh (2016)** Math B.A.E., Eastern Washington University; M.S., Montana State University
- **Shawn McDaniel (2004)** Welding Technology A.A.S., Electronic Engineering; American Welding Society: CWI (Certified Welding Inspector) 01110781, CWE (Certified Welding Educator) 0111009E
- **John Meeks (2022)** Athletic Director B.S., Bluefield College; M.A.Ed., University of Houston
- **Dori Miller (2021)** STEM Center-Emporium Lab Coordinator B.S., Illinois State University; M.S., Ph.D., University of Wyoming
- **Abinidi Milligan (2019)** BEa Educational Planner B.S., Central Washington University
- **Ammon Milligan (2019)** Director of Residence Halls and Residential Life B.A., Southern Virginia University
- **Zach Olson (2017)** Developmental English B.F.A., M.A., Bemidji State University
- **John Owens (2020)** Music B.A., California State University, San Bernardino; M.Mus., Ph.D., Kent State University
- **Allison Palumbo (2016)** English B.A., Weber State University; M.A., Florida State University; Ph.D., University of Kentucky
- **Rosemary Parsons (2010)** English Language Acquisition A.A., Big Bend Community College; B.A., Central Washington University
- **LeAnne Parton (2011)** Director of Development/Executive Director of the BBCC Foundation A.A., Big Bend Community College; B.A., Eastern Washington University



- **Valerie Parton (1993)** Dean of Institutional Research and Planning B.A., Eastern Washington University; M.A.Ed., Heritage University
- **Rebecca Pettingill (2023)** Outreach Design Coordinator B.A., Eastern Washington University
- **Vanessa Pruneda (2018)** Director of EOC Grant & Outreach A.A., Big Bend Community College; B.A., M.A, Ed., Eastern Washington University
- **Terry Pyle (2011)** Agriculture/Economics B.S., Brigham Young University; M.B.A., Pacific Lutheran University
- **Jody Quitadamo (2016)** History/Political Science B.A., M.A., Central Washington University
- **Maria “Carmen” Ramirez (2016)** HEP Educational Planner AA Big Bend Community College; B.S. Central Washington University
- **Michele Reeves (2016)** Education/Early Childhood B.A., Central Washington University; M.A., Grand Canyon University
- **Dustin Regul (2022)** Art B.A., Illinois College; M.A., Eastern Illinois University; M.F.A., Washington State University
- **Suzanne Reilly (2020)** Sociology/Social Science B.A., Shippensburg University; M.A., The Pennsylvania State University; Ph.D., University of Illinois at Urbana-Champaign
- **Jeni Richline (2021)** Instructional Design Specialist B.A., Geneva College; M.S., California State University
- **Christopher Riley (2001)** History/Political Science B.A., Pacific University; M.A., Pepperdine University
- **Charlene Rios (1997)** Executive Director of Business Services A.A., Big Bend Community College; B.A., University of San Diego; M.S.Ed., Capella University
- **Chandra Rodriguez (2019)** Assistant Director of the BBCC Foundation A.A., Big Bend Community College
- **Marbely Sanchez (2019)** Financial Aid Advisor B.A., University of Washington
- **Maria “Maddie” Sanchez (2023)** Outreach Coordinator B.S., Eastern Washington University
- **Tammy Sanders (2018)** Director of Title V Grants B.A., M.A.Ed., City University
- **Linda Schoonmaker (2015)** Vice President for Finance & Administration B.S., University of North Carolina at Pembroke; M.B.A., University of Washington; Certified Public Accountant
- **Alissa Scriven (2023)** Retention Coordinator B.S., M.A.Ed., Central Washington University
- **Kate Shuttleworth (1999)** Writing Center Coordinator B.A., San Francisco State University
- **Keith Starcher (2020)** Aviation Maintenance Technology A.A.S., Big Bend Community College; B.S, Central Washington University
- **Patrick Steele (2019)** Director of Information Technology B.S., Mayville State University; M.S., Minot State University
- **John Marc Swedburg II (2010)** Aviation/Commercial Pilot A.A.S., Big Bend Community College; B.S., Aviation, M.B.A., Embry-Riddle Aeronautical University; FAA Certificates: Single and Multi-Engine Airline Transport Pilot; Single and Multi-Engine Flight Instructor; Instrument Instructor

- **Sara Thompson Tweedy (2020)** President B.A., Hollins University; M.Div, Yale University Divinity School; D.M., University of Maryland
- **Sean Twohy (2015)** English B.A., Western Washington University; M.A., University of South Dakota
- **Michell Valdivia Reynada (2021)** Computer Science A.A.S, Big Bend Community College; B.S., Central Washington University
- **Diana Villafana (2003)** HEP Grant Manager A.A.S., Big Bend Community College; B.A., Heritage University
- **Rafael Villalobos, Jr. (2012)** Director of Project Heart Title V Grant B.A., Central Washington University; M.A.Ed., Heritage University
- **Tyler Wallace (2008)** Math A.S., Blue Mountain Community College; B.A., B.S., M.A.T., George Fox University; M.A., University of Houston; Ed.D., Liberty University
- **Christy Welch (2016)** Biology B.S., M.S., Washington State University
- **Mariah Whitney (2003)** Biology A.A., Big Bend Community College; B.S., Washington State University; M.S., Central Washington University
- **Jackson Wilks (2022)** Assistant Director of Business Services B.S., Brigham Young University
- **Preston Wilks (1996)** Accounting and Business/Head Women's Basketball Coach A.A., Big Bend Community College; B.S., M.S., Brigham Young University; Certified Public Accountant
- **Tom Willingham (2004)** Workforce Education Development Coordinator

- **Sue Workman (2001)** TRiO Upward Bound Academic Coordinator A.A., Lower Columbia College; B.A., Washington State University
- **Richard Wynder (2009)** Automotive Technology Automotive Service Technology Diploma, Southern Alberta Institute of Technology; Block Competency, Central Washington University; Washington Career/ Technical Teaching Certificate; Alberta Journeyman; Canada Inter-Provincial Journeyman; ASE Master Technician
- **Kristin Young (2018)** Testing Center & Tutor Services Coordinator B.A.Ed., Eastern Washington University; M.A.T., Grand Canyon University
- **MariaAnita Zavala-Lopez (2000)** Counselor B.A., University of Washington; M.A.Ed., Washington State University

## Emeritus-Faculty and Staff

On occasion, retired staff, faculty and administrators are recognized for extraordinary service with the college. The title of "Emeritus" is bestowed by the BBCC Trustees upon the recommendation of the President, to gratefully acknowledge those unique individuals whose efforts throughout their careers on behalf of the college were far beyond the expectations of their positions.

- Alice Milholland (1962-1981): Instructor Emeritus
- Dr. Peter D. DeVries (1978-1987): President Emeritus
- Dr. Robert Mason (1962-1991): Dean Emeritus
- Leroy Ledebor (1965-1991): Professor Emeritus
- Dr. Leroy Johnson (1980-1990): Professor Emeritus
- Ron Graff (1967-1993): Professor Emeritus
- Don Wright (1966-1988): Professor Emeritus
- Fred Huston (1964-1984): Dean Emeritus

- Larry Petersen (1968–1993): Professor Emeritus
- Wayne Freeman (1973–1992): Professor Emeritus
- Stephen Tse (1966–1996): Professor Emeritus
- Rex Wilks (1966–1995): Professor Emeritus
- Dr. Robert J. Wallenstien (1966–1977): President Emeritus
- Roger Glaese (1969–1998): Vice President Emeritus
- Fred Buche (1966–1996): Faculty Emeritus
- David R. Wolff (1970–2000): Faculty Emeritus
- Dr. Harrell Guard (1986–1994): Vice President Emeritus
- Cynthia Calbick (1973–2001): Faculty Emeritus
- Barbara Guiland (1982–2001): Faculty Emeritus
- Brenda Teals (1971–2001): Faculty Emeritus
- Bill Looney (1970–2002): Faculty Emeritus
- Patricia Schrom (1992–2003): Trustee Emeritus
- Makoto Enokizono (1974–2004): Faculty Emeritus
- Vic Gilliland (1967– 2004): Faculty Emeritus
- Erika Hennings (1996–2004): Trustee Emeritus
- Patricia Nobach (1985–2005): Faculty Emeritus
- Joe Rogers (1970–2005): Faculty Emeritus
- Linda Wrynn (1981–2006): Faculty Emeritus
- Anita Hughes (1985–2007): Faculty Emeritus
- Pat Palmerton (1978 to 2007): Director Emeritus
- Ken Turner (1980 – 2008): Vice President Emeritus
- Kathy Tracy Mason (1989 – 2008): Faculty Emeritus
- Maryanne Allard (1975 – 2008): Athletic Director Emeritus
- Steve Matern (1980 – 2009): Faculty Emeritus
- Van Jorgensen (1984 – 2009): Faculty Emeritus
- Pete Hammer (1976 – 2009): Faculty Emeritus
- Chuck Cox (1980 – 2009): Faculty Emeritus
- Kim Helvy (1984–2009): Staff Emeritus

- Mike Lang (1976 – 2010): Vice President Emeritus
- Felix Ramon (1994– 2010): Trustee Emeritus
- Patricia Teitzel (1989–2011): Faculty Emeritus
- Eugene “Gene” Donat (1975–2011): Faculty Emeritus
- Katherine Kenison (1999–2011): Trustee Emeritus
- Holly Moos (1973–2012): Vice President Emeritus
- William C. Bonaudi (1995–2012): President Emeritus
- Donna Brown (1995–2012): Staff Emeritus
- Marsha Asay (1983–2013): Faculty Emeritus
- Lance Wyman (1983–2013): Faculty Emeritus
- Mike O’Konek (1985–2013): Faculty Emeritus
- Irene Osumi (1988–2013): Staff Emeritus
- Max Heinzmann (1981–2014): Faculty Emeritus
- John Swedburg (1982–2014): Faculty Emeritus
- Marsha Nelson (1973–1975, 1978–1982, 1984–1990, 1995–2015): Faculty Emeritus
- Hope Strnad (1984–2015): Staff Emeritus
- Mike Blakely (2004–2014): Trustee Emeritus
- Gail Erickson (1983–2014): Faculty Emeritus
- Pat Patterson (1992–2015): Faculty Emeritus
- Mary Shannon (1993–2015): Administrator Emeritus
- Gail Hamburg (1999 – 2015): Vice President Emeritus
- Kathy Arita (1999–2015): Director Emeritus
- Doug Sly (1985–2016): Administrator Emeritus
- Candis Lacher (1989–2016): Administrator Emeritus
- John Carpenter (1994–2016): Faculty Emeritus
- Garry Helvy (1994–2016): Staff Emeritus
- David Hammond (2001–2017): Faculty Emeritus
- Rita Jordan (1999–2017): Staff Emeritus
- Stephen Lane (1987–2017): Faculty Emeritus
- John Peterson (2002–2017): Faculty Emeritus
- Terry Kinzel–Troutman (1999–2017): Administrator Emeritus
- Kara Garrett (1987–2017): Administrator Emeritus

- Petr Radchishin (2002–2017): Staff Emeritus
- Margie Lane (1988–2018): Staff Emeritus
- Barbara Whitney (1990–2018): Faculty Emeritus
- Randy Fish (1986–2018): Staff Emeritus
- William “Bill” Autry (1995–2019): Faculty Emeritus
- Barbara Jacobs (1972–2019): Faculty Emeritus
- Nancy Theis (1974–2019): Staff Emeritus
- Leslie “Les” Michie (2001–2019): Faculty Emeritus
- Kathy Aldrich (1974–2019): Staff Emeritus
- Dan Moore (1992–2021): Faculty Emeritus
- Jim Hamm (1993–2021): Faculty Emeritus
- Nancy Leach: (1974–2020) Staff Emeritus
- Jim Tincher (posthumously): (1985–2020) Staff Emeritus
- Mark Poth (1987–2022): Athletic Director Emeritus
- Rie Palkovic (1998–2022): Faculty Emeritus
- Kathleen Duvall (1994–2023) Administrator Emeritus
- Erik Borg (2000–2023) Faculty Emeritus

# Departments/ Programs

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## Accounting

**Preston Wilks**  
**509.793.2194**  
**accounting@bigbend.edu**

Accounting is often referred to as the language of business. This reference is because the primary function of accounting is to provide key financial information to business stakeholders to be used in assessing the economic performance and condition of a business. Those choosing to enter the field of accounting should have strong problem solving abilities, excellent oral and written communication skills, and quantitative skills.

### Accounting Technician AAS

#### Degree Type

Associate in Applied Science

The Accounting Technician program is designed to develop proficiencies and skills necessary to obtain entry-level employment in bookkeeping and accounting career paths. Jobs are available in corporate offices, industrial plants, mortgage and commercial banks, investment firms, insurance offices, real estate offices, retailing operations, and in general, any small business.

Program Learning Outcomes:

- IO1 Communication  
Communicate the cumulative effect of business transactions by preparing basic financial statements
- IO2 Quantitative Reasoning  
Analyze the financial health of a business by interpreting business data obtained from financial statements

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Record business transactions in traditional accounting journals by using common accounting practices (GAAP- Generally Accepted Accounting Principles)
- PO5 Record, classify, and summarize business transactions by using current accounting software
- PO6 Demonstrate an understanding of concepts and terminology related to operating in a business environment by completing various business-related projects and exams

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year

#### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACCT 105	Introduction to Accounting	5
	BIM 101/104	2
BIM 180	Introduction to Microsoft Office	1-5
MAP 117	Applied Math for Workforce Programs I	1-5

#### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BUS 115	Workplace Skills and Behaviors	4
BUS& 101	Intro to Business	5
ENGL& 101	English Composition I	5
BUS 161	Business Calculators	2

## Spring Quarter

Course Code	Title	Credits
BUS 122	Business Communications	5
CMST& 220	Public Speaking	5
	ECON 200 or ECON 201 or ECON 202	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
ACCT& 201	Prin of Accounting I	5
ACCT 262	Introduction to QuickBooks®	2
BUS& 201	Business Law	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

### Winter Quarter

Course Code	Title	Credits
ACCT& 202	Prin of Accounting II	5
BIM 109	Internet Communications	1-2
BIM 190	Spreadsheets I	1-5
	PSYC& 100 or SOC& 101	5

### Spring Quarter

Course Code	Title	Credits
ACCT& 203	Prin of Accounting III	5
ACCT 233	Intro to Payroll Taxes	2
ACCT 260	Computer Accounting	3
BUS 170	Consumer Finance	5

^Students who have had accounting and/or typing in high school and can demonstrate proficiency may replace these courses with other business electives with advisor approval

<b>Total Credits</b>	<b>90</b>
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## Accounting One-Year Certificate of Achievement

### Degree Type

## Certificate

### Program Learning Outcomes:

- IO1 Communication  
Communicate the cumulative effect of business transactions by preparing basic financial statements
- IO2 Quantitative Reasoning  
Analyze the financial health of a business by interpreting business data (obtained from financial statements)
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO5 Record, classify, and summarize business transactions by using current accounting software

Upon completion of the following courses, the student will earn a Certificate of Achievement from BBCC.

Course Code	Title	Credits
ACCT 105	Introduction to Accounting	5
ACCT& 201	Prin of Accounting I	5
ACCT& 202	Prin of Accounting II	5
ACCT& 203	Prin of Accounting III	5
ACCT 262	Introduction to QuickBooks®	2
BIM 180	Introduction to Microsoft Office	1-5
BIM 190	Spreadsheets I	1-5
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
ENGL& 101	English Composition I	5
BUS 161	Business Calculators	2
CMST& 220	Public Speaking	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>52</b>

## Accounting Principles Proficiency Certificate of Accomplishment

### Degree Type

Certificate

Program Learning Outcomes:

- IO1 Communication  
Communicate the cumulative effect of business transactions by preparing basic financial statements
- PO4 Record business transactions in traditional accounting journals by using common accounting practices (GAAP- Generally Accepted Accounting Principles)

### Required Courses

Course Code	Title	Credits
ACCT 105	Introduction to Accounting	5
ACCT& 201	Prin of Accounting I	5
ACCT& 202	Prin of Accounting II	5
ACCT& 203	Prin of Accounting III	5

### Remaining Program Courses to Receive Associate in Applied Science Degree

Course Code	Title	Credits
	Remaining Program Courses 40 to Receive Associate in Applied Science Degree	
<b>Total Credits</b>		<b>20</b>

## Basic Office Computing Certificate of Accomplishment

### Degree Type

Certificate

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Create professional documents that would be used in an office environment

## Required Courses

Course Code	Title	Credits
	BIM 101/104	2
BIM 180	Introduction to Microsoft Office	1-5
BIM 190	Spreadsheets I	1-5
BUS 161	Business Calculators	2

### Remaining Program Courses to Receive Associate in Applied Science Degree

Course Code	Title	Credits
	Remaining Program Courses 40 to Receive Associate in Applied Science Degree	
<b>Total Credits</b>		<b>11</b>

## Business Communications Certificate of Accomplishment

### Degree Type

Certificate

Program Learning Outcomes:

- IO1 Communication  
Write, speak, and present information effectively and professionally



## Remaining Program Courses to Receive Associate in Applied Science Degree

[ENGL&101](#) English Composition I.

[PSYC&100](#) General Psychology.

OR [SOC&101](#) Intro to Sociology

[BIM 109](#) Internet Communications..

[BUS& 101](#) Intro to Business.

[MAP 117](#) Applied Math for Workforce Programs I.

[BUS 170](#) Consumer Finance

[BUS& 201](#) Business Law

[BUS 233](#) Introduction to Payroll Taxes

[ECON 200](#) Introduction to Economics

OR [ECON& 201](#) or [ECON& 202](#)

[FAD 150](#) Industrial First Aid

Course Code	Title	Credits
	Remaining Program Courses 40 to Receive Associate in Applied Science Degree	40

## Required Courses

Course Code	Title	Credits
BUS 115	Workplace Skills and Behaviors	4
BUS 122	Business Communications	5
CMST& 220	Public Speaking	5
<b>Total Credits</b>		<b>14</b>

## Computerized Accounting Applications Certificate of Accomplishment

**Degree Type**  
Certificate

Program Learning Outcomes:

- PO5 Record, classify, and summarize business transactions by using current accounting software

## Required Courses

Course Code	Title	Credits
ACCT 260	Computer Accounting	3
ACCT 262	Introduction to QuickBooks®	2

## Remaining Program Courses to Receive Associate in Applied Science Degree

Course Code	Title	Credits
	Remaining Program Courses 40 to Receive Associate in Applied Science Degree	40
<b>Total Credits</b>		<b>5</b>

## Accounting Course Descriptions

### ACCT& 201 : Prin of Accounting I

An introduction to the steps in the accounting cycle; accounting for merchandise; the adjusting process-deferrals and accruals; financial statements; cash transactions; receivables, inventories and internal controls. This course is the first in a three-course series designed for all accounting and business majors.

#### Degree Code

Specified Elective

**Credits** 5

**Lecture Hours** 55

#### Prerequisites

[ACCT 105](#) recommended

#### Quarters Offered

Fall, Winter

### ACCT& 202 : Prin of Accounting II

An introduction to the accounting for fixed assets and depreciation, intangible assets, current

liabilities, corporations, partnerships, long-term liabilities, statement of cash flows, and financial statement analysis. This course is the second in a three-course series designed for all accounting and business majors.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ACCT& 201: Prin of Accounting I

**Quarters Offered**

Winter, Spring

**ACCT& 203 : Prin of Accounting III**

An introduction to managerial accounting concepts and principles, job order and process cost systems, cost-volume-profit analysis, budgeting, variances and standard costs, performance analysis for decentralized operations; differential analysis; product pricing; and capital investment analysis. This course is the third in a three-course series designed for all accounting and business majors.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ACCT& 202: Prin of Accounting II

**Quarters Offered**

Summer, Spring

**ACCT 105 : Introduction to Accounting**

This course provides the student with an introductory level understanding of the fundamentals of bookkeeping and accounting. The student is provided the procedures for completing the accounting cycle for both a service entity and a merchandising entity within a single proprietorship.

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**ACCT 233 : Intro to Payroll Taxes**

This course offers an introduction to the proper calculation, payment, and reporting of payroll taxes incurred by businesses. The preparation of required tax returns and the various reporting periods to government agencies will also be discussed. This course is designed for the student with little or no prior experience in payroll taxes.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Complete ACCT& 201 OR have prior experience in business or accounting.

**Quarters Offered**

Spring

**ACCT 260 : Computer Accounting**

A presentation of Windows based accounting techniques used in a service business and a merchandising business. Also presented is the proper use of a voucher system, departmental accounting, partnership accounting, corporate accounting, financial statement analysis, fixed assets, inventory, payroll, and accounting system setup.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

**Prerequisites**

ACCT& 202: Prin of Accounting II

**Quarters Offered**

Spring

**ACCT 262 : Introduction to QuickBooks®**

This course offers an introduction to QuickBooks®, the nations leading accounting software package for small businesses. Basic functions and capabilities of the software will be reviewed in a hands-on environment. This course is designed for the student with little or no prior experience with QuickBooks®.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Prerequisites**

To enhance the learning experience, it is recommended that the student complete ACCT&201 OR have prior experience in business or accounting.

**Quarters Offered**

Fall

## Agricultural Mechanics- CURRENTLY NOT ENROLLING NEW STUDENTS

**agriculture@bigbend.edu**

Mechanics is the science of things in motion. Agricultural mechanics is concerned with these principles as they apply to the repair and maintenance of cultivation machines. Through offering a one-year Certificate of Achievement and a two-year Associate of Applied Science degree (AAS), this program will equip students with in-depth knowledge and skills related to hydraulic, braking, drivetrain, diesel, electrical, and mechanical systems. Successful graduates of this program will also be able to proficiently weld and fabricate.

### Agricultural Mechanics Technology AAS (116+ Credits)

**Degree Type**

Associate in Applied Science

Mechanics is the science of things in motion. Agricultural mechanics is concerned with these principles as they apply to the repair and maintenance of cultivation machines. Through offering a one-year Certificate of Achievement and a two-year Associate of Applied Science degree (AAS), this program will equip students with in-depth knowledge and skills related to hydraulic, braking, drivetrain, diesel, electrical, and mechanical systems. Successful graduates of this program will also be able to proficiently weld and fabricate.

### Agricultural Mechanics Technology AAS (116+ credits)

The AAS in Agriculture Mechanics Technology provides a deep dive into the field of agricultural mechanics. Courses are designed to teach students the intersectional competencies required of the modern mechanical technician. Students will gain mechanical, welding, hydraulic and electrical skills taught to industry technical and safety standards. Students will graduate with deep knowledge of drivetrain and diesel systems and will have hours of experience diagnosing and repairing agricultural equipment. Mentoring under field-tested experts, students will gain experience operating agriculture equipment and earn a Forklift Operator Certificate. Upon completion of the program, students will have proven their ability to think critically, solve complex mechanical issues, lead as a team member, and thrive working individually.

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to agricultural mechanics.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, safety awareness, and/or workplace specific skills related to agricultural mechanics.
- PO4 Students will demonstrate knowledge of scientific principles when applied to the diagnoses and/or repair of agricultural equipment systems.
- PO5 Students will demonstrate critical-thinking and problem-solving skills in the diagnoses of agricultural equipment.
- PO6 Students will diagnose and perform repairs within industry standards.

- PO7 Students will demonstrate workplace safety when operating, repairing and servicing equipment.

The following schedule of courses is the recommended program for completing the AAS degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
AGM 102	Agricultural Mechanics Workplace Safety	1
AGM 109	Shop Skills I	2
AGM 151	Drivetrains I	6
MAP 117	Applied Math for Workforce Programs I	1-5

### Winter Quarter

Course Code	Title	Credits
AUT 121	Automotive Electrical and Electronic Systems	15
WLD 145	Agricultural Welding	4

### Spring Quarter

Course Code	Title	Credits
AGM 141	Hydraulics I	6
AUT 111	Automotive Engine Service	9
	SOC& 101 or PSYC& 100	5

### Summer Quarter

Course Code	Title	Credits
AGM 103	Agricultural Equipment Operation	3
AGR 295	Work-Based Learning- Internship	1-20
AGR 297	Work-Based Learning Seminar	1

## Second Year

### Fall Quarter

Course Code	Title	Credits
AGM 161	Diesel I	5
AGM 221	Electrical II	6
AGM 241	Hydraulics II	5
	CMST& 220 or CMST& 210	5

### Winter Quarter

Course Code	Title	Credits
AGM 129	Brakes	5
AGM 251	Drivetrains II	5
AGM 261	Diesel II	6

### Spring Quarter

Course Code	Title	Credits
AGM 291	Diagostics	8
AUT 231	Automotive Heating and Air Conditioning	6
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
	ENGL 109 or ENGL& 101	3
<b>Total Credits</b>		<b>116</b>

## Agriculture Mechanic Technology Certificate of Achievement (64 Credits)

### Degree Type

Certificate

### Agriculture Mechanic Technology Certificate of Achievement (64 credits)

The Certificate of Achievement is designed to recognize students who do not plan to complete an AAS degree program. A student who completes the following option will earn a certificate of achievement from BBCC.

The Agriculture Mechanics Technology program introduces students to the field of agricultural

mechanics. Courses are designed to teach students the intersectional competencies required of the modern mechanical technician. Students be exposed to mechanical, welding, hydraulic and electrical skills taught to industry technical and safety standards. Students will gain experience operating agriculture equipment and earn a Forklift Operator Certificate. Upon completion of the certificate, students will have proven their ability to think critically, solve complex mechanical issues, lead as a team member, and thrive working individually.

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to agricultural mechanics.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, safety awareness, and/or workplace specific skills related to agricultural mechanics.
- PO4 Students will demonstrate knowledge of scientific principles when applied to the diagnoses and/or repair of agricultural equipment systems.
- PO5 Students will demonstrate critical-thinking and problem-solving skills in the diagnosis of agricultural equipment.
- PO6 Students will diagnose and perform repairs within industry standards.
- PO7 Students will demonstrate workplace safety when operating, repairing and servicing equipment.

## Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGM 102	Agricultural Mechanics Workplace Safety	1
AGM 109	Shop Skills I	2
AGM 151	Drivetrains I	6
MAP 117	Applied Math for Workforce Programs I	1-5
	CMST& 220 or CMST& 210	5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AUT 121	Automotive Electrical and Electronic Systems	15
WLD 145	Agricultural Welding	4
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGM 141	Hydraulics I	6
AUT 111	Automotive Engine Service	9
	ENGL 109 or ENGL& 101	3
	PSYC& 100 or SOC& 101	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGM 103	Agricultural Equipment Operation	3
<b>Total Credits</b>		<b>64</b>

# Agricultural Mechanics– CURRENTLY NOT ENROLLING NEW STUDENTS Course Descriptions

## **AGM 102 : Agricultural Mechanics Workplace Safety**

In this course, students will learn to identify and mitigate potential hazards relating to the field of agricultural mechanics. Students will learn workplace and shop safety best practices.

**Credits** 1

**Lecture Hours** 11

## **AGM 103 : Agricultural Equipment Operation**

In this course, students will learn how to safely operate and maintain agricultural equipment. Students will understand the role that routine maintenance and thorough inspections play in operator and bystander safety. Students will perform fluid, filter and lubrication services. Additionally, students will conduct minor repairs as they pertain to routine maintenance such as, tightening/replacing belts, repairing minor leaks and universal joints. Students will be tasked with using operator manuals to locate, identify, and utilize safety, operational, and maintenance information for various purposes as they relate to agricultural mechanics. Students will demonstrate their ability to safely operate agriculture equipment including obtaining a forklift operator certification.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

### **Prerequisites**

AGM 102: Agricultural Mechanics Workplace Safety

## **AGM 109 : Shop Skills I**

This course will introduce students to measuring devices commonly used in agricultural mechanics. Students will demonstrate proper tool usage techniques as well as the ability to

accurately read measuring devices such as calipers, beakers, micrometers, dial indicators, and tape measures.

**Credits** 2

**Lab Hours** 44

## **AGM 129 : Brakes**

This course is an overview of brake systems. Students will gain an understanding of manual brakes and various types of power assist brakes as they apply to basic automotive, heavy truck, and agricultural braking systems. Students will learn basic airbrake function, operation, and repair. Students will study hydraulic brake systems that apply to the automotive and agriculture industry and gain experience in bleeding, serving, and diagnosing.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

### **Prerequisites**

[AGM 102](#) Agricultural Equipment and Workplace Safety (required) [AGM 109](#) Shop Skills I (recommended).

## **AGM 141 : Hydraulics I**

This course introduces students to hydraulic fundamentals and hydraulic safety. Students will learn how hydraulic flow and pressure is created and how it is harnessed to produce mechanical motion in open-center and closed-center systems. Upon successful completion of the course, students will be able to understand hydraulic system components and be able to articulate how they synergize to form a system. Additionally, students will be able to decipher basic hydraulic schematics.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

### **Prerequisites**

[AGM 102](#) Agricultural Equipment and Workplace Safety (required), [AGM 109](#) Shop Skills I (recommended).

## **AGM 151 : Drivetrains I**

In this course students will learn how power is transferred from engine to ground and PTO in

various agricultural drive systems. Additionally, students will learn how torque is amplified, and how power transfer is adjusted. These principles will be first taught in the classroom and then demonstrated in a lab providing students with a both theoretical, and hands-on, learning experience in the safe operation of drivetrain systems.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

[AGM 102](#) Agricultural Equipment and Workplace Safety (required) [AGM 109](#) Shop Skills I (recommended).

### **AGM 161 : Diesel I**

This course is an introduction to diesel engine safety and operation. Topics such as mechanical injection, valve adjustments, injector adjustments, injector timing, turbochargers, aftercoolers, and fuel delivery are covered. Students will also gain practical experience with basic diesel engine troubleshooting, repair, and maintenance.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[AGM 102](#) Agricultural Equipment and Workplace Safety (required) [AGM 109](#) Shop Skills I (recommended).

### **AGM 221 : Electrical II**

This course takes an in-depth look at electrical systems, electrical components and best practices in component testing and troubleshooting. Students will be familiarized with CAN bus, ISOBUS, and controller communication, configuration, and programming. Students will gain hands-on experience testing and diagnosing components, locating electrical faults, and reading schematics. Students will apply these skills to various sensors and actuators used on agricultural equipment commonly found in the Columbia Basin.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

[AUT 121](#) Automotive Electrical and Electronic Systems (required).

### **AGM 241 : Hydraulics II**

This course, a continuation of Hydraulics I, is a deeper dive into hydraulic technologies. Topics such as charge pumps, PEC pumps, hydrostats, pilot-operated valves, and load-sensing systems will be covered. Students will practice safely operating, testing, and adjusting these systems. Students will also use hydraulic schematics to test and troubleshoot various hydraulic systems and components.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

AGM 141: Hydraulics I  
[AGM 141](#) Hydraulics I (required).

### **AGM 251 : Drivetrains II**

A continuation of Drivetrains I, this course covers the safe servicing practices of hydraulically lubed axles, semi and full powershift transmissions, service and park brakes, and differential locks. Other topics include hydraulic clutches, lube circuits, and hydraulic brakes. Students will practice operating, calibrating, and configuring both electronically and non-electronically controlled systems.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[AGM 151](#) Drivetrains I (required).

### **AGM 261 : Diesel II**

A continuation of Diesel I, this course is a deep dive into electronic diesel engines. Course topics include testing and diagnosing engine sensors and switches, engine performance, electronically controlled diesel injection systems, and industry standard safety protocols. Students will also gain



hands-on experience following troubleshooting manuals to test components and repair engine faults.

**Credits** 6

**Lecture Hours** 33

**Lab Hours** 66

**Prerequisites**

[AGM 161](#) Diesel I (required).

### **AGM 291 : Diagnostics**

This course is the capstone for the Agricultural Mechanics Technology program. Students will employ skills developed in previous classes to test and diagnose hydraulic, electrical, and mechanic issues in agricultural equipment. Lab time will closely simulate real-world agricultural mechanic work. Successful completion of this course will require adept troubleshooting, communication, time-management, record-keeping skills. This course will put the student critical-thinking and problem-solving capacities to the test.

**Credits** 8

**Lecture Hours** 11

**Lab Hours** 154

**Prerequisites**

Students are only eligible to take this class in his or her final quarter of Agricultural Mechanics coursework.

## Agriculture

[agriculture@bigbend.edu](mailto:agriculture@bigbend.edu)

The Agriculture department offers two pathways for students pursuing a degree in agriculture. An Associate in Applied Science (AAS) Agriculture Technology degree prepares students for a direct route to start their careers in the agricultural industry. The transfer pathway, Associate in Applied Science-Transfer degree (AAS-T), allows students to seamlessly transfer to Washington State University and earn a bachelor's degree in agriculture.

## Ag Technology & Management (non-transfer) AAS (95+ Credits)

**Degree Type**

Associate in Applied Science

BBCO provides students interested in Agricultural Technology and Management a comprehensive Associate in Applied Science (AAS) degree with three customized pathways intended to provide graduates with the skills needed to independently operate or support local, regional and national agriculture industries. The degree plan specifically outlines pathways for students interested in specializing in Agricultural Business, Agronomy, and/or the use of Unmanned Aerial Vehicles (UAVs).

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will demonstrate critical-thinking and problem-solving skills as they make decisions in agricultural management situations
- PO5 Students will demonstrate knowledge of scientific principles when applied to a variety of crop production systems
- PO6 Students will show knowledge of workplace safety when handling food, chemical/pesticides, and equipment.
- PO7 Students will select and use the appropriate precision and software application technology.

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**Total Credits**

**95**

## Agricultural Business AAS

### Degree Type

Associate in Applied Science

The following schedule of courses is the recommended program for completing the AAS degree with the Agricultural Business specialization. See a program advisor for substitute courses.

### First Year

#### Fall Quarter

Course Code	Title	Credits
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
BUS& 101	Intro to Business	5
	MAP 117, MAP 103 or BUS 102	5

#### Winter Quarter

Course Code	Title	Credits
AGR 263	Soils	5
AGR 212	Ag Safety and Pesticides	5
ACCT 105	Introduction to Accounting	5

#### Spring Quarter

Course Code	Title	Credits
BIM 110	Microsoft Office Essentials	1-3
ECON& 201	Micro Economics	5
	PSYC& 100 or SOC& 101	5

### Second Year

#### Fall Quarter

Course Code	Title	Credits
ACCT 262	Introduction to QuickBooks®	2
AGR 120	Intro to Precision Agriculture	5
AGR 241	Farm and Ranch Management	5
	ENGL 109 or ENGL& 101	3

#### Winter Quarter

Course Code	Title	Credits
AGR 272	Food Sustainability and Safety	5
BUS 200	Supervision	5
CMST& 220	Public Speaking	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

#### Spring Quarter

Course Code	Title	Credits
AGR 271	Agriculture Sales and Marketing	5
BUS 170	Consumer Finance	5
	Approved Elective (5 credits)	5

#### Summer Quarter

Course Code	Title	Credits
AGR 295	Work-Based Learning- Internship	1-20
	AGR 297 or CDL 100	1-17
	<b>Total Credits</b>	<b>95</b>

## Agronomy AAS

### Degree Type

Associate in Applied Science

Agronomy is the science of soil management and crop production. Soil and crop production are the base of the agriculture industry. The following schedule of courses is the recommended program for completing the AAS degree with the Agronomy specialization. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
	ENGL 109 or ENGL& 101	3
	MAP 117, MAP 103 or BUS 102	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 263	Soils	5
AGR 212	Ag Safety and Pesticides	5
BIM 110	Microsoft Office Essentials	1-3
	PSYC& 100 or SOC& 101	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 251	Integrated Pest Management	5
	CMST& 220 or CMST& 210	5
ECON& 201	Micro Economics	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 120	Intro to Precision Agriculture	5
AGR 241	Farm and Ranch Management	5
AGR 265	Crop Production	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 272	Food Sustainability and Safety	5
BUS 200	Supervision	5
CHEM& 105	Chemical Concepts	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 211	Agriculture Weeds Identification and Control	5
AGR 110	Water Management in Agriculture	3
AGR 271	Agriculture Sales and Marketing	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 295	Work-Based Learning- Internship	1-20
	AGR 297 or CDL 100	1-17
<b>Total Credits</b>		<b>96</b>

## Uncrewed Aircraft Systems AAS

### Degree Type

Associate in Applied Science

The following schedule of courses is the recommended program for completing the AAS degree with the Unmanned Systems specialization. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
	CMST& 220 or CMST& 210	5
UAS 112	Uncrewed Aircraft Systems (UAS) Ground School I	5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 263	Soils	5
GIS 110	Geographic Information Systems (GIS) I	4
MAP 117	Applied Math for Workforce Programs I	1-5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 110	Microsoft Office Essentials	1-3
GIS 210	Geographic Information Systems (GIS) II	5
	PSYC& 100 or SOC& 101	5
UAS 142	Uncrewed Aircraft Systems (UAS) Flight Lab	6

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 120	Intro to Precision Agriculture	5
AGR 241	Farm and Ranch Management	5
ENGL 109	Applied Technical Writing	3

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 272	Food Sustainability and Safety	5
BUS 200	Supervision	5
AGR 212	Ag Safety and Pesticides	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 271	Agriculture Sales and Marketing	5
ECON& 201	Micro Economics	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
UAS 107	Commercial UAS Remote Pilot (Part 107)	2

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 295	Work-Based Learning- Internship	1-20
	AGR 297 or CDL 100	1-17
<b>Total Credits</b>		<b>95</b>

## Ag & Food Business Economics AAS-T

### Degree Type

Associate in Applied Science-Transfer

The following schedule of courses is the recommended program for completing Ag & Food Business Economics option. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
ANTH& 100	Survey of Anthropology	5
ENGL& 101	English Composition I	5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ART& 100	Art Appreciation	5
BOT 130	Botany	5
CMST& 220	Public Speaking	5
ECON& 202	Macro Economics	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 271	Agriculture Sales and Marketing	5
ECON& 201	Micro Economics	5
	PSYC& 100 or SOC& 101	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 295	Work-Based Learning- Internship	1-20
AGR 297	Work-Based Learning Seminar	1

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 241	Farm and Ranch Management	5
CHEM& 161	General Chem w/Lab I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MATH& 141	Precalculus I	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 263	Soils	5
CHEM& 162	General Chem w/Lab II	5
MATH& 146	Introduction to Statistics	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 163	General Chem w/Lab III	5
	HIST& 116 or HIST& 118	5
MATH& 148	Business Calculus	5
<b>Total Credits</b>		<b>101-120</b>

## Ag Technology & Production Management AAS-T

### Degree Type

Associate in Applied Science-Transfer

The following schedule of courses is the recommended program for completing Ag Technology & Production Management option. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
ECON& 201	Micro Economics	5
ENGL& 101	English Composition I	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 272	Food Sustainability and Safety	5
AGR 212	Ag Safety and Pesticides	5
BOT 130	Botany	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 251	Integrated Pest Management	5
AGR 271	Agriculture Sales and Marketing	5
CMST& 220	Public Speaking	5
	HIST& 116 or HIST& 118	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 295	Work-Based Learning- Internship	1-20
AGR 297	Work-Based Learning Seminar	1

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 241	Farm and Ranch Management	5
CHEM& 161	General Chem w/Lab I	5
MATH& 146	Introduction to Statistics	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 263	Soils	5
ANTH& 100	Survey of Anthropology	5
CHEM& 162	General Chem w/Lab II	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ART& 100	Art Appreciation	5
CHEM& 163	General Chem w/Lab III	5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>101-120</b>

## Agriculture Science – Agriculture Transfer AAS-T (94 credits)

### Degree Type

### Associate in Applied Science–Transfer

This AAS–T degree program is designed to give students a strong foundation in the agricultural fields and aligns with the specific WSU majors within the *Integrated Plant Sciences* and *Agricultural Food Systems* degrees. Students completing this degree will be prepared to begin upper division work in agriculture at WSU.

Customized Articulation Agreements are intended to eliminate duplication of coursework and better integrate programs to ensure a more efficient pathway to graduation. The agreements provide Big Bend Community College students with a more efficient transfer pathway to Washington State University (WSU). The current Custom Articulation Agreement options include the following:

- *Field Crop Management*
- *Agricultural and Food Business Economics*
- *Agricultural Technology and Production Management*

Students should work with a BBCC Agriculture Program Advisor to develop a schedule of courses to meet WSU program and transfer requirements.

### Program and Degree Learning Outcomes:

#### IO1 **Communication**

Students will be able to communicate clearly and effectively within a workplace context.

#### IO2 **Quantitative Reasoning**

Students will be able to reason mathematically using methods appropriate to the profession.

#### IO3 **Human Relations/Workplace Skills**

Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.

PO4 Students will demonstrate critical-thinking and problem-solving skills as they make decisions in agricultural management situations

PO5 Students will demonstrate knowledge of scientific principles when applied to a variety of crop production systems

The following schedule of courses is the recommended program for completing the AAS-T degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
ANTH& 100	Survey of Anthropology	5
ENGL& 101	English Composition I	5

### Winter Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
BOT 130	Botany	5
ECON& 201	Micro Economics	5

### Spring Quarter

Course Code	Title	Credits
ART& 100	Art Appreciation	5
CMST& 220	Public Speaking	5
MATH& 146	Introduction to Statistics	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
CHEM& 161	General Chem w/Lab I	5
	HIST& 116 or HIST& 118	5

## Winter Quarter

Course Code	Title	Credits
AGR 263	Soils	5
CHEM& 162	General Chem w/Lab II	5
	PSYC& 100 or SOC& 101	5

## Spring Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
CHEM& 163	General Chem w/Lab III	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>94</b>

## Agriculture Transfer AAS-T Degree Type

Associate in Applied Science-Transfer

This AAS-T degree program is designed to give students a strong foundation in the agricultural fields and aligns with the specific WSU majors within the Integrated Plant Sciences and Agricultural Food Systems degrees. Students completing this degree will be prepared to begin upper division work in agriculture at WSU.

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.



- PO4 Students will demonstrate critical-thinking and problem-solving skills as they make decisions in agricultural management situations
- PO5 Students will demonstrate knowledge of scientific principles when applied to a variety of crop production systems

The following schedule of courses is the recommended program for completing the AAS-T degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
ANTH& 100	Survey of Anthropology	5
ENGL& 101	English Composition I	5

### Winter Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
BOT 130	Botany	5
ECON& 201	Micro Economics	5

### Spring Quarter

Course Code	Title	Credits
ART& 100	Art Appreciation	5
CMST& 220	Public Speaking	5
MATH& 146	Introduction to Statistics	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
CHEM& 161	General Chem w/Lab I	5
	HIST& 116 or HIST& 118	5

## Winter Quarter

Course Code	Title	Credits
AGR 263	Soils	5
CHEM& 162	General Chem w/Lab II	5
	PSYC& 100 or SOC& 101	5

## Spring Quarter

Course Code	Title	Credits
	AGR Elective (5 credits)	5
	AGR Elective (5 credits)	5
CHEM& 163	General Chem w/Lab III	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>94</b>

## Field Crop Management AAS-T Degree Type

Associate in Applied Science-Transfer

The following schedule of courses is the recommended program for completing Field Crop Management option. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 261	Plant Science	5
ENGL& 101	English Composition I	5
MATH& 141	Precalculus I	5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ART& 100	Art Appreciation	5
BOT 130	Botany	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MATH& 146	Introduction to Statistics	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ECON& 201	Micro Economics	5
	HIST& 116 or HIST& 118	5
MATH& 142	Precalculus II	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 295	Work-Based Learning- Internship	1-20
AGR 297	Work-Based Learning Seminar	1

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 241	Farm and Ranch Management	5
ANTH& 100	Survey of Anthropology	5
CHEM& 161	General Chem w/Lab I	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 212	Ag Safety and Pesticides	5
AGR 263	Soils	5
CHEM& 162	General Chem w/Lab II	5
CMST& 220	Public Speaking	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AGR 251	Integrated Pest Management	5
CHEM& 163	General Chem w/Lab III	5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>101-120</b>

## Agricultural Agronomy Certificate of Achievement

### Degree Type

Certificate

This certificate will provide students the foundational knowledge and skills to work in or support crop production. Upon completion of the following courses, the student will earn a Certificate of Achievement. See a program advisor for substitute courses.

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will demonstrate critical-thinking and problem-solving skills as they make decisions in agricultural management situations
- P12 Students will apply plant and soil science concepts to crop production.

## Required Courses

Course Code	Title	Credits
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 110	Water Management in Agriculture	3
AGR 211	Agriculture Weeds Identification and Control	5
AGR 251	Integrated Pest Management	5
AGR 261	Plant Science	5
AGR 263	Soils	5
AGR 265	Crop Production	5
CHEM& 105	Chemical Concepts	5
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>51-55</b>

## Agriculture Business Certificate of Achievement

### Degree Type

Certificate

Agricultural business is a large sector of the agriculture industry. This certificate will provide students the foundational knowledge and skills to work in or operate an agricultural business. Upon completion of the following courses, the student will earn a Certificate of Achievement. See a program advisor for substitute courses.

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will demonstrate critical-thinking and problem-solving skills as they make decisions in agricultural management situations
- PO8 Students will demonstrate knowledge of business principles when applied to agricultural businesses and operations.

## Required Courses

Course Code	Title	Credits
ACCT 105	Introduction to Accounting	5
AGR 101	Orientation to Agricultural Industries & Careers	2
AGR 241	Farm and Ranch Management	5
AGR 271	Agriculture Sales and Marketing	5
BUS& 101	Intro to Business	5
BUS 170	Consumer Finance	5
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>45</b>

# Agriculture Course Descriptions

## **AGR 101 : Orientation to Agricultural Industries & Careers**

This course will explore the Columbia Basins agricultural industries along with the career opportunities available within the industries. This course includes industry tours, career research & planning, personal & professional development, and networking.

**Credits** 2

**Lecture Hours** 22

**Quarters Offered**

Fall

## **AGR 110 : Water Management in Agriculture**

This course will provide students the opportunity to study water and its management for agronomic purposes. A broad range of topics will be covered including the Columbia Basin Irrigation project, hydrology, basic irrigation principles, water relationships, efficiency, and water quality & supply. Course topics and concepts will be reinforced with hands-on labs and activities

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

[AGR 263](#) Soils recommended.

**Quarters Offered**

Winter

## **AGR 120 : Intro to Precision Agriculture**

This course provides an overview of the fundamentals of precision agriculture. Specifically covering Global Positioning Systems (GPS), Geographic Information Systems (GIS), remote sensing, data analysis, mapping, and variable rate agriculture technologies. Course concepts will be applied and reinforced through laboratory instruction.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Quarters Offered**

Fall

## **AGR 211 : Agriculture Weeds Identification and Control**

This course covers the classification, identification and control of weeds that economically affect agriculture in the Columbia Basin and surrounding areas.

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

## **AGR 212 : Ag Safety and Pesticides**

This course is an overview of safety in the agricultural industry by identifying safety hazards, applying procedures, analyzing safety rules and regulations. Emphasis will be placed on the relation to agricultural operations, technological changes, workplace violence, ethics, diversity, and personal/organizational responsibilities. This course will also focus on agricultural chemical applications, proper pesticide and fertilizer use. Upon completion of this course, students will be prepared for their Washington State Commercial Applicator License Exams.

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

## **AGR 241 : Farm and Ranch Management**

In this course, students will study the management principles for profitable farming operations, ranches, and other agribusiness firms. Topics include economic concept application and analysis, record keeping, creating and evaluating financial statements, budgeting, taxes, and risk management. Course concepts will be reinforced through laboratory instruction.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Fall

**AGR 251 : Integrated Pest Management**

In this course, students will learn ecologically based pest management strategies for controlling weeds, insects, pathogens, nematodes, and vertebrate pests as well as how to set up sampling and monitoring programs in the field. The course will cover the biological nature of pests, focusing on how their population dynamics and ecological interactions with other species and how their environments contribute to their detrimental impacts on agriculture and human resources. (Previous Course Title Ecologically Based Pest Management)

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**AGR 261 : Plant Science**

This course introduces principles of plant science as it relates to the production and management of crops. Topics will include plant classification, form and function, growth, processes, genetics, and reproduction. Course concepts will be applied through laboratory instruction.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Fall

**AGR 263 : Soils**

This course is an introduction to basic concepts of soil science, plant nutrition, and water management. Topics include soil formation and development, soil structure and composition, physical properties of soils, soil minerals, soil chemistry, soil fertility, soil microorganisms, soil ecology, fertilizers, plant, and soil and water relationships.

**Degree Code**

Math/Science Laboratory

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Winter

**AGR 265 : Crop Production**

This course takes an in depth look at the science and processes of crop production. Students will build on their knowledge of plant and soils sciences and apply it to crop production from the beginning stages of soil and seed to the final harvested product. Students are encouraged to take [AGR 261](#) Plant Science and [AGR 263](#) Soils prior to this course

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

**AGR 271 : Agriculture Sales and Marketing**

This course will provide students the opportunity to study the marketing system for agricultural commodities. Students learn to analyze topics related to market structure, supply, demand, price, price analysis, trade, spatial relationships, market price variation through time, institutional arrangements, and public policy as they relate to agricultural marketing. Additionally, the concept of futures markets is introduced as a tool for price risk management. Theoretical economic frameworks covered in this class are applied to the commodities relevant to the Columbia Basin.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ECON& 201 Micro Economics.

**Quarters Offered**

Spring

**AGR 272 : Food Sustainability and Safety**

Students will study the challenges and importance of sustainable and safe food production. Topics include history of agriculture, geography of hunger, the sustainability concept, agricultural systems, agroecology, biotechnology, and food safety.

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**AGR 295 : Work-Based Learning-Internship**

This course provides students with a valuable and practical work experience in Agriculture. Learned agriculture topics from Agriculture curriculum will be applied to and enhance the work experience. This is a paid or volunteer experience that is a supervised position both by the employer and the Agriculture instructor. The course may be repeated up to 20 credits

**Credits** 1-20**Clinical Hours** 33-660**Quarters Offered**

Summer

**AGR 297 : Work-Based Learning Seminar**

This seminar course covers topics related to professional employment in Agriculture. Students will share feedback and discussion to integrate work-based learning experiences with classroom instruction.

**Credits** 1**Lecture Hours** 11**Quarters Offered**

Summer

## Aircraft Rescue & Fire Fighting

## Aircraft Rescue & Fire Fighting Course Descriptions

**FIR 101 : Aircraft Rescue and Fire Fighting 40 Hour Basic**

This 40 hour course covers fundamental training required by the FAA as described in FAR 139.319. The course includes fire fighting equipment, aircraft types, engines, systems, live fires, fire fighting operations, fire fighter safety, extinguishing agents, and disaster planning. Practical fire fighting involving flammable fuel, laddering/extraction and Self contained Breathing Apparatus using an actual aircraft. Students are provided with the opportunity to

utilize state of the art technology, equipment and techniques. Instruction begins in the classroom and evolves in the practical training exercises on various aircraft related topics. This course will prepare a student to receive a certificate of completion from Big Bend Community College and the Federal Administration.

**Credits** 3**Lecture Hours** 24**Lab Hours** 16**FIR 102 : Aircraft Rescue and Fire Fighting Truck Operations**

This course is providing training and experience for students to properly operate a crash truck during a crash truck during an aircraft fire.

**Credits** 2**Lecture Hours** 6**Lab Hours** 20**FIR 103 : Aircraft Rescue and Fire Fighting Recurrent - Live Fire Training**

This course offers firefighters the opportunity to meet live fire requirements as specified in FAR 139.319, the FAA requirement that all rescue and firefighting personnel participate in at least one live fire drill every 12 months.

**Credits** 1**Lecture Hours** 2**Lab Hours** 6**Prerequisites**

Completion of Big Bend Community Colleges 40 Hour Basic ARFF School OR meet all three equivalent training/experience criteria listed below:

**FIR 104 : ARFF Officer Development**

This airport, rescue firefighting officer development course covers strategic and tactical considerations in a hands-on, live-fire ground environment, as well as leadership training.

**Credits** 1**Lecture Hours** 8**Lab Hours** 8**Prerequisites**

Current employment in firefighting industry for future or Commissioned Fire Officers

# Anthropology

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Anthropology courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Social Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Anthropology is the study of humankind. This broad field includes the study of human biological origins, evolution, diversity, and nature, as well as the study of the origin, evolution, diversity, and nature of human cultural and social life. Anthropology represents an attempt to grasp and celebrate the whole context of human experience, including all people, from all cultures, across all time. Among the career possibilities in anthropology are: archaeology, education, social work, Foreign Service, and governmental agency work.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

# Anthropology Course Descriptions

## **ANTH& 100 : Survey of Anthropology**

An introduction to anthropology with a primary focus on cultural diversity of the human experience. The course surveys four subfields of Anthropology including sociobiology, anthropological linguistics, cultural anthropology, and applied anthropology. Major themes addressed throughout the course include cultural relativity, ethnocentrism, cultural change, the conflict between "foreign" anthropologist and "native" peoples, the role of anthropology in modern society, and anthropology as a "personal lens" of change. Students will complete a two part "field study", become familiar with The HRAF (human relations area file - a major electronic data base in Anthropology), and learn potential applications of becoming an anthropologist. There are no prerequisites. Strongly recommended completion of MATH 094/M AP 117 or a higher placement and completion of ENGL 098 or a higher placement.

### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

# Art

**Dustin Regul**

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Art courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a

detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Art is a human expression dating back to prehistoric times. Humans made naturalistic and abstract expressions in their environments. As we delve into art making we tap into an essential characteristic of being human. In the art department, the studio method of learning emphasizes the development of individual creativity. Through the learning experience of technical competence, the art department encourages students to achieve a sense of involvement and integrity in making projects. Through the study of art history in other cultures and time periods the students may make connections to human expressions throughout the world community.

The department provides basic disciplines in the arts for art majors, other students, and citizens of the community. In developing each individual's talent and interests, equal emphasis is on mastery and the appreciation of all art forms. The curriculum probes aspects of visual communication, which focus the eye, mind, and hand in the technical and creative awareness the student needs to adequately prepare for his/her major area of study and for transfer to a four-year college or university.

A variety of art courses are offered for the student and the community. The art student may select from such fields as art education, two and three-dimensional design, drawing, painting or ceramic art. Some possible career options for art and art history majors are: artist, art educator, museum curator, art critic, graphic designer, photographer, web designer, industrial design, and many others. The study of the arts and art history may help other majors in problem solving techniques, creative thinking, and working with others.

Since programs differ at each college, students should consult program outlines published by

the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## **Recommended Pre-Major Courses Credits**

ART 101 2D Foundations

ART 102 Color Theory

ART 103 3D Foundations

ART 104 Drawing I

ART 105 Drawing II.

ART 106 Drawing III

ART 140 Introduction to Digital Art.

ART 216 Prehistoric–Medieval Art History..

ART 217 Renaissance –Mid-nineteenth Century..

ART 218 Western Art: Impressionism to Art after 1945.

## **Recommended Art Electives (12 credits)**

ART 121 Ceramics I

ART 122 Ceramics II

ART 123 Ceramics III

ART 221 Watercolor I.

ART 222 Watercolor II

ART 223 Watercolor III

ART 231 Oil Painting I

ART 232 Oil Painting II

ART 233 Oil Painting III



## Art Course Descriptions

### **ART& 100 : Art Appreciation**

Art is a visual language which artists use to record and interpret life experiences. The messages artists share are personal and social records. The ability to understand and appreciate visual art is a skill you can develop through observation and study and one you can utilize throughout your life. We will cover a general overview of artists' materials and techniques as well as historical context with lectures, slides, movies, and experiments with art media. Open to all students.

#### **Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **ART 101 : 2D Foundations**

2D Foundations is an introduction to the study of the elements and principles of art that will be explored through various media in two dimensional problems. There will be projects addressing the specific elements of art: **line, shape/form, perspective, texture, value.** Using these elements, the projects will also demonstrate the principles of organization: **rhythm and repetition, balance, harmony-unity, movement, proportion, space, dominance.**

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Fall

### **ART 102 : Color Theory**

The study of water color painting from still life and nature with an introduction to the materials and techniques of watercolor painting.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Winter

### **ART 103 : 3D Foundations**

An introduction to the study of three-dimensional design explored through text and various media in sculpture.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Spring

### **ART 104 : Drawing I**

An introduction to drawing based on observation, emphasizing composition, and form. This course is basic to all art practice courses and is an introduction to basic drawing techniques involving various media such as pencil, charcoal, color pastels, and ink.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Fall, Spring

### **ART 105 : Drawing II**

Drawing II is a continuation in the exploration of drawing with emphasis on technique and interpretation of ideas using various media. You will learn drawing techniques with various media and develop an individual artistic voice by introducing content (meaning or message) into drawings. Drawing I, II, and III can be taken out of sequence.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Winter

**ART 106 : Drawing III**

Working from a live model, the student explores a range of drawing approaches including gestural drawings, sustained renderings, structural drawings and expressive treatment of the figure. Exercises are performed which emphasize anatomical structure and focus on fragments, such as hand studies and portraiture. The development of a personal approach to drawing the figure and an examination of how the figure can be handled in art is explored through such means as critiques, slide presentations and demonstrations. Drawing I or II recommended

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**ART 121 : Ceramics I**

Experiments and design in clay applied to pottery and sculpture. Work in various hand construction methods, glazing and kiln firing.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**ART 122 : Ceramics II**

Ceramics II continues in experiments and design in clay applied to pottery and sculpture by throwing on the pottery wheel, glazing and kiln firing.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[ART 121](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring

**ART 123 : Ceramics III**

Advanced experiments and design in clay applied to pottery and sculpture by working in various hand construction methods and in pottery wheel, glazing and kiln firing.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[ART 121](#), [ART 122](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring

**ART 140 : Introduction to Digital Art**

This course is an introduction to digital art wherein students will use technology for creative expression and the sharing of ideas and artwork.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Winter, Spring

**ART 198 : Special Projects**

Special projects in art - individual projects by special arrangement with instructor.

**Degree Code**

Humanities Performance/Skill

**Credits** 1-5

**Clinical Hours** 55-275

**Prerequisites**

instructor permission

**ART 212 : American Art**

Beginning with the era of the colonization of North America by European nations and ending with the 20th century, this course will trace the development of art in the United States.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**ART 216 : Western Art: Ancient to Medieval**

A survey of the history of western art and architecture from ancient times to the medieval age.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**ART 217 : Western Art: Renaissance to Mid Nineteenth Century**

A survey of the history of western art and architecture from Renaissance times to the mid nineteenth century. We will explore the art of Leonardo da Vinci and Michelangelo to the beginnings of photography in the mid nineteenth century

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**ART 218 : Western Art: Impressionism to Art After 1945**

A survey of the history of western art and architecture from late nineteenth century to contemporary times. Explore the work of the Impressionists like Monet and the Cubism of Picasso to the modern artwork of Jackson Pollock.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

**ART 221 : Watercolor Painting I**

The study of water color painting from still life and nature with an introduction to the materials and techniques of watercolor painting.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Quarters Offered**

Spring, Summer

**ART 222 : Watercolor Painting II**

A continuation of the study of water color painting from still life and nature with the materials and techniques of water color painting.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[ART 221](#) or instructor permission

**Quarters Offered**

Spring, Summer

**ART 223 : Watercolor Painting III**

Advanced water color painting is an emphasis upon the student's artistic growth and the development of his or her own style and voice using watercolor techniques and materials.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[ART 221](#) and [ART 222](#) or instructor permission.

**Quarters Offered**

Spring, Summer

**ART 230 : Painting/Drawing Workshop**

A workshop class designed to allow experimentation with 2D media such as pencil, charcoal, pastels, watercolor, acrylic paint.

**Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44-44

**Lab Hours** 22

**Prerequisites**

None but studio class such as drawing or painting recommended

### **ART 231 : Oil Painting I**

Introduction to the materials and techniques of oil painting. Painting from still life and nature using creative compositions.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Fall, Winter, Spring

### **ART 232 : Oil Painting II**

Continuation of exploration in oil painting materials and techniques with an emphasis on developing content or message in the paintings.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

[ART 231](#) or instructor permission.

#### **Quarters Offered**

Fall, Winter, Spring

### **ART 233 : Oil Painting III**

Advanced oil painting is an emphasis upon the students artistic growth and the development of his or her own style and voice using oil painting techniques and materials.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

[ART 231](#) and 232 or instructor permission.

#### **Quarters Offered**

Fall, Winter, Spring

### **ART 298 : Special Projects**

Special projects in art - individual projects by special arrangement with instructor.

#### **Degree Code**

Humanities Performance/Skill

**Credits** 1-5

**Clinical Hours** 55-275

#### **Prerequisites**

instructor permission

## Astronomy

**Tyler Wallace, Division Chair**

**509.793.2150**

**[astronomy@bigbend.edu](mailto:astronomy@bigbend.edu)**

Astronomy courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Astronomy is the study of the entire universe, ranging from descriptions of and explanations for the daily, seasonal, and annual motions we observe with our eyes to trying to understand the origin and evolution of the universe itself. Between those extremes astronomy includes the study of the increasing number of known solar systems, the stars and other matter that make up galaxies, and the way galaxies and clusters of galaxies interact in the warped fabric of space and time. A course in astronomy introduces a learner to a wide range of material in the area, but also looks at how we know what we know, incorporating material from other fields such as chemistry, geology, and physics.

Most professional astronomers work in academia, combining research with teaching. Some work in business or private industry, some in planetariums or science museums, some in purely teaching positions in high schools or community colleges. The large number of

science and mathematics courses necessary for a degree in astronomy are applicable in many different employment fields.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Astronomy Course Descriptions

### **ASTR& 100 : Survey of Astronomy**

A survey course intended for the non-science major. Topics studied will include most of the following: historical astronomy, electromagnetic radiation, telescopes, the Earth-Moon system, the solar system, the sun, stars, stellar evolution, galaxies, quasars, and cosmology. This is a non-lab science course. Credit not granted for both ASTR& 100 and ASTR& 101.

#### **Degree Code**

Natural Science

#### **Credits** 5

#### **Lecture Hours** 55

#### **Prerequisites**

Completion of [MATH 099](#)/[MAP 121](#) or a higher placement

### **ASTR& 101 : Intro to Astronomy**

A survey course intended for the non-science major. Topics studied will include most of the following: historical astronomy, electromagnetic radiation, telescopes, the Earth-Moon system, the solar system, the sun, stars, stellar evolution, galaxies, quasars and cosmology. The laboratory portion of the course may include optics, visual astronomical observing techniques, use of the telescope, spectroscopy, and distance measurement. Credit not granted for both [ASTR& 100](#) and ASTR& 101.

#### **Degree Code**

Lab Science

#### **Credits** 5

#### **Lecture Hours** 44

#### **Lab Hours** 22

#### **Prerequisites**

Math 099 or higher placement

#### **Quarters Offered**

Fall, Spring

### **ASTR 105 : Observational Astronomy**

A descriptive overview of astronomy with particular emphasis on observation. Lectures will cover the solar system, the Earth-Moon system, stellar systems, celestial motion, the history of visual astronomy, optical aids, and observing techniques. This course is not intended to be part of a physical science premajor.

#### **Degree Code**

Specified Elective

#### **Credits** 3

#### **Lecture Hours** 28

#### **Lab Hours** 12

## Automotive Technology

### **Dick Wynder**

**509.793.2255**

**[automotive@bigbend.edu](mailto:automotive@bigbend.edu)**

A student in the BBCC Automotive Technician program receives training in all eight ASE Certification areas. Modern repair and diagnostic test equipment are used in training the student to accurately repair the complex vehicles of today. The curriculum also includes shop safety and environmental training, Industrial First Aid Certification, EPA Section 609 Refrigerant Certification, basic welding skills, and hydraulics, as well as degree required general education classes. Graduates of the Automotive Technology program obtain employment as automotive repair technicians and in related occupations such as automotive parts merchandising, alignment, tire service, and fleet maintenance. The agricultural equipment service and repair industry also provides employment opportunities for our graduates. A high-tech

career in automotive technology gives a person job mobility with the security of knowing that his/her skills will always be in demand.

Any applicant who is 18 years of age or older or is a graduate of an accredited high school or has an equivalent certificate (GED) or is a qualified Running Start student is eligible for entry into the Automotive Technology program. Applications for admittance are accepted throughout the year. Students normally begin the program in the fall quarter, but may start in the winter or spring quarters. Advanced standing may be requested for prior education or experience.

## Automotive Technology AAS

### Degree Type

Associate in Applied Science

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations
- PO4 Graduates will demonstrate proper shop safety procedures and hazardous waste handling while performing repairs and diagnostics in the lab
- PO5 Graduates will use proper tools during repair and diagnostic work in the lab
- PO6 Graduates demonstrate the ability to retrieve service information from manuals and on-line sources
- PO7 By program completion, graduates will pass the ASE Student Exams including engine repair, automatic transmissions,

manual transmissions, steering and suspension, brakes, electrical/electronics, HVAC, and engine performance

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year

#### Fall Quarter

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 124	Brake System Service	9
AUT 125	Suspension, Steering and Alignment	9
AUT 190	Skills Laboratory I	2
MAP 117	Applied Math for Workforce Programs I	1-5

#### Winter Quarter

Course Code	Title	Credits
AUT 121	Automotive Electrical and Electronic Systems	15
AUT 132	Hydraulic Systems	3
AUT 190	Skills Laboratory I	2
WLD 101	Oxy-Acetylene Welding for Auto Mechanics	2
WLD 102	ARC/GMAW Welding for Automotive Technicians	2

#### Spring Quarter

Course Code	Title	Credits
AUT 105	Automotive Personal Computer Applications	2
AUT 111	Automotive Engine Service	9
AUT 131	Manual Drive Train and Axles 8	
AUT 190	Skills Laboratory I	2

## Second Year Fall Quarter

Course Code	Title	Credits
AUT 220	Engine Performance	18
AUT 290	Skills Laboratory II	2
	CMST& 220 or CMST& 210	5

## Winter Quarter

Course Code	Title	Credits
AUT 212	Automatic Transmission Repair	9
AUT 213	Automotive Servicing I	6
AUT 290	Skills Laboratory II	2
	ENGL 109 or ENGL& 101	3

## Spring Quarter

Course Code	Title	Credits
AUT 211	Automobile Convenience Systems	2
AUT 223	Automotive Servicing II	6
AUT 231	Automotive Heating and Air Conditioning	6
AUT 290	Skills Laboratory II	2
	PSYC& 100 or SOC& 101	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>137</b>

### Automatic Transmission & Transaxle Repair Certificate of Accomplishment

#### Degree Type Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved

courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 212	Automatic Transmission Repair	9
<b>Total Credits</b>		<b>10</b>

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

### Automotive Heating and Air Conditioning Certificate of Accomplishment

#### Degree Type Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved

courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 231	Automotive Heating and Air 6 Conditioning	
<b>Total Credits</b>		<b>7</b>

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

### Brake Repair Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered

through a particular workforce program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 124	Brake System Service	9
<b>Total Credits</b>		<b>10</b>

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

### Electrical/Electronic Systems Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and



or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 121	Automotive Electrical and Electronic Systems	15

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

**Total Credits**                      **16**

### Engine Performance Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and

or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 220	Engine Performance	18

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

**Total Credits**                      **19**

### Engine Repair Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and

or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 111	Automotive Engine Service	9
*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.		
<b>Total Credits</b>		<b>10</b>

### Manual Drive Train and Axle Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and

or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and 1 Environmental Issues	
AUT 131	Manual Drive Train and Axles 8	
*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.		
<b>Total Credits</b>		<b>9</b>

### Suspension and Steering Certificate of Accomplishment

**Degree Type**  
Certificate

Students not desiring a degree but who are interested in training and instruction in specialized areas may be awarded Certificates of Accomplishment. The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular workforce program. This certification is designed for the occasional and

or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

Automotive Technology Certificates of Accomplishment correspond with the eight ASE/NATEF certification areas and are available as follows:

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AUT 115	Automotive Shop Safety and Environmental Issues	1
AUT 125	Suspension, Steering and Alignment	9
<b>Total Credits</b>		<b>10</b>

\*All certificates require the completion of AUT 115 Automotive Shop Safety and Environmental Issues. Students seeking to earn multiple certificates only need to complete AUT 115 once regardless of number of certificates intended.

## Automotive Technology Course Descriptions

### **AUT 105 : Automotive Personal Computer Applications**

An introductory course covering the operation of personal computers using automotive applications. Hardware components, Windows Operating System, word processing, spreadsheets, and student created presentations will be covered emphasizing "hands-on" experience.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

### **Prerequisite or Corequisite**

Concurrent enrollment in automotive program classes.

### **Quarters Offered**

Spring

### **AUT 111 : Automotive Engine Service**

This course covers the theory of engine operation and the procedures necessary to perform automobile engine troubleshooting, repair and rebuilding. Topics covered include shop skills, engine operation, engine blocks, engine crankshafts, engine bearings, engine pistons, rings and valve system service. This course is designed to prepare the student for the ASE/NATEF Engine Repair Certification test, while instilling interpersonal and employability skills. There will be a heavy focus on customer service and quality control.

**Credits** 9

**Lecture Hours** 66

**Lab Hours** 66

### **Prerequisites**

[AUT 115](#) Automotive Shop Safety and Environmental Issues

### **Corequisites**

[AUT 190](#) Automotive Lab.

### **Quarters Offered**

Spring

### **AUT 115 : Automotive Shop Safety and Environmental Issues**

This course covers automotive shop safety rules, procedures, and shop equipment operation and is required before a student is allowed to work in the automotive laboratory. The proper handling, storage, and disposal of automotive related hazardous waste is also covered. Offered as regularly scheduled course during the fall quarter and offered by arrangement for students who enroll in the automotive program any other quarter.

**Credits** 1

**Lecture Hours** 10

**Lab Hours** 2

### **Quarters Offered**

Fall, Winter, Spring

### **AUT 121 : Automotive Electrical and Electronic Systems**

This comprehensive course covers both theory and operation of the electrical systems in today's high-tech vehicles. Topics covered include D.C. electrical theory, D.C. circuitry, Ohms Law, solid state components, batteries, starting circuits, charging circuits, lighting circuits, vehicle wiring and ignition systems. Emphasis will be placed on using modern electrical test equipment and procedures to diagnose and repair complex electrical systems. This course is designed to prepare the student for the ASE/NATEF Electrical Systems Certification test, while instilling interpersonal and employability skills. There will be a heavy focus on customer service and quality control.

**Credits** 15

**Lecture Hours** 110

**Lab Hours** 110

#### **Prerequisites**

AUT 115: Automotive Shop Safety and Environmental Issues

#### **Corequisites**

[AUT 190](#).

#### **Quarters Offered**

Winter

### **AUT 124 : Brake System Service**

This course covers the theory, operation, diagnosis and repair of both conventional and anti-lock brake systems. Topics covered are hydraulic operating systems, drum brake systems, disc brake systems, emergency/parking brake systems and brake machining operations. This course is designed to prepare the student for the ASE/NATEF Brakes Certification test, while instilling interpersonal and employability skills. There will be a heavy focus on customer service and quality control.

**Credits** 9

**Lecture Hours** 66

**Lab Hours** 66

#### **Prerequisites**

[AUT 115](#)-Automotive Shop Safety and Environmental Issues

#### **Corequisites**

[AUT 190](#) Automotive Lab.

#### **Quarters Offered**

Fall

### **AUT 125 : Suspension, Steering and Alignment**

This course covers the theory, operation and repair of various automotive suspension and steering systems used in today's vehicles. Topics covered include steering types, suspension types, shock/strut service, tires/wheels and suspension and steering component replacement. Students will use modern computerized alignment equipment to perform two wheel, four wheel and thrust type vehicle alignments. This course is designed to prepare the student for the ASE/NATEF Suspension and Steering Certification test.

**Credits** 9

**Lecture Hours** 66

**Lab Hours** 66

#### **Prerequisites**

[AUT 115](#) Automotive Shop Safety and Environmental Issues.

#### **Corequisites**

[AUT 190](#) Automotive Lab.

#### **Quarters Offered**

Fall

### **AUT 131 : Manual Drive Train and Axles**

This course covers the theory, operation, diagnosis and repair of automotive clutch systems, manual transmissions, manual transaxles, front and rear drive axle operation, various drive shaft configurations and the procedures necessary to perform power train troubleshooting and repair. This course is designed to prepare the student for the ASE/NATEF Manual Drive Train & Axles Certification test, while instilling interpersonal and employability skills. There will be a heavy focus on customer service and quality control.

**Credits** 8

**Lecture Hours** 55

**Lab Hours** 66

#### **Prerequisites**

[AUT 115](#) Automotive Shop Safety and Environmental Issues.

**Corequisites**

[AUT 190](#) Automotive Lab.

**Quarters Offered**

Spring

**AUT 132 : Hydraulic Systems**

This course provides a student with the skills and knowledge necessary to maintain and service various hydraulic power transmission systems. Topics covered include hydraulic fundamentals, system operation, pump, valve and actuator service, as well as seals, lines and hydraulic system components.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

[AUT 115](#) Automotive Shop Safety and Environmental Issues.

**Corequisites**

[AUT 190](#) Automotive Lab.

**Quarters Offered**

Winter

**AUT 190 : Skills Laboratory I**

This course is for full-time automotive students who need extra project laboratory time to update or enhance their skills to meet program certification requirements. Students will be directed to complete ASE/NATEF tasks not completed in the day classes. (May be repeated for credit up to six credits for each course; graded on pass/fail basis).

**Credits** 2

**Lab Hours** 44

**Prerequisites**

Concurrent enrollment in first year automotive program classes.

**Quarters Offered**

Fall, Winter, Spring

**AUT 211 : Automobile Convenience Systems**

This course covers the operation and repair of automotive convenience systems. Classroom and laboratory lessons include power windows, power seats, air bag system testing and servicing, as well as minor door, hood, window, and trunk adjustments. The procedure to

perform a proper Pre-delivery Inspection (PDI) will be covered and Washington State auto repair laws and how they effect the repair technician will be discussed.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Prerequisites**

[AUT 121](#) - All First Year Certificate Auto Courses.

**Quarters Offered**

Spring

**AUT 212 : Automatic Transmission Repair**

This course covers the theory, operation, service, and repair of various automatic transmission and transaxle assemblies. Classroom and laboratory instruction provide in-depth training using modern test equipment in the diagnosis and repair of these complex systems. This course will prepare students for the ASE/NATEF Automatic Transmission Repair Specialists test.

**Credits** 9

**Lecture Hours** 66

**Lab Hours** 66

**Prerequisites**

All First Year Certificate Auto Courses plus [AUT 132](#).

**Quarters Offered**

Winter

**AUT 213 : Automotive Servicing I**

Students, at the direction of the instructor, work on customer vehicles applying skills learned in previous automotive classes. Students will be required to complete ASE/NATEF tasks not completed in other courses. Customer relations, repair order preparation, scheduling, estimating, utilization of shop space and equipment, and hazardous waste management are covered to provide students with an understanding of repair shop operations.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

Instructor permission or completion of first year automotive classes.

**Quarters Offered**

Winter

### **AUT 220 : Engine Performance**

This comprehensive course covers the theory and operation of various ignition systems, fuel delivery systems, emission controls, computerized engine controls, and the use of diagnostic test equipment. Classroom and laboratory lessons provide in-depth training using modern test equipment to diagnose and repair these complex systems. This course is designed to prepare students for the ASE/NATEF Engine Performance test.

**Credits** 18

**Lecture Hours** 132

**Lab Hours** 132

#### **Prerequisites**

All First Year Certificate Auto Courses.

#### **Quarters Offered**

Fall

### **AUT 223 : Automotive Servicing II**

Students, at the direction of the instructor, work on customer vehicles applying skills learned in previous automotive classes. Students will be required to complete ASE/NATEF tasks not completed in other courses. Customer relations, repair order preparation, scheduling, estimating, utilization of shop space and equipment, and hazardous waste management are covered to provide students with an understanding of repair shop operations.

**Credits** 6

**Lab Hours** 132

#### **Prerequisites**

Instructor permission or completion of first year automotive classes.

#### **Quarters Offered**

Spring

### **AUT 231 : Automotive Heating and Air Conditioning**

This course covers the diagnosis, servicing, and repair of modern vehicle heating and air conditioning systems. Classroom and laboratory lessons provide training and experience using modern refrigeration servicing and recycling equipment necessary to meet environmental

regulations. CFC-12 and HFC-134A systems and equipment are utilized and retrofitting following Environmental Protection Agency guidelines is discussed. This course is designed to prepare the student for the ASE/NATEF Heating and Air Conditioning test.

**Credits** 6

**Lecture Hours** 33

**Lab Hours** 66

#### **Prerequisites**

All First Year Certificate Auto Courses or Instructor Approval.

#### **Quarters Offered**

Spring

### **AUT 290 : Skills Laboratory II**

This course is for full-time automotive students who need extra project laboratory time to update or enhance their skills to meet program certification requirements. Students will be directed to complete ASE/NATEF tasks not completed in the day classes. (May be repeated for credit up to six credits for each course; graded on pass/fail basis).

**Credits** 2

**Lab Hours** 44

#### **Prerequisites**

Concurrent enrollment in second year automotive program classes

#### **Quarters Offered**

Fall, Winter, Spring

### **AUT 295 : Workbased Learning**

A supervised work experience in the automotive technology field to enhance the application of classroom instruction and skills and/or area of specialization approved by the program instructor. May be repeated up to twelve (12) credits.

**Credits** 1-6

**Lecture Hours** 33-198

#### **Prerequisites**

AUT instructor permission required.

#### **Corequisites**

Concurrent enrollment in [AUT 297](#)

### **AUT 297 : Workbased Learning Seminar**

Feedback and discussion to integrate and relate Work Based Learning and classroom based instruction. Work ethic, leadership, safety and occupational health, environmental issues, and other student generated topics are examined. May be repeated up to six (6) credits.

**Credits** 1

**Lecture Hours** 11

#### **Prerequisites**

FIR 101: Aircraft Rescue and Fire Fighting 40 Hour Basic

#### **Corequisites**

Concurrent enrollment in [AUT 295](#).

## Aviation (Commercial Pilot/Flight)

**509.793.2241**

**email: [aviation@bigbend.edu](mailto:aviation@bigbend.edu)**

**John-Marc Swedburg II**

**509.793.2247**

**Chief Flight Instructor**

**John Gillespie**

**509.793.2246**

**Benjamin Altrogge**

**509.793.2250**

**Terry Haws**

**509.793.2420**

The Commercial Pilot Training program combines course work in flight training along with other ground school courses to prepare students for obtaining a commercial pilot certificate with instrument rating. To meet these requirements, most students require more than six quarters to complete the training. Because of this need, classes are scheduled each summer quarter. Additional ratings for flight instructor, instrument flight instructor, multi-engine, and seaplane may be earned through special

arrangements. Special departmental rules and procedures stated in the BBCC Professional Pilot Course Handbook apply to this program.

Students desiring admission into the Commercial Pilot Training Program must meet appropriate admission requirements stated in section 1.1 of the BBCC Professional Pilot Course Handbook. Contact the Aviation Department 509.793.2241 or [aviation@bigbend.edu](mailto:aviation@bigbend.edu) for specific admission requirements. If some of the basic education requirements have pre-approved substitutions, and all course requirements are met, it is possible for the commercial pilot student to receive both the AA&S and the AAS degrees during the two-year program.

### **Commercial Pilot AAS**

#### **Degree Type**

Associate in Applied Science

BBCC offers a two-year Workforce program in aviation for students who wish to prepare for a career as a commercial pilot and not transfer to a four-year college.

Students are required to take all the courses listed below plus any electives necessary to meet quarterly and program credit totals.

See the Associate in Applied Science section under Degrees and Certificates for substitutions if you desire both the AA&S and the AAS degrees.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts
- PO5 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.
- PO6 The students will be able to demonstrate the technical aspects of aircraft control and operation of related systems at the FAA commercially certificated and instrument rated pilot level
- PO7 The students will be able to interpret regulatory and legal issues which impact the industry at the FAA commercially certificated pilot level.
- PO8 The student will be able to evaluate effective aeronautical decision making skills at the FAA commercially certificated pilot level

## First Year

### Fall Quarter

Course Code	Title	Credits
	PSYC& 100 or SOC& 101	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
AVF 111	Pre-Flight Ground School	1
AVF 112	Private Pilot Ground School	5
AVF 141	Private Pilot Flight (Stage 1)	4

## Winter Quarter

Course Code	Title	Credits
ENGL& 101	English Composition I	5
MAP 117	Applied Math for Workforce Programs I	1-5
AVF 113	Meteorology	5
AVF 142	Private Pilot Flight (Stage 2)	4
AVF 117	Aviation Emergency Preparedness & Response	1

## Spring Quarter

Course Code	Title	Credits
AVF 114	Theory of Flight	5
AVF 143	Private Pilot Flight (Stage 3)	4
	CMST& 220 or AVF 225	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
AVF 223	Instrument Ground School	5
AVF 251	Commercial Pilot Flight (Stage 4)	4
	Advisor Approved Electives/ Transfer Courses	

## Winter Quarter

Course Code	Title	Credits
AVF 221	Commercial Pilot Ground School	5
AVF 252	Commercial Pilot Flight (Stage 5)	4
	Advisor Approved Electives/ Transfer Courses	



## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 253	Commercial Pilot Flight (Stage 7)	4
AVF 254	Night Flying	1
AVF 261	Instrument Flight (Stage 6)	4
Advisor Approved Electives/ Transfer Courses		

NOTE: AVF 141, 142, 143, 251, 252, 253, 254, and 261 must be taken to complete the associated stage flight laboratory portion of the program.

**Total Credits** **74-78**

## ATP: Multi-Engine Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 292	A.T.P.: Multi-Engine	1
<b>Total Credits</b>		<b>1</b>

## Aircraft Solo Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 111	Pre-Flight Ground School	1
AVF 141	Private Pilot Flight (Stage 1)	4
<b>Total Credits</b>		<b>5</b>

## Commercial Pilot Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AVF 114	Theory of Flight	5
AVF 221	Commercial Pilot Ground School	5
AVF 251	Commercial Pilot Flight (Stage 4)	4
AVF 252	Commercial Pilot Flight (Stage 5)	4
AVF 253	Commercial Pilot Flight (Stage 7)	4
AVF 254	Night Flying	1
<b>Total Credits</b>		<b>23</b>

## Commercial Pilot Certificate of Achievement

### Degree Type Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an Associate in Applied Science degree program.

#### Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts
- PO5 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

## Required Courses

Course Code	Title	Credits
AVF 111	Pre-Flight Ground School	1
AVF 261	Instrument Flight (Stage 6)	4
	PSYC& 100 or SOC& 101	5
	CMST& 220 or AVF 225	5
ENGL& 101	English Composition I	5
MAP 117	Applied Math for Workforce Programs I	1-5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>23-27</b>

## Flight Instructor (CFI) Certificate of Accomplishment

### Degree Type Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

#### Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AVF 225	Effective Communication in Flight Instruction	5
AVF 270	Flight Instructor	4
<b>Total Credits</b>		<b>9</b>

## Flight Instructor Instrument (CFII) Certificate of Accomplishment

### Degree Type

## Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 271	Flight Instructor Instrument- Airplane	2
<b>Total Credits</b>		<b>2</b>

## Instrument Pilot Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

(19 credits/2 quarters)

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 223	Instrument Ground School	5
AVF 261	Instrument Flight (Stage 6)	4
AVF 223	Instrument Ground School	5
AVF 261	Instrument Flight (Stage 6)	4
<b>Total Credits</b>		<b>18</b>

## Multi-Engine Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
AVF 275	Multi-Engine Flight	2
<b>Total Credits</b>		<b>2</b>

## Multi-Engine Instructor (MEI) Certificate of Accomplishment

### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AVF 291	Multi-Engine Instructor	2
<b>Total Credits</b>		<b>2</b>

### Private Pilot Certificate of Accomplishment

#### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AVF 112	Private Pilot Ground School	5
AVF 113	Meteorology	5
AVF 142	Private Pilot Flight (Stage 2)	4
AVF 143	Private Pilot Flight (Stage 3)	4
<b>Total Credits</b>		<b>18</b>

### Sea Plane Certificate of Accomplishment

#### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AVF 272	Seaplane Flight	2
<b>Total Credits</b>		<b>2</b>

### Simulator Training Certificate of Accomplishment

#### Degree Type

Certificate

Students who are interested in training in specialized areas of flight will be awarded Certificates of Accomplishment from BBCC as follows:

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AVF 276	Simulator Training/ Instrument Training	1-1
<b>Total Credits</b>		<b>0.5-1</b>

# Aviation (Commercial Pilot/Flight) Course Descriptions

## **AVF 111 : Pre-Flight Ground School**

This course introduces the student to the aircraft, its flight manual, the basic federal aviation regulations, elementary principles of flight, aircraft operation, and BBCC flight rules. This course starts the week prior to the normal class starting date. All students accepted and alternates must attend this course. Pre-program counseling is done at this time, and flight training is started.

**Credits** 1

**Lecture Hours** 11

### **Prerequisites**

Accepted flight student status.

### **Quarters Offered**

Fall

## **AVF 112 : Private Pilot Ground School**

This course prepares the student to take the FAA private pilot knowledge examination. It includes elementary navigation, weather, federal aviation regulations, NTSB reporting procedures, radio procedures, AIM, advisory circulars, operating limitations, aircraft performance, principles of aerodynamics, power plants and systems, stall and spin awareness, ADM and judgment, preflight action and planning.

**Credits** 5

**Lecture Hours** 55

### **Prerequisites**

[AVF 111](#) or Chief Pilot approval.

### **Quarters Offered**

Fall

## **AVF 113 : Meteorology**

This course is designed for pilots but is helpful for the non-aviation major to understand the basics of meteorology. A study in the nature of the atmosphere, winds, temperature, moisture, air masses and frontal systems, weather forecasting utilizing charts and reports available from FAA FSS's; incorporates techniques for flying in various weather conditions.

### **Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

### **Prerequisites**

[AVF 112](#) or Chief Pilot approval.

### **Quarters Offered**

Winter

## **AVF 114 : Theory of Flight**

This course covers basic aerodynamic theory of flight, aircraft instruments, performance, stability, control, airframe stress, structural limits, constant speed propellers, and turbo charging.

**Credits** 5

**Lecture Hours** 55

### **Prerequisites**

[AVF 112](#): Private Pilot Ground School

### **Quarters Offered**

Spring

## **AVF 117 : Aviation Emergency Preparedness & Response**

Aviation Emergency Preparedness and Response is intended for Private and Commercial pilots; introduces emergency preparedness, survival, and rescue procedures common to general aviation.

**Credits** 1

**Lecture Hours** 11

### **Quarters Offered**

Winter

## **AVF 141 : Private Pilot Flight (Stage 1)**

Scheduled flight time, ground critique, discussions, and observation time; both dual and solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time.

**Credits** 4

**Lecture Hours** 44

### **Quarters Offered**

Fall

## **AVF 142 : Private Pilot Flight (Stage 2)**

Scheduled flight time, ground critique, discussions and observation time; both dual and

solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

AVF 141: Private Pilot Flight (Stage 1)

**Quarters Offered**

Winter

**AVF 143 : Private Pilot Flight (Stage 3)**

Scheduled flight time, ground critique, discussions and observation time; both dual and solo flights. Instrument flight training is integrated with all phases of flying. Includes simulator time.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

AVF 142: Private Pilot Flight (Stage 2)

**Quarters Offered**

Spring

**AVF 190 : Flight (Alternate)**

Provides additional aircraft flight time to allow the student additional time to increase his/her skill or complete a course of study. Includes flight time and follow-up critique.

**Credits** 1-4

**Prerequisites**

AVF 141: Private Pilot Flight (Stage 1)

[AVF 141](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 213 : Advanced Meteorology**

This course is designed for aviation majors but it is helpful for the non-aviation major to understand meteorology at a more advanced level. This course will cover the nature and utility of atmosphere, winds, temperature, moisture, air masses and frontal systems, weather forecasting utilizing charts and reports available from FAA and NWS. This course will incorporate techniques for flying in various weather conditions.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[AVF 113](#) or Chief Pilot approval

**AVF 221 : Commercial Pilot Ground School**

Preparation for the FAA commercial pilot knowledge test. Includes study of applicable FAR's, accident reporting requirements of the NTSB; basic aerodynamics and the principles of flight; meteorology and the use of weather reports and forecasts; safe and efficient operation of aircraft; weight and balance computations; use of performance charts, performance limitations; use of navigation facilities, ADM, judgment and CRM; principles and functions of aircraft systems; maneuvers, procedures and emergency operations; night and high-altitude operations; the National Airspace System.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[AVF 113](#) & 114

**Quarters Offered**

Winter

**AVF 223 : Instrument Ground School**

Preparation for FAA instrument knowledge examination, includes: FAR's that apply to IFR; appropriate sections of AIM; air traffic control system and procedures; IFR navigation systems and instruments; use of en route and instrument approach charts, aircraft operations under IFR; procurement and use of aviation weather reports and forecasts, recognition of critical weather situations and wind shear avoidance, ADM and judgment, and CRM.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[AVF 113](#) and 114.

**Quarters Offered**

Fall

**AVF 225 : Effective Communication in Flight Instruction**

This course covers the required areas of instructor knowledge; and is designed to aid the student in passing the appropriate FAA knowledge tests. It includes the learning process and emphasizes elements of effective communication. Methods of teaching and communicating are studied and practiced, as well as how to evaluate and critique through written and oral processes. Includes practice in classroom, one-to-one, and team teaching.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[AVF 221](#), 223 & 252, or Chief pilot approval.

**Quarters Offered**

Spring

**AVF 227 : Aircraft Systems for Pilots**

Introduces the systems of complex aircraft: fuel, hydraulic, brake, control, ignition, and electrical systems; covers nomenclature, preventive maintenance, engines, propellers, and related publications.

**Credits** 5

**Lecture Hours** 55

**AVF 251 : Commercial Pilot Flight (Stage 4)**

Scheduled flight time, ground critique, discussion and observation time, dual, solo, cross-country, and instrument, and complex aircraft time. Includes simulator time.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[AVF 143](#).

**Quarters Offered**

Fall

**AVF 252 : Commercial Pilot Flight (Stage 5)**

Scheduled flight time, ground critique, discussion and observation time; dual, solo, cross-country, instrument, and complex aircraft time. Includes simulator time.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[AVF 251](#).

**Quarters Offered**

Winter

**AVF 253 : Commercial Pilot Flight (Stage 7)**

Scheduled flight time, ground critique, discussion and observation time; dual, solo, and cross-country time. Includes 28 hours simulator time upon program completion.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[AVF 261](#).

**Quarters Offered**

Spring

**AVF 254 : Night Flying**

Provides an introduction to night flying and advanced instruction in night navigation, procedures, orientation, landings, takeoffs and techniques necessary for safe operation of airplanes at night.

**Credits** 1

**Lab Hours** 60

**Prerequisites**

[AVF 142](#).

**Quarters Offered**

Fall, Winter, Spring

**AVF 261 : Instrument Flight (Stage 6)**

Provides training in instrument flight procedures in preparation for the airplane instrument rating; includes simulator training.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[AVF 252](#).

**Quarters Offered**

Spring

**AVF 270 : Flight Instructor**

Preparation for the Certified Flight Instructor rating; includes flight time and critique.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

Commercial license and instrument rating and Chief Pilot approval.

**Quarters Offered**

Summer

**AVF 271 : Flight Instructor Instrument–Airplane**

Provides the Flight Instructor applicant with the knowledge, skill and experience necessary to become an Instrument Instructor; includes flight time and critique.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Commercial/instrument license, CFI single engine license and 10 hours as CFI with FII written passed and Chief Pilot approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 272 : Seaplane Flight**

A dual flight lab course designed to develop flight skills in water operations and procedures, along with flight maneuvers in preparation for the FAA Seaplane Rating; includes flight time and critique.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Commercial Pilot Certificate or Chief Pilot approval.

**Quarters Offered**

Fall, Spring, Summer

**AVF 275 : Multi-Engine Flight**

Preparation for the FAA Multi-Engine rating.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Commercial Pilot Certificate and Chief Pilot approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 276 : Simulator Training/Instrument Training**

Designed to fit the individual and particular needs of each pilot in instrument training, refresher or FAA currency requirements.

**Credits** 1-1

**Lecture Hours** 5-11

**Prerequisites**

Instructor approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 290 : Flight (Alternate)**

Provides additional aircraft flight time to allow the student additional time to increase his/her skill or complete a course of study. Includes flight time and follow-up critique.

**Credits** 1-4

**Prerequisites**

AVF 141: Private Pilot Flight (Stage 1)

[AVF 141](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 291 : Multi-Engine Instructor**

Preparation for the FAA Multi-Engine Flight Instructor rating.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Commercial Airplane with instrument rating, multi-engine land ratings, flight instructor single engine.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 292 : A.T.P.: Multi-Engine**

Prepares the student for FAA A.T.P. flight check.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

Commercial/Instrument. M.E., 1500 hours, ATP knowledge test passed.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 295 : Work-Based Learning**

A supervised work experience in the aviation industry to enhance the application of classroom instruction and/or flight skills. This is a paid or volunteer experience that is supervised by both the employer and the Aviation program. May be repeated up to 15 credits.

**Credits** 1-6

**Clinical Hours** 33-198

**Prerequisites**



[AVF 297](#), Work-Based Learning Seminar. Aviation program permission and any requirements of the contractual agreement, between BBCC and the employer.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AVF 297 : Work-Based Learning Seminar**

This course is taken in conjunction with [AVF 295](#) (Work-Based Learning) and gives the student the opportunity and responsibility to report on their work experience and to analyze that experience for successes and for areas of improvement. May be repeated up to six (6) credits.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[AVF 295](#) (Work-Based Learning)

**Quarters Offered**

Fall, Winter, Spring, Summer

## Aviation Maintenance Technology

**email: [amt@bigbend.edu](mailto:amt@bigbend.edu)**

The Aviation Maintenance Technology program at BBCC is designed to prepare students for FAA airframe and powerplant maintenance certification and for employment in aviation maintenance careers. Courses offer quality training to serious and motivated students through a structured competency-based curriculum provided by industry experienced instructors. Instruction includes the basics of maintenance, servicing, inspection, repair, troubleshooting, and overhaul of aircraft airframes, powerplants, and their related systems and components associated with general and commercial aviation in the proper environment in which students may become professional aviation maintenance technicians.

Students are required to furnish their own hand tools and purchase their own texts; estimated cost of tools and books is \$1,500 to \$2,500.

Note: All aviation maintenance courses are subject to change as required by the Federal Aviation Administration. BBCC courses and programs are suggested curricula to meet the current FAA rules and regulations.

## Aviation Maintenance Technology AAS

**Degree Type**

Associate in Applied Science

Program and Degree Learning Outcomes:

- IO1 Communication  
Students will be able to identify and explain a variety of airframe and/or powerplant systems and components as evaluated by the completion of the FAA written, oral and practical exams.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, and appropriate safety awareness and/or workplace specific skills through instructor observation.
- PO4 Students will be able to assess a variety of airframe and/or powerplant systems and components and be able to troubleshoot various systems components as evaluated by the completion of the FAA written, oral and practical exams.
- PO5 Students will show knowledge of Federal Aviation rules and regulations components as evaluated by the completion of the FAA written and oral & practical exams.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

First Year  
Fall Quarter

Course Code	Title	Credits
MAP 100	Applied Mathematics (AMT) 2 Approved by FAA.	
AMT 148	AMT General Electricity	2-7
AMT 150	AMT General	4-16

Winter Quarter

Course Code	Title	Credits
AMT 151	Airframe Mechanic I	4-22
	PSYC& 100 or SOC& 101	5

Spring Quarter

Course Code	Title	Credits
AMT 149	AMT Airframe Electricity	3
AMT 151	Airframe Mechanic I	4-22
AMT 152	Airframe Mechanic II	4-21
	ENGL 109 or ENGL& 101	3

Second Year

Fall Quarter

Course Code	Title	Credits
AMT 152	Airframe Mechanic II	4-21
AMT 251	Powerplant Mechanics I	4-16
	CMST& 220 or CMST& 210	5

Winter Quarter

Course Code	Title	Credits
AMT 251	Powerplant Mechanics I	4-16
AMT 252	Powerplant Mechanics II	4-14
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

Spring Quarter

Course Code	Title	Credits
AMT 249	AMT Powerplant Electricity	2
AMT 253	Powerplant Mechanics III	4-16

Note: All AMT courses are approved by FAA

Airframe Maintenance Technician  
Certificate of Achievement

**Degree Type**

Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an AAS degree program.

Students may be eligible to take the FAA written, oral, and practical examinations after successful completion of the general curriculum and the airframe or powerplant curriculum.

Program and Certificate Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.
- PO5 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.

Upon completion of the following courses, the student will earn a Certificate of Achievement.

## Required Courses

Course Code	Title	Credits
AMT 149	AMT Airframe Electricity	3
AMT 151	Airframe Mechanic I	4-22
AMT 152	Airframe Mechanic II	4-21
	PSYC& 100 or SOC& 101	5
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 100	Applied Mathematics (AMT) 2 Approved by FAA.	2
*Approved by FAA		
<b>Total Credits</b>		<b>61</b>

## Airframe Mechanic I Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCB upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AMT 149	AMT Airframe Electricity	3
AMT 151	Airframe Mechanic I	4-22
<b>Total Credits</b>		<b>25</b>

## Airframe Mechanic II Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCB upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AMT 152	Airframe Mechanic II	4-21
<b>Total Credits</b>		<b>21</b>

## Aviation Maintenance – General Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCC upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AMT 148	AMT General Electricity	2-7
AMT 150	AMT General	4-16
MAP 100	Applied Mathematics (AMT) 2 Approved by FAA.	
<b>Total Credits</b>		<b>25</b>

### Composite Technician Certificate of Accomplishment

**Degree Type**  
Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCC upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### \*Required Courses

\*total credits will be completed in 2 quarters

Course Code	Title	Credits
AMT 150	AMT General	4-16
MAP 100	Applied Mathematics (AMT) 2 Approved by FAA.	
CPT 120	Composite Fabrication	4
CPT 125	Composite Assembly	4
CPT 130	Composite Repair	4
CPT 145	Special Projects	3
<b>Total Credits</b>		<b>33</b>

### Powerplant Maintenance Technician Certificate of Achievement

**Degree Type**  
Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an AAS degree program.

Students may be eligible to take the FAA written, oral, and practical examinations after successful completion of the general curriculum and the airframe or powerplant curriculum.

Program and Certificate Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.
- PO5 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.

## Required Courses

Course Code	Title	Credits
AMT 249	AMT Powerplant Electricity	2
AMT 251	Powerplant Mechanics I	4-16
AMT 252	Powerplant Mechanics II	4-14
AMT 253	Powerplant Mechanics III	4-16
	PSYC& 100 or SOC& 101	5
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 100	Applied Mathematics (AMT) Approved by FAA.	2
*Approved by FAA		
<b>Total Credits</b>		<b>63</b>

## Powerplant Mechanic I Certificate of Accomplishment

**Degree Type**  
Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCB upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

## Required Courses

Course Code	Title	Credits
AMT 251	Powerplant Mechanics I	4-16
<b>Total Credits</b>		<b>16</b>

## Powerplant Mechanic II Certificate of Accomplishment

**Degree Type**  
Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCB upon request by application, may issue Certificates of Accomplishment upon successful

completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AMT 249	AMT Powerplant Electricity	2
AMT 252	Powerplant Mechanics II	4-14
<b>Total Credits</b>		<b>16</b>

### Powerplant Mechanic III Certificate of Accomplishment

#### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an AAS degree or a Certificate of Achievement.

BBCC upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
AMT 253	Powerplant Mechanics III	4-16
<b>Total Credits</b>		<b>16</b>

## Aviation Maintenance Technology Course Descriptions

### AMT 148 : AMT General Electricity

This course covers the theory of basic electricity and applied Physics. This course is FAA approved under 14 CFR Part 147.

**Credits** 2-7

**Lecture Hours** 11-39

**Lab Hours** 22-77

#### Prerequisites

Instructor approval.

#### Quarters Offered

Fall, Winter

### AMT 149 : AMT Airframe Electricity

Student will perform operation of AC and DC electrical systems used on large and small aircraft, generating and starting systems, AC and DC electric motors, wiring, controls, switches, indicators, and protective devices, and constant speed and integrated drive generators

**Credits** 3

**Lecture Hours** 33

#### Prerequisites

Instructor approval.

#### Quarters Offered

Fall, Winter, Spring

### AMT 150 : AMT General

This course will cover aviation applied physics, application of aircraft drawing, function of weight and balance control, operation and cleaning of aircraft, identification and application of aircraft materials. The use of maintenance forms and publications in the aviation industry. This course is approved under FAA Part 147.

**Credits** 4-16

**Lecture Hours** 22-90

**Lab Hours** 44-182

**Prerequisites**

Instructor approval.

**Quarters Offered**

Fall, Winter

**AMT 151 : Airframe Mechanic I**

This course will cover aircraft airframe structures, including wood, fabric and sheet metal, airframe inspection, application of finishes and assembly of fixed wing and rotary wing components and structures, balancing and rigging of airframe structures and components. This course is FAA approved under 14 CFR Part 147.

**Credits** 4-22

**Lecture Hours** 77-352

**Lab Hours** 33-132

**Prerequisites**

Instructor approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AMT 152 : Airframe Mechanic II**

This course will cover aircraft airframe systems and components. To provide the skills in checking, overhaul, repairs, installation, removal, servicing, inspection, and troubleshooting of landing gear systems, hydraulic and pneumatic power systems, cabin atmosphere control systems, aircraft instruments, communication and navigation system lab, aircraft fuel systems, aircraft electrical systems, position and warning systems, ice and rain control systems, and fire protection systems. This course is approved under FAA Part 147.

**Credits** 4-21

**Lecture Hours** 2-119

**Lab Hours** 44-264

**Prerequisites**

Instructor approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AMT 153 : Airframe Mechanic III**

As required by the Federal Aviation Administration, the airframe program is a

minimum of 750 hr. of instruction with approximately 25% of the instruction in a class room environment and 75% of the instruction in a lab environment. AMT 153 is designed to allow students more time to achieve FAA required proficiency levels and to allow students to further their proficiency levels in aviation airframe related studies. This course will cover any area of the FAA required airframe curriculum that the student is deficient in, or if all required competencies have been met, the student may further their proficiency levels in any airframe related area of study. This course is FAA approved under 14 CFR Part 147.

**Credits** 4-24

**Lecture Hours** 22-132

**Lab Hours** 44-264

**Prerequisites**

[AMT 150,151,152](#), [MAP 100](#) and instructor approval.

**Quarters Offered**

Fall, Winter, Spring, Summer

**AMT 249 : AMT Powerplant Electricity**

Students will develop an understanding of the operation of generators, alternators, DC motors, and AC motors, and their repair and overhaul. Students will also learn the special requirements of electrical components operating in high temperature areas and how to install wiring, controls, switches, and indicators and protect them from its effects. This course is FAA approved under, 14 CFR Part 147.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Instructor approval.

**Quarters Offered**

Fall, Winter, Spring

**AMT 251 : Powerplant Mechanics I**

**Credits** 4-16

**Lecture Hours** 22-88

**Lab Hours** 44-176

**AMT 252 : Powerplant Mechanics II**

**Credits** 4-14

**Lecture Hours** 22-66

**Lab Hours** 44-176

### **AMT 253 : Powerplant Mechanics III**

As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a class room environment and 75% of the instruction in a lab environment. There is approximately 30 hours of extra time at the end of the Powerplant program, which is to be used for make-up time or for further competency enhancement. This course is FAA approved under 14 CFR Part 147. This course will cover two areas: (1) Powerplant theory and maintenance, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engines. (2) Powerplant systems and components, including the inspection, repair, overhaul, service, troubleshooting, removal, and installation of aircraft reciprocating and turbine engine instrument, fire protection, electrical, lubrication, ignition, starting, fuel metering, induction, airflow, cooling, exhaust, propellers, unducted fans, and auxiliary power unit systems.

**Credits** 4-16

**Lecture Hours** 22-88

**Lab Hours** 44-176

#### **Prerequisites**

Instructor approval.

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **AMT 254 : Powerplant Mechanic IV**

As required by the Federal Aviation Administration, the Powerplant program is a minimum of 750 hr. of instruction with approximately 25% of the instruction in a classroom environment and 75% of the instruction in a lab environment. AMT 254 is designed to allow students more time to achieve FAA required proficiency levels and to allow students to further their proficiency levels in aviation. Powerplant related studies. This course will cover any area of the FAA required Powerplant curriculum that the student is deficient in, or if all required competencies have been met, the student may further their

proficiency levels in any Powerplant related area of study. This course is FAA approved under 14 CFR Part 147.

**Credits** 4-16

**Lecture Hours** 22-88

**Lab Hours** 44-176

#### **Prerequisites**

AAMT 251, 252, 253 and Instructor approval.

#### **Quarters Offered**

Fall, Winter, Spring, Summer

## Avionics

### Avionics Course Descriptions

#### **AVIO& 102 : Aircraft Electronic Fundamentals**

Fundamentals, troubleshooting, and experiments with fundamental aircraft electronics; diodes; power supplies; rectifiers; voltage regulators; transistors; amplifiers; oscillators and multivibrator circuits; latches and flip-flops; transmitters; synchro systems; gyroscopes.

**Credits** 8

**Lecture Hours** 55

**Lab Hours** 66

#### **Prerequisites**

[AVIO 101](#) or [AMT 149](#)

#### **AVIO& 103 : Aircraft Wiring Systems**

Fundamentals, troubleshooting, and repair of aircraft wiring, including acceptable standards for visual, electrical, and mechanical quality.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

#### **Prerequisites**

[AVIO 101](#) or [AMT 149](#)

#### **AVIO 101 : Aircraft Electrical Fundamentals**

Fundamentals, troubleshooting, and experiments of aircraft electrical circuits; safety practices; electrostatic devices; metric notation; voltage, current, resistors and measurements, switches, fuses, and circuit breakers; tools for



troubleshooting, including multimeters and oscilloscopes; magnetism and electromagnetic principles and calculations; relays and meters; Ohm's and Kirchhoff's Laws; circuits; electrical generators, inductors, filters, and capacitors; resistance and reactance; transformers; batteries; motors.

**Credits** 8

**Lecture Hours** 55

**Lab Hours** 66

## Bachelor of Applied Science–Applied Management

**Anne Ghinazzi, Program Coordinator**  
**509.793.2322**  
**anneg@bigbend.edu**

The Bachelor of Applied Science in Applied Management (BAS-AM) degree builds upon any associate degree (2-year) by adding junior and senior-year courses focused on applied management. The program provides customized, high-demand management courses geared toward the needs of various industry sectors in the local economy. Students will gain the knowledge and skills necessary to enter and advance in management or supervisory positions or start their own business. Potential positions include management, accounting, project management, or entrepreneurial. Obtaining advanced academic degrees may lead to administrative positions in business administration, education, and management. The demand for managers should remain strong over the next decade.

Students must apply, and be admitted, to participate in the BAS-AM program. Please visit the BAS-AM website to learn more about the program's: entry requirements, online application and instructions, costs, and additional information at <https://www.bigbend.edu/academics/bas-in-applied-management/>.

BAS-AM students must earn

- 180 college-level credits: 90 credits from previous coursework + 90 credits earned in BAS-AM program\*\*\*
- a cumulative grade point average (GPA) of 2.0 or above
- a minimum 2.0 GPA in all BAS-AM program core and upper-division courses
- a minimum 1.0 GPA in all other college-level courses applied in the BAS-AM degree
- No more than 3 PEH AC credits may be used in the degree.

### Applied Management BAS Degree Type

Bachelor in Applied Science

Program and Degree Learning Outcomes:

- IO1 Communication  
Communicate effectively with internal and external stakeholders using an appropriate channel for the situation.
- IO2 Computation  
Analyze the financial health of a business by interpreting business data obtained from financial statements.
- IO3 Human Relations/Workplace Skills  
Demonstrate effective leadership, critical thinking, teamwork, and technical and information literacy competencies needed to make business-critical decisions to resolve interpersonal and organizational challenges that most often occur in the modern workplace.
- PO4 Apply and analyze multicultural strategies to facilitate respectful and equitable inclusion of diverse individuals and perspectives to achieve organizational goals.
- PO5 Identify the significance of and key decisions in the operations management function, and quality management/quality control methods.

- PO6 Develop comprehensive project plans, monitor the plans, identify areas of risk and deal with problems through appropriate use of project management techniques.
- PO7 Demonstrate integrity through ethical behavior and socially responsible decision making.
- PO8 Apply organizational behavior principles and human resources management practices to effectively develop, hire, and retain a skilled workforce.

The following schedule of courses is the recommended junior and senior year program for completing the BAS-AM degree (90 credits).

## Junior Year

### Fall Quarter

Course Code	Title	Credits
ENGL& 235	Technical writing	5
PHIL& 120	Symbolic Logic	5
SOC 320	Organizational Behavior	5
	Diversity (DIV) Course	5
	Approved General Elective (if needed**)	1-5

### Winter Quarter

Course Code	Title	Credits
BUS& 101	Intro to Business	5
ECON& 201	Micro Economics	5
CMST 330	Organizational Communication	5

### Spring Quarter

Course Code	Title	Credits
ENVS& 100	Survey of Env Science	5
MGMT 310	Accounting for Managers	5
MGMT 305	Business Management	5

## Senior Year

### Fall Quarter

Course Code	Title	Credits
CHEM& 110	Chemical Concepts w/Lab	5
MGMT 380	Human Resource Management	5
PHIL 340	Professional Ethics	5

### Winter Quarter

Course Code	Title	Credits
MGMT 370	Organizational Leadership	5
MGMT 410	Financial Management	5
MGMT 430	Project Mangement	5

### Spring Quarter

Course Code	Title	Credits
MGMT 350	Marketing for Managers	5
MGMT 440	Operations Management	5
MGMT 460	Applied Management Capstone	5

\*or advisor approved course from the same General Education distribution area

**Total Credits**

**96-100**

# Bachelor of Applied Science-Applied Management Course Descriptions

## MGMT 305 : Business Management

This course explores organizational theory that introduces the principles and concepts of effective management. It includes organizational structure and control systems, managing organizational technology and innovation, information processing and decision making, and applications in today's management and

leadership. Students will learn the management functions of planning, organizing, leading, and controlling.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

BUS&101 or BUS&201 Bachelor of Applied Science - Applied Management program admission.

**MGMT 310 : Accounting for Managers**

This course covers the basic principles of financial and managerial accounting, including analyzing balance sheets, income statements, cash flow statements, financial analysis, and budgetary control systems. This course reviews accounting practices and how they are used to help managers make sound business decisions.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Bachelor of Applied Science - Applied Management program admission.

**MGMT 350 : Marketing for Managers**

The course is an introduction to marketing with an emphasis on developing marketing strategies to communicate and create value for the organization. The course focuses on the development of marketing techniques, management of the marketing mix, and digital and social media marketing.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Acceptance into the Bachelor of Applied Science in Applied Management program.

**MGMT 370 : Organizational Leadership**

This course reviews the role of leadership in an organization. Students will explore leadership theories and strategies to enhance collaboration, manage conflict, and lead with integrity and respect in order to meet organizational goals.

Students will complete self-assessments to identify and analyze their leadership style for application in the workplace.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

[MGMT 305](#). Acceptance into the Bachelor of Applied Science in Applied Management program.

**MGMT 380 : Human Resource Management**

This course examines the major trends in human resources development and management. Students will examine the role of the human resource department as well as the development of a skilled and diverse workforce by applying effective strategies for recruiting, selecting, and retaining personnel. Using interactive exercises, case studies and group discussions, you will explore the intersection between the legal, ethical and practical implications of managing human resources within the dynamic shifts occurring in our economic realities, demographics, community expectations and social change.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Acceptance into the Bachelor of Applied Science in Applied Management program

**MGMT 410 : Financial Management**

This course covers financial management principles with a focus on the concepts associated with allocation of resources. Students will learn how to meet financial objectives and make decisions through topics such as analysis of financial statements, forecasting, cash and capital budgeting, risk and return, capital structure, value of money, and financing. Case studies are used to examine financial management problems and solutions.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Acceptance into the Bachelor of Applied Science in Applied Management program.

**MGMT 430 : Project Management**

This course examines the role of project management and introduces students to project management frameworks and processes. Student will learn to apply knowledge and skills for effective project management in order to plan, execute, and complete projects that achieve organizational goals.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Acceptance into the Bachelor of Applied Science in Applied Management program.

**MGMT 440 : Operations Management**

This course examines the concepts for designing, planning, and improving service through application of operations management. Students will learn to evaluate the operational decision-making management techniques used to improve processes and productivity in organizations. Topics include quality control, forecasting, workflow processes and lean manufacturing, and inventory management.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Acceptance into the Bachelor of Applied Science in Applied Management program.

**MGMT 460 : Applied Management Capstone**

The Applied Management Capstone course is the culminating project of the BAS-AM program. Students demonstrate comprehensive learning and proficiency of BAS-AM core content through the practical application of business principles in their research and analysis of a current, real-world business issue and the development of a recommendation.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Admissions into the Bachelor of Applied Science in Applied Management (BAS-AM) program.  
.Pre-Requisite/Co-Requisite [MGMT 440](#)

## Basic Education for Adults (BEA)

**Jody Bortz, Director**

**509.793.2331**

**[Jodyb@bigbend.edu](mailto:Jodyb@bigbend.edu)**

**General Information**

**509.793.2304**

**[BEAInfo@bigbend.edu](mailto:BEAInfo@bigbend.edu)**

## Adult Basic Education

Adult Basic Education is a program to serve individuals seeking assistance in completing high school, obtaining their GED, improving basic reading, writing, and speaking skills for non-English speakers and/or improve basic mathematics to prepare for college-level courses. Most classes are open-entry and self-paced. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## English as a Second Language

English as a Second Language (ESL) classes provide instruction in beginning and intermediate English language skills to adults whose first language is not English. Classes emphasize listening, speaking, reading, and writing skills. Students may earn high school credit and/or prepare for their GED test. Most classes are open-entry and self-paced. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## High School Completion/ Diploma

The High School+ program assists individuals in obtaining a high school diploma through competency-based instruction. Students earn credits through completing coursework, prior learning credentials, specialized training and/or assessments. Students may earn college level credits or earn a work-based credential. Most classes are open-entry and self-paced. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## Integrated Basic Education and Skills Training (I-BEST)

I-BEST classes are designed with students in mind. Faculty team-teach to provide course content and basic skills support. Programs and courses are approved by the State Board for Community and Technical Colleges as designated high-wage/high-demand industry sectors. Goals are to complete industry recognized credentials and vocational certificates and when possible, continue towards completion of an AA degree. Many classes are offered evenings and weekends. Bilingual and basic skills support is available. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## Open Doors

Open Doors is a collaboration between BBCC and local high schools to offer students aged 16-21 another option to reengage with school and complete their high school diploma and/or GED. Students may also receive college level credits or career focused certificates. The student must be credit deficient and meet eligibility criteria to

enroll. Contact your high school counselor or contact the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## High School Equivalency Program (HEP)

High school completion or GED preparation for migrant/seasonal farmworkers and their dependents. Students enroll into our Basic Education courses (HS, GED, or ESL) and when eligible, will be enrolled into supplemental services and resources. Individuals must document farmworker or dependent status to qualify. Most classes are open-entry and self-paced. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [hepinfo@bigbend.edu](mailto:hepinfo@bigbend.edu) or [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## GED Preparation

Individuals may study and prepare for the GED exam by attending BEdA classes. All instruction is provided in English, but the test may be taken in English, Spanish, or French. Accommodations may be provided if approved. Students aged 16-19 will need additional documentation to test based upon age requirements. Most classes are open-entry and self-paced. Times and locations can be found in the current quarterly class schedule or by contacting the Basic Skills Office at 509.793.2304 or by email at [bedainfo@bigbend.edu](mailto:bedainfo@bigbend.edu)

## Basic Education for Adults (BEdA) Course Descriptions

### **DVS 011 : Basic Skills Review**

The main goal of this course is to assist students to improve their reading/writing, math, listening/speaking and employability skills in order to earn a high school diploma or pass the official GED

tests. To enroll in the Basic Skills Program, students must be at least 16 years old. For the HS21 program, students must be 21 years old or older. (Formerly: DVS 011, 012, 013, 014, 020, 021)

### **Prerequisites**

This course is designed for students with a CASAS score below 235 in reading and/or math.

### **DVS 012 : Adult Secondary Education I**

The main goal of this course is to assist students to improve their reading/writing, math, listening and employability skills in order to earn a high school diploma or to pass the Official GED tests (to enroll in the Basic Skills Program, students must be at least 16 years old). For HS21 students, this course is designed for students studying for the second half of their HS21 diploma. (Formerly: [DVS 011](#), 012, 013, 014, 020, 021)

### **Prerequisites**

This course is designed for students who, at intake, have credits placing them at 11th or 12th grade (earned more than half their credits for graduation) and/or for second language students score 236-245 on CASAS Reading and Math tests.

### **DVS 013 : Adult Secondary Education II**

The main goal of this course is to assist students to improve their reading/writing, math, listening and employability skills in order to earn a high school diploma or to pass the Official GED tests (to enroll in the Basic Skills Program, students must be at least 16 years old). For HS21 students, this course is designed for students studying for the second half of their HS21 diploma. (Formerly: [DVS 011](#), 012, 013, 014, 020, 021)

### **Prerequisites**

This course is designed for students who, at intake, have credits placing them at 11th or 12th grade (earned more than half their credits for graduation) and/or for second language students score 246-255 on CASAS Reading and Math tests.

### **DVS 014 : Adult Basic Skills**

The main goal of this course is to assist students to improve their reading, writing, listening, employability skills, and math skills in order to

advance to the next NRS Educational Functional level as determined by the CASAS Levels and to obtain knowledge and skills necessary for college and career readiness (Formerly: [DVS 011](#), 012, 013, 014, 020, 021)

### **Prerequisites**

This course is designed for students with a CASAS score below 246 in reading and/or math.

### **DVS 015 : Accelerated Learning Support**

DVS 015 is designed to provide additional instruction and support for basic skills students in I-BEST or other collegelevel accelerated math and English classes. The course provides a review of core concepts and vocabulary introduced in the related college-level math and/or English courses and students engage in activities to help strengthen basic math and/ or English skills.

### **Prerequisites**

Students must be concurrently enrolled in I-BEST or other college-level accelerated math and/ or English classes

### **DVS 017 : Accelerated Learning Support: Math**

DVS 017 is designed to provide additional instruction and support for basic skills students in I-BEST or other collegelevel accelerated Math classes. The course provides a review of core concepts and vocabulary introduced in the related college-level Math courses and students engage in activities to help strengthen basic Math skills.

### **Prerequisites**

Placement in pre-college Math; students must be concurrently enrolled in I-BEST or other college-level accelerated Math classes.

### **DVS 031 : Beginning English Language Acquisition**

This basic skills level course is for students whose first language is not English. Participants study speaking, listening, reading, writing, employability skills, and mathematics in English, so they may perform a variety of basic tasks requiring communication at work, at home, and in their community. Students must be at least sixteen years old to enroll in the Basic Skills

Program or 21 years old or older to enroll in the HS21 program. (Formerly DVS 030,031,032,034,035,037)

**Prerequisites**

This course is designed for students with a CASAS score below 190 in reading and/or below 189 in listening

**DVS 032 : Intermediate English Language Acquisition**

This basic skills level course is for students whose first language is not English. Participants study speaking, listening, reading, writing, employability skills, and mathematics in English, so they may perform a variety of basic tasks requiring communication at work, at home, and in their community. Students must be at least sixteen years old to enroll in the Basic Skills Program or 21 years old or older to enroll in the HS21 program. (Formerly DVS 030,031,032,034,035,037)

**Prerequisites**

This course is designed for students with a CASAS score between 191-210 in reading and/or between 190-209 listening

**DVS 033 : Advanced English Language Acquisition**

This basic skills level course is for students whose first language is not English. Participants study speaking, listening, reading, writing, employability skills, and mathematics in English, so they may perform a variety of basic tasks requiring communication at work, at home, and in their community. Students must be at least sixteen years old to enroll in the Basic Skills Program or 21 years old or older to enroll in the HS21 program. (Formerly DVS 030,031,032,034,035,037)

**Prerequisites**

This course is designed for students with a CASAS score between 211-235 in reading and/or between 210-227 in listening

**DVS 036 : English Language Acquisition/ Citizenship**

This basic skills level course is if for students whose first language is not English and who are preparing for the United States naturalization

examination. Participants study speaking, listening, reading, writing and arithmetic in English using U. S. History, government and citizenship themes. Individuals may enroll in the course at any time during the quarter.

**DVS 080 : College Transitions Math**

Review and instruction in whole numbers, decimals, fractions, geometry, and integers. Learn strategies to deal with math anxiety and test taking. Students should note this course does not count towards credit total for financial aid eligibility. (Formerly: MATH 080)

**Prerequisites**

Placement exam or instructor permission.

**DVS 090 : Transition to College**

This Transition to College course is designed to assist advanced ESL/ABE students in developing skills to transition into an academic or vocational program. Students will receive an orientation to the college culture and its services. Students will concentrate on the academic English speaking, reading, writing, presentation and the basic computer skills needed for a successful transition into a credit bearing college program.

**Prerequisites**

CASAS Reading Level 230 and above.

**DVS 091 : BEdA Orientation Course (OPD/ HS+/ELA)**

The main goal of this course is to assist students as they enter any BEdA program (high school completion or English language acquisition) by giving them the tools they will need to succeed while enrolled in BEdA.

**Prerequisites**

To enroll in the Open Doors program, students must be at least 16 years old. For the High Schools or ELA program, students must be 18 years old or older.

## Biological Sciences

**Theresa Calip**

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Biology and botany courses may be taken as part of the Associate in Arts and Science DTA degree or as part of the Associate in Science-Transfer degree. Within the Associate in Arts and Science DTA degree, these courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Within the Associate in Science-Transfer degree, biology courses satisfy the AS-T I Biology pre-major. The Associate in Science-Transfer degree allows students to prepare for upper division study toward a Bachelor of Science degree in biology (as well as other sciences). This degree gives students the opportunity to make substantial progress toward fulfilling major requirements while completing at least half of the Breadth requirements for Humanities and Social Science.

A degree in biological sciences opens the door to a wide variety of choices—from the health sciences to environmental technology, from biomedical research to wildlife biology. The range of possibilities is limited only by a student's own interests, aptitudes, and imagination! The biology program provides courses to meet a variety of student needs.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate

institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

These courses are recommended for all areas of life science majors, including but not limited to: pre-dental, pre-medicine, prepharmacy, pre-veterinary, environmental science, forensic science and nutrition.

## **Biological Sciences and Related Pre-Professional Studies**

### **Degree Type**

Associate in Science-Transfer

Degree Requirements:

To earn the Associate in Science-Transfer degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being used for the basic or breadth requirements in the Associate in Science-Transfer degree may not be taken pass/fail.

### **Associate in Science-Transfer AS-T Track I**

#### **Biological Sciences, Environmental/Resource Sciences, Chemistry, Geology, and Earth Science**



The 90 transferable credits must include the following:

## Basic Requirements

### A. Communication Skills [BS]

Course Code	Title	Credits
	ENGL& 101, ENGL& 102, ENGL& 235, or ENGL& 201	5

### B. Mathematics [SQR]

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5

### C. Humanities [HU, HP] and Social Sciences [SS]

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus and additional 5 credits from either the Humanities or the Social Science distribution lists. Cross listed courses may be used to meet credit requirements in only one distribution area.

1. Humanities distribution
2. Social science distribution
3. Humanities or Social Science distribution

## AS-T 1: Pre-major Program

Note: Sequence courses should not be broken up between institutions (e.g., the typical three-quarter chemistry sequence should be taken entirely at one institution).

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
CHEM& 162	General Chem w/Lab II	5
CHEM& 163	General Chem w/Lab III	5
	BIOL& 221, 222, 223; PHYS& 221, 222, 223; or PHYS& 114, 115, 116	15
	MATH& 146 or MATH& 163	5
	Additional 10-15 credits in PHYS, GEOL, organic CHEM, BIOL, or MATH	10-15

## Remaining Credits

Sufficient additional college-level credits so that total credits earned are at least 90 quarter credits. These remaining credits may include prerequisites for major courses (e.g., pre-calculus), additional major coursework, or specific general education or other university requirements, as approved by the advisor with no more than 5 cr of general electives.

Total Credits	90
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## Biology Pre-Major AS-T 1 (90 Credits)

### Degree Type

Associate in Science-Transfer

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Cultural, Social, Political Aspects  
Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Problem Solving  
Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

## Degree Requirements

To earn the Associate in Science-Transfer degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being used for the basic or breadth requirements in the Associate in Science-Transfer degree may not be taken pass/fail.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
ENGL& 101	English Composition I	5
MATH& 141	Precalculus I	5

### Winter Quarter

Course Code	Title	Credits
CHEM& 162	General Chem w/Lab II	5
ENGL& 235	Technical writing	5
MATH& 142	Precalculus II	5

### Spring Quarter

Course Code	Title	Credits
CHEM& 163	General Chem w/Lab III	5
MATH& 146	Introduction to Statistics	5
	Advisor Approved HU/SS (5 credits)	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
BIOL& 221	Majors Ecology/Evolution	5
MATH& 151	Calculus I	5
CMST& 220	Public Speaking	5

### Winter Quarter

Course Code	Title	Credits
BIOL& 222	Majors Cell/Molecular	5
MATH& 152	Calculus II	5
HUM 214	Diversity Issues: Race, Class and Gender	5

### Spring Quarter

Course Code	Title	Credits
BIOL& 223	Majors Organismal Phys	5
MATH& 163	Calculus 3	5
	PEH 100 or PEH 178	3

Most science courses have prerequisites; see the catalog section "Course Descriptions" for specific course information.

\* Check Prerequisites

\*\* Some medical schools and veterinary schools require statistics.

\*\*\*Another generally accepted transfer course of 2-5 credits will be accepted to total the required 90 credits. Make sure to check with your advisor.

Depending upon which Pre-Med major a student chooses, they may be required to take Vertebrate A&P rather than Human A&P, separate Anatomy and Physiology courses rather than combined, or possibly 3 quarters rather than 2. Check with the college to which you intend to transfer.

## Recommended Courses for Pre-Nursing and Allied Health Majors

Course Code	Title	Credits
BIOL& 160	General Biology with Lab	5
BIOL& 241	Human Anatomy and Physiology I	5
BIOL& 242	Human Anatomy and Physiology II	5
BIOL& 160	General Biology with Lab	5

Most science courses have prerequisites; see the catalog section "Course Descriptions" for specific course information. Make sure to check prerequisites.

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**Total Credits** **90**

## Biological Sciences Course Descriptions

### BIOL& 100 : Survey of Biology

A study of basic biological principles common to living organisms, this course is intended for non-

majors who desire a lab science requirement. Topics of study include: scientific thinking, basic chemistry, cell structure and membrane transport, energy and cell pathways, DNA and gene expression, chromosomes and cell division, genes and inheritance, and evolution and natural selection. Related investigations take place in a required two-hour lab period each week. There will be no required dissections in the laboratory.

#### Degree Code

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### Quarters Offered

Fall, Winter, Spring, Summer

### BIOL& 160 : General Biology with Lab

This course is intended for students pursuing careers in Nursing or other Allied Health fields and satisfies the biology prerequisite for A&P I (BIOL& 241). Course content includes the following topics: 1) cellular order and organization including cell chemistry, biological molecules, and cell structure and physiology; 2) energetics including enzymes and carbohydrate metabolism; 3) reproduction, growth and development including DNA replication, cell cycle and control, and cell division; 4) cellular regulation including membranes, transport, protein synthesis, gene regulation, cell signaling, and buffer systems. This course does not satisfy the prerequisite for BIOL& 222 or 223. Related investigations take place in a three-hour lab period each week.

#### Degree Code

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

#### Prerequisites

A 2.0 or better in [CHEM& 121](#) or [CHEM& 161](#) on a college transcript within the last 3 years, or concurrent enrollment in CHEM& 121 or instructor

permission. Prior introductory biology experience such as high school biology or BIOL&100 recommended.

**Quarters Offered**

Fall, Winter, Spring

**BIOL& 170 : Human Biology**

This course offers a broad overview of the human body for the non-science major. Topics of study include: unifying biological principles such as basic cell chemistry, cell biology, and metabolism, as well as the biology of selected human systems. Issues related to human biology will also be examined. This course does not include a lab.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Quarters Offered**

Fall, Winter, Spring

**BIOL& 221 : Majors Ecology/Evolution**

The first quarter in a three-quarter general biology series, this series is designed for life-science majors, pre-professional students, and for students intending to take advanced courses in the biological sciences. Topics of study include: ecology including population, community, and ecosystem ecology; evolution including the origin and history of life, microevolution, macro evolution, and systematics; the diversity of life including bacteria, archaea, protists, plants, fungi, and animals. Related investigations take place in a three-hour lab period each week. NOTE: This majors' biology sequence may be taken in the following order: BIOL& 222, 223, and 221, with instructor's permission.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

**Prerequisites**

Successful completion of either CHEM& 121 or CHEM& 161 with a 2.0 or better or concurrent enrollment in CHEM& 121 or CHEM& 161, or instructor permission. Recent high school biology or BIOL& 100 strongly recommended.

**Quarters Offered**

Fall

**BIOL& 222 : Majors Cell/Molecular**

The second quarter in a three-quarter general biology series, this series is designed for life-science majors, for pre-professional students, and for students intending to take advanced courses in the biological sciences. Topics of study include: cell chemistry and biological molecules, prokaryotic and eukaryotic cells, membrane transport, energetics and cell metabolism, cell communication, DNA replication, gene expression, and gene regulation, cell division, genetics, and developmental genetics. Related investigations take place in a three-hour lab period each week. NOTE: This majors' biology sequence may be taken in the following order: BIOL& 222,223, and 221, with instructor's permission.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

**Prerequisites**

Successful completion of BIOL& 221 with a 2.0 or better and successful completion of either CHEM& 121 or CHEM& 161 with a 2.0 or better, or instructor's permission

**Quarters Offered**

Winter

**BIOL& 223 : Majors Organismal Phys**

The third quarter in a three-quarter general biology series, this series is designed for life-science majors, pre-professional students, and for students intending to take advanced courses in the biological sciences. Topics of study include: animal and plant anatomy, physiology, and development. Related investigations take place in a three-hour lab period each week.

**Degree Code**

Lab Science

**Credits** 5**Lecture Hours** 38**Lab Hours** 33**Prerequisites**

Successful completion of BIOL& 222 with a 2.0 or better and successful completion of either CHEM& 121 or CHEM& 161 with a 2.0 or better, or instructor's permission

**Quarters Offered**

Spring

**BIOL& 241 : Human Anatomy and Physiology I**

An analysis of the structure and function of human skeletal, muscular, and nervous systems as well as the role of receptor-ligand interactions and introductory histology. Emphasis will be given to the homeostatic relationships between systems. Four hours of lab per week will be devoted to exploring these systems. Lab participation is required for credit.

**Degree Code**

Lab Science

**Credits** 5**Lecture Hours** 33**Lab Hours** 44**Prerequisites**

A grade of 2.0 or better in BIOL& 160, BIOL& 211, or BIOL& 222, and in CHEM& 121 or above, or on a college transcript within the last 5 years, or instructor permission.

**Quarters Offered**

Fall, Winter

**BIOL& 242 : Human Anatomy and Physiology II**

The second quarter of a two-quarter sequence which includes the structure, function and pathology of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Emphasis will be given to the homeostatic relationships between systems. Four hours of lab per week will be devoted to exploring these systems. Lab participation is required for credit.

**Degree Code**

Lab Science

**Credits** 5**Lecture Hours** 33**Lab Hours** 44**Prerequisites**

A minimum grade of 2.0 in BIOL& 241 or equivalent.

**Quarters Offered**

Winter, Spring

**BIOL& 260 : Microbiology**

An introduction to microbes and their activities. Emphasis will be given to the areas of bacteriology, immunology, virology and epidemiology. Four hours of lab per week is required for credit. Labs will deal with the culture and identification of organisms, as well as genetic transformation.

**Degree Code**

Lab Science

**Credits** 5**Lecture Hours** 33**Lab Hours** 44**Prerequisites**

A grade of 2.0 or better in [BIOL& 241](#), or on a college transcript within the last 5 years, or instructor permission.

**Quarters Offered**

Fall, Spring

**BIOL 104 : Core Concepts in Biology**

A review of the biological principles common to living organisms, this course is intended for students planning to take BIOL& 211 who have some prior biology background but would like a review of the basic biology concepts. Topics of study include, macromolecules, cell structure, membrane transport, energy and metabolism, DNA replication, gene expression, cell division, and genetics.

**Degree Code**

Specified Elective

**Credits** 2**Lecture Hours** 22**Prerequisites**

Any prior biology course, high school or college-level, is highly recommended.

# Botany

[botany@bigbend.edu](mailto:botany@bigbend.edu)

## Botany Course Descriptions

### **BOT 130 : Botany**

A study of the basic principles of plant life. Topics include: plant cells, tissues, and organs; plant physiology, transport, and reproduction; plant diversity and genetics, as well as a look at how society uses and relies on plants. Related investigations take place during two hours of lab each week. Laboratory topics reinforce classroom learning and include a study of plant structures and plant diversity.

#### **Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Quarters Offered**

Winter

### **BOT 140 : Field Botany**

Field botany involves the identification and classification of local plants of the Columbia Basin area. Different biomes are studied with emphasis on the steppe and shrub-steppe vegetation common to this area. Students participate in seven field trips to collect native plants. Following field trips, students identify, press, dry, and mount collected plants in order to assemble a required plant collection. During laboratory sessions students learn to use a taxonomic key to identify and classify collected plants. NOTE: This is a field course with required field trips. Field trips often involve hiking over uneven terrain; students climb up slopes, both on and off trails to collect plant specimens. Any questions concerning these field trips may be directed to the instructor.

#### **Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

#### **Quarters Offered**

Spring

## Business

**Preston Wilks**

**509.793.2194**

[business-accounting@bigbend.edu](mailto:business-accounting@bigbend.edu)

## Business Transfer (DTA/ MRP) (90+ credits)

Students intending to transfer to a baccalaureate institution and major in Business Administration have two degree options-The Business DTA or the Associate in Arts and Science DTA. Completing all of the prescribed courses listed for the Business DTA will enable students to be major ready when they transfer to any public baccalaureate institution in the state of Washington. See the catalog for more information concerning the Associate in Business-DTA and the specific required class for this degree. Business students choosing to transfer with an Associate in Arts and Science-DTA degree should consult program outlines published by the college or university to which they intend to transfer. However, the following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area. Please see the catalog for general education requirements for the Associate in Arts and Science Degree.

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills
- PO4 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources

## Business DTA

### Degree Type

Direct Transfer Agreement/Major Related Program

To earn the Associate in Business DTA MRP degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in designated courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree will be awarded.

Note: No course may be used more than once for meeting degree requirements.

The 90 transferable credits must include the following:

## Basic Requirements Communication Skills

Course Code	Title	Credits
ENGL& 101	English Composition I	5
	ENGL& 102 or ENGL& 235 or ENGL& 201	5

## Quantitative Skills

Symbolic or Quantitative Reasoning

Note: Intermediate algebra or higher placement score is required for entrance into all SQR courses. Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 141	Precalculus I	5
MATH& 148	Business Calculus	5

## Breadth Requirements

### Humanities

Select from at least two of the disciplines listed on the Humanities distribution list with no more than 10 credits from any one discipline. No more than 5 credits in foreign language at the 100 level may apply to this category. No more than 5 credits in humanities performance/skill credits (HP) may apply to this requirement.

Course Code	Title	Credits
CMST& 220	Public Speaking	5
	Student Choice for Remaining Credits in this Category (10 credits)	10

## Social Science

Select from at least two of the disciplines listed on the Social Science distribution list

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ECON& 201	Micro Economics	5
ECON& 202	Macro Economics	5
	Student choice for remaining 5 credits in this category	5

## Natural Science

Select from at least two of the disciplines listed on the Natural Science distribution list

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 146	Introduction to Statistics	5
	Lab Science (5 credits)	5
	Non-lab Science or Lab Science (5 credits)	5

## Business Core Requirements

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACCT& 201	Prin of Accounting I	5
ACCT& 202	Prin of Accounting II	5
ACCT& 203	Prin of Accounting III	5
BUS& 201	Business Law	5

## Physical Education/Health & Wellness

Complete one of the following:

No more than 3 PEH AC credits may be used in the degree.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	Three PEH Activity [AC] Credits	3
PEH 100	Lifetime Wellness	3
PEH 178	Principles of Fitness	3

## General Electives

Note: No course may be used more than once for meeting degree requirements.

Many courses in this degree are designated. Refer to the Distribution lists to help you choose a class within the distribution categories that meets your educational goals and interests. Refer to the Departments and Programs of Study pages for a full listing of courses in each discipline and which quarter each course will be taught; ask your advisor to help you.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	ACCT 105 or BUS& 101	5
ENGL& 101	English Composition I	5
	As needed per English/Math 5 placement or Elective (5 credits)	

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	ECON& 201 or 202	5
MATH& 141	Precalculus I	5
	Humanities or Social Science5 (5 credits)	

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	ECON& 201 or 202	5
MATH& 148	Business Calculus	5
	Lab or Natural Science (5 credits)	5



## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	As needed per English/Math placement or Elective (5 credits)	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACCT& 201	Prin of Accounting I	5
	Lab or Natural Science (5 credits)	5

MATH& 146	Introduction to Statistics	5
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### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACCT& 202	Prin of Accounting II	5
BUS& 201	Business Law	5
	Humanities or Social Science (5 credits)	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACCT& 203	Prin of Accounting III	5
CMST& 220	Public Speaking	5
	ENGL& 102 or 201	5

## Summer Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	As needed per English/Math placement or Elective (5 credits)	5
	Humanities or Social Science (5 credits)	5
	Physical Education/Health & Wellness (PEH) (3 credits)	3
	Advisor Approved Electives/Transfer Courses	

## Breadth Requirement Options

### Humanities (10 credits)

Art, Communications, Diversity, English, Foreign Languages, Music, Philosophy, Religious Studies

### Social Sciences (5 credits)

Anthropology, Criminal Justice, History, Political Science, Psychology, Sociology

### Natural Sciences and Lab Sciences (10 credits)

Lab Sciences: ASTR& 101, BIOL& 100, BOT 130 or 140, GEOL& 101 CHEM& 121, PHYS& 110

Natural Sciences and Non-lab Sciences: ASTR& 100, BIOL& 170, CHEM& 105, ENV& 100, NUTR& 101

**Total Credits**

**90**

## Business Course Descriptions

### **BUS& 101 : Intro to Business**

This course provides an overview of business, focusing on the world of business today within the context of a global society. Basic principles and concepts include; business models, entrepreneurship, functional areas of business, management, organizational structure, human resources, marketing, information systems, finance, ethics and social responsibility as well as emerging business topics.

#### **Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **BUS& 201 : Business Law**

This course provides an introduction to the nature and sources of law and overview of law typically relating to the operation of businesses

from the point of view of owners, managers, employees, customers, and suppliers with an emphasis on contracts and sales.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**BUS 102 : Business Mathematics**

Applications of quantitative reasoning and logic in business through a study of banking, discounts, commissions, markup, promissory notes, interest, taxes, insurance, payroll, and financial statements.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Successful completion of [MATH 094](#) or MAPI 17 or placement score into [MATH 098](#) or above.

**Quarters Offered**

Fall, Spring

**BUS 114 : Business Ethics**

This course studies and analyzes ethical issues facing the world of business and society today and identifies approaches available when dealing with or resolving complex ethical issues.

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**BUS 115 : Workplace Skills and Behaviors**

Practical application-oriented study of interpersonal skills and behaviors for the workplace. Topics included are communication, ethics at work, decision making, teamwork, conflict resolution, diversity, etiquette, adapting to change, and work life balance

**Credits** 4

**Lecture Hours** 44

**BUS 119 : Business Grammar and Edit**

This course is designed to prepare students for today's offices where clear and concise writing and editing is based on a sound understanding

of grammar and is considered to be an essential job skill. Topics will include the parts of speech, punctuation, capitalization, and numbers. Students will walk away with a solid foundation of good grammar mechanics and the ability to skillfully edit their own work.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

English placement of [ENGL 99](#) or higher.

**BUS 121 : Business English**

This Business English course is designed to prepare students for today's offices where clear and concise writing is based on a sound understanding of grammar and is considered to be an essential job skill.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

BBCC English placement exam ENGL099 or successful completion of ENGL098 with a 2.0 or higher.

**Quarters Offered**

Winter, Spring

**BUS 122 : Business Communications**

This course promotes the development of business communication skills which include reading, writing, listening, speaking, and interacting within groups. Special emphasis is given to the creation of day-to-day business documents

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[BUS 121](#) or ENGL& 101.

**Quarters Offered**

Fall, Spring

**BUS 135 : Fundamentals of Logistics, Transportation, and Supply Chain Management**

This introductory course provides an overview of the fundamentals of commercial transportation, logistics, and supply chain management; an overview of the various operations and processes involved in efficient movement of cargo and impacts to the financial performance

of business; and provides students with practical industry knowledge. Topics will include logistics and supply chain management, the physical side of materials management, inbound logistics and purchasing, physical distribution management, outbound logistics with regard to transportation, information technology systems, finance in logistics and supply chain management, and logistics and the supply chain in the global environment.

**Credits** 1-3

**Lecture Hours** 11-33

### **BUS 161 : Business Calculators**

Touch-control training on the ten-key electronic display/printing calculator. Basic functions, development of proficiency with proration, percentage, interest, discount, present value, and profit computations.

**Credits** 2

**Lab Hours** 44

#### **Prerequisites**

Completion of [MATH 094](#)/[MAP 117](#) or a higher placement.

### **BUS 170 : Consumer Finance**

This course offers an introduction to investigating, buying, and financing techniques for vehicles, consumer goods, insurance, and homes; consumer rights, responsibilities, and obligations; minimizing federal income tax; borrowing, saving, and investing.

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Spring

### **BUS 200 : Supervision**

The student will look at management in organizations and the information, tools, qualities, and skills needed to successfully manage others while fostering a positive work environment and contributing to organizational success.

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

[BUS 120](#), or [SOC&101](#), or [PSYC&100](#) or Instructor Permission.

#### **Quarters Offered**

Winter

### **BUS 215 : Customer Service**

This course will provide the student with strategies and skills to effectively meet the needs of customers. The student will be introduced to internal and external customers, to customer satisfaction, to customer retention, and to customer service trends.

**Credits** 3

**Lecture Hours** 33

#### **Prerequisites**

Basic computer skills strongly recommended.

#### **Quarters Offered**

Fall, Summer

### **BUS 289 : Project Management**

This course focuses on exploring and exercising principles that are common to project management across multiple industries and disciplines. Students develop skills in project integration, scope, time, cost, quality, human resource, communications, risk, procurement, and stakeholder management. Students and instructors will select a final project that will allow them to focus on their area of specialization and learn about the perspectives of other industries while working as a team to accomplish common project goals. Students who have earned 45 or more college-level credits may register for this class. This class is intended for students in the second year of their degree program. Credit cannot be earned in both BUS 289 and CS 289. (Formerly: CS 289)

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

45 or more college-level credits.

### **BUS 295 : Work-Based Learning**

A supervised work experience in a community agency or business involving the application of classroom information and skills. One credit for each 33 hours of supervised work-based learning. May be repeated up to 8 credits.

**Credits** 1-6

**Clinical Hours** 33-198

**Prerequisites**

BUS department advisor permission.

**Corequisites**

[BUS 297](#)

**BUS 297 : Work-Based Learning Seminar**

A discussion/conference oriented course covering various topics related to business. The topic discussed during a particular quarter will be influenced by the needs and interests of the students. May be repeated up to six (6) credits.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

BUS department advisor permission

## Business Information Management

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The Business Information Management (BIM) program degrees and certificates outlined are suggested courses of study for students interested in pursuing careers in a business office environment. Students successfully completing a two-year program will earn one of two AAS degrees. Each of the BIM AAS degrees is transferable toward the online Bachelor of Applied Science Applied Management (BAS-AM) at Big Bend Community College or a Bachelor of Applied Science (BAS) Administrative Management at Central Washington University.

Our classes prepare you for the world of work and apply to nearly every sector of the economy. All organizations need administrative professionals. Each program offers a job readiness component preparing you to write winning resumes, have successful interviews and job performance.

Electives provide students with flexibility while pursuing their degrees and the opportunity to focus study on interest or need. Electives include business management, law, accounting, Spanish, and various office/financial management applications at both introductory and advanced levels.

Most courses are competency-based, variable credit classes. Please refer to the description portion of the catalog to determine if the course is competency-based, variable credit, or structured. Competency-based courses are designed to allow each student to work individually at his or her own pace to accomplish the required course objectives and balance the workload of daily life.

## Business Information Management Program Approved Electives

ACCT 105 Introduction to Accounting

BIM 106 Advanced Keyboarding

BIM 109 Internet Communications (2nd/3rd credits)

BIM 173 Word Processing I

BIM 190 Spreadsheets I

BIM 210 Internet

BIM 285 MOS Prep & Certification (Other MS Apps)

BUS 161 Business Calculators

BUS& 201 Business Law

CJ& 101 Introduction Criminal Justice

CJ& 110 Criminal Law

HED 121 The Human Body and Disease I

HED 122 The Human Body and Disease II

## Administrative Professional Services AAS

### Degree Type

Associate in Applied Science

This option emphasizes the need for quality customer service, human relations, communication, and technology skills in the office where employment opportunities increase significantly for those who have these essential skills and can assume responsibility and perform a variety of office functions. Prerequisite and requisite courses must be completed with a minimum grade of 2.0.

### Program Learning Outcomes:

- IO1 Communication  
Students will write, speak, and present information effectively by creating professional documents that would be used in an office or medical office environment.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, professionalism, and/or workplace specific skills.
- PO4 Students will identify the interpersonal and ethical attributes needed for success in the profession by developing a professional portfolio and/or successfully completing a mock interview with industry professionals.
- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

The following schedule of courses is the recommended program for completing this degree. Depending on a student's English or Math placement, and keyboarding skills, additional courses may be required.

Substitutions must be approved by a BIM advisor. Some electives are not available every quarter or year. Ask about other classes in which you may be interested.

## Two-Year Degree

Course Code	Title	Credits
	Certificate of Achievement Administrative Assistant	66
BIM 262	Professional Preparation	3
BIM 285	Microsoft Office Specialist Prep and Certification	1-5
BUS 200	Supervision	5
	BIM Electives	18

## First Year

### Fall Quarter

Course Code	Title	Credits
BUS 115	Workplace Skills and Behaviors	4
BIM 109	Internet Communications	1-2
ENGL& 101	English Composition I	5
	CSS 102 or CSS 100	3

### Winter Quarter

Course Code	Title	Credits
BUS 215	Customer Service	3
BIM 131	Records Management	1-3
BIM 104	Intermediate Keyboarding	1-3
MAP 117	Applied Math for Workforce Programs I	1-5

### Spring Quarter

Course Code	Title	Credits
BIM 180	Introduction to Microsoft Office	1-5
BUS 122	Business Communications	5
	PSYC& 100 or SOC& 101	5

## Summer Quarter\*

\*Students who do not plan to take summer classes, should complete summer quarter classes in additional quarter or add to previous quarter.

Course Code	Title	Credits
	Electives (5 credits)	5

## Second Year - suggested schedule Fall Quarter

Course Code	Title	Credits
BUS& 101	Intro to Business	5
CMST& 220	Public Speaking	5
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5

## Winter Quarter

Course Code	Title	Credits
BUS 200	Supervision	5
BUS 119	Business Grammar and Edit	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5

## Spring Quarter

Course Code	Title	Credits
BUS 114	Business Ethics	5
BIM 262	Professional Preparation	3
	Electives (7 credits)	7

## Summer Quarter

\*Students who do not plan to take summer classes, should complete summer quarter classes in additional quarter or add to previous quarter

Course Code	Title	Credits
	Electives (6 credits)	6

## Administrative Professional Services AAS Electives

Course Code	Title	Credits
ACCT 105	Introduction to Accounting	5
BIM 106	Advance Keyboarding	1-3
BIM 109	Internet Communications	1-2
BIM 173	Word Processing I	1-5
BIM 186	Microsoft Publisher	1-3
BIM 187	Adobe Acrobat	1-3
BIM 190	Spreadsheets I	1-5
BIM 210	Internet	1-2
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5
BUS 161	Business Calculators	2
BUS& 201	Business Law	5
CJ& 101	Intro Criminal Justice	5
<b>Total Credits</b>		<b>94</b>

## Medical Office and Billing Support Services AAS

### Degree Type

Associate in Applied Science

This option is designed for students who are interested in specializing in medical office administration and billing. This degree consists of a combination of medical knowledge, accounting and business skills, and computer applications. Prerequisite and requisite courses must be completed with a minimum grade of 2.0.

Program Learning Outcomes:

- IO1 Communication  
Students will write, speak, and present information effectively by creating professional documents that would be used in an office or medical office environment.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, professionalism, and/or workplace specific skills.
- PO4 Students will identify the interpersonal and ethical attributes needed for success in the profession by developing a professional portfolio and/or successfully completing a mock Interview with industry professionals.
- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

The following schedule of courses is the recommended program for completing this degree. Depending on a student's English or Math placement, and keyboarding skills, additional courses may be required. Substitutions must be approved by a BIM advisor. Some electives are not available every quarter or year. Ask about other classes in which you may be interested.

## Required Courses

Course Code	Title	Credits
	Medical Office Technician Certificate	59
ACCT 105	Introduction to Accounting	5
BUS 119	Business Grammar and Edit	5
BIM 117	Medical Office Accounts Receivable	4
BIM 262	Professional Preparation	3
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5
BUS 122	Business Communications	5
BUS 200	Supervision	5
	BIM Electives (8 credits)	

## First Year Fall Quarter

Course Code	Title	Credits
BUS 115	Workplace Skills and Behaviors	4
BIM 109	Internet Communications	1-2
ENGL& 101	English Composition I	5
	CSS 102 or CSS 100	3

## Winter Quarter

Course Code	Title	Credits
BUS 215	Customer Service	3
BIM 131	Records Management	1-3
BIM 104	Intermediate Keyboarding	1-3
MAP 117	Applied Math for Workforce Programs I	1-5

## Spring Quarter

Course Code	Title	Credits
BIM 180	Introduction to Microsoft Office	1-5
BUS 122	Business Communications	5
	PSYC& 100 or SOC& 101	5

### Summer Quarter\*

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5
Electives (3 credits)		

### Second Year

#### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
HED 119	Medical Terminology	5
HED 239	Medical Ethics	2
ACCT 105	Introduction to Accounting	5
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5

#### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 113	The Medical Office	5
BUS 119	Business Grammar and Edit	5
BUS 161	Business Calculators	2
BUS 200	Supervision	5

#### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CMST& 220	Public Speaking	5
BIM 262	Professional Preparation	3
BIM 117	Medical Office Accounts Receivable	4
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2

### Summer Quarter\*

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
Electives (5 credits)		5

\*Students who do not plan to take summer classes, should complete summer quarter classes in additional quarter or add to previous quarter.

### Approved BIM Program Electives

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 106	Advance Keyboarding	1-3
BIM 173	Word Processing I	1-5
BIM 186	Microsoft Publisher	1-3
BIM 187	Adobe Acrobat	1-3
BIM 190	Spreadsheets I	1-5
BIM 210	Internet	1-2
BIM 280	Advanced Microsoft Office	1-5
BIM 285	Microsoft Office Specialist Prep and Certification	1-5
BUS& 201	Business Law	5
CJ& 101	Intro Criminal Justice	5
CMST& 230	Small Group Communication	5
<b>Total Credits</b>		<b>98</b>

### Administrative Assistant Certificate of Achievement

#### Degree Type

Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an AAS degree program. Upon completion of the following options, the student will earn a Certificate of Achievement from BBCC.

Program Learning Outcomes:

- IO1 Communication  
Students will write, speak, and present information effectively by creating professional documents that would be used in an office or medical office environment.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession



- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, professionalism, and/or workplace specific skills.
- PO4 Students will identify the interpersonal and ethical attributes needed for success in the profession by developing a professional portfolio and/or successfully completing a mock Interview with industry professionals.
- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

## Required Courses

Course Code	Title	Credits
	Customer Service Associate Certificate	54
BUS 119	Business Grammar and Edit	5
BIM 280	Advanced Microsoft Office	1-5
BUS 114	Business Ethics	5
<b>Total Credits</b>		<b>66</b>

## Customer Service Associate Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an AAS degree program. Upon completion of the following options, the student will earn a Certificate of Achievement from BBCC.

Program Learning Outcomes:

- IO1 Communication  
Students will write, speak, and present information effectively by creating professional documents that would be used in an office or medical office environment.

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, professionalism, and/or workplace specific skills.
- PO4 Students will identify the interpersonal and ethical attributes needed for success in the profession by developing a professional portfolio and/or successfully completing a mock Interview with industry professionals.
- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

## Required Courses

Course Code	Title	Credits
	Office Assistant Certificate	32
MAP 117	Applied Math for Workforce Programs I	1-5
BUS 122	Business Communications	5
BUS& 101	Intro to Business	5
CMST& 220	Public Speaking	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>54</b>

## Medical Office Receptionist Certificate of Accomplishment

### Degree Type

Certificate

Upon completion of each of the following options, the student will earn a Certificate of Accomplishment from BBCC.

Program Learning Outcomes:

- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

## Required Courses

Course Code	Title	Credits
BUS 115	Workplace Skills and Behaviors	4
BIM 109	Internet Communications	1-2
BIM 113	The Medical Office	5
BIM 131	Records Management	1-3
PSYC& 100	General Psychology	5
ENGL& 101	English Composition I	5
BUS 215	Customer Service	3
HED 119	Medical Terminology	5
HED 239	Medical Ethics	2
<b>Total Credits</b>		<b>33</b>

## Medical Office Technician Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an AAS degree program. Upon completion of the following options, the student will earn a Certificate of Achievement from BBCC.

Program Learning Outcomes:

- IO1 Communication  
Students will write, speak, and present information effectively by creating professional documents that would be used in an office or medical office environment.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, professionalism, and/or workplace specific skills.
- PO4 Students will identify the interpersonal and ethical attributes needed for success in the profession by developing a professional portfolio and/or successfully completing a mock Interview with industry professionals.
- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

## Required Courses

Course Code	Title	Credits
	Medical Office Receptionist Certificate	33
BIM 104	Intermediate Keyboarding	1-3
BIM 109	Internet Communications	1-2
BIM 180	Introduction to Microsoft Office	1-5
MAP 117	Applied Math for Workforce Programs I	1-5
BUS 161	Business Calculators	2
CMST& 220	Public Speaking	5
CSS 100	College Success Skills	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
<b>Total Credits</b>		<b>59</b>

## Office Assistant Certificate of Accomplishment

### Degree Type

Certificate

Upon completion of each of the following options, the student will earn a Certificate of Accomplishment from BBCC.

Program Learning Outcomes:

- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

### Required Courses

Course Code	Title	Credits
	Office Clerk Certificate	16
BIM 104	Intermediate Keyboarding	1-3
BIM 180	Introduction to Microsoft Office	1-5
ENGL& 101	English Composition I	5
CSS 100	College Success Skills	3
<b>Total Credits</b>		<b>32</b>

### Office Clerk Certificate of Accomplishment

**Degree Type**  
Certificate

Upon completion of each of the following options, the student will earn a Certificate of Accomplishment from BBCC.

Program Learning Outcomes:

- PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

### Required Courses

Course Code	Title	Credits
BUS 115	Workplace Skills and Behaviors	4
BIM 131	Records Management	1-3
BUS 215	Customer Service	3
PSYC& 100	General Psychology	5
BIM 109	Internet Communications	1-2
<b>Total Credits</b>		<b>16</b>

### Office Format Design Specialist Certificate of Accomplishment

**Degree Type**  
Certificate

Program Learning Outcomes:

PO5 Students will develop proficient Microsoft Office techniques by creating professional business documents while meeting an 85% competency level.

### Required Courses

Course Code	Title	Credits
BIM 109	Internet Communications	1-2
BIM 131	Records Management	1-3
BIM 180	Introduction to Microsoft Office	1-5
BIM 186	Microsoft Publisher	1-3
BIM 187	Adobe Acrobat	1-3
BUS 115	Workplace Skills and Behaviors	4
BUS 215	Customer Service	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 117	Applied Math for Workforce Programs I	1-5
<b>Total Credits</b>		<b>27</b>

## Business Information Management Course Descriptions

### **BIM 101 : Basic Keyboarding**

This course gives emphasis to learning the keyboard; namely, the alphabet, numbers, and symbols. This course is designed for the individual who has never taken a keyboarding class, who may want to renew keyboarding skills, or who wants to change keyboarding habits.

**Credits** 1-2

**Lab Hours** 22-44

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 102 : Document Formatting**

This course gives primary emphasis to the formatting of business documents using Microsoft Word 2021

**Credits** 1-4

**Lab Hours** 22-88

**Prerequisites**

[BIM 101](#) or Basic Keyboarding Skills

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 103 : The Administrative Professional**

This course is an introduction to the administrative professional career.

**Credits** 2

**Lecture Hours** 22

**Quarters Offered**

Fall, Winter

**BIM 104 : Intermediate Keyboarding**

This course gives emphasis to improving keyboarding speed and accuracy.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

[BIM 10](#) /Basic Keyboarding Skills.

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 106 : Advance Keyboarding**

This course gives emphasis to improving keyboarding speed and accuracy.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

BIM 104: Intermediate Keyboarding

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 109 : Internet Communications**

This course will introduce the functions of Outlook 2021 and other online communications and the fundamental use and sharing of online documents and data.

**Credits** 1-2

**Lab Hours** 22-44

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 110 : Microsoft Office Essentials**

This course is an introduction to Microsoft Office Suite 2021. This course is not intended for Business Information Management majors. Credit cannot be earned in both BIM 10 and BIM 108.

**Credits** 1-3

**Lab Hours** 22-66

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 112 : Proof & Edit**

This course gives students the opportunity to learn different proofreading techniques and then emphasizes practice using those techniques.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

[BIM 102](#), [BUS 121](#).

**Quarters Offered**

Fall, Winter, Spring

**BIM 113 : The Medical Office**

The course will cover the basic job skills and requirements needed to work in a medical office, making appointments, and referrals, HIPAA laws, retrieving billing and coding information, handling patient concerns and questions, proper telephone and collection techniques, managing health records and patient requirements for medical business office personnel. Additional topics include: the general flow of information, the role that computers play in a medical office, and how to use medical office software for activities such as entering data, billing, filing claims, scheduling, and printing reports.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[HED 119](#) or instructor permission and basic computer knowledge.

**Quarters Offered**

Fall, Winter, Spring

**BIM 117 : Medical Office Accounts Receivable**

This is a basic class in managing the information required for billing medical insurance in clinic and hospital settings. This class will cover coding, specific form requirements, account aging, posting payments and adjustments to patient accounts, and medical coverage plans, including government plans. Issues related to overall medical business offices will also be part of the class, including correct patient billing and collection procedures. (Formerly: BIM 107 & BIM 111).

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

BIM 113: The Medical Office

**Quarters Offered**

Spring

**BIM 130 : Filing**

This course introduces basic filing rules for alphabetic, numeric, subject, and geographic filing.

**Credits** 1-2

**Lab Hours** 22-44

**Quarters Offered**

Fall, Winter, Spring

**BIM 131 : Records Management**

Every business needs to manage its records and information efficiently. This course covers the necessary skills to understand the basics of records management and focuses on managing physical documents and electronic documents using different filing methods.

**Credits** 1-3

**Lab Hours** 22-66

**BIM 173 : Word Processing I**

This course is an in-depth introduction to Microsoft Word. The focus is to learn functions of Word 2021, to apply these functions to business situations, and begin preparing students for the (MOS) Microsoft Office Specialist exam.

**Credits** 1-5

**Lab Hours** 22-110

**Prerequisites**

[BIM 102](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring

**BIM 177 : Business Information Management Lab**

This course allows individual study in one of the business information management subject areas. Study and credit hours determined at the time of enrollment by the instructor.

**Credits** 1-6

**Lab Hours** 22-132

**Prerequisites**

Instructor permission.

**BIM 180 : Introduction to Microsoft Office**

This course is an introduction to the basic functions of Microsoft Office 2021- Word, Excel, Access, PowerPoint, and Integration. This course is intended for Business Information Management and Accounting students.

**Credits** 1-5

**Lab Hours** 22-110

**Prerequisites**

Successful completion of [MATH 094](#)/[MAP 117](#) or a higher placement.

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 181 : Introduction to Microsoft Word**

This course provides an introduction to Microsoft Word 2021. It is not intended for Business Information Management Program students.

**Credits** 1-3

**Lab Hours** 22-66

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 182 : Introduction to Microsoft Excel**

This course provides an introduction to Microsoft Excel 2021. It is not intended for Business Information Management Program students.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

Completion of [MATH 094](#)/[MAP 117](#) or a higher placement.

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 183 : Introduction to Microsoft Access**

This course provides an introduction to Microsoft Access 2021. It is not intended for Business Information Management Program students.

**Credits** 1-3

**Lab Hours** 22-66

**Quarters Offered**

Fall, Winter, Spring

**BIM 184 : Introduction to Microsoft PowerPoint**

This course provides an introduction to Microsoft PowerPoint 2021. It is not intended for Business Information Management Program students

**Credits** 1-3

**Lab Hours** 22-66

**Quarters Offered**

Fall, Winter, Spring

**BIM 186 : Microsoft Publisher**

This course is an in-depth introduction to Microsoft Publisher 2019. Students will learn to create professional publications and marketing materials such as creating a flyer, publishing a trifold brochure, and designing a newsletter.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

Completion of [BIM 110](#) Microsoft Essentials, [BIM 180](#) Introduction to Microsoft Office, or [BIM 181](#) Introduction to Microsoft Word

**BIM 187 : Adobe Acrobat**

This course is an in-depth introduction to Adobe Acrobat. Students will learn to create, edit, share, and sign PDF documents and forms.

**Credits** 1-3

**Lab Hours** 22-66

**Prerequisites**

Completion of [BIM 110](#) Microsoft Essentials, [BIM 180](#) Introduction to Microsoft Office, or [BIM 181](#) Introduction to Microsoft Word.

**BIM 190 : Spreadsheets I**

This course is an in-depth introduction to Microsoft Excel 2021. The focus is to learn functions of Excel, to apply this knowledge to

business situations, and to begin preparing students for the MOS (Microsoft Office Specialist) Expert certification exam.

**Credits** 1-5

**Lab Hours** 22-110

**Prerequisites**

Successful completion of BUS102-Business Mathematics, or successful completion of [MATH 094](#) or [MAP 117](#) or BBCC Placement Exam into [MATH 098](#) or higher.

**Quarters Offered**

Fall, Winter, Spring

**BIM 198 : Special Topics**

This course provides individual study in one of the business information management subject areas. Study and credit hours determined at the time of enrollment by the instructor.

**Credits** 1-5

**Lab Hours** 22-110

**Prerequisites**

Instructor permission

**BIM 210 : Internet**

This course is an introduction to the Internet, web browsers, search engines, and search techniques.

**Credits** 1-2

**Lab Hours** 22-44

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 262 : Professional Preparation**

This course covers job preparation components in which emphasis is given to job search and interviewing techniques

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

BUS 200: Supervision

**Quarters Offered**

Spring

**BIM 280 : Advanced Microsoft Office**

This course is a continuation from BIM180 and introduces the advanced features and

integration capabilities of Microsoft Office 2021. This course consists of five modules—Word, Excel, PowerPoint, Access, and Integration.

**Credits** 1–5

**Lab Hours** 22–110

**Prerequisites**

BIM180 and BUS102

**Quarters Offered**

Fall, Winter, Spring, Summer

**BIM 285 : Microsoft Office Specialist Prep and Certification**

This course is intended for students taking the MOS (Microsoft Office Specialist) certification exams. This course consists of five modules—Word, Excel, Access, PowerPoint, and Outlook. Students will review Microsoft Office 2021 features and complete a certified MOS exam at the end of each module.

**Credits** 1–5

**Lab Hours** 22–110

**Prerequisites**

[BIM 280](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

## Chemistry

**Lindsay Groce**

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**Aaron Mahoney**

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Chemistry courses may be taken as part of the Associate in Arts and Science DTA degree or as part of the Associate in Science–Transfer (AS–T 1) degree. Within the Associate in Arts and Science DTA degree, these courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section “Degrees & Certificates” for a detailed

description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Within the Associate in Science–Transfer degree, chemistry courses satisfy the AS–T 1 Chemistry pre–major. The Associate in Science–Transfer degree allows students to prepare for upper division study toward a Bachelor of Science degree in chemistry (as well as other sciences). This degree gives students the opportunity to make substantial progress toward fulfilling major requirements while completing at least half of the Breadth requirements for Humanities and Social Science. Chemistry is known as the central science because it is the study of the structure and behavior of all materials. This includes everything from the most infinitesimal particles to the vastness of the cosmos. A major in chemistry prepares students for career fields such as medicine, pharmacology, environmental science, engineering, education, ecology, or public service, and forensic science. The chemistry program provides courses to meet a variety of student needs.

For science and engineering majors, up to one year of college transfer course work is available (General Chemistry). The following recommended courses prepare students for most baccalaureate institutions, but students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### Degree Requirements:

To earn the Associate in Science–Transfer degree, a student must:

- Complete their degree within three years from the quarter of entry based on the

catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.

- Complete at least 90 transferable credits in courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being used for the basic or breadth requirements in the Associate in Science–Transfer degree may not be taken pass/fail.

## Chemistry Pre–Major AS–T I

### Degree Type

Associate in Science–Transfer

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Cultural, Social, Political Aspects  
Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Problem Solving  
Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
ENGL& 101	English Composition I	5
MATH& 141	Precalculus I	5

### Winter Quarter

Course Code	Title	Credits
CHEM& 162	General Chem w/Lab II	5
MATH& 142	Precalculus II	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

Course Code	Title	Credits
CHEM& 163	General Chem w/Lab III	5
ENGL& 235	Technical writing	5
MATH& 151	Calculus I	5

### Summer Quarter

Course Code	Title	Credits
	Advisor Approved HU/SS (5 credits)	5
	BIOL& 100 or PEH 100 or PEH 178	3-5

## Second Year

### Fall Quarter

Course Code	Title	Credits
BIOL& 221	Majors Ecology/Evolution	5
MATH& 152	Calculus II	5
PHYS& 221	Engineering Physics I w/Lab	5



## Winter Quarter

Course Code	Title	Credits
BIOL& 222	Majors Cell/Molecular	5
MATH& 163	Calculus 3	5
PHYS& 222	Engineering Physics II w/Lab	5

## Spring Quarter

Course Code	Title	Credits
BIOL& 223	Majors Organismal Phys	5
PHYS& 223	Engineering Physics III w/Lab	5
	PEH 100 or PEH 178	3
	Advisor Approved HU/SS (5 credits)	5

\* Many universities accept General Physics courses instead of Engineering Physics.

\*\* With placement into MATH& 151, Calculus I, at first semester, majors biology sequence can be replaced by additional math courses: MATH& 254 Calculus IV, MATH 220 Linear Algebra, and MATH& 230 Differential Equations or another year would be needed to take both the majors biology sequence and the advanced math classes.

## Recommended Courses for Pre-Nursing and Allied Health Majors

Course Code	Title	Credits
CHEM& 121	Intro to Chemistry	5
CHEM& 131	Intro to Organic/Biochem	5

\* [CHEM& 121](#) Required for Nursing DTA\*

\*\* [CHEM& 131](#) Required for students intending to complete a BSN degree.

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<b>Total Credits</b>	<b>90</b>
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## Chemistry Course Descriptions

### CHEM& 105 : Chemical Concepts

This course is intended for non-science majors. The focus is on fundamental topics of chemistry

such as; atoms and molecules, periodic table, organic chemistry, biochemistry, and radioactivity as they relate to current society. This class is intended to increase scientific literacy in non-science majors. This class can also provide some preparation for students with a limited chemistry background planning to continue on to CHEM& 121. This course is distinct from CHEM& 110 in both content and practice.

### Degree Code

Natural Science

**Credits** 5

**Lecture Hours** 55

### Prerequisites

Completion of [MATH 094](#)/[MAP 117](#) or a higher placement

### Quarters Offered

Fall, Winter, Spring, Summer

### CHEM& 110 : Chemical Concepts w/Lab

This course is intended for non-science majors. It will provide a basic introduction to chemical principles as they apply to the structure and behavior of matter with an emphasis in examples and application from everyday life. This course can prepare students with limited chemistry background who are planning to pursue further chemistry courses. The course does not meet the chemistry requirement for pre-nursing or nursing degrees. This course is distinct in content and practice from [CHEM& 105](#).

### Degree Code

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

### Prerequisites

Completion of [MATH 094](#)/[MAP 117](#) or a higher placement

### Quarters Offered

Fall, Winter, Spring

### CHEM& 121 : Intro to Chemistry

This course is designed primarily for the allied health student. In addition this class serves students wanting an introductory chemistry course prior to the full year CHEM& 161,162,163

sequence. Topics include basic chemical vocabulary, atomic structure, stoichiometry, periodic behavior of elements and compounds, gases, liquids, solids, solutions, water and equilibria. The course includes 22 hours of laboratory. Laboratory exercises are designed to reinforce classroom learning as well as providing hands on experience with chemical reactions. Relevance of course material to current practices in chemistry is a fundamental focus.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Completion of [MATH 098](#)/[MAP 119](#) or a higher placement. A passing grade in high school chemistry or completion of CHEM& 105 is recommended.

**Quarters Offered**

Fall, Winter, Spring, Summer

**CHEM& 131 : Intro to Organic/Biochem**

This course is designed for Allied Health transfer students and for students wanting an introductory organic chemistry course in preparation for a complete organic chemistry sequence at a baccalaureate institution. Topics include an introduction to alkanes, alkenes and alkynes, an exploration of common functional groups, and organic nomenclature. The course also explores the relationship of organic compounds such as carbohydrates, lipids, proteins, and enzymes with the human body. CHEM& 131 includes 25–30 hours of laboratory. Laboratory exercises are designed to reinforce classroom learning as well as providing hands on experience with chemical reactions.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

**Prerequisites**

[CHEM& 121](#) with a grade of 2.0 or above or instructor permission

**Quarters Offered**

Winter, Spring

**CHEM& 161 : General Chem w/Lab I**

The first in a three-quarter series examining the principles of General Chemistry with the primary emphasis on inorganic chemistry. This series is designed for physical science majors, pre-medical, pre-veterinary and pre-pharmacy students, and for students who are required to take one or more quarters of majors-level chemistry. Topics include: matter and measurements, atoms, molecules and ions, chemical formulas, chemical reactions and equations, electronic structure of atoms and periodic properties of elements.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

**Prerequisites**

Placement in MATH& 141 or completion of [MATH 099](#). A passing grade in high school chemistry or completion of CHEM& 121 recommended

**Quarters Offered**

Fall

**CHEM& 162 : General Chem w/Lab II**

The second in a three-quarter series examining the principles of General Chemistry with the primary emphasis on inorganic chemistry. Topics include: Chemical equilibrium, gas laws, molecular geometry, introduction to solution chemistry (acids and bases, precipitation reactions, redox chemistry), reaction rates and states of matter. Relevance of course material to current practices in chemistry is a fundamental focus.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

**Prerequisites**

Successful completion of CHEM& 161 or instructors permission

### Quarters Offered

Winter

### **CHEM& 163 : General Chem w/Lab III**

The final course in a three-quarter series examining the principles of General Chemistry with the primary emphasis on inorganic chemistry. Topics include acid-base chemistry, chemical equilibria, solubility, nuclear reactions, and electrochemistry. An introduction to organic chemistry and an introduction to inorganic qualitative analysis are included. A portion of the laboratory component is devoted to inorganic qualitative analysis..

### **Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 38

**Lab Hours** 33

### **Prerequisites**

Successful completion of CHEM& 162 or instructor permission.

### **Quarters Offered**

Spring

## College Success Skills

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CSS courses helps students become more effective learners and achieve their goals at Big Bend Community College. National studies show that students who take CSS courses are more likely to stay in college and graduate than students who do not. CSS courses teach students skills that research has identified as essential to college success. CSS courses add to or build on

the skills students already have as students debate the purpose of college, practice reading and studying techniques, engage in critical thinking, and explore the many resources Big Bend Community College offers to help them succeed.

Library 101 is designed to prepare students with academic level research skills necessary to create search strategies, locate resources, identify formats, evaluate search results, understand APA and other citation styles, and avoid plagiarism. Prerequisite: Placement into ENGL 099 or successful completion of ENGL 098 with a 2.0 or higher All course work for this class will be completed online through Canvas.

## College Success Skills Course Descriptions

### **CSS 100 : College Success Skills**

CSS 100 helps students become more effective learners and achieve their goals at Big Bend. National studies show that students who take courses like CSS 100 are more likely to stay in college and graduate than students who do not. CSS 100 teaches students skills that research has identified as essential to college success. CSS 100 adds to or builds on the skills students already have as students debate the purpose of college, practice reading and studying techniques, engage in critical thinking, and explore the many resources Big Bend offers to help them succeed.

**Credits** 3

**Lecture Hours** 33

### **CSS 102 : Focus on Success**

Students will explore many of the non-academic factors that affect success in college. Students will study self-awareness and the practical application of research to the following areas: career and college course choices; relationships; diversity; values; stress management; substance use; sexual decisions; financial literacy, and diet and exercise. In addition, students will develop basic computer literacy as they explore the

nonacademic factors through computer use, word processing operations, email, and use of the Internet

**Credits** 3

**Lecture Hours** 33

### **CSS 103 : First Year Student Success**

Students will explore diverse resources Big Bend offers to help them succeed. College Success Skills courses help students become effective learners and achieve their goals. Through course content students will explore careers and pathways, identify next steps after Big Bend, and financial literacy topics such as FAFSA completion, understanding credit scores, and balancing budgets.

**Credits** 1-3

**Lecture Hours** 11-33

### **CSS 105 : Introduction to Healthcare Studies**

This course provides the foundation for understanding the educational responsibilities of choosing a career in the healthcare field. Students will identify the scope of education and practice of various members of the healthcare profession in order to develop an educational and career plan. Additional key topics include test-taking preparation, critical thinking, leadership skills, communication styles, ethical decision making, note-taking and study tactics, and accessing reference sources.

**Credits** 3

**Lecture Hours** 33

### **CSS 106 : College Reading Strategies**

College Reading Strategies emphasizes the development of the critical reading and thinking skills (analysis, synthesis, and evaluation) needed for courses in the humanities, social sciences, and sciences. Presents active reading strategies, study reading techniques, and vocabulary building skills.

**Credits** 2-3

**Lecture Hours** 22-33

# Commercial Driver's License

**Program Info – Julia Gamboa**

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**Faculty – Guillermo Garza**

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Contact Workforce Education Services (WES) for eligibility for tuition and fee assistance (509.793.2310). A shortage of long-haul drivers prompted the creation of Big Bend Community College's Commercial Truck Driving Program. The course provides classroom study and behind-the-wheel driving and experience. The program covers a variety of professional topics and prepare students for entry-level job opportunities. Class includes defensive driving techniques, brake adjustment, equipment inspection, hazardous material transportation, DOT log books, trip planning, and other job-related topics. Class space is limited and early registration is strongly recommended. Dorms are available.

This 4-6 week course provides classroom study and 160 hours of driving instruction experience. Class includes Class A license with no air brake restrictions and the endorsements for doubles and triples, tankers and hazardous material, defensive driving techniques, brake adjustment, equipment inspection, hazardous material transportation, DOT log books, trip planning, and other job-related topics.

The CDL program prepares students for the CDL driving examination and entry-level employment. Regular attendance and punctuality are critical for successful completion. To be eligible for admissions to the BBCC Commercial Driver's License program applicants

must complete the following (and is recommended that items be completed in this order):

1. Completed State of Washington Community and Technical College Application for Admission (Application for Admission BBCC).
2. Completed CDL Program Application.
3. Completed BBCC Class Registration Form.
4. Copy of a valid Washington State Driver's License
5. Copy of the completed Department of Transportation (DOT) physical form and card.
6. Pay all tuition and fees at the time of registration.
7. Student must have CDL permit before the start of class
8. A pre-enrollment controlled substances test is mandatory. The test will be taken at the start of the program no later than the 3rd day of class. If the controlled substances test results are positive, the applicant will be expelled.

## Commercial Driver's License Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of an approved course offered through a particular program. Upon completion of the following option, the student will earn a Certificate of Accomplishment from BBCC.

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills

## Required Course

Course Code	Title	Credits
CDL 100	Commercial Driver's License (CDL)	17
<b>Total Credits</b>		<b>17</b>

## Commercial Driver's License Course Descriptions

### CDL 090 : CDL Skill Improvement

Extra driving time and instruction to enhance students driving skills and/or update their qualification for testing. This is an open enrollment course offered throughout each quarter. May be repeated for credit; graded on pass-fail basis.

**Credits** 1-10

**Lecture Hours** 22

**Lab Hours** 220

### Prerequisites

Instructor permission

### CDL 100 : Commercial Driver's License (CDL)

This course provides classroom study, driving instruction, and experience to prepare students for the State of Washington Commercial Drivers License (CDL) Class A exam and entry-level employment as a truck driver with no airbrake restrictions and endorsements for doubles and triples, tankers and hazardous material.

**Credits** 17

**Lecture Hours** 93

**Lab Hours** 187

### Prerequisites

Completed Commercial Drivers License (CDL) Program Application with supporting documents.

### Quarters Offered

Fall, Winter, Spring, Summer

# Communication Studies

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Communication studies courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Basic Requirement, the Humanities Breadth requirement, or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Communication Studies is the study of the creation, delivery, and reception of verbal and nonverbal communication. Students will learn to prepare and give effective and ethically grounded speeches, improve interpersonal communication, develop critical thinking and research skills, and analyze the production and content of media messages. Communication Studies is committed to a hands-on approach that brings together theory and real-world communication practices. The department approaches communication as a social and cultural process that is both about upholding individual identity as well as collective action as a way to find solutions for pressing social and political problems. Some of the possible career possibilities in Communication Studies are: politics, education, journalism, activism, research, mediation, podcasting, event planning, social media management, and broadcasting.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Recommended Pre-Major Courses Credits

CMST& 102 Introduction to Mass Communications CWU, EWU

CMST& 210 Interpersonal Communications CWU, EWU

CMST& 220 Public Speaking CWU, EWU\*

CMST 229 Advanced Public Speaking CWU, EWU\*

CMST 230 Small Group Discussion CWU, EWU

\* CMST& 220 AND CMST 229 transfer as same EWU course.

## Communication Studies Course Descriptions

### **CMST& 101 : Introduction to Communication**

This course is an overview of the field of Communication Studies and introduces students to the ways public and private human communication shape our world. Combining a social scientific and humanistic perspective, students will use communication theories to explore a range of topics to explain, critique, and problem-solve interpersonal, group, cultural, and organizational issues related to communication.

#### **Degree Code**

Diversity, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

### **CMST& 102 : Introduction to Mass Communications**

Intro to Mass Communication is a survey course that examines the history, institutions, and social impact of mass media communication and emerging technologies. Study focuses on critical analysis of the channels of mass media, as well as the media messages produced in advertising, news, and pop culture. The course includes discussion of major theories in the field, including theories on media literacy, agenda setting, media effects, and the role of representation in

understanding gender and cultural diversity. Special attention is given to the impact of mass media on individuals and society.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**CMST& 210 : Interpersonal Communication**

This course is a study of effective interpersonal skill development with the goal of improving personal and work relationships. Emphasis is placed on the personal, situational, and cultural influences of interaction. Topics include human perception, interpersonal dynamics, listening, conflict management, communication as shared meaning through the use of verbal and nonverbal symbol systems. The course is intended for students who communicate in one-on-one situations, including social work, healthcare, public service and business majors. This course is intended for students who are interested in improving interpersonal skills in work, volunteer, and personal environments.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**CMST& 220 : Public Speaking**

Provides an introduction to the fundamental process of speaking to the public. It is designed to help students develop skills in communication and to acquire an understanding of oral communication as a vital human relations factor in society.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**CMST& 230 : Small Group Communication**

This course is a study of the concepts and theories related to group formation and development, and basic group communication dynamics. Students lead and participate in various forms of group discussion and activities. This course is designed for Communication Studies majors, business majors, nursing majors, and community activists, as well as for anyone interested in working effectively in small group settings. (Formerly: SPH 210/CMST 234)

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter, Summer

**CMST 100 : Human Communications**

This course will provide students with applied communication skills. Students will learn practical application of small group presentations, conflict resolution and increased confidence in personal communication skills. Exemplifying self-concept, perception, verbal and non-verbal attributes and attitudes experienced between family, friends, and employment relationships.

**Credits** 4

**Lecture Hours** 44

**Quarters Offered**

Fall, Winter

**CMST 225 : Intercultural Communication**

Intro to Intercultural Communication is a survey course that focuses on the importance of culture in our everyday lives, and the ways in which culture affects communication skills and processes. In an era of rapid globalization being able to communicate across cultures is imperative to our ability to function in a diverse workplace, city, and world. This class will introduce the student to foundational and contemporary concepts, practices, and processes of intercultural communication, methods of critical intercultural analysis, and the scholarly field of Intercultural Communication.

Through the study of intercultural communication theories, and reflection on contexts (social, cultural and historical) in which we live and communicate, students will develop sensitivity to the role culture plays in communication.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CMST& 210 Interpersonal Communication or CMST& 220 Public Speaking

**CMST 229 : Advanced Public Speaking**

This course is a mastery course that moves beyond the fundamentals of public speaking. In this class public speaking is understood as a primary means of motivating change, of developing critical thinking and self-reflection, and of creating connections across difference. The student will be introduced to rhetorical theory and will have the opportunity to apply their creativity to a range of assignments from storytelling to crisis speech making..

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CMST& 220 (Public Speaking) or instructor permission

**CMST 330 : Organizational Communication**

This course explores organizational communication principles. Students will learn techniques for improving organizational communication through exploration of various communication topics including public relations and marketing, leadership functions, dispute resolution, coaching and mentoring, motivation and influence, perception, goal setting, emotional intelligence, growth mindset, diversity, and global perspectives. It is vital to recognize the ways in which communication choices shape organizational structures, goals, cultures, policies, problems, membership, ethics, and employee

behavior. In this course, you will learn effective communication needed in professional and volunteer groups. You will engage in interactive exercises and practical application of theory, practicing skills you will need to improve organizations, and the lives of its members and stakeholders.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

CMST & 210 Interpersonal Communication or CMST & 220 Public Speaking. Bachelor of Applied Science -Applied Management program admission.

## Composites

### Composites Course Descriptions

**CPT 120 : Composite Fabrication**

Students will develop skills in print reading, project planning, layout, distortion control, fixturing and other fabrication techniques. Students will have the opportunity to apply knowledge to projects of personal interest and/or as assigned.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44

**Prerequisites**

Completion of AMT 111, AMT 121, AMT 161, and AMT 201

**CPT 125 : Composite Assembly**

Students will identify and utilize appropriate materials and processes to assemble structures made of composite material. The class includes utilizing the lay-up, vacuum bagging, and cure processing of wet laminating techniques and pre-impregnated material.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44



**Prerequisites**

Completion of AMT 111, AMT 121, AMT 161, and AMT 201

**CPT 130 : Composite Repair**

Students will inspect, test, and repair composite structures. This course explains how imperfections affect composite properties and provide hands on training for the repair of defects. Areas of emphasis include structural and non-structural evaluation, material handling, surface preparation, and repair procedures.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44

**Prerequisites**

Completion of AMT 111, AMT 121, AMT 161, and AMT 201

**CPT 145 : Special Projects**

Students will develop skills in print reading, project planning, layout, distortion control, fixturing, and other fabrication techniques. Students will have the opportunity to apply knowledge to projects of personal interest and/or as assigned. A culminating oral presentation helps students develop communication and research skills.

**Credits** 3

**Clinical Hours** 90

**Prerequisites**

Completion of AMT 111, AMT 121, AMT 161, and AMT 201

## Computer Science

**Tom Willingham**

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**computerscience@bigbend.edu**

The Computer Science program offers industry-recognized training for high-demand careers in various sectors of information technology at Big Bend Community College. Students can earn

associate degrees, short-term certificates, or take courses for transfer to a four-year college or University.

Current Department of Labor statistics indicate that 8 of the 9 fastest growing occupations will be in the area of Information Technology. According to Money Magazine, 23 of the top 100 best jobs in America are in the Information Technology sector in fields such as Network Administrator, IT Specialist, Software Developer, Software Tester, Information Systems Security, IT Manager, Web Master, and Programmer.

Program prerequisites: Basic computer literacy, keyboarding, and familiarity with word processing and spreadsheet software; pre-college math and English courses may be required depending on student placement level. Degree options include an Associate in Computer Science DTA/MRP and a Systems Administration, Associate in Applied Science degree.

Certificate options include Cisco Networking Certificate of Achievement and Certificate of Accomplishment, Computer Support Specialist Certificate of Accomplishment, a Network Support Specialist Certificate of Accomplishment, and a Systems Administration Certificate of Achievement.

Big Bend Community College's CS Department is a Microsoft Data Center Academy, a CompTIA Academic Partner, a Cisco Networking Academy, and an active member of the National Cybersecurity Training & Education Center (NCyTE). We work with these and other organizations worldwide to ensure that our program is relevant to and meeting industry needs.

### Systems Administration, AAS Degree Type

Associate in Applied Science

The Systems Administration program prepares students for careers in network systems and

administration. Network administrators install and maintain computer workstations and server software, set up user accounts, maintain system resources and operations, trouble shoot systems and network problems, and manage system security.

Students are trained in technical support of PC systems and in administration of Windows Server and Linux server based operating systems. All types of industries and businesses including data centers, hospitals, school districts, corporations and governments that use networked computers, servers, and online tools require systems administration skills.

Students develop skills to:

- Install, upgrade, and repair stand-alone computers
- Install, wire, configure, administer, maintain, and troubleshoot Local Area Networks
- Setup and configure network protocols
- Install, configure, maintain and troubleshoot routers and switches
- Maintain and troubleshoot systems and network security (cybersecurity) protocols
- The program prepares students to take industry certification exams in CompTIA A+, Network+, Microsoft Technology Associate (MTA), Microsoft Certified Solutions Associate (MCSA), Cisco Certified Network Associate (CCENT and CCNA) and others

Program Learning Outcomes:

- IO1 Communication  
Communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Analyze and solve computational problems using a modern program language.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Demonstrate the ability to build, upgrade, and repair computer hardware

- PO5 Configure, troubleshoot, and administer computer networks and networking hardware
- PO6 Deploy and manage server hardware and software to support organizational operations and goals
- PO7 Identify basic components of databases, virtualization, security, and project management

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year Fall Quarter

Course Code	Title	Credits
CS 104	Intro to Computer Hardware	3
CS 105	Intro to Computer Operating Systems	3
CS 110	Networking Fundamentals	4
	ENGL 109 or ENGL& 101	3
WKED 101	Professional Preparation - Occupation Specific I	1

## Winter Quarter

Course Code	Title	Credits
CS 120	A+ Prep & Certification	1-2
CS 205	Windows Server Administration	5
MATH& 141	Precalculus I	5
	PSYC& 100 or SOC& 101	5
WKED 102	Professional Preparation - Occupation Specific II	1

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CS 121	Network+ Prep & Certification	1
CS 171	Cisco Networking: Intro to Networks	6
CS 206	Linux Server Administration	5
	CMST& 220 or CMST& 210	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
WKED 103	Professional Preparation - Occupation Specific III	1

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CS 106	Intro to Virtualization	5
CS 111	Intro to Programing	5
	Approved Elective (5 credits)	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CS 115	Intro to Database Design & Management	5
CS 172	Cisco Networking: Routing, Switching, & Wireless Essentials	6
CS 207	Introduction to Security Administration	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	CS& 131 or CS& 141	5
CS 173	Cisco Networking: Enterprise Networking, Security, and Automation	6
<b>Total Credits</b>		<b>93-94</b>

## Cisco Networking Academy Certificate of Accomplishment

### Degree Type

Certificate

This short term training option is designed for students seeking the Cisco CCENT and CCNA certifications. If desired, students can continue training and apply all earned credits to the Cisco Networking Academy Certificate of Achievement and Associate of Applied Science degree options.

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

### Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CS 171	Cisco Networking: Intro to Networks	6
CS 172	Cisco Networking: Routing, Switching, & Wireless Essentials	6
CS 173	Cisco Networking: Enterprise Networking, Security, and Automation	6
<b>Total Credits</b>		<b>18</b>

## Cisco Networking Certificate of Achievement

### Degree Type

Certificate

The Cisco Networking Academy prepares students to take the Cisco certification exams to become a Cisco Certified Network Associate (CCENT and CCNA). Certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched

networks, including implementation and verification of connections to remote sites in a WAN.

Students complete general education requirements and, if desired, can continue training and apply all earned certificate of achievement credits to the Associate in Applied Science degree.

Program Learning Outcomes:

- IO1 Communication  
Communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Analyze and solve computational problems using a modern program language
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills
- PO4 Demonstrate the ability to build, upgrade, and repair computer hardware
- PO5 Configure, troubleshoot, and administer computer networks and networking hardware
- PO8 Configure WAN technologies and network services required by converged applications in a complex network
- PO9 Troubleshoot routers & switches; resolve common VLAN routing issues in both IPv4 & IPv6 networks

## Required Courses

Course Code	Title	Credits
CS 104	Intro to Computer Hardware	3
CS 105	Intro to Computer Operating Systems	3
CS 110	Networking Fundamentals	4
CS 121	Network+ Prep & Certification	1
CS 171	Cisco Networking: Intro to Networks	6
CS 172	Cisco Networking: Routing, Switching, & Wireless Essentials	6
CS 173	Cisco Networking: Enterprise Networking, Security, and Automation	6
	CMST& 220 or CMST& 210	5
ENGL 109	Applied Technical Writing	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
	MATH& 141 or MAP 117	5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>49</b>

## Desktop Support Specialist Certificate of Accomplishment

### Degree Type

Certificate

This short term training option is designed for students seeking the Cisco CCENT and CCNA certifications. If desired, students can continue training and apply all earned credits to the Cisco Networking Academy Certificate of Achievement and Associate of Applied Science degree options.

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
CS 103	Intro to Computer Hardware & Operating Systems	6
CS 116	Networks & Network Security I	3
CS 117	Networks & Network Security II	3
CS 120	A+ Prep & Certification	1-2
CS 171	Cisco Networking: Intro to Networks	6
CS 205	Windows Server Administration	5
CS 206	Linux Server Administration	5
<b>Total Credits</b>		<b>30</b>

## Systems Administration Certificate of Achievement

### Degree Type

Certificate

This certificate prepares students to enter the work force as entry-level computer technicians. The Certificate of Achievement is designed for students wishing to complete short-term (one-year) training. Students gain the necessary skills to prepare for and take industry recognized computer certification exams in CompTIA A+, Microsoft MTA, and Cisco CCENT.

Students take general education requirements in math, English, and communication and, if desired, can continue training and apply all earned credits to the Associate in Applied Science degree.

Program Learning Outcomes:

- IO1 Communication  
Communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills?  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Demonstrate the ability to build, upgrade, and repair computer hardware
- PO5 Configure, troubleshoot, and administer computer networks and networking hardware
- PO6 Deploy and manage server hardware and software to support organizational operations and goals

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
CS 104	Intro to Computer Hardware	3
CS 105	Intro to Computer Operating Systems	3
CS 110	Networking Fundamentals	4
CS 120	A+ Prep & Certification	1-2
CS 121	Network+ Prep & Certification	1
CS 171	Cisco Networking: Intro to Networks	6
CS 205	Windows Server Administration	5
	Approved CS Elective (5 credits)	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MATH& 141	Precalculus I	5
	MATH& 141 or MAP 117	5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>45</b>

## Computer Science Transfer Associate in Computer Science DTA/MRP

### Degree Type

Direct Transfer Agreement/Major Related Program

Big Bend Community College offers the Associate in Computer Science DTA/MRP degree to prepare students for transfer to a four-year university and complete a bachelor's degree in Computer Science. Graduates may be able to transfer with junior status with all or most prerequisites for the computer science major completed. A computer science bachelor's degree prepares students to work in careers such as software development, computer programming, and scientific computing. Since programs differ at each college, students should consult program outlines in the catalog of the college or university to which they plan to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in the transfer area and the requirements of the intended college or university.

Program prerequisites:

- Complete BBCC admissions process
- Complete English and math placement tests; precollege course may be required
- Meet with a CS program advisor to develop a professional development plan
- MATH&141 Pre-Calculus I and MATH&142 Pre-Calculus II
- Basic computer literacy, keyboarding, and familiarity with word processing and spreadsheet software

Associate in Computer Science DTA/MRP (95 credits<sup>^</sup>)

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

Degree Requirements:

To earn the Associate in Computer Science DTA MRP degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in designated courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements.

The 90 transferable credits must include the following:

## Basic Requirements

### Communication Skills

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGL& 101	English Composition I	5
	ENGL& 235 or ENGL& 102	5

### Quantitative Skills

Symbolic or Quantitative Reasoning

Note: Intermediate algebra or higher placement score is required for entrance into all SQR courses. Enrollment into any BBCC math course requires placement at the appropriate entrance level.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 151	Calculus I	5

## Breadth Requirements

### Humanities

Select from at least two of the disciplines listed on the Humanities distribution list with no more than 10 credits from any one discipline. No more than 5 credits in foreign language at the 100 level may apply to this category. No more than 5 credits in humanities performance/skill credits (HP) may apply to this requirement.

Recommended:

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
PHIL 210	Ethics	5
PHIL& 120	Symbolic Logic	5
	Student choice for remaining 5 credits in this category	5

## Social Science

Select from at least two of the disciplines listed on the Social Science distribution list

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	ECON& 201 or 202	5
	Student Choice for Remaining Credits in this Category (10 credits)	10

## Natural Science

Select from at least two of the disciplines listed on the Natural Science distribution list

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
MATH& 152	Calculus II	5

## Major Core Requirements

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	CS& 131 or CS& 141	5
	CS 132 or 142	5
CS 111	Intro to Programing	5
CS 235	Data Structures and Algorithms with C++	5
MATH& 163	Calculus 3	5
MATH& 254	Calculus IV	5

## University Specific Requirements

Gonzaga, Heritage, and WSU require a Discrete Math (Structures) prerequisite that is not currently offered at Big Bend Community College.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
PHYS& 223	Engineering Physics III w/Lab	5
MATH 220	Linear Algebra	5
MATH 230	Differential Equations	5
ENGR 202	Design of Logic Circuits	6

## Physical Education/Health & Wellness

No more than 3 PEH AC credits may be used in the degree.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	Three PEH Activity [AC] Credits	3
PEH 100	Lifetime Wellness	3
PEH 178	Principles of Fitness	3

### General Electives

Some recommendations:

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 146	Introduction to Statistics	5
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5

Note: No course may be used more than once for meeting degree requirements.

\* Some universities may require more classes to meet prerequisites.

Program Major Requirements:

This is a complicated DTA degree with many university-specific requirements. Students must see their advisor for these university-specific requirement. Any course without an "&" requires approval. Other classes may be accepted or substituted. Refer to the Humanities and Social Science Distribution lists to help you choose classes within the distribution categories that meets your educational goals and interests. Refer to the Departments and Programs of Study pages for a full listing of courses in each discipline and which quarter each course will be taught; ask your advisor to help you.

- See advisor for university-specific requirements
- Any course without an & requires approval
- Other classes may be accepted or substituted with approvals

The following recommended courses prepare students for most baccalaureate institutions. Degree Requirements will vary with each college.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CS 111	Intro to Programing	5
ENGL& 101	English Composition I	5
MATH& 141	Precalculus I	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	CS& 131 or CS& 141	5
	ENGL& 235 or ENGL& 102	5
MATH& 142	Precalculus II	5



## Spring Quarter

Course Code	Title	Credits
	CS 132 or 142	5
	Humanities or Social Science (5 credits)	5
MATH& 151	Calculus I	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
	Humanities or Social Science (5 credits)	5
MATH& 152	Calculus II	5
PHYS& 221	Engineering Physics I w/Lab	5
MATH& 146	Introduction to Statistics	5

### Winter Quarter

Course Code	Title	Credits
	Humanities or Social Science (5 credits)	5
	MATH& 163 or MATH& 153 and MATH& 254	5-10
MATH 220	Linear Algebra	5
PHYS& 222	Engineering Physics II w/Lab	5

### Spring Quarter

Course Code	Title	Credits
	Humanities or Social Science (5 credits)	5
	Humanities or Social Science (5 credits)	5
PHYS& 223	Engineering Physics III w/Lab	5

^Some universities may require more classes to meet prerequisites.

#### \*Math and English Requirements

- Any course without an & requires approval
- See advisor for university-specific requirements
- Gonzaga, Heritage, and WSU require a Discreet Math (Structures) prerequisite that is not currently offered at Big Bend Community College.
- MATH 230 Differential Equations (Gonzaga)
- MATH& 254 Calculus IV (Gonzaga, WSU)
- CS 235 Data Structures & Algorithms (WSU)
- ENGR 202 Design of Logic Circuits (EWU)
- Other classes may be accepted or substituted with approvals

#### \*\*Humanities and Social Science Requirements

- Social Sciences: Must include courses from three different disciplines (15 credits)
- Humanities: At least two disciplines. No more than 5 credits in 100 level foreign language. Maximum of 5 humanities performance/skill credits may be applied to breadth (15 credits)
- Any course without an & requires approval
- See advisor for university-specific requirements
  - CMST& 210 Interpersonal Communications
  - PHIL& 120 Symbolic Logic (Gonzaga, WSU)
  - PHIL 120 Ethics (EWU)
  - ECON& 201 Micro Economics (WSU-Vancouver)
  - ECON& 202 Macro Economics (WSU-Vancouver)
  - PSYC& 100 General Psychology
  - SOC& 101 Intro to Sociology
- Other classes may be accepted or substituted with approval

**Total Credits**

**90**

# Computer Science Course Descriptions

## **CS& 131 : Computer Science I: C++**

An introduction to computer programming design and development with a primary focus on data structures and abstraction using the C++ object-oriented programming language. Topics include logical problem-solving, algorithm development, and programming basics, including an understanding of pointers, dynamic memory allocation, and data structures such as linked lists.

### **Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

### **Prerequisites**

MATH& 141 or concurrent enrollment.

### **Quarters Offered**

Winter

## **CS& 141 : Computer Science I: Java**

An introduction to computer programming using the Java programming language. Students learn algorithm development and computational problem solving while writing Java programs. Language features that are studied include keywords, variables, data types, control structures, arrays, methods, classes, and objects.

### **Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

### **Prerequisites**

MATH& 141 or concurrent enrollment.

## **CS 101 : Intro to Computer Science**

An introduction to computer science concepts and the role of computers in society. Topics include the history of computing, computer hardware, operating systems, the Internet, database management, an overview of programming languages, careers in computer technology, and the ethics of computing. This

course is designed for Computer Science majors, and will emphasize principles and underlying computer technology concepts.

### **Degree Code**

Specified Elective

**Credits** 3

**Lecture Hours** 33

### **Quarters Offered**

Spring

## **CS 103 : Intro to Computer Hardware & Operating Systems**

This course covers basic concepts of computing hardware and operating systems (O/S) design structure, and mechanisms. Coursework will address the impact of hardware design on applications and systems software including computer software systems performance, memory, kernel structure, input/output (I/O) devices, file system functions, virtualization, and securing the operating system. Students will learn how computers work, how to replace parts and upgrade components, and how to install and configure major modern client operating systems. Students completing CS 103 have the knowledge and skills necessary for CompTIA A+ Certification exam preparation.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

### **Prerequisites**

## **CS 104 : Intro to Computer Hardware**

This course covers basic concepts of computing hardware and addresses the impact of hardware design on applications and systems software. Students will learn how computers work and be able to replace parts and upgrade components. Students completing CS 104 and CS 105 will have the knowledge and skills necessary for CompTIA A+ Certification exam preparation.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

### **Quarters Offered**

Fall, Winter

**CS 105 : Intro to Computer Operating Systems**

An introduction to operating systems (O/S) design, structure, and mechanisms. Topics include computer software systems performance, memory, kernel structure, input/output (I/O) devices, file system functions, virtualization, and securing the operating system. Students will install and configure major modern client operating systems. Students completing [CS 104](#) and CS 105 will have the knowledge and skills necessary for CompTIA A+ Certification exam preparation.

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall, Winter

**CS 106 : Intro to Virtualization**

This introductory course is an overview and hands-on exploration of virtualization in desktop, server, and cloud environments. Concepts covered include an introduction to virtualization technologies and how to deploy and manage a virtual server environment. Course topics include virtualization concepts and terms, installing and deploying virtual machines using Hyper-V, VM Ware, and XenServer, and implementing a secure virtual environment.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[CS 103](#) or [CS 105](#)

**Quarters Offered**

Fall

**CS 110 : Networking Fundamentals**

An introduction to the basic concepts of computer networking, including: the OSI model, working with network-related hardware, network configuration with TCP/IP, network operating system basics, fault tolerance issues, and troubleshooting network problems. The course prepares students for the CompTIA Network+ certification exam. Note: This course's learner outcomes align to the common IT course, IT 115: Introduction to Networking, and is accepted as a

transfer course with participating Washington State community and technical colleges. Look for this notation if transferring to another IT program at a Washington State community or technical college.

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Quarters Offered**

Fall, Winter

**CS 111 : Intro to Programming**

An introductory computer programming course. Students learn to write and debug simple text based programs while exploring the fundamental principles of programming. Topics for study include input / output, statements, expressions, operations, variables, data types, control structures, program modularization, basic data structures and file input and output.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

Completion of [MATH 098](#)/[MAP 119](#) or concurrent enrollment or a higher placement.

**Quarters Offered**

Fall, Spring

**CS 115 : Intro to Database Design & Management**

This course will examine the theory of database design and management, including how collections of data are organized, stored, and analyzed. Topics include the fundamentals of the relational model, Structured Query Language (SQL), data modeling, database design and administration, and web database processing. Introductory business and financial services applications will be used to illustrate course concepts through lectures and hands-on labs.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Quarters Offered**

Winter

### **CS 116 : Networks & Network Security I**

An introduction to computer and device networking is required by anyone becoming involved in any technical field. Today's personal computers, microcontrollers and PLCs no longer work in isolation. They constantly exchange a variety of information through wired and wireless networks. This course will provide a basic understanding of the Theory of Operation, security, technical design, and architecture of network and Internet communication. The course is designed for all audiences, including those with absolutely no prior technical experience or math skills. The Internet is amazingly designed and should be understood by all who use it.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

### **CS 117 : Networks & Network Security II**

This course will provide the operational commands, knowledge, skills, and abilities needed to use, debug, explore, maintain, modify, troubleshoot and defend networks based on the Theory of Operation. The student will learn requisite Command Line Interface (CLI) and Graphical User Interface (GUI) skills and utilities for Windows and Linux networking utilities. These skills are required to successfully support personal and organizational networks, data centers, and internet connectivity. The course will build on network security and add internet, WiFi, industrial and organizational security including firewalls, Industry 4.0, Industrial Internet of Things (IIoT), Internet of Things (IoT), Long Range (LoRa). Learning experiences will be augmented by learning to setting up several small, functional desktop networks at home or in the lab. Student ownership of a small home lab equipment setup will be covered by class lab fees.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

CS 116: Networks & Network Security I

### **CS 120 : A+ Prep & Certification**

This course is intended for students taking the CompTIA A+ certification exam. Content from the prerequisite courses will prepare the students for the exams. Instructors for this course will provide materials, support, and practice exams to facilitate student preparation

**Credits** 1-2

**Lab Hours** 22-44

**Prerequisites**

[CS 103](#) or [CS 104](#) and [CS 105](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

### **CS 121 : Network+ Prep & Certification**

This course is intended for students taking the CompTIA Network+ certification exam. Students will have materials, support, and practice exams provided to facilitate their preparation.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[CS 110](#) or [CS 116](#) & [CS 117](#)

**Quarters Offered**

Fall, Winter, Spring, Summer

### **CS 122 : Server+ Prep & Certification**

This course is intended for students taking the CompTIA Server+ certification exam. Students will have materials, support, and practice exams provided to facilitate their preparation.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[CS 205](#) and [CS 206](#) or instructor permission.

### **CS 123 : Security+ Prep & Certification**

This course is intended for students taking the CompTIA Security+ certification exam. Students will have materials, support, and practice exams provided to facilitate their preparation.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[CS 207](#) or instructor permission

**CS 124 : Cloud+ Prep & Certification**

This course is intended for students taking the CompTIA Cloud+ certification exam. Students will have materials, support, and practice exams provided to facilitate their preparation.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

Instructor permission.

**CS 132 : Advanced Programming with C++**

This course expands on the fundamentals covered in [CS& 131](#). Students will develop intermediate C++ programs for both traditional data processing and object-oriented applications. Through the experience of creating these programs and methods the student will learn advanced features of C++ object-oriented programming to solve problems in various domains.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

CS& 131: Computer Science I: C++

**Quarters Offered**

Fall, Winter, Spring

**CS 142 : Advanced Programming with Java**

This course expands on the programming fundamentals covered in [CS& 141](#). Students learn to develop advanced object-oriented Java programs of increasing complexity using advanced design and data abstraction techniques. Language concepts explored include recursion, inheritance, polymorphism, exception handling, interfaces, file processing and graphical programs.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

CS& 141: Computer Science I: Java

**Quarters Offered**

Fall

**CS 151 : Introduction to Digital Forensics**

This course is an introduction to the methods used to properly conduct a computer forensics investigation. Topics covered include an overview of computer forensics as a profession; how computer crime affects forensics, forensic methods, and labs; branches of digital forensics; email forensics, mobile forensics, data acquisition and analysis; and, a review of computer forensics tools.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[CS 103](#) or [CS 105](#) and either [CS 110](#) or [CS 116](#)

**CS 152 : Ethical Hacking**

This course is an introduction to Cybersecurity. There is an exponential growth in the Information Technology sector for trained security specialists with in-depth knowledge and experience analyzing data and securing networks, computers and mobile devices. Learning techniques of threat management is mission critical to prevent data breaches. This course prepares students for an entry level IT position focused on cybersecurity which is required for many Information System Technician, Network Administration, and other IT Specialist positions.

**Credits** 5--1

**Lecture Hours** 31

**Lab Hours** 44

**Prerequisites**

[CS 103](#) or [CS 105](#) and either [CS 110](#) or [CS 116](#)

**CS 171 : Cisco Networking: Intro to Networks**

This course introduces the architectures, models, protocols, and networking elements that connect users, devices, applications and data through the Internet and across modern computer networks - including IP addressing and Ethernet fundamentals. This is the first of three courses comprising the Cisco CCNA7 curricula and covers the technical knowledge and skills required to take the Cisco CCNA exam.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

[CS 103](#) or [CS 104](#) and [CS 105](#)

**CS 172 : Cisco Networking: Routing, Switching, & Wireless Essentials**

This course focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area networks (WLANs) and security concepts. Students learn key switching and routing concepts. By the end of this course, students will be able to perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. This is the second of three courses comprising the Cisco CCNAv7 curricula and covers the technical knowledge and skills required to take the Cisco CCNA exam.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

CS 171: Cisco Networking: Intro to Networks

**CS 173 : Cisco Networking: Enterprise Networking, Security, and Automation**

This course helps students develop workforce readiness skills and build a foundation for success in networking-related careers and degree programs. Students learn, apply, and practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities including comprehensive networking concepts and skills, from network applications to the protocols and services provided to those applications. Upon completion of [CS 171](#), [CS 172](#), and [CS 173](#), learners will be prepared to take the Cisco CCNA Unified certification exam.

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

CS 172: Cisco Networking: Routing, Switching, & Wireless Essentials

**CS 195 : Internship: Work Based Learning**

Students will participate in a supervised internship with regional computer and information technology employers. Students will acquire industry work experience that validates employability skills. Course may be repeated up to a maximum of 4 credits.

**Credits** 1-4

**Clinical Hours** 33-132

**Prerequisites**

Enrollment in Computer Science program, instructor permission, and concurrent enrollment in [CS 197](#).

**CS 197 : Internship: Work Based Learning Seminar**

Students participating in internships share feedback and discussion to integrate work-based learning experiences with classroom instruction. Students are expected to participate in class discussions and develop a computer science career-based employment resume.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

Concurrent enrollment in [CS 195](#)

**CS 205 : Windows Server Administration**

This course focuses on Windows Server Administration. Topics include the communication, design and implementation of the Active Directory, DNS, Group Policy Objects, disaster recovery, configuring the web server, security, and working knowledge of Microsoft Exchange.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[CS 103](#) or [CS 105](#) and either [CS 110](#) or [CS 116](#)

**Quarters Offered**

Winter, Spring

**CS 206 : Linux Server Administration**

In this course students will customize the BASH environment, build shell scripts in the Korn shell, control the Linux system, manage user accounts, manage system software in Linux, and manage

file systems in Linux. Students will also troubleshoot the system, configure the client/server environment, apply security practices to Linux systems, and improve system performance. (Formerly UNIX/Linus Server Administration)

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[CS 103](#) or [CS 105](#), [CS 205](#) recommended

**Quarters Offered**

Spring, Summer

### **CS 207 : Introduction to Security Administration**

This course builds on prior course work in computer hardware, operating systems, and networks. Students will acquire the specific skills required to implement basic security services on any type of computer network and be prepared to take the CompTIA Security+ exam.

**Credits** 5

**Lecture Hours** 55

**Prerequisite or Corequisite**

[CS 103](#) or [CS 105](#) and either [CS 110](#) or [CS 116](#)

**Prerequisites**

[CS 105](#) and [CS 110](#), or instructor permission.

**Quarters Offered**

Winter

### **CS 211 : Intro to Scripting**

An introductory scripting course. Students will explore the fundamental principles of scripting and learn to write and debug simple scripting language to add functionality to programs. Topics for study include input/output, operations, pipes, shell variables, control structures, file input and output, regular expressions, and navigation within a file system

**Degree Code**

Specified Elective

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

**Prerequisites**

Recommend [CS 111](#), Linux experience, or instructor permission

### **CS 235 : Data Structures and Algorithms with C++**

The 3rd course in a yearlong study of the foundations of Computer Science. In this course a variety of data structures and their associated algorithms are implemented and utilized. Basic data structures such as arrays, linked lists, stacks, queues, sets, and trees are studied and applied to problems in data storage and manipulation. Basic sorting algorithms are studied. Design, analysis and implementation techniques are discussed to illustrate and apply the concepts of the course.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

[CS 132](#) or Instructor Permission.

**Quarters Offered**

Fall, Winter, Spring

### **CS 245 : Data Structures and Algorithms with Java**

The 3rd course in a yearlong study of the foundations of Computer Science. In this course a variety of data structures and their associated algorithms are implemented and utilized. Basic data structures such as arrays, linked lists, stacks, queues, sets, and trees are studied and applied to problems in data storage and manipulation. Basic sorting algorithms are studied. Design, analysis, and implementation techniques are discussed to illustrate and apply the concepts of the course.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

[CS 142](#) or Instructor permission

### **CS 260 : Computer Programming Topics**

This course highlights a new emerging software development, programming language, cloud computing, web application, or mobile application topic. In consultation with their Computer Science program advisor, students choose a specialized or in-depth programming related project and apply new and emerging



computing and information technologies. Completed projects are presented and shared with fellow students.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

[CS 111](#) or instructor permission.

### **CS 295 : Internship: Work Based Learning II**

Students will participate in an advanced internship with regional computer and information technology employers. Course may be repeated up to 4 credits.

**Credits** 1-4

**Clinical Hours** 33-132

**Prerequisites**

[CS 195](#), [CS 197](#), and instructor permission

### **CS 297 : Internship: Work Based Learning Seminar II**

Continuation of internship work based learning seminar. Students will provide feedback and discussion to integrate and relate internship/work-based learning experience and classroom instruction.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[CS 197](#) and instructor permission

## Criminal Justice

**Jody Quitadamo, Division Chair**

**509.793.2177**

**[criminaljustice@bigbend.edu](mailto:criminaljustice@bigbend.edu)**

**Kaja Englund**

**[criminaljusticej@bigbend.edu](mailto:criminaljusticej@bigbend.edu)**

Criminal Justice involves the scientific study of crime. This program is designed to broaden students' awareness of how our society deals with criminals using law enforcement, the courts, and correctional institutions. This area of study is intended for individuals already working within, or want to work within, the criminal justice

system or those who will eventually transfer to four-year college or university.

The world of Criminal Justice is growing in popularity based on scientific advances and the interest that current media has generated. We now understand more about the benefits of science in solving crimes and how certain techniques used in the Criminal Justice System impact its outcomes. If you want to learn more about law enforcement, the courts, or the corrections

system, please contact me.

I can give you information about job possibilities in the field. No longer does a criminal justice degree mean that you are becoming only a law enforcement officer. You can now become a forensic scientist, legal psychologist, corrections officer, lawyer, and much, much, more. I would love to chat with you if you are interested in anything related to the justice system and reducing crime.

We have two degree options that can be tailored to your specific career and academic goals. One degree option will prepare you to go straight into work and the other will prepare you to transfer to a university. Contact me using the information on this page so we can find the program and courses that are right for you. As your advisor, I will sit with you every quarter and help you plan your courses. We will take into account your specific career goals, your current time or financial constraints, and your enthusiasm for particular topics. Email is the best way to reach me; contact me today!

## Criminal Justice AAS-T

**Degree Type**

Associate in Applied Science

The Criminal Justice Workforce Program is designed to develop the proficiencies and skills necessary to obtain entry-level employment in Criminal Justice related career paths. Job possibilities after completing this degree include but are not limited to entry-level police officer,



corrections officer in a prison or jail, or other criminal justice job that requires a 2-year degree or less.

This program assists the development of skills that employers are looking for and was specifically designed not to teach specific police or corrections tactics but to give a well-rounded foundation to any criminal justice related career.

Program Learning Outcomes:

- IO1 Communication  
Execute effective oral and written communication skills related to their discipline (e.g., report writing)
- IO2 Quantitative Reasoning  
Execute mathematical reasoning using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Explain ethical decision making and know why high personal ethics is vital in criminal justice
- PO4 Identify what is required to enter various Criminal Justice careers including knowledge, skills, abilities, physical fitness and agency specific standards
- PO5 Demonstrate an understanding of the role and structure of leadership in Criminal Justice and how to employ leadership techniques

The following recommended courses will prepare students for most entry-level positions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in their area of study so that any needed substitutions can be made. The recommended courses prepare students for most baccalaureate institutions. Degree Requirements will vary with each college.

## First Year Fall Quarter

Course Code	Title	Credits
CJ& 101	Intro Criminal Justice	5
ENGL& 101	English Composition I	5
	MATH& 107 or MATH& 146	5

## Winter Quarter

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
CJ& 105	Introduction to Corrections	5
ENGL& 235	Technical writing	5

## Spring Quarter

Course Code	Title	Credits
PSYC& 100	General Psychology	5
CJ 217	Advanced Report Writing	3
	CJ Approved Elective (5 credits)	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
	PEH Activity Course (1 credit)	1

## Second Year Fall Quarter

Course Code	Title	Credits
CJ 210	Introduction to American Policing	5
	CJ Approved Elective (5 credits)	5
	PEH Activity Course (1 credit)	1

## Winter Quarter

Course Code	Title	Credits
CJ& 110	Criminal Law	5
CJ& 106	Juvenile Justice	5
	CJ Approved Elective (5 credits)	5
	PEH Activity Course (1 credit)	1

## Spring Quarter

Course Code	Title	Credits
	CJ Approved Electives (11 credits)	11

## Criminal Justice Program Approved Electives

Course Code	Title	Credits
BIOL& 100	Survey of Biology	5
CHEM& 105	Chemical Concepts	5
CHEM& 121	Intro to Chemistry	5
CJ 198	Special Topics	1-2
CJ 203	Police Administration and Leadership	5
CJ 209	Police Psychology	5
CJ 215	Criminal Investigations	5
CJ 295	Work-Based Learning (CJ)	1-8
PHIL 210	Ethics	5
POLS& 203	International Relations	5
NUTR& 101	Nutrition	5
PSYC 225	Psychology and the Legal System	5
PSYC& 200	Lifespan Psychology	5
REL 201	World Religions	5
REL 211	Religion in America	5
SOC& 101	Intro to Sociology	5
UAS 107	Commercial UAS Remote Pilot (Part 107)	2
UAS 112	Uncrewed Aircraft Systems (UAS) Ground School I	5
UAS 142	Uncrewed Aircraft Systems (UAS) Flight Lab	6
<b>Total Credits</b>		<b>91</b>

## Criminal Justice Course Descriptions

### **CJ& 101 : Intro Criminal Justice**

This course provides an overview of the criminal justice system discussing law enforcement, the courts, corrections, juvenile justice, and current

issues. This course examines the Constitutional requirements, historical development of the system, the agencies, processes and theories within the criminal justice system. Emphasis is placed on how the various systems interrelate and interact with each other to attain the goal of an equitable delivery of crime-related public services

### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

### **Quarters Offered**

Fall, Winter, Spring, Summer

### **CJ& 105 : Introduction to Corrections**

This course will examine the historical context, philosophical concepts, and major theories that have shaped corrections in the United States. Various sentencing options, correctional approaches and programs, the role of corrections in the larger criminal justice system, and contemporary correctional issues are discussed. Emphasis is placed on the effects of the corrections system on the individuals, families, and society (Formerly CJ 220).

### **Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

### **Prerequisites**

Completion of CJ& 101 or Instructor Permission

### **Quarters Offered**

Spring

### **CJ& 106 : Juvenile Justice**

This course will cover the history and philosophy of juvenile justice in America and the impact of societal reforms on the juvenile justice system. Multiple theories of delinquency will be discussed, as well as how society's response to criminal behavior influenced the development, construction, and implementation of juvenile justice laws, policies, and programs.

### **Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CJ& 101: Intro Criminal Justice

**Quarters Offered**

Winter

**CJ& 110 : Criminal Law**

This course is designed as an introduction into the study of criminal law and will review the difference between crimes against property, crimes against public, and crimes against a person. This course will study the various mental states required for criminal responsibility and those defenses used in a criminal trial, along with definitions, classifications, elements, and penalties of crime and criminal responsibility.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Completion of CJ& 101 or Instructor Permission

**Quarters Offered**

Winter

**CJ 198 : Special Topics**

This course provides individual study in one of the criminal justice subject areas. Study and credit hours determined at the time of enrollment by the instructor.

**Credits** 1-2

**Lecture Hours** 11-22

**Prerequisites**

Instructor Permission.

**CJ 203 : Police Administration and Leadership**

This course covers an overview of police organization and administration. Principles of management and effective leadership will be covered in relation to line and staff positions and advancement within a law enforcement career.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CJ& 101: Intro Criminal Justice

**CJ 209 : Police Psychology**

This course introduces theories of perception, emotion, motivation, personality and nonverbal communication used as tools by police officers in everyday contacts. Understanding behavior and predicting human behavior in common police situations are emphasized. Police family and personal mental health is also covered.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

PSYC& 100

**CJ 210 : Introduction to American Policing**

This course examines the role of policing in American society. Theories and practices are covered from historical and contemporary perspectives. This course identifies challenges in law enforcement including the political, social, organizational, and legal environments where the police perform their roles.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Completion of CJ& 101 or Instructor Permission

**Quarters Offered**

Fall

**CJ 215 : Criminal Investigations**

This course will review the role investigations play in the criminal justice system. Topics covered will include: investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparations. Investigation techniques will be practiced as part of the course.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CJ&101 or instructor permission

**CJ 217 : Advanced Report Writing**

This course presents advanced technical writing content specific to the criminal justice system. Students review standard grammar, punctuation

and compositions skills. The content includes, but not limited to the following: complicated police reports where information may be obtained from investigations, interrogations and collisions and involves a variety of forms and narratives related to law enforcement.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[ENGL& 235](#) – Technical Writing.

**Quarters Offered**

Spring

**CJ 295 : Work-Based Learning (CJ)**

Supervised, non-paid, work experience in a government or municipal agency involving the application of classroom information and skills. This course may be repeated for up to 8 credits. Credits will be directly related to number of hours worked.

**Credits** 1-8

**Clinical Hours** 33-264

**Prerequisites**

Instructor permission

**CJ 297 : Work-Based Learning Seminar**

Feedback and discussion to integrate and relate work based learning and classroom based instruction. This course may be repeated for up to 8 credits.

**Credits** 11

**Lecture Hours** 11

**Corequisites**

[CJ 295](#) – Work Based Learning, and Instructor Permission

## Early Childhood Education

**Michele Reeves**

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The Early Childhood Education Program (ECE) offers certificates to meet the requirements of Steps 5, 6, 7 of Level 2 on the Washington State

Career Lattice for Early Care and Education Professionals. Students begin with coursework to obtain a State Initial Early Childhood Education Certificate (12 credits–Step 5). These same 12 credits apply toward the Short Certification in Early Childhood Education (20 credits–Step 6). The 20 credits from the Short Certificate of Specialization in Early Childhood Education apply toward the State Early Childhood Education Certificate (54 credits--Step 7). The credits earned in the “State Early Childhood Education Certificate” apply toward the **90+**-credit Associate in Applied Science in Early Childhood Education degree (Steps 8 & 9).

Many of the ECE courses are offered once a year; however, classes are offered in the evening and online to allow individuals to work and attend school. Some courses are offered as I-BEST (Integrated Basic Education and Skills Training) models to support students with basic skills; such as reading, writing, and mathematics.

## Early Childhood Education AAS

**Degree Type**

Associate in Applied Science

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Establish, implement, evaluate and analyze an early care and education setting (Program Planning and Development)
- PO4 Describe how children acquire language and creative expression and develop physically, cognitively and socially (Child Growth and Development)

- PO5 Establish an environment that provides learning experiences to meet children’s needs, abilities and interests (Curriculum and Learning Environment)
- PO6 Observe and assess what children know and can do in order to plan and provide curriculum that meets their developmental needs (Ongoing Measurement of Child Progress)
- PO7 Develop strong relationships with families and work collaboratively with agencies/organizations to meet children’s needs and to encourage the community’s involvement with early care and education (Families and Community Partnerships)
- PO8 Establish and maintain an environment that ensures children’s safety, health, and nourishment (Health, Safety, Nutrition)
- PO9 Establish supportive relationships with children and guide them as individuals and as part of a group (Interactions)
- PO10 Serve children and families in a professional manner and participate in the community as a representative of early care and education (Professional Development and Leadership)

The coursework in the Associate in Applied Science in Early Childhood Education degree meets Level 3-Steps 8 & 9 on the Career Lattice. Students who complete the AAS in ECE may work with children birth to age eight as in-home or center-based child care providers, administrators, lead or assistant preschool teachers, or Paraeducators in public schools.

## Program Requirements

- High School Diploma or GED (if applying for Financial Aid)
- Pass Washington State Patrol background check
- Pass a Washington State Department of Children, Youth and Families background check (fingerprints may be required)
- Complete Tuberculin skin test
- Proof of Covid-19 vaccination or an approved medical or religious exemption
- Obtain Washington Education Liability Insurance (if applicable)
- Maintain an overall 2.0 GPA (if receiving Financial Aid and to earn degree)

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year

#### Fall Quarter

Course Code	Title	Credits
CSS 100	College Success Skills	3
ECED& 105	Intro Early Child Ed	5
ECED& 170	Environments-Young Child	3
EDUC& 130	Guiding Behavior	3
EDUC& 150	Child/Family/Community	3

#### Winter Quarter

Course Code	Title	Credits
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 132	Infants/Toddlers Care	3
ECED& 160	Curriculum Development	5
ECED& 190	Observation /Assessment	3

#### Spring Quarter

Course Code	Title	Credits
ECED& 180	Lang/Literacy Develop	3
EDUC& 115	Child Development	5
ENGL& 101	English Composition I	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
EDUC 190	Classroom Experience	5
SOC& 101	Intro to Sociology	5

### Winter Quarter

Course Code	Title	Credits
EDUC 190	Classroom Experience	5
MATH& 107	Math in Society	5
PSYC& 100	General Psychology	5

### Spring Quarter

Course Code	Title	Credits
EDUC 190	Classroom Experience	5
EDUC& 204	Inclusive Education	5
HUM 214	Diversity Issues: Race, Class and Gender	5
WKED 103	Professional Preparation - Occupation Specific III	1
<b>Total Credits</b>		<b>94</b>

## Early Childhood Education AAS-T (91+ Credits)

### Degree Type

Associate in Applied Science-Transfer

### Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Establish, implement, evaluate and analyze an early care and education setting (Program Planning and Development)

- PO4 Explain how children develop physically, cognitively, and socially with particular attention to language acquisition, equity of care and trauma prevention
- PO5 Analyze how trauma informed methods, equitable relationships with children along with positive and equitable learning environments ensure the health, growth and safety of children in the following domains: physical, cognitive, and social-emotional.

## Eastern Washington University P-3 Articulation Agreement

Big Bend Community College and Eastern Washington University developed an articulation agreement to transfer the Associate in Applied Science Transfer (AAS-T) degree from BBCC into the Education program to complete a Bachelor of Arts in Early Childhood Education with Preschool-Grade 3 teaching certification at EWU. If you are interested in this degree option, you will need to work closely with your BBCC Advisor and Eastern

Washington University. For more information, call (509) 359-4817 or visit EWU online at: [www.ewu.edu](http://www.ewu.edu). In addition to completing the AAS-T degree, students must also complete the West B Exam prior to acceptance into the ECE program at EWU.

Students must pass both a Washington State Patrol and Washington State Department of Children, Youth, and Families background check prior to program entrance. **Students are also required to provide results of a Tuberculin skin test, proof of Covid-19 vaccination or an approved medical or religious exemption (if applicable) and obtain Washington Education Association liability insurance, prior to enrolling in ECED& 120-Practicum.**

See a program advisor for a list of classes for the Pre - EWU P-3 AAS-T degree ( 91+ Credits)

## First Year

Course Code	Title	Credits
CMST& 220	Public Speaking	5
ECED& 105	Intro Early Child Ed	5
ECED& 170	Environments-Young Child	3
ECED 122	Science and Math for Young Children	4
ECED& 180	Lang/Literacy Develop	3
EDUC& 115	Child Development	5
EDUC& 130	Guiding Behavior	3
EDUC& 150	Child/Family/Community	3
ENGL& 101	English Composition I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
PSYC& 100	General Psychology	5

## Second Year

Course Code	Title	Credits
BIOL& 100	Survey of Biology	5
EDUC 190	Classroom Experience	5
HUM 220	Diversity in Education	5
MATH& 107	Math in Society	5
ECED& 160	Curriculum Development	5
ECED& 190	Observation /Assessment	3
ENGL& 102	Composition II	5
CHEM& 105	Chemical Concepts	5
EDUC& 204	Inclusive Education	5
PSYC& 200	Lifespan Psychology	5
	Approved Elective....ECED& 120	2
<b>Total Credits</b>		<b>91</b>

## State Early Childhood Education Certificate of Achievement

### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Establish, implement, evaluate and analyze an early care and education setting (Program Planning and Development)
- PO4 Describe how children acquire language and creative expression and develop physically, cognitively and socially (Child Growth and Development)
- PO5 Establish an environment that provides learning experiences to meet children's needs, abilities and interests (Curriculum and Learning Environment)
- PO8 Establish and maintain an environment that ensures children's safety, health, and nourishment (Health, Safety, Nutrition)
- PO9 Establish supportive relationships with children and guide them as individuals and as part of a group (Interactions)

## Required Courses

Course Code	Title	Credits
CMST& 220	Public Speaking	5
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 160	Curriculum Development	5
ECED& 170	Environments-Young Child	3
ECED& 180	Lang/Literacy Develop	3
ECED& 190	Observation /Assessment	3
EDUC& 115	Child Development	5
EDUC& 130	Guiding Behavior	3
EDUC& 150	Child/Family/Community	3
ENGL& 101	English Composition I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
MAP 117	Applied Math for Workforce Programs I	1-5
<b>Total Credits</b>		<b>54</b>

## State Initial Early Childhood Education Certificate of Accomplishment

### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
<b>Total Credits</b>		<b>12</b>

## State Short Certificate of Specialization – Administration Certificate of Accomplishment

### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills
- Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 139	Admin of Early Lrng Prog.	3
EDUC& 115	Child Development	5
<b>Total Credits</b>		<b>20</b>

## State Short Certificate of Specialization – Family Child Care Certificate of Accomplishment

### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 134	Family Childcare Management	3
EDUC& 115	Child Development	5



**Total Credits** **20**

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### State Short Certificate of Specialization – General Certificate of Accomplishment

#### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

#### Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
EDUC& 115	Child Development	5
EDUC& 130	Guiding Behavior	3
<b>Total Credits</b>		<b>20</b>

### State Short Certificate of Specialization – Home Visitor/ Family Engagement Certificate of Accomplishment

#### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

### Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 138	Home Visiting & Family Engagement	3
EDUC& 115	Child Development	5
<b>Total Credits</b>		<b>20</b>

### State Short Certificate of Specialization – Infant/Toddler Certificate of Accomplishment

#### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

#### Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum-Nurturing Rel	2
ECED& 132	Infants/Toddlers Care	3
EDUC& 115	Child Development	5
<b>Total Credits</b>		<b>20</b>

### State Short Certificate of Specialization – School Age Care Certificate of Accomplishment

#### Degree Type

Certificate

Program and Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
ECED& 105	Intro Early Child Ed	5
ECED& 107	Health/Safety/Nutrition	5
ECED& 120	Practicum–Nurturing Rel	2
EDUC& 115	Child Development	5
EDUC& 136	School Age Care	3
<b>Total Credits</b>		<b>20</b>

## Early Childhood Education Course Descriptions

### ECED& 100 : Child Care Basics

This course is designed to meet licensing requirements for early learning lead teachers and family home child care providers, STARS 30 hour basics course recognized in the MERIT system. Topics: child growth/development, cultural competency, community resources, guidance, health/safety/nutrition and professional practices. Course may include fieldwork. (Formerly: ECE 175)

**Credits** 3

**Lecture Hours** 33

### ECED& 105 : Intro Early Child Ed

Explore the foundations of early childhood education. Examine theories defining the field, issues, and trends, best practices, and program models. Observe children, professionals and programs in action. Course may include fieldwork. (Formerly: ECE 100)

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

### ECED& 107 : Health/Safety/Nutrition

This course introduces basic concepts of equitable health, safety and nutrition standards for the growing child in group care and education programs. Requirements as outlined in Child Care Block Grant funding (CCDF) and state licensing standards for child care providers will be covered including the knowledge and skills to ensure appropriate health, nutritional, and safety practices. In addition, the course will emphasize the skills necessary to recognize signs of child maltreatment, the educator's role as a mandated reporter and the process of identifying and referring families to available community resources. Course may include fieldwork. (Formerly: ECE 105)

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

### ECED& 120 : Practicum–Nurturing Rel

In an early learning setting, engage in establishing nurturing, supportive relationships with all children and professional peers. Focus on children's health & safety, promoting growth & development, and creating a culturally responsive environment. Students are required to complete 33 hours of child observations and interactions in a preschool classroom environment.

**Credits** 2

**Lecture Hours** 11

**Clinical Hours** 33

**Prerequisites**

[ECED& 105](#) and instructor permission. Prior to registering for this course, students must pass a Washington State Department of Children, Youth, and Families background check, provide results of a Tuberculin skin test, copy of immunization records, proof of Covid-19 vaccination or an approved religious or medical exemption, and obtain Washington Education Association liability insurance, if applicable.

**Quarters Offered**

Fall, Winter, Spring

**ECED& 132 : Infants/Toddlers Care**

Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver, relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care. Course may include fieldwork. (Formerly: ECE 108)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Winter, Spring

**ECED& 134 : Family Childcare Management**

Learn how to manage a family childcare program. Topics include: licensing requirements, record-keeping, relationship building, communication strategies, guiding behavior, and promoting growth and development. Course may include fieldwork.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

Instructor permission.

**Quarters Offered**

Summer

**ECED& 138 : Home Visiting & Family Engagement**

Plan and provide home visits and group activities that promote secure parent-child relationships and support families to provide high-quality early learning experiences that are embedded in everyday routines and experiences. Course may include fieldwork.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

Instructor Permission.

**Quarters Offered**

Summer

**ECED& 139 : Admin of Early Lrng Prog.**

Develop administrative skills required to develop, open, operate, manage, and improve early childhood education and care programs. Acquire basic business management skills. Explore resources and supports for meeting

Washington State licensing and professional NAEYC standards. Course may include fieldwork. (Formerly: ECE 160)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Summer

**ECED& 160 : Curriculum Development**

Investigate learning theory, program planning, tools and methods for curriculum development promoting language, fine/gross motor, social-emotional, cognitive and creative skills and growth in children birth through age 8 utilizing developmentally appropriate practice. Course may include fieldwork. (Formerly: ECE 230)

**Credits** 5

**Lecture Hours** 55

**Corequisites**

ECED& 190.

**Quarters Offered**

Winter

**ECED& 170 : Environments-Young Child**

This class focuses on the adults role in designing, evaluating, and improving indoor and outdoor environments that ensure quality learning, nurturing experiences, and optimize the development of young children. Course may include fieldwork. (Formerly: ECE 135)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall

**ECED& 180 : Lang/Literacy Develop**

Teaching strategies for language acquisition and literacy skill development are examined at each developmental stage (birth-age 8) through the four interrelated areas of speaking, listening, writing, and reading. Course may include fieldwork. (Formerly: ECE 250)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Spring

### **ECED& 190 : Observation /Assessment**

Collect and record observation data in order to plan for and support the child, the family, the group and the community. Practice reflection techniques, summarizing conclusions and communicating findings. Course may include fieldwork.

**Credits** 3

**Lecture Hours** 33

#### **Corequisites**

ECED& 160.

#### **Quarters Offered**

Winter

### **ECED 122 : Science and Math for Young Children**

This course provides a study of the cognitive and motor development of young children as it applies to math and science conceptual development. Students will learn to research, create and plan assessment of math and science pedagogy, and develop curriculum and materials for the early childhood learning environment.

#### **Degree Code**

Specified Elective

**Credits** 4

**Lecture Hours** 44

#### **Prerequisites**

ECED& 105: Intro Early Child Ed

## Economics

**Terry Pyle**

**509.793.2186**

**economics@bigbend.edu**

Students majoring in economics may elect to specialize in the following professional career areas: business, labor economics, money and banking, public finance, international trade, law, economics education, healthcare, economic development, government, and entrepreneurship. Those planning to enter the field of economics should have above average reading, comprehension, and computational skills.

Since programs differ at each of the four-year colleges, students who intend to transfer should consider program outlines published by the college or university. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Economics Course Descriptions

### **ECON& 201 : Micro Economics**

Micro economic concepts are applied to business and household decision-making as well as public policy. Major topics include: scarcity and choice, production possibilities, supply and demand analysis, elasticity, consumer choice, production and costs, market structures, antitrust and regulation, and public micro economics..

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

Strongly recommend completion of [MATH 094/M AP 117](#) or a higher placement and completion of [ENGL 098](#) or a higher placement..

### **ECON& 202 : Macro Economics**

Introduction to the principles of Macro Economics including unemployment, inflation, aggregate demand/supply, Classical and Keynesian Theories, fiscal and monetary policy tools, money and banking, and current economic problems.

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

Strongly recommend completion of [MATH 094/MAP 117](#) or a higher placement and completion of [ENGL 098](#) or a higher placement..

### **ECON 200 : Introduction to Economics**

Overview of the basic principles of the American Economy to include supply and demand, money

and banking, international trade, GDP, inflation, unemployment, and analysis of the market system. THIS IS NOT A SUBSTITUTE FOR ECONK 201 or ECONK 202.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Strongly recommend completion of [MATH 094/MAP 117](#) or a higher placement and completion of [ENGL 098](#) or a higher placement.

**Quarters Offered**

Fall, Winter, Spring

## Education

[education@bigbend.edu](mailto:education@bigbend.edu)

## Education Course Descriptions

**EDUC& 115 : Child Development**

Build foundation for explaining how children develop in all domains, conception through early adolescence. Explore various developmental theories, methods for documenting growth, and impact of brain development. Topics addressed: stress, trauma, culture, race, gender identity, socioeconomic status, family status, language, and health issues. Course may include fieldwork.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**EDUC& 130 : Guiding Behavior**

Examine the principles and theories promoting social competence in young children and creating safe learning environments. Develop skills promoting effective interactions, providing positive individual guidance, and enhancing group experiences. Course may include fieldwork

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall, Winter, S, Summer

**EDUC& 136 : School Age Care**

Develop skills to provide developmentally appropriate and culturally relevant activities and care for children ages 5-12 in a variety of settings. Includes implementing curriculum, preparing environments, building relationships, guiding cognitive and social emotional development as well as community outreach. Course may include fieldwork.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

Instructor permission.

**Quarters Offered**

Summer

**EDUC& 150 : Child/Family/Community**

Integrate the family and community contexts in which a child develops. Explore cultures and demographics of families in society, community resources, strategies for involving families in the education of their child, and tools for effective communication. Course may include fieldwork (Formerly EDUC 150)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall

**EDUC& 202 : Intro to Education**

Survey of history, philosophy, principles, issues and trends in American Education. Includes opportunities for observations of educational models and exploration of career paths. Credit cannot be earned in both EDUC& 201 and EDUC& 202. Course may include fieldwork. (Formerly EDUC& 201)

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Successful completion of ENGL 099 or placement in ENGL& 101.

**Quarters Offered**

Fall, Winter

**EDUC& 204 : Inclusive Education**

Introductory course in recognition and identification of exceptionality in children from birth through high school. Includes policies and regulations concerning state and federal provisions of special education and related services, as well as adaptations for serving students with special needs in general education classrooms. Course may include fieldwork.

**Degree Code**

Specified Elective

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**EDUC 190 : Classroom Experience**

This course will provide students with the opportunity to gain practical, hands-on experience working with children infancy to age eight in a variety of educational settings and reflect on their experiences. Students are required to assist a classroom teacher for 99 hours. ***Prior to registering for this course, students must pass a Washington State Department of Children, Youth, and Families background check, provide results of a Tuberculin skin test, copy of immunization records, proof of Covid-19 vaccination or an approved religious or medical exemption, and obtain Washington Education Association liability insurance, if applicable.***

**Credits** 5

**Lecture Hours** 22

**Clinical Hours** 99

**Prerequisites**

[ECED& 120](#) or [EDUC& 202](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring

**EDUC 198 : Special Topics**

Covers current issues in the education field. Maybe repeated for credit with advisor's approval.

**Credits** 0-5

**Lecture Hours** 2-55

**Prerequisites**

Instructor Permission

**EDUC 298 : Special Topics**

Covers current issues in the education field. Maybe repeated for credit with advisor's approval.

**Credits** 0-5

**Lecture Hours** 2-55

**Prerequisites**

Instructor Permission

## Engineering

**Tyler Wallace, Division Chair**

**509.793.2150**

**[engineering@bigbend.edu](mailto:engineering@bigbend.edu)**

Engineering courses may be taken as part of the Associate in Arts and Science DTA degree or as part of the Associate in Science- Transfer (AS-T 2) degree. Within the Associate in Arts and Science DTA degree, these courses may be used toward the Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Within the Associate in Science-Transfer degree, engineering courses satisfy the AS-T 2 Pre-Engineering MRP Degree path. The AS-T 2 Pre-Engineering MRP Degree path allows students to prepare for upper division study toward a Bachelor of Science degree in engineering and enter the college or university at junior standing should they be admitted to the school's engineering program. This degree gives students the opportunity to make substantial progress

toward fulfilling major requirements while completing at least half of the Breadth requirements for Humanities and Social Science.

At a basic level, engineers apply scientific and mathematical principles to make the world a better place. They may design machines, roads, buildings, or circuitry; combine the inventions of others to develop or improve processes; oversee the operation of technological equipment in facilities ranging from waste treatment plants to large manufacturing facilities to water purification plants; develop new materials that are stronger, lighter, or more environmentally friendly.

Since programs differ at each college, students should consider program outlines published by the college or university where the student plans to continue his/her course of study. The following recommended courses will prepare students for most senior institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in their transfer area. Students should seek out their advisor for more information and guidance on possible courses to take to complete this degree and to prepare and plan for future transfer.

## Advising Maps

Advising maps for the AS-T degrees offered at BBCC are available on the BBCC Website. Use the Academics dropdown, below Programs & Degrees, select Advising Maps. Once on the Advising Maps page look for:

- Biology AS-T Track I
- Chemistry AS-T Track I
- Engineering, Computer Science, or Physics AS-T Track II

AS-T Track 2 Pre-Engineering MRP degrees offered statewide include four pathways.

- Bioengineering and Chemical Engineering (BioE and ChemE) Pathway

- Computer and Electrical Engineering (Comp E and EE) Pathway
- Civil and Mechanical Engineering (CE and ME) Pathway
  - Note: This pathway includes Aeronautical, Environmental and Industrial Engineering.
- Materials Science and Manufacturing Engineering (MSE and MFGE) Pathway

BBCC does not offer all of the courses required within these Pre-Engineering MRP pathways. Students interested in one of these Pre-Engineering MRP pathways should see their advisor to develop an educational plan that would enable students to work toward one of the above listed MRPs.

The advising map is helpful to prepare for advising and registration each quarter. Students should maintain an accurate record of courses completed and bring their advising map with them for advising appointments.

## Associate in Bioengineering and Chemical Engineering AS-T Track 2/MRP

### Degree Type

Associate in Science-Transfer

The transferable credits must include the following:

## Basic Requirements Communication Skills

Choose from:

Course Code	Title	Credits
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
ENGL& 235	Technical writing	5
ENGL 201	Advanced Academic Research Writing	5

## Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 163	Calculus 3	5
MATH 230	Differential Equations	5

## Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. An Economics course is recommended.

Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to completion of the baccalaureate degree. Please meet with your advisor to determine which courses to take in this area.

Course Code	Title	Credits
	CMST& 220 and ECON& 201 or ECON& 202	15

## Engineering Physics

Course Code	Title	Credits
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5

## Chemistry

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
CHEM& 162	General Chem w/Lab II	5
CHEM& 163	General Chem w/Lab III	5
	Organic Chemistry	8-12

## Specialization Courses

Select 3 courses as appropriate for intended major and intended bachelor's institution:

- [ENGR 240](#) Applied Numerical Methods
- Intro to Design
- [ENGR 202](#) Design of Logic Circuits
- Computer Programming
- [MATH& 254](#) Calculus IV
- [ENGL& 235](#) Technical Writing
- [ENGR& 204](#) Electrical Circuits
- [ENGR& 214](#) Statics
- Chemical Process, Principles, & Calculations
- Biology for Science Majors I
- Biology for Science Majors II
- [ENGR 201](#) Materials Science
- Biochemistry
- [ENGR& 224](#) Thermodynamics

Many courses are designated within this degree. See a program advisor for substitute courses. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests.

The following schedule of courses is the recommended program for completing this degree and prepares students for most baccalaureate institutions, but since programs differ at each college, students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## First Year

### Fall Quarter

Course Code	Title	Credits
MATH& 151	Calculus I	5
PHYS& 221	Engineering Physics I w/Lab	5
ENGL& 101	English Composition I	5



## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 152	Calculus II	5
PHYS& 222	Engineering Physics II w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 163	Calculus 3	5
PHYS& 223	Engineering Physics III w/Lab	5
CS& 131	Computer Science I: C++	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 161	General Chem w/Lab I	5
MATH& 254	Calculus IV	5
ENGR& 214	Statics	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 162	General Chem w/Lab II	5
MATH 220	Linear Algebra	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH 230	Differential Equations	5
ENGR& 204	Electrical Circuits	5
ENGR 205	Electric Circuits Lab	1
ENGR 240	Applied Numerical Methods	5

## Third Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGL& 235	Technical writing	5
CHEM& 163	General Chem w/Lab III	5
	Advisor Approved HU/SS (5 credits)	5

### Additional Courses that could be taken to fill out a Third Year

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR 240	Applied Numerical Methods	5
CS 132	Advanced Programming with C++	5
ENGR& 224	Thermodynamics	5
ENGR 110	Intro to Science and Engineering	3
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
<b>Total Credits</b>		<b>90-104</b>

## Associate in Civil and Mechanical Engineering AS-T Track 2/ MRP

### Degree Type

Associate in Science-Transfer

The transferable credits must include the following:

### Basic Requirements Communication Skills

Choose from:

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
ENGL& 235	Technical writing	5
ENGL 201	Advanced Academic Research Writing	5

## Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 163	Calculus 3	5
MATH 220	Linear Algebra	5
MATH 230	Differential Equations	5

## Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. An Economics course is recommended.

Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to completion of the baccalaureate degree. Please meet with your advisor to determine which courses to take in this area.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	CMST& 220 and ECON& 201 or ECON& 202	15

## Engineering Physics

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5

## Chemistry

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 161	General Chem w/Lab I	5
CHEM& 162	General Chem w/Lab II	5

## Other Required Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 225	Mechanics of Materials	5

## Specialization Courses

Select 4 courses as appropriate for intended major and intended bachelor's institution:

- Computer Programming
- Intro to Design
- [MATH& 254](#) Calculus IV
- [ENGR& 111](#), [ENGR& 112](#) Engineering Graphics I & II
- [ENGL& 235](#) Technical Writing
- [ENGR& 224](#) Thermodynamics
- [ENGR& 204](#) Electrical Circuits
- [ENGR 201](#) Materials Science
- [ENGR 240](#) Applied Numerical Methods
- Biology for Science Majors I
- [CHEM& 163](#)

Many courses are designated within this degree. See a program advisor for substitute courses. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests.

The following schedule of courses is the recommended program for completing this degree and prepares students for most baccalaureate institutions, but since programs differ at each college, students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGL& 101	English Composition I	5
MATH& 151	Calculus I	5
PHYS& 221	Engineering Physics I w/Lab	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 152	Calculus II	5
PHYS& 222	Engineering Physics II w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 163	Calculus 3	5
PHYS& 223	Engineering Physics III w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 161	General Chem w/Lab I	5
MATH& 254	Calculus IV	5
ENGR& 214	Statics	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH 220	Linear Algebra	5
CHEM& 162	General Chem w/Lab II	5
ENGR& 225	Mechanics of Materials	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH 230	Differential Equations	5
CS& 131	Computer Science I: C++	5
ENGR& 215	Dynamics	5

## Third Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR& 112	Engineering Graphics II	5
	Advisor Approved HU/SS (5 credits)	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR 240	Applied Numerical Methods	5

### Additional Courses that could be taken to fill out a Third Year:

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR 110	Intro to Science and Engineering	3
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
CHEM& 163	General Chem w/Lab III	5
ENGL& 235	Technical writing	5
<b>Total Credits</b>		<b>98-111</b>

## Associate in Computer and Electrical Engineering AS-T Track 2/ MRP

### Degree Type

Associate in Science-Transfer

The transferable credits must include the following:

## Basic Requirements

### Communication Skills

Choose from:

Course Code	Title	Credits
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
ENGL& 235	Technical writing	5
ENGL 201	Advanced Academic Research Writing	5

### Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 163	Calculus 3	5
MATH 220	Linear Algebra	5
MATH 230	Differential Equations	5

### Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. An Economics course is recommended.

Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to completion of the baccalaureate degree. Please meet with your advisor to determine which courses to take in this area.

Course Code	Title	Credits
CMST& 220	Public Speaking	5
ECON& 201	Micro Economics	5
ECON& 202	Macro Economics	5

## Engineering Physics

Course Code	Title	Credits
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5

## Chemistry

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5

## Other Required Courses

Course Code	Title	Credits
ENGR& 204	Electrical Circuits	5
CS 260	Computer Programming Topics	5

## Specialization Courses

Select 5 courses as appropriate for intended major and intended bachelor's institution:

- 2nd course in Computer Programming
- Intro to Design
- [MATH& 254](#) Calculus IV
- [ENGL& 235](#) Technical Writing
- [ENGR& 214](#) Statics
- [ENGR& 215](#) Dynamics
- [ENGR& 224](#) Thermodynamics
- [ENGR 202](#) Design of Logic Circuits, Digital Logic
- Biology for Science Majors I
- [CHEM& 162](#)
- [ENGR 240](#) Applied Numerical Methods
- Microprocessors
- [ENGR& 204](#) Electrical Circuits
- Signals & Systems

Many courses are designated within this degree. See a program advisor for substitute courses. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests.

The following schedule of courses is the recommended program for completing this degree and prepares students for most baccalaureate institutions, but since programs differ at each college, students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 151	Calculus I	5
PHYS& 221	Engineering Physics I w/Lab	5
ENGL& 101	English Composition I	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 152	Calculus II	5
PHYS& 222	Engineering Physics II w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH& 163	Calculus 3	5
PHYS& 223	Engineering Physics III w/Lab	5
CS& 131	Computer Science I: C++	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 161	General Chem w/Lab I	5
MATH& 254	Calculus IV	5
ENGR& 214	Statics	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CHEM& 162	General Chem w/Lab II	5
MATH 220	Linear Algebra	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MATH 230	Differential Equations	5
ENGR& 204	Electrical Circuits	5
ENGR 205	Electric Circuits Lab	1
ENGR& 215	Dynamics	5

## Third Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGR 202	Design of Logic Circuits	6
	Advisor Approved HU/SS (5 credits)	5

## Additional Courses that could be taken to fill out a Third Year

Course Code	Title	Credits
CHEM& 163	General Chem w/Lab III	5
CS 132	Advanced Programming with C++	5
ENGR 240	Applied Numerical Methods	5
ENGR& 224	Thermodynamics	5
ENGR 110	Intro to Science and Engineering	3
ENGL& 235	Technical writing	5
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
<b>Total Credits</b>		<b>91-105</b>

## Associate in Materials Science and Manufacturing Engineering AS-T Track 2/ MRP

### Degree Type

Associate in Science–Transfer

The transferable credits must include the following:

### Basic Requirements

#### Communication Skills

Choose from:

Course Code	Title	Credits
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
ENGL& 235	Technical writing	5
ENGL 201	Advanced Academic Research Writing	5

## Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 163	Calculus 3	5
MATH 220	Linear Algebra	5
MATH 230	Differential Equations	5

## Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. An Economics course is recommended.

Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to completion of the baccalaureate degree. Please meet with your advisor to determine which courses to take in this area.

Course Code	Title	Credits
	CMST& 220 and ECON& 201 or ECON& 202	15

## Engineering Physics

Course Code	Title	Credits
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5

## Chemistry

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
CHEM& 162	General Chem w/Lab II	5

## Remaining Required Courses

Course Code	Title	Credits
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 225	Mechanics of Materials	5

## Specialization Courses

Select 4 courses as appropriate for intended major and intended bachelor's institution:

- Computer Programming
- Intro to Design
- MATH& 254 Calculus IV
- ENGR& 111, ENGR& 112 Engineering Graphics I & II
- ENGL& 235 Technical Writing
- ENGR& 224 Thermodynamics
- ENGR& 204 Electrical Circuits
- ENGR 201 Materials Science
- ENGR 240 Applied Numerical Methods
- Biology for Science Majors I
- CHEM& 163

Many courses are designated within this degree. See a program advisor for substitute courses. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests.

The following schedule of courses is the recommended program for completing this degree and prepares students for most baccalaureate institutions, but since programs differ at each college, students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## First Year

### Fall Quarter

Course Code	Title	Credits
ENGL& 101	English Composition I	5
MATH& 151	Calculus I	5
PHYS& 221	Engineering Physics I w/Lab	5

### Winter Quarter

Course Code	Title	Credits
MATH& 152	Calculus II	5
PHYS& 222	Engineering Physics II w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

Course Code	Title	Credits
MATH& 163	Calculus 3	5
PHYS& 223	Engineering Physics III w/Lab	5
	Advisor Approved Additional Credits	

## Second Year

### Fall Quarter

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
MATH& 254	Calculus IV	5
	Advisor Approved Additional Credits	

### Winter Quarter

Course Code	Title	Credits
MATH 220	Linear Algebra	5
CHEM& 162	General Chem w/Lab II	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

Course Code	Title	Credits
MATH 230	Differential Equations	5
	Advisor Approved Additional Credits	

## Third Year Fall Quarter

Course Code	Title	Credits
CHEM& 163	General Chem w/Lab III	5
	Advisor Approved HU/SS (5 credits)	5
ENGL& 235	Technical writing	5

Additional Courses that could be taken to fill out a Third Year:

Course Code	Title	Credits
CS 132	Advanced Programming with C++	5
	ENGR 110 or MCT 110	
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
<b>Total Credits</b>		<b>98-111</b>

## Associate in Materials Science and Manufacturing Engineering AS-T Track 2/ MRP

### Degree Type

Associate in Science-Transfer

The transferable credits must include the following:

### Basic Requirements Communication Skills

Choose from:

Course Code	Title	Credits
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
ENGL& 235	Technical writing	5
ENGL 201	Advanced Academic Research Writing	5

## Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 163	Calculus 3	5
MATH 220	Linear Algebra	5

## Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. An Economics course is recommended.

Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to completion of the baccalaureate degree. Please meet with your advisor to determine which courses to take in this area.

Course Code	Title	Credits
	CMST& 220 and ECON& 201 or ECON& 202	15

## Engineering Physics

Course Code	Title	Credits
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5

## Chemistry

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5



## Remaining Required Courses

Course Code	Title	Credits
ENGR& 214	Statics	5
ENGR& 225	Mechanics of Materials	5
ENGR 201	Material Science	5

## Specialization Courses

Select 5 courses as appropriate for intended major and intended bachelor's institution:

- Computer Programming
- Intro to Design
- MATH& 254 Calculus IV
- MATH 230 Differential Equations
- ENGR& 111, ENGR& 112 Engineering Graphics I & II
- ENGL& 235 Technical Writing
- ENGR& 224 Thermodynamics
- ENGR 240 Applied Numerical Methods
- Biology for Science Majors I
- CHEM& 162
- CHEM& 163
- Organic Chemistry

Many courses are designated within this degree. See a program advisor for substitute courses. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests.

The following schedule of courses is the recommended program for completing this degree and prepares students for most baccalaureate institutions, but since programs differ at each college, students should still consult the program outlines published by the college or university to which they intend to transfer to make sure the courses taken here are in alignment with the specific transfer program. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## First Year

### Fall Quarter

Course Code	Title	Credits
ENGL& 101	English Composition I	5
MATH& 151	Calculus I	5
PHYS& 221	Engineering Physics I w/Lab	5

### Winter Quarter

Course Code	Title	Credits
MATH& 152	Calculus II	5
PHYS& 222	Engineering Physics II w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

### Spring Quarter

Course Code	Title	Credits
MATH& 163	Calculus 3	5
PHYS& 223	Engineering Physics III w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
MATH& 254	Calculus IV	5
ENGR& 214	Statics	5

### Winter Quarter

Course Code	Title	Credits
MATH 220	Linear Algebra	5
CHEM& 162	General Chem w/Lab II	5
ENGR& 225	Mechanics of Materials	5

### Spring Quarter

Course Code	Title	Credits
MATH 230	Differential Equations	5
ENGR 201	Material Science	5
CS& 131	Computer Science I: C++	5

## Third Year Fall Quarter

Course Code	Title	Credits
ENGR& 112	Engineering Graphics II	5
	Advisor Approved HU/SS (5 credits)	5

## Winter Quarter

Course Code	Title	Credits
ENGR 240	Applied Numerical Methods	5

Additional Courses that could be taken to fill out a Third Year:

Course Code	Title	Credits
ENGR 110	Intro to Science and Engineering	3
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
CHEM& 163	General Chem w/Lab III	5
ENGL& 235	Technical writing	5
<b>Total Credits</b>		<b>104-195</b>

## Engineering Course Descriptions

### ENGR& 111 : Engineering Graphics I

This course studies the principles of mechanical drawings: geometric construction, orthographic projection, sectional views, auxiliary views, isometric and oblique drawings, dimensions, threads, fasteners, and lettering using AutoCad software. This software is used by engineers to communicate proposed designs and new ideas. (Formerly ENGR 160)

#### Degree Code

Specified Elective

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Quarters Offered**

Winter, Spring

### ENGR& 112 : Engineering Graphics II

This course uses computer software to draft parametric models in three dimensions using Solidworks software. This course covers file management methods, rapid prototyping, and 2D drawing development techniques. (Formerly ENGR 265)

#### Degree Code

Specified Elective

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Quarters Offered**

Winter, Spring

### ENGR& 204 : Electrical Circuits

This course introduces electrical circuit concepts and mathematical models to analyze electrical circuits and systems. The behaviors of circuit components including resistors, sources, capacitors, inductors and operational amplifiers will be examined. The analytic solutions of mathematical models will be calculated and presented in terms of voltage, current and electrical power. Fundamentals of electrical power generation, transmission, analysis and calculation will also be covered.

#### Degree Code

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 152, PHYS& 223, or instructor permission.

**Corequisites**

Differential Equations, or instructor permission

**Quarters Offered**

Spring

### ENGR& 214 : Statics

Statics is the study of objects which are either at rest or moving with constant velocity. Students in this course will learn to apply mathematics and physical science to the analysis of the forces and moments acting on these objects, developing engineering problem-solving skills in the process. Topics studied will include the following: vector notation and operations; equilibrium of particles

and rigid bodies; moments of forces; couples; trusses and frames; shear and moment diagrams; applications of friction; center of gravity, centroids, and moments of inertia. (Formerly EGR211)

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 151, PHYS& 221 with grades of 2.0 or higher

**Corequisites**

MATH& 152

**ENGR& 215 : Dynamics**

Dynamics is the study of the accelerated motion of particles and rigid bodies. The study of the motion in this course will deal with kinematics (the mathematical description of the motion) and kinetics (the analysis of the forces causing the motion). Vector notation and operations will be used extensively in this course, and calculus will be used regularly. (Formerly EGR 212)

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ENGR& 214, PHYS& 221, and MATH& 152 with grades of 2.0 or higher.

**ENGR& 224 : Thermodynamics**

Thermodynamics is the science of energy. This course introduces the basic principles of thermodynamics from a macroscopic point of view and applies them to engineering systems such as heat pumps, engines, power plants, and refrigeration. Topics include property tables, equations of state, first and second laws of thermodynamics, analysis of closed and open systems, power and refrigeration cycles.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

PHYS& 221, MATH& 152.

**Corequisites**

CHEM& 162: General Chem w/Lab II

**ENGR& 225 : Mechanics of Materials**

An introduction to the concepts of stress, strain, deformation, and failure theory in solid materials. Applies mechanics of materials concepts to structural and machine elements such as rods, shafts, and beams. These elements are analyzed in tension, compression, bending, torsion, and shear. (Formerly EGR 214)

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ENGR& 214, MATH& 152 with grades of 2.0 or higher.

**ENGR 110 : Intro to Science and Engineering**

Students in this course will investigate careers in science and engineering, and will research the educational pathways to those careers. In addition, students will learn techniques for becoming a successful student in science and engineering majors.

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall, Winter

**ENGR 201 : Material Science**

An introduction to Materials Science that includes the atomic, molecular, and crystalline structures of materials and their relationship to electrical, mechanical, thermal, and chemical properties, as well as an introduction to materials processing and fabrication techniques.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

PHYS& 221, CHEM& 161

**ENGR 202 : Design of Logic Circuits**

This course introduces students to the methods, skills and theoretical knowledge needed to

design, simulate, and build combinational logic and basic sequential logic circuits. Using industry relevant CAD tools and design technologies, students will learn through homework and projects to design and implement a collection of combinational and sequential logic circuits. Upon completion, students will apply the same tools prevalent in industry and their transferrable skills to many digital electronic applications today.

**Degree Code**

Specified Elective

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

**Prerequisites**

MATH& 141 with grades of 2.0 or higher and one of the following: [CS 111](#) or CS& 131 or CS&141, or instructor permission

**ENGR 205 : Electric Circuits Lab**

This course utilizes lab experiments to verify electrical circuit principles that are learned in [ENGR& 204](#). Students will also perform measurements to confirm the analytical solutions from mathematical models. Some engineering programs including electrical engineering require this course. Please see your advisor.

**Degree Code**

Lab Science

**Credits** 1

**Lab Hours** 22

**Prerequisites**

NONE.

**Corequisites**

ENGR& 204: Electrical Circuits

**Quarters Offered**

Spring

**ENGR 240 : Applied Numerical Methods**

This course includes application of the following methods: elements of error analysis, real roots of an equation, polynomial approximation by finite difference and least square methods, interpolation, quadrature, numerical solution of ordinary differential equations, and numerical

solutions of systems of linear equations. The student should expect to program a computer in addition to using a graphing calculator.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[MATH& 163](#) with grade of 2.0 or higher; or instructor permission

**Quarters Offered**

Winter

## English

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English courses are be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward Basic Requirements, Humanities Breadth requirements, or for Specified or General Elective credit. Students seeking an Associate in Arts and Science DTA degree should refer to the Arts &

Science DTA Program pages for a detailed description of program outcomes and courses that will satisfy the degree requirements.

An English major might find employment as a teacher, a writer, or an editor of magazines, books, or advertising, or might plan to enter a profession requiring a graduate degree for which a background in English is desirable, such as law or librarianship. English courses are designed to provide students who plan to major in English, as well as other college students, with opportunities to improve their written and visual communications.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## English Course Descriptions

### **ENGL& 101 : English Composition I**

This composition course provides instruction in academic written communication by having students compose formal essays, with the goal of teaching students to communicate effectively and engage with issues and ideas.

#### **Degree Code**

Basic Skills, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

Placement exam or 2.0 in English 099 or English 094.

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **ENGL& 102 : Composition II**

This advanced composition course provides instruction in academic writing through literary analysis and increases students' exposure to literature.

#### **Degree Code**

Basic Skills, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

A grade of 2.0 or better in ENGL&101.

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **ENGL& 220 : Intro to Shakespeare**

William Shakespeare has been the central author of the English-speaking world for centuries. His plays and poems are quoted more often than those of any other English-speaking writer. This introduction to Shakespearean Comedy, History and Tragedy will focus on Shakespeare's most popular works and their relevance in the modern world.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

ENGL& 101: English Composition I

### **ENGL& 235 : Technical writing**

This course is designed to improve students' written technical communication skills as are related to a range of professional applications. The goal of technical writing is to communicate a message clearly, concisely, and persuasively. This course emphasizes critical thinking skills as applied to technical writing, attention to research techniques, detail, professionalism, purpose, and audience. Students will learn to design, format, and produce documents common in business and industry.

#### **Degree Code**

Basic Skills, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

A grade of 2.0 or better in ENGL&101.

**Quarters Offered**

Winter, Spring

**ENGL& 244 : American Literature I**

This course explores the religious views, politics, and cultural beliefs of early America through its literature. Texts range from American literature's beginning to 1860, focusing on American authors and poets, beginning with Puritan and Separatist journals and pamphlets, captivity narratives, moving on to romance novels and to the short fiction of Poe, Melville, and Hawthorne, and ending with the works of Dickinson and Whitman. Students may take the American Literature courses at any time without regard to the I, II, III sequence.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**ENGL& 245 : American Literature II**

An introduction to American Literature from 1860 to the 1960's. Explore the religious views, politics, and ideologies of late nineteenth century to the late twentieth century of America through its literature. This course studies American authors, poets, and playwrights beginning with realism through naturalism, continuing with the political themes of early twentieth century, through the writers of the Great Depression, post World-War II, up to the 1960's

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**ENGL& 246 : American Literature III**

This class explores American literature published in the decades since 1960. Themes studied may include terrorism and cold war anxiety, technology, gender roles, multiculturalism, alienation, rebellion, popular psychology, or others relevant to the literature of the time. Students will read contemporary novels, stories, and poems that reflect American trends and

culture during this period. Students do NOT need to have taken American Literature I or American Literature II to do well in this course.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**ENGL& 256 : World Literature III**

A survey of world literature, ranging from the industrial revolution to the present.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**ENGL 010 : English Lab**

Allows non-BBCC student access to tutors in the Writing Center.

**ENGL 094 : Applied Technical Writing Foundations**

This course is designed for students who need ENGL 109: Applied Technical Writing but placed at below-college level English. The course provides instruction in professional written communication. Students compose formal essays and a variety of technical documents to learn to communicate effectively. Students will focus on reading, interpreting, evaluating, planning, organizing, and composing professional and technical writing as applied in academics, business, and industry. This course provides instruction in ENGL 109 with embedded support. Students earn ENGL 094 or ENGL 109 depending on demonstrated competencies at course completion. A passing grade in ENGL 094 earns 5 credits; a passing grade in ENGL 109 earns 3 credits ENGL 109 plus 2 credits General Electives.

**Degree Code**

Basic Skills

**Credits** 5

**Lecture Hours** 55

**ENGL 098 : Basic English Skills**

English 098 Basic English Skills provides instruction in basic writing skills, particularly sentence patterns and paragraph development. The course also introduces students to concepts of grammar, mechanics, punctuation, spelling, word usage, vocabulary development, reading comprehension, and reading fluency. See course notes: some sections of this course require co-enrollment in additional classes as part of a learning community.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**ENGL 99 : English Skills**

This composition course provides instruction in academic written communication. Students compose formal essays to learn to communicate effectively and to engage with issues and ideas. The course is taught as [ENGL& 101](#) enhanced with instruction in [ENGL 99](#) skills. Students who demonstrate at least a 2.0 competency in ENGL& 101 skills will receive ENGL&101 credit; students who demonstrate ENGL 099 skills will earn ENGL 099 credit. This course has a co-requisite of [CSS 106](#), College Reading Strategies. Students must be enrolled in both courses, ENGL 099 and [CSS 106](#), in the same quarter. A grade of 2.0 in ENGL 99 is required to move into ENGL& 101.

**Credits** 5**Lecture Hours** 55**Prerequisites**

Placement into [ENGL 098](#) or [ENGL 99](#).

**Corequisites**

Enrollment in [CSS 106](#)

**ENGL 100 : English Composition Foundations**

This composition course provides instruction in academic written communication. Students compose formal essays to learn to communicate effectively and to engage with issues and ideas. ENGL 100 is taught as ENGL & 101 with additional support. Students earn ENGL 100 or ENGL & 101 at course completion depending on

demonstrated competencies. A passing grade in ENGL 100 earns 8 credits General Electives; a passing grade in ENGL & 101 earns 5 credits ENGL & 101 plus 3 credits General Electives. A grade of 2.0 in ENGL 100 is required to advance to ENGL & 101; a grade of 2.0 in ENGL & 101 is required to advance to ENGL & 102 or ENGL & 235. ENGL 100 does not substitute for any required college-level English Composition course.

**Credits** 5**Lecture Hours** 55**Prerequisites**

Placement in [ENGL 098](#), ENGL 099, [ENGL 100](#)

**ENGL 105 : The Moral of the Story**

This course examines different ways that we can find meaning and value in the stories that surround us. We will use our own values and experiences, as well as other perspectives, to gain a better understanding of cultural artifacts such as movies, written texts, songs, comics/ graphic novels, and even physical objects, such as cars or clothing. This class has no prerequisite and focuses more on ideas than writing skills. This course is not a replacement or prerequisite for required English composition courses. It is recommended for students who are exploring degree options or considering a career related to the liberal arts.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**Quarters Offered**

Fall, Winter, Spring

**ENGL 109 : Applied Technical Writing**

This course provides instruction in professional written communication. Students compose formal essays and a variety of technical documents to learn to communicate effectively. Students will focus on reading, interpreting, evaluating, planning, organizing, and composing professional and technical writing as applied in academics, business, and industry.

**Credits** 3**Lecture Hours** 33

**Prerequisites**

Placement into ENGL & 101 or a passing grade of 2.0 in ENGL 099 or [ENGL 094](#)

**Quarters Offered**

Winter, Spring

**ENGL 198 : Special Projects in English**

Special Projects in English individual projects by special arrangement with instructor.

**Degree Code**

Humanities Lecture

**Credits** 1-3

**Clinical Hours** 33-99

**Prerequisites**

Instructor permission and completed Learning Contract.

**ENGL 201 : Advanced Academic Research Writing**

This advanced writing course focuses on critical thought and composition within academic/professional communities. Published works regarding current affairs, pressing social matters and/or political issues will be critically read and then written about in a way that meets the expectations of an academic/professional community. Students will write a variety of papers, the last of which will be a researched argument.

**Degree Code**

Basic Skills, Specified Elective

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ENGL& 101.

**ENGL 211 : Creative Writing: Fiction**

In this course students will develop the basic techniques that writers use to create imaginative and effective fiction, and use the writers workshop as a method for improving their work. Although this class focuses on writing short stories, it can be useful for those interested in all forms of narrative writing, including novels, screenplays, and creative nonfiction.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Spring

**ENGL 212 : Creative Writing: Poetry**

This creative writing course focuses on writing poetry and critiquing your classmates' poems. Through close examination of modern and contemporary poetry, you will begin to recognize elements of craft and form and use those techniques in your own weekly poems. This course will also teach you the habits of using concrete, original, concise language as well as the etiquette of being an integral member of a workshop— skills transferable to any college course that involves writing or collaboration.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**ENGL 221 : Creative Writing II: Fiction**

This course is designed for students who have completed an introductory fiction writing class (such as [ENGL 211](#)) and who want to continue their creative writing in a lecture and workshop setting. Students will further develop the techniques that writers use to build effective fiction and use the writer's workshop as a method for improving their own work. Students will also read and analyze stories and/or novels with an eye toward improving their own craft.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[ENGL 211](#) or instructor permission.

**ENGL 225 : Chicana Literature**

This class will explore the rhetorical and narrative strategies used by Chicana writers to explore the themes of identity, culture, and discrimination in Chicana novels, short stories, and essays. Engagement with these texts requires not necessarily agreement with, but openness to and respect for, perspectives different from our own.



**Degree Code**

Humanities Lecture, Diversity

**Credits** 5**Lecture Hours** 55**ENGL 234 : Science Fiction as Literature**

This course provides instruction in the genre of science fiction as a literary type and will provide instruction in analysis of short stories, novels, and films from within the genre of science fiction. The course will range from the beginnings of science fiction through the present. Emphasis is placed on historical and current use of science fiction to address social, cultural, and political issues, and will focus on the ways in which the genre facilitates discussion of social problems and relevant social issues.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**Quarters Offered**

Winter

**ENGL 239 : The Mystery Story as Literature**

From Sherlock Holmes to C.S.I., mystery stories have been popular and enduring forms of entertainment. In addition to exploring the world of crime, mysteries can offer insight into the nature of good and evil, raise questions about the human condition, and reveal truths about history and culture. This class will use mystery stories, novels, and films that range from the classic to the contemporary.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**ENGL 240 : World Literature**

A course of world literature from the ancient world through the twentieth century.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**Prerequisites**

ENGL& 101 with a grade of 2.0 or above

**ENGL 243 : The American Novel**

An introduction to the major American novels of the 19th and 20th centuries. Novels will be chosen from the works of major writers such as Melville, Hawthorne, Crane, James, Hemingway, Fitzgerald, Salinger and Mailer.

**Degree Code**

Humanities Lecture

**Credits** 5**Lecture Hours** 55**ENGL 261 : Women's Literature**

This course begins by asking the questions "What is Womens Literature?" and "Why study Womens Literature?" Reading a variety of genres (poetry, fiction, & nonfiction), students will engage with intersecting expressions of womanhood across identities as they learn about the many ways women have empowered themselves, individually and collectively, to participate a society and a history that had long excluded them. Students increase their critical reading and thinking skills while learning to critique the limits of traditional literary canons, or what represents "great" writing. By encountering all different kinds of women's literature across several centuries and across the globe, we become better versed in the many experiences that define "womanhood" and thus become more inclusive readers and thinkers.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5**Lecture Hours** 55**Prerequisites**

Completion of ENGL099 or ENGL100 a 2.0 or higher or placement into ENGL& 101.

**Quarters Offered**

Winter

**ENGL 272 : Graphic Novel as Literature**

Though once condemned as "low brow" literature and "badly drawn, badly written, and badly printed.. .pulp-paper nightmares" certain to turn young readers into juvenile delinquents, comics have forever been on the cutting edge of counterculture and alternative movements. Only

in recent years have comics and their book-length counterparts, graphic novels, started receiving serious attention from adult audiences in the U.S. This course traces the comic tradition from comic book superheroes to Japanese manga to poignant autobiographies, examining the literary merit and legitimacy of the graphic novel along the way.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

## Environmental Science

**Mariah Whitney**

**509.793.2149**

**MariahW@bigbend.edu**

Environmental science courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Environmental science is an interdisciplinary field that blends the natural sciences with the social sciences in order to better understand how our natural world works, how human interactions and behaviors impact our environment, and how the natural world impact its resident human species. Biology, ecology, chemistry, and geology blend with anthropology, sociology, political science, and economics to name just a few disciplines involved. The issues and problems investigated rarely have simple solutions with many opposing viewpoints and stakeholders which make environmental science a compelling field to study.

Environmental scientists work as ecologists, anthropologists, environmental consultants, climatologists, and conservation scientists, to name a few of the many occupations within the field. Some work for private businesses, others for governmental organizations and others for public entities.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Environmental Science Course Descriptions

### **ENVS& 100 : Survey of Env Science**

An introduction to the fundamental principles of environmental science, topics of study include some of the following topics: environmental, science, and information literacy, human population growth, environmental health, ecological economics and consumption, solid waste, ecosystems and nutrient cycling, population and community ecology, evolution and extinction, biodiversity and preserving biodiversity, freshwater resources and water pollution, food resources and sustainable agriculture, coal and petroleum, air pollution and climate change, nuclear power, alternative energy sources, environmental policy, and urbanization and sustainable communities.

**Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

## Film Studies

## Film Studies Course Descriptions

### **FILM 101 : Introduction to Cinema**

This class examines a series of films from different cultures, eras, and genres as a way to create an appreciation of filmmaking and to analyze different aspects of culture in cinema. On an introductory level, we will examine some of the tools in the filmmakers' arsenal and consider how they relate to the filmmaker's vision. Exposure to a variety of films—ranging from independent and foreign to studio blockbusters, and everything in between—is also fundamental to this class. (Formerly ENGL 216)

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

## First Aid/EMT

## First Aid/EMT Course Descriptions

### **FAD 150 : Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens**

An advanced industrial first aid course and bloodborne pathogen course designed to meet the Department of Labor and Industry, OSHA and WISHA requirements. Intended for supervisory personnel, employees, pre-nursing, Pre-Emergency Medical Technicians, and those interested in having first aid and C.P.R. training. This course is recognized in the U.S. and several foreign countries by federal and state agencies and company employers.

**Credits** 2

**Lecture Hours** 20

**Lab Hours** 4

#### **Quarters Offered**

Fall, Winter, Spring, Summer

## Geographic Information Systems

A geographic information system (GIS) is a framework for capturing and analyzing data and tying it so specific geographic locations. GIS is used in a multitude of industries and organizations. At BBCC, GIS classes are included in the Agriculture and Unmanned Systems programs.

## Geographic Information Systems Course Descriptions

### **GIS 110 : Geographic Information Systems (GIS) I**

Using basic capabilities of ArcGIS software tools, students are introduced to geographic information systems (GIS) concepts, including coordinate systems, spatial data analysis, data editing, data queries, database development, map creation, and report generation.

**Credits** 4

**Lecture Hours** 38

**Lab Hours** 11

#### **Prerequisites**

Completion of [MATH 098](#)/[MAP 119](#) or a higher placement or instructor permission.

### **GIS 210 : Geographic Information Systems (GIS) II**

This second course in geographic information systems (GIS) focuses on spatial data analysis, including the use of interpolation, contours, data intersections, and overlay analysis. Students will be introduced to the latest GIS software tools, including performing analysis of real-world data collected from Unmanned Aircraft Systems (UAS).

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

[GIS 110](#) or Instructor Permission.

### **GIS 220 : Remote Sensing**

This course addresses key aspects of remote sensing. Topics include the electromagnetic spectrum, satellites and remote sensing systems, manned/unmanned aircraft and remote sensing systems, basic image interpretation and analysis concepts, and remote sensing applications (i.e., agriculture, forestry, geology, etc.).

**Credits** 3

**Lecture Hours** 33

#### **Prerequisites**

[GIS 110](#) or instructor permission

## Geology

**Tyler Wallace, Division Chair**

**509.793.2150**

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Geology courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

The field of geology studies the Earth and the processes that have shaped the Earth over its 4.6 billion-year history. Geologists study earthquakes, volcanoes, landslides, and floods. They study the rocks and minerals that make up the Earth's crust as well as the slow movements of large pieces of crust and upper mantle called tectonic plates that account for mountain building, earthquake zones, and volcanic activity. The landscape of the Columbia Basin was shaped by ice age floods that repeatedly swept through and carved out our channeled basalt cliffs leaving behind Dry Falls. Geologists studied our unique area and gathered the evidence to help to explain what we see in our own backyard. Geologists may spend time in laboratories or out

in the field; they may work for universities, government agencies, non-profit organizations, or natural resource companies.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Geology Course Descriptions

### **GEOL& 101 : Intro Physical Geology**

This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on mountain building forces, weathering, natural hazards, rocks and minerals, and structural change. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust. There will be a required field trip that will take the time of a lecture and lab.

#### **Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

Completion of [MATH 098](#)/ [MAP 119](#) or a higher placement.

#### **Quarters Offered**

Winter, Spring

### **GEOL& 103 : Historical Geology**

Students will examine the evolution of Earth, its climate system, water resources, and life on the planet over time. The connection between these phenomena and societal concerns will be explored. Students will develop their skills in geoscience data analysis and interpretation and explore academic and career pathways in the geosciences. There will be a required fieldtrip during the course of the quarter that will take the time of one lecture and one lab.

**Degree Code**

Lab Science

**Credits** 5**Lecture Hours** 44**Lab Hours** 22**Prerequisites**

GEOL&amp; 101: Intro Physical Geology

**GEOL& 103 : Historical Geology**

Students will examine the evolution of Earth, its climate system, water resources, and life on the planet over time. The connection between these phenomena and societal concerns will be explored. Students will develop their skills in geoscience data analysis and interpretation and explore academic and career pathways in the geosciences. There will be a required fieldtrip during the course of the quarter that will take the time of one lecture and one lab.

**Credits** 5**Lecture Hours** 43**Lab Hours** 22**Prerequisites**[GEOL& 101](#)

## Health Education

### Health Education Course Descriptions

**HED 119 : Medical Terminology**

This course offers a broad overview of the fundamentals of medical terminology. Topics covered include: prefixes, suffixes, combining forms, word roots, abbreviations and basic human anatomy and physiology as they pertain to all major body structures and functions.

**Credits** 5**Lecture Hours** 55**Quarters Offered**

Fall, Winter, Spring

**HED 121 : The Human Body and Disease I**

The first course of a three-part course sequence examining body structure, function and disease.

This includes an introduction to the organization of the body, mechanism of disease, and discussion of the anatomy and physiology of skeletal system, muscular system, and the integumentary system. Common diagnostic tests/treatments, pharmacological agents, and possible prognoses for common disease processes are included. There is no lab component.

**Credits** 5**Lecture Hours** 55**Prerequisites**None. Co-enrollment in [HED 119](#) recommended**Quarters Offered**

Fall

**HED 122 : The Human Body and Disease II**

The second of a three-part course sequence examining body structure, function and disease. This includes the analysis and discussion of the nervous system, endocrine system, the senses, cardiovascular system, and respiratory system. Common diagnostic tests/treatments, pharmacological agents, and possible prognoses for common disease processes are included. There is no lab component

**Credits** 5**Lecture Hours** 55**Prerequisites**Completion of [HED 121](#) and [HED 119](#), each with a minimum grade of 2.0**Quarters Offered**

Winter

**HED 123 : The Human Body and Disease III**

The third of a three-part course sequence examining body structure, function and disease. This includes the analysis and discussion of the lymphatic system, gastrointestinal system, the urinary system, reproductive system, and basic diagnostic tests. Common diagnostic tests/treatments, pharmacological agents, and possible prognoses for common disease processes are included. There is no lab component.

**Credits** 5**Lecture Hours** 55

**Prerequisites**

Completion of [HED 121](#), [HED 122](#) and [HED 119](#), each with a minimum grade of 2.0.

**Quarters Offered**

Spring

**HED 160 : Pharmacology for Allied Health**

This basic pharmacology course provides instruction on therapeutic action and major side effects of common drugs, principles of medication and dosage calculations for allied health pathways.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

5 credits of [MAP 117](#) with a minimum grade of 2.0 or better; concurrent enrollment in [MA 116](#)

**Quarters Offered**

Spring

**HED 239 : Medical Ethics**

This course introduces ethical and legal issues facing medical professionals.

**Credits** 2

**Lecture Hours** 22

**Quarters Offered**

Fall, Winter

## High School Completion

**Jody Bortz, Director**

**509.793.2331**

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**General Information**

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## High School Completion Course Descriptions

**HSC 010 : Reading/Writing/Communication (HS English 1)**

Reading/Writing/Communication (HS English 1) focuses on reading, writing, and language through the study of history, past and present,

including conventions of traditional grammar, sentence structure, and paragraph structure. Speaking, listening, and study skills are reinforced through note taking, class discussion, and individual/group presentations and writing assignments. High school completion credit only. Students can earn 0.25–2.0 Freshman/Sophomore high school credits. This course may be repeated.

**Prerequisites**

Students must be registered in a Basic Skills class.

**HSC 011 : Reading/Writing/Communication (HS English 2)**

Reading/Writing/Communication (HS English 2) focuses on reading, writing, and language through the study of history, past and present, including conventions of traditional grammar, sentence structure, and paragraph structure. Speaking, listening, and study skills are reinforced through note taking, class discussion, and individual/group presentations and writing assignments. High school completion credit only. Students can earn 0.25–2.0 Junior/Senior high school credits. This course may be repeated.

**Prerequisites**

Students must be registered in a Basic Skills class.

**HSC 015 : Career and Technical HS Mathematics**

The course provides math instruction in applied math concepts to include whole numbers, fractions, decimals, geometrical concepts and shapes, interpreting graphs and charts, statistical information and probability along with algebraic expressions and equations to meet the math skills required for high school graduation. High school completion credit only. May be repeated as needed.

**Prerequisites**

Students must be enrolled in a Basic Skills class.

**HSC 016 : Algebra I HS Mathematics**

The course provides math instruction in interpreting graphs and charts with algebraic expressions and equations to meet the math

skills required for high school graduation. For high school completion credit only. May be repeated as needed.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 017 : HS Geometry**

The course provides math instruction in applied math concepts to geometrical concepts and shapes and interpreting graphs and charts to meet the math skills required for high school graduation. For high school completion credit only.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 020 : General Lab-Science**

This lab course provides basic instruction and lab exposure related to physical, life and earth science content. High school completion credit only. Students can earn 0.25–2.0 high school credits. This course may be repeated.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 021 : General Non-Lab Science**

This general non-lab science survey course provides basic instruction in physical, life and earth science, necessary for high school graduation. High school completion only. Students may earn 0.25–1 HS credit. This course may be repeated.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 025 : Health and Fitness**

This course is designed for students to develop physical and mental health fitness skills as required for high school graduation. High school completion credit only. May be repeated as needed.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 030 : United State Constitution and Government**

United States Constitution and Government traces the nation's history from the pre-colonial period to the present. Students learn about the

Native American, European, and African people who lived in America before it became the United States. They examine the beliefs and philosophies that informed the American Revolution and the subsequent formation of the government and political system. Students investigate the economic, cultural, and social motives for the nation's expansion, as well as the conflicting notions of liberty that eventually resulted in civil war. High school completion credit only. Students may earn 0.25–1.0 HS credits. This course may be repeated.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 031 : Washington State Government and History**

Washington State Government and History examines Washington history from native and European contact to the present. The study of Washington state includes an examination of the state constitution, key treaties, and tribal sovereignty issues, including the study of migration, differing cultural experiences, and human interactions with the environment. High school completion credit only. Students may earn 0.25–0.50 HS credit This course may be repeated.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 032 : Contemporary World Events**

Contemporary World Events examines modern world history and geography to identify global themes rooted in environmental issues, economic development, human rights, and civic action and responsibility. High school completion only. Students may earn 0.25–1 HS CWP or World History credit. This course may be repeated.

**Prerequisites**

Students must be enrolled in a Basic Skills class

**HSC 035 : Fine Arts**

This course will contextualize artistic study throughout other high school content areas including language, science, history, and elective credits. Artistic expression and study may range from visual design, creative writing, textile, and



natural product, performing arts or digital design as necessary for high school graduation. Independent study may be approved by instructor to include classes, specialized training or hobbies demonstrating artistic aptitude. High school completion credit only. Students can earn 0.25–2.0 high school credits. This course may be repeated.

#### **Prerequisites**

Students must be enrolled in a Basic Skills class

#### **HSC 040 : Occupational Education**

This course is designed to assist students in determining their personal, educational and occupational goals by identifying marketable skills and exploring the current labor market. High school completion credit only.

#### **Prerequisites**

Students must be enrolled in a Basic Skills class

#### **HSC 045 : Elective and Personal Pathway (PPR)**

The elective course is designed to enable students to further explore and develop special interest skills through independent study. Students may focus on personal, educational, or career pathways aligned with their Personal Pathway (PPR) and/or Elective credit goals. High school completion credit only. Students can earn 0.25–2.0 high school credits. This course may be repeated.

#### **Prerequisites**

Students must be enrolled in a Basic Skills class

#### **HSC 049 : Portfolio**

This course is the final capstone project for the HS21+ high school diploma. Students will create a portfolio that demonstrates their cumulative learning, community service project, college readiness, and career readiness.

#### **Prerequisites**

Students must be enrolled in a Basic Skills class

## History

**Chris Riley**

**509.793.2184**

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**Jody Quitadamo**

**509-793-2177**

**history@bigbend.edu**

History courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Social Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section “Degrees & Certificates” for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

History undertakes the study of past human affairs in order to understand who we are and where we might be going. It takes into account societies in diverse areas of the world from the earliest civilizations to the present day. History is an important part of a general liberal arts education. Students who plan to major in history may prepare for a number of careers, including public school teaching, government service, law, library and museum work, or professional historian.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### Recommended Pre-Major Courses (20 credits)

HIST& 136 U.S. History 1 CWU & EWU

HIST& 137 U.S. History 2 CWU & EWU

HIST& 126 World Civilization I CWU

HIST& 127 World Civilization II CWU

HIST& 128 World Civilization III CWU

Or may substitute Western Civ for World Civ (CWU)



HIST& 116 Western Civilization I CWU & EWU

HIST& 117 Western Civilization II CWU & EWU

HIST& 118 Western Civilization III CWU

\* Choose four courses, CWU

## History Course Descriptions

### **HIST& 116 : Western Civilization I**

From the origins of civilization to the dawn of the modern world in the 1500 s, this course surveys the classical world of Greece and Rome, Western Christendom, Byzantium and Islam, the Middle Ages, and the early Renaissance.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

### **HIST& 117 : Western Civilization II**

From early modern Europe to the Napoleonic Wars in the nineteenth century, this course examines Western civilization in transition: The Renaissance and Reformation, commercial expansion into the Americas, Africa and Asia, absolutism, science, the enlightenment, and French Revolution.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

### **HIST& 118 : Western Civilization III**

This course stresses the international transition from European dominance to the rise of superpowers and third world nations. World Wars, depression, Democracy, Nazism, Communism, and the European Community are major themes. (1800 -1990).

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

### **HIST& 126 : World Civilization I**

From the emergence of Buddhism in India to the fall of the Roman Empire, this course provides a general overview of major developments in ancient world history. Students investigate major historical developments as exemplified by the traditional cultures of Africa, Southwest Asia (Middle East), China, Japan, India, Oceania, the Americas, and Europe. Employing the same thinking skills and methods used by historians, students draw on a variety of disciplines and sources to piece together an informed and coherent view of the past and think critically about essential questions including How do humans interact with their environments? and How do belief systems reveal how major groups in society view themselves and others?

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

### **HIST& 127 : World Civilization II**

World Civilizations II is a systematic study of the major patterns of global history in the modern period, from 1000 C.E. to 1850 C.E. This course analyzes the distinguishing characteristics of the world's major civilizations, and the gradual integration of the diverse cultures of the world into an interconnected system. Students will examine the major political, social, cultural, and economic developments, including the spread of Islam and European exploration in Africa, Asia, and the Americas. We will pay particular attention to colonialism, slavery, revolution, nationalism, globalization, democracy, and human rights. This course develops critical thinking, writing, and analytical skills by

employing the same skills and methods used by historians to piece together an informed and coherent view of the past.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**HIST& 128 : World Civilization III**

World Civilizations III introduces students to the history of the modern world from 1850 to the present day. Particular emphasis will be placed upon the global impacts of the industrial revolution, new ideologies such as liberalism and socialism, revolutionary movements like those in Russia and China, colonization and decolonization, legacies of WWI and WWII, the Cold War's global impact, comparative study of genocide, and the transformation of the Middle East in modern times. The course focuses on a theme of connections among world societies to give students the "big picture" of world history.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**HIST& 136 : US History 1**

Covering the first half of American history, this course takes students on a journey from the European foundations for colonization in the New World to the conclusion of the American Civil War. Along the way students are exposed to the philosophic, cultural, and political underpinnings of the American story, and personalities and events which bring that story to life.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**HIST& 137 : US History 2**

From the end of the Civil War to the end of the twentieth century, this course examines the development of the modern United States and its transformation from an isolationist agriculturally based society to global superpower. Along the way students are exposed to the philosophic, cultural, and political underpinnings of the American story, and personalities and events which bring that story to life.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**HIST& 215 : Women in American History**

A survey of women and U.S. history from pre-colonial times to the present. This course explores women's place in American History, including historical attitudes about women's place in society and the realities of life and work for women. This course also covers the women's rights movements from the mid-1800's to the present. Topics include cultural, ethnic, political, social, and economic history.

**Degree Code**

Social Science, Diversity

**Credits** 5

**Lecture Hours** 55

**HIST& 219 : Native American History**

A survey of Native American history in the United States, this course explores Native American life before and after European contact, U.S Native American policy from 1789 to the present, and how the Native American nations maintained aspects of their culture in a changing and hostile environment. Students will examine the diverse Native American cultures prior to European contact, examine conflicts nations faced after contact, and study how the nations impacted and contributed to United States history.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

### **HIST& 219 : Native American History**

A survey of Native American history in the United States, this course explores Native American life before and after European contact, U.S Native American policy from 1789 to the present, and how the Native American nations maintained aspects of their culture in a changing and hostile environment. Students will examine the diverse Native American cultures prior to European contact, examine conflicts nations faced after contact, and study how the nations impacted and contributed to United States history.

**Credits** 5

### **HIST 105 : Introduction to the History of Science**

This course is a survey course designed to give the student a basic understanding of the history of science from the Ancient Greeks to the present through the lens of the discoveries and scientific personalities that shaped its development. Students will examine the connections between science and the humanities and come to appreciate that science is not done in a vacuum, but has consequences for wider society. Through a series of written projects and examinations, the students will learn fundamental facts and theories of science as well as how to study and analyze them using the methodologies and techniques of both history and science. Course is cross-listed with SCI 105 and students cannot earn credit for both.

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

### **HIST 110 : The American Experience**

A brief history of the United States, this course combines a chronological and thematic approach to answer a few essential questions—the most important of which being, what does it mean to be an American? Critical periods in American History are examined with an eye toward their lasting impact upon American culture and politics. These periods

include the colonial and revolutionary era, the age of reform (1830s/40s), the Civil War and Reconstruction, the Age of Industrialization, and world wars, and the Cold War. Essential questions will examine such things as democracy, opportunity, justice and equality. Please note: This course includes information also covered in greater detail in HIST&136 and HIST&137.

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Winter, Spring

### **HIST 121 : History of Mexico**

This course will explore the social, cultural and otherwise varied history of Mexico from prehistoric times to the present. Lectures, discussion and readings will provide additional insights into the ethnic, economic and political realities of Mexico in our time.

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Spring

### **HIST 210 : Tudor England**

Meet the Tudors—history’s most famous royal family and soap opera. Beloved by Hollywood, Henry VIII and his children (Edward VI, Mary I, and Elizabeth I) did more than behead spouses and burn heretics. Together they changed the face of the Western World by shepherding the transition from the Middle Ages to the modern world—sometimes willingly too! Exploring the political and religious reformation in England and the nature of the personalities at play, this course seeks to open sixteenth century England and see the great dynasty as it was seen through the eyes of those who lived in terror of it, as well as through the more scholarly—but no less fascinated— eyes of modern historians.

#### **Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**HIST 215 : Women in American History**

**Credits** 5

**HIST 230 : Ancient Near East**

The course will study the growth and development of the Ancient Near East from its origin in Ancient Sumer in the bronze age to the rise of the Persians. Attention will also be given to Egypt and Israel and their contributions to the milieu of culture and society in the ancient Near East. The course will look at, in varying degrees, the culture, art, architecture, and religion of these societies.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**HIST 245 : American Civil War & Reconstruction**

This course examines the institutions, events, and personalities that made the Civil War an "irrepressible conflict," and the difficult reconstruction period that followed. The onset of the Civil War was rooted in the national controversy over slavery. For this reason a detailed look at southern slavery, northern industrialism and sectional politics and secession will precede study of the military history of the war itself and the political reconstruction.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**HIST 250 : Ancient Greece**

A survey course of Greek history, beginning with the first identifiably Greek peoples of the Bronze Age and continuing down through the Dark Ages, the Classical period in Greece, the rise of Macedonia and Alexander the Great and the Hellenistic Age. In addition to the historical

developments, we will look at Greek myth and religion, art, philosophy, science and other aspects of Greek culture.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

**HIST 270 : The Roman World**

This course is a survey of Roman history from the founding of the city in the 8th century BC to the collapse of the Empire in the west in the 5th century AD. The content is organized chronologically, but we will also take time to look at Roman culture including literature, art, architecture and drama.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

## Homeland Security - currently not offered

The Homeland Security Management Program (HSEM) offers an opportunity for students to prepare for careers as emergency management managers and policy leaders, and to acquire the knowledge and skills needed to improve outcomes in a wide range of disaster situations.

The primarily online program incorporates instruction in policy as well as planning and operational components of emergency management and homeland security, including opportunities to gain practical experience and work with current incident management technologies. The program addresses competencies required of emergency management professionals in careers in government, private industry, and non-profit sectors. Students explore the complex world of

emergency and disaster management issues and learn the critical thinking and decision-making skills necessary to support and supervise comprehensive, integrated, and effective management in the event of natural, system-wide, or human-induced crises. The curriculum provides policy foundations and advances students through core competencies in hazard identification; risk and vulnerability assessment; planning; terrorism; mitigation, preparedness, response and recovery; and planning for diverse populations.

BBCC does not offer degrees in HSEM. HSEM classes are taught through a partnership with Pierce College. Pierce College does offer online degrees in HSEM. Homeland Security Emergency Management courses will develop the students' competencies to prepare for and respond to all hazard environments, and includes an understanding of socioeconomic and cultural diversity issue. HSEM courses are often included as part of a student's education plan when seeking degrees in Criminal Justice.

## Homeland Security – currently not offered Course Descriptions

### **HSEM 102 : Introduction to Homeland Security and Emergency Management**

Provides groundwork on which emergency services can build a strong foundation for disaster and emergency management for homeland security in the 21st century. Addresses issues, policies, questions, best practices, and lessons learned through recent years; requirements of NFPA® 1600, Standard on Emergency Management and exposure to new and developing theories, practices, and technology in emergency management.

**Credits** 5

**Lecture Hours** 55

### **HSEM 110 : Incident Command System/National Incident Management System**

This course introduces the Incident Command System (ICS) and provides the foundation for higher-level ICS training. This course describes the history, features, and principles and organization structure of the Incident Command System. It also explains the relationship between ICS and the National Incident Management System (NIMS). (Course will meet ICS 100/200/700/800 requirements).

**Credits** 2

**Lecture Hours** 22

#### **Prerequisites**

Completion of or concurrent enrollment in [HSEM 102](#)

### **HSEM 120 : All Hazards Emergency Planning**

This course is designed to introduce students to developing an effective emergency planning system. This course offers training in the fundamentals of the emergency planning process, including the rationale behind planning. Emphasis will be placed on hazard/risk analysis and planning team development. Other topics, such as Continuity of Operations (COOP), Emergency Support Functions, National Response Plan, Washington State Comprehensive Emergency Management Plan and contingency planning for areas such as Special Needs (Vulnerable Populations) or Animal Sheltering are included.

**Credits** 3

**Lecture Hours** 33

#### **Prerequisites**

HSEM 102: Introduction to Homeland Security and Emergency Management

### **HSEM 130 : Technology in Emergency Management**

This class provides a detailed overview of the technology used, and also clearly explains how the technology is applied in the field of emergency management. Students will learn how to utilize technology in emergency planning, response, recovery and mitigation efforts and they'll uncover the key elements that must be in place for technology to enhance the emergency

management process. Course overviews include: Web Emergency Operations Center (EOC), using technology with training and exercises, reverse 911 notification systems, video conferencing/ downlinks and Geographic Information System (GIS)/ Global Positioning System (GPS) capabilities.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management

**HSEM 157 : Public Information Officer**

The course is designed to train participants for coordinating and disseminating information released during emergency operations and for assisting in the scheduling and coordination of news conferences and similar media events. After completing this course the student will have met the sections required for Public Information Officer as outlined by NFPA 1035

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management

**HSEM 160 : Emergency Response Awareness to Terrorism**

Provides current and relevant information about terrorism, terrorist behavior, homeland security policies and dilemmas, and how to deal effectively with threats and the consequences of attacks. Student will gain insight into the key players involved in emergency management, local and state issues, particularly as they need to interact and work with FEMA and other federal agencies. Course components include identifying terrorism, causes of terrorism, preventing terrorist attacks, responding to terrorism attacks and avoidance in communication and leadership collapse.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[HSEM 102](#) - Intro to Emergency Management

**HSEM 180 : Public Administration**

This course provides an overview in the structure and issues of public service. Course participants will examine the context of public administration: the political system, the role of federalism, bureaucratic politics and power, and the various theories of administration that guide public managers today. Course components include public administration, personnel, budgeting, decision-making, organizational behavior, leadership, and policy implementation. Lessons will be drawn from the most current applications of public administration today, such as Hurricane Katrina efforts and Homeland Security.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management

**HSEM 190 : Homeland Security Emergency Management Special Topics**

Special topics will be developed for areas outside the usual course offerings in Homeland Security Emergency Management degree. Topics developed will focus on a specific current issue or concept in the areas of homeland security or emergency management. NOTE: A maximum of five (5) credit hours of HSEM 190 may be used as elective credit toward the HSEM degree.

**Credits** 5

**Lecture Hours** 11-55

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management and 12 additional HSEM credits or HSEM Program Coordinator approval

**HSEM 200 : Emergency Operations Center**

This course provides the student with skills and knowledge to manage an Emergency Operations Center (EOC), acquire and control resources, and interface with on-scene responders within Incident Management Systems. Topics include EOC design, preparing, staffing and operating, jurisdictional setting, and the critical link between Incident Management Systems and emergency management operations.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[HSEM 110](#) Basic ICS/NIMS & [HSEM 102](#) Introduction to Emergency Management

**HSEM 210 : Exercise Design and Evaluation**

This course provides participants with the knowledge and skills to develop, conduct, evaluate and report effective exercises that test a community's operations plan and operational response capability. Throughout the course, participants will learn about topics including exercise program management, design and development, evaluation, and improvement planning. It also builds a foundation for subsequent exercise courses, which provide the specifics of the Homeland Security Exercise and Evaluation Program (HSEEP) and the National Standard Exercise Curriculum (NSEC).

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management and [HSEM 120](#) All Hazards Emergency Planning or Program Coordinator approval

**HSEM 220 : Developing and Managing Volunteer Resources**

This course will focus on methods and procedures for involving private-sector organizations and volunteers in emergency management programs in ways which benefit both parties. The focus of the course is on maximizing the effectiveness of volunteer resources by implementing a people-oriented system that addresses defining volunteer roles, designing a plan of action, recruiting volunteers, training individuals who volunteer and motivation and maintenance of a successful program. Participants will acquire skills and knowledge to make appropriate volunteer assignments that enhance the effectiveness of an integrated emergency management system.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management

**HSEM 230 : Disaster Recovery and Response**

The purpose of this course is to enable students to understand and think critically about response and recovery operations in the profession of emergency management. Students will utilize problem based learning by analyzing actual disaster events and applying the theories, principals, and practice of response and recovery. In addition, students will learn about the issues faced by special populations and how to address these special needs in natural disaster response and recovery.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Completion of [HSEM 102](#) and Completion of [HSEM 120](#)

**HSEM 240 : Homeland Security Emergency Management Work-based Learning**

Provides students "real world experiences" in homeland security and emergency management. Students learn to work within time constraints and are exposed to appropriate workplace behaviors. Students will have opportunities to refine the core skills they have learned from the courses or curriculum.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management and HSEM Program Coordinator approval

**HSEM 250 : Homeland Security Law and Ethics**

This course is designed to give the student an overview of various statutes, regulations, constitutional law, and common law associated with Homeland Security. This course examines emergency response, weapons of mass destruction, local government powers, Federal Emergency Management Agency (EEMA), Department of Homeland Security, civil rights, international anti-terrorism efforts, Homeland Security Act of 2002, and the Patriot Act. Students



will be introduced to the legalities and ethics relevant to organizing for counterterrorism, investigating terrorism and other national security threats, crisis and consequence management.

**Credits** 3

**Lecture Hours** 33

**Prerequisites**

[HSEM 102](#) Introduction to Emergency Management

## Humanities

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Humanities courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Humanities involve studying human culture and asking questions about the human condition and existence: how we deal the fragility of life, what the nature of truth is, the purpose and experience of human emotions, the nature of human drives, how to live in a world with other humans, how to be better humans, and how our experiences as humans shape us. In essence, these courses help us understand more about what it means to be a human being.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate

institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Humanities Course Descriptions

### **HUM 102 : Kick Ass Women in Popular Culture**

This course helps students gain critical literacy skills that will make them more effective and inclusive readers and thinkers. We will watch film and television shows that challenge the damsel in distress stereotype by featuring kick-ass women who can save themselves and/or others using violence. We will read what scholarly and popular critics argue about these film and television shows to unpack controversies related to the "strong, independent woman" ideal. Students will learn relevant media literacy vocabulary, analyze scenes from what we watch together, and gain historical knowledge of how the representation of women has changed over the last century. They will apply this knowledge to journal assignments, reading responses, personal reflections, and multi-media assignments including a poster presentation.

**Please note: the film and television programs we watch are for mature audiences and include graphic violence and sexual themes.**

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

### **HUM 108 : Introduction to Gender Studies**

This course introduces students to major issues, concepts, and basic terms central to the field of Gender Studies. Throughout the quarter, we will critically engage with social, cultural and historical ideas about what it means to be female and male, how these ideas shape everyday life experiences, and what consequences this has on relationships, work, and the structuring of a society. Emphasis will



include the multiple ways that sex and gender interact with race, class, sexuality, nationality, and other social identities.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

**HUM 110 : Greek Mythology**

Greek Mythology is the basis for understanding Western literature, art, history and even some symbolism on U.S. currency. More than just entertainment, the ancient myths discuss our relationship to the divine, the nature of power, and the importance of heroics. This course will cover the pantheon of Greek gods and the literary styles of the epic, tragedy, and comedy.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Quarters Offered**

Fall, Winter, Summer

**HUM 205 : Diversity in French- and German-Language Cinema**

HUM 205 Diversity in French- and German-Language Cinema is a survey course that examines French- and German-Language films featuring the experiences of immigrants, women, people living with disabilities and other historically marginalized groups. Students will critically engage with the way that these subjects are portrayed on screen, comparing and contrasting the films' subjects with their own viewing and life experiences.

**Degree Code**

Diversity, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**HUM 214 : Diversity Issues: Race, Class and Gender**

This cultural diversity studies course examines and investigates culture, behavior, values, identity, stereotypes, person and societal perceptions, and the cultural construction of reality using a literature-based and experientially based cognitive curriculum. This class will explore multicultural society with a mind toward improving students' understanding of their own cultures and the cultures that surround them.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

ENGL& 101 or instructor permission

**Quarters Offered**

Fall, Winter, Spring

**HUM 220 : Diversity in Education**

This course examines and discusses the historical and current perspectives on diversity and inclusion and the impact of systemic societal influences on children's development, learning and school experiences. Strategies for developmentally, culturally, and linguistically appropriate anti-bias curriculum and teaching methods will be created. Ideas for approaches that promote inclusive and anti-racist classroom communities will be generated. Includes self-reflection on the influence of the teachers' own culture and life experiences on teaching and interactions with children and families. Classroom materials and environments will be evaluated and modified to promote anti-bias and anti-racist learning opportunities for all children.

**Degree Code**

Diversity, Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[ECED& 105](#) or [EDUC& 202](#)

**Quarters Offered**

Fall

# Industrial Systems Technology

**manufacturing@bigbend.edu**

Electrical and control system technologies are increasingly sophisticated and complex. Electrical/Electronic technologies have changed the fabric of our existence. We are truly living the electronic age. New innovations seem to be routine, daily occurrences. Today's competitive business climate pushes Industry to grasp new technology to maintain tighter control of their processes, knowing better control – better bottom line! Today's industrial electrician is a multi-faceted technician. Modern industrial plants require technician level individuals who, maintain, calibrate, repair, troubleshoot, and wish to grow with new innovation.

## Industrial Electrical Technology AAS

### Degree Type

Associate in Applied Science

The Industrial Electrical Technology program provides comprehensive two-year curriculum designed to prepare students for career opportunities as industrial electrical technicians. Students receive instruction in safety, electrical and electronic theory, process control, instrumentation, and Programmable Logic Controllers.

Our mission is to prepare students for entry in the world of industrial electricity, with a thorough understanding of electrical safety, and safe practices. We wish to instill the enthusiasm to learn, think, and grow, now and into the future! Favorable opportunities, now and into the foreseeable future, make Industrial Electricity an interesting, outstanding career choice.

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations
- PO4 Students will be able to apply electronic principals to electro-maintenance activities
- PO5 Students will be able to install electrical/electronic apparatus using appropriate techniques
- PO6 Students will be able to access controls automation logic equipment for monitoring and troubleshooting purposes
- PO7 Students will be able to demonstrate proper mechanical techniques to assembly/disassembly activities
- PO8 Students will be able to fabricate simple fixtures as situations generally require

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
IST 100	Introduction to Industrial Safety and Health	3
IST 102	Technical Drawing Interpretation	3
HIST 105	Introduction to the History of Science	5
MAP 117	Applied Math for Workforce Programs I	1-5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	CMST& 220 or CMST& 210	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 106	Basic Electricity - AC Circuit Analysis	5
IST 120	Introduction to Preventive/Predictive Maintenance	3
	PSYC& 100 or SOC& 101	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
	ENGL 109 or ENGL& 101	3
IST 107	Industrial Electricity I	5
IST 110	Introduction to the National Electric Code	2
IST 113	Industrial Electrical Installation Techniques	5
IST 221	Electronics I (Principles)	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
IST 110	Introduction to the National Electric Code	2
IST 150	Introduction to Programmable Logic Controllers	5
IST 207	Industrial Electricity II	5
IST 222	Electronics II (Applications)	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
IST 111	National Electric Code II	2
IST 152	Programmable Automation Control	5
IST 170	Introduction to Instrumentation	5
IST 223	Electronics III (Industrial)	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
IST 112	National Electric Code III	2
IST 208	Industrial Electricity III	5
IST 270	Instrumentation II & Control Actuators	5
	IST Approved Electives (2+ credits)	2
<b>Total Credits</b>		<b>100</b>

## Electronics Technology Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed for students who wish to take specialized courses in a particular field and desire certification acknowledging completion of specific program modules. These modules contain the mathematics, written and oral communications, and human relations general education requirements and accepted course requirements for certification.

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will be able to apply electronic principals to electro-maintenance activities
- PO5 Students will be able to install electrical/electronic apparatus using appropriate techniques

Interested students must work out courses and schedules with the IST program advisor.

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 105	Basic Electricity-DC Circuit Analysis	5
IST 106	Basic Electricity - AC Circuit Analysis	5
IST 221	Electronics I (Principles)	5
IST 222	Electronics II (Applications)	5
IST 223	Electronics III (Industrial)	5
	IST Approved Electives (5 credits)	5
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>48</b>

## Industrial Electrical Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed for students who wish to take specialized courses in a particular field and desire certification acknowledging completion of specific program modules. These modules contain the mathematics, written and oral communications, and human relations general education requirements and accepted course requirements for certification.

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will be able to apply electronic principals to electro-maintenance activities
- PO5 Students will be able to install electrical/electronic apparatus using appropriate techniques

Interested students must work out courses and schedules with the IST program advisor.

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 105	Basic Electricity-DC Circuit Analysis	5
IST 106	Basic Electricity - AC Circuit Analysis	5
IST 107	Industrial Electricity I	5
IST 207	Industrial Electricity II	5
IST 208	Industrial Electricity III	5
IST 221	Electronics I (Principles)	5
	IST Approved Electives (2+ credits)	2
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>50</b>

## Industrial Electricity Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through particular technical program. This certification is designed for the occasional and or part-time student that does not plan to complete an Associate in Applied Science degree or Certificate of Achievement.

Big Bend Community College upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

#### Program Learning Outcomes

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
IST 107	Industrial Electricity I	5
IST 113	Industrial Electrical Installation Techniques	5
IST 207	Industrial Electricity II	5
IST 208	Industrial Electricity III	5
<b>Total Credits</b>		<b>20</b>

## Programmable Logic Controllers Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or small modules of courses offered through particular technical program.

This certification is designed for the occasional and or part-time student that does not plan to complete an Associate in Applied Science degree or Certificate of Achievement.

Big Bend Community College upon request by application, may issue Certificates of Accomplishment upon successful completion of the following approved modules with an earned minimum grade of 2.0 for each course.

#### Program Learning Outcomes

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
IST 150	Introduction to Programmable Logic Controllers	5
IST 207	Industrial Electricity II	5
IST 152	Programmable Automation Control	5
<b>Total Credits</b>		<b>15</b>

## Programmable Logic Controllers Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed for students who wish to take specialized courses in a particular field and desire certification acknowledging completion of specific program modules. These modules contain the mathematics, written and oral communications, and human relations general education requirements and accepted course requirements for certification.

#### Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Students will be able to apply electronic principals to electro-maintenance activities
- PO5 Students will be able to install electrical/electronic apparatus using appropriate techniques

Interested students must work out courses and schedules with the IST program advisor.

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 105	Basic Electricity-DC Circuit Analysis	5
IST 106	Basic Electricity - AC Circuit Analysis	5
IST 107	Industrial Electricity I	5
IST 150	Introduction to Programmable Logic Controllers	5
IST 152	Programmable Automation Control	5
IST 207	Industrial Electricity II	5
IST 208	Industrial Electricity III	5
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
<b>Total Credits</b>		<b>48</b>

# Industrial Systems Technology Course Descriptions

## IST 100 : Introduction to Industrial Safety and Health

Introduction to basic industrial safety and health incorporating OSHA/WISHA rules and regulations, personal protective equipment, chemical safety, tool safety, material handling safety, machine safety, electrical safety, fire protection, health protection and safe working practices.

**Credits** 3

**Lecture Hours** 33

## IST 102 : Technical Drawing Interpretation

Fundamental technical drawing, reading and sketching principles, concepts and standards as applied to industry. GTE Dual Credit available.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

## IST 105 : Basic Electricity-DC Circuit Analysis

Fundamentals of DC electricity as applied to series, parallel, and series-parallel circuits. Use of test equipment and troubleshooting simple circuits.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

### Prerequisites

[MAP 103](#)/[MAP 117](#)/ [MATH 094](#) or concurrent enrollment or Instructor Permission

## IST 106 : Basic Electricity - AC Circuit Analysis

Teaches alternating current theory, waveform quantities and characteristics, including network analysis with reactive components. Proper use of test equipment and troubleshooting simple circuits.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

### Prerequisites

[IST 105](#) and [MAP 103](#)/[MAP 117](#)/ [MATH 094](#) or concurrent enrollment or Instructor Permission.

**IST 107 : Industrial Electricity I**

Electrical theory and application, electrical blueprints, power sources, panels, control devices, motors, etc. Use of test equipment and troubleshooting. Note: For Maintenance Mechanics

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 102](#), 106, [MAP 103](#) or instructor permission

**IST 110 : Introduction to the National Electric Code**

Introduction to Washington State electrical law and the National Electric Code as they pertain to the working electrical technician.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[IST 107](#) or instructor permission

**IST 111 : National Electric Code II**

Application of the Washington State electrical laws (WAG codes) and the National Electric Code as they pertain to the working electrical technician.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[IST 110](#) or instructor permission

**IST 112 : National Electric Code III**

Washington State electrical laws (WAC Codes 296-46, RCW 19.28) and National Electrical Code (NFPA 70) are applied to the working electrician.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

[IST 111](#) or instructor permission

**IST 113 : Industrial Electrical Installation Techniques**

Fundamentals of raceway, wire and utilization equipment installations for plant safety, efficiency and long economic life.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 107](#) or instructor permission

**IST 120 : Introduction to Preventive/Predictive Maintenance**

Theory and practice of preventive and predictive maintenance concepts. Performing routine preventative maintenance and scheduling predictive maintenance outages.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

[IST 102](#) and [MAP 103](#)/[MAP 117](#)/[MATH 094](#) or concurrent enrollment or Instructor Permission.

**IST 130 : Introduction to Refrigeration and Air Conditioning**

Fundamental physical, chemical, engineering, and mechanical aspects of the refrigeration process.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 100](#), [IST 102](#), [IST 106](#), and [MAP 103](#)/[MAP 117](#)/[MATH 094](#) or concurrent enrollment or Instructor Permission.

**IST 136 : Intro to Industrial Boiler Technology**

This course involves the fundamental principles of steam generation, boiler designs, components, operation, water treatment, safety procedures and related steam generation equipment.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 107](#) or instructor permission

**IST 141 : Intro to Mechanized Irrigation Applications I**

This class will introduce the history and development of mechanized irrigation. It will distinguish the basic irrigation systems: pivot, swing arm corner, and lateral move systems. Course work will examine the various propulsion systems, electrical/electronic/digital logic controls and irrigation hydraulic principles. It will

focus on technical service and operation aspects in a "real-life" lab environment under actual conditions.

**Credits** 5

**Lecture Hours** 27

**Lab Hours** 55

**Prerequisites**

[IST 100](#) and [IST 102](#)

### **IST 142 : Mechanized Irrigation Applications II**

This class will reinforce the concepts of mechanized irrigation systems acquired from the intro class. Course work will provide an in-depth and practical view of the various propulsion systems, electrical/electronic/digital logic controls and irrigation hydraulic principles. It will focus on technical service and operation aspects irrigation service technicians experience in the held. Instruction using "real-life" lab equipment under authentic conditions provides "hands on" experience similar to actual held work.

**Credits** 5

**Lecture Hours** 27

**Lab Hours** 55

**Prerequisites**

[IST 141](#); Intro to Mechanized Irrigation Applications I

### **IST 150 : Introduction to Programmable Logic Controllers**

Introduction to programmable logic controller principles, hardware, and operation. Includes ladder logic, instruction, maintenance and troubleshooting. (Formerly ELC 150)

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 107](#) and [MAP 103/MAP 117/MATH 094](#) or concurrent enrollment or Instructor Permission.

### **IST 152 : Programmable Automation Control**

Programmable Logic Controllers have become the backbone of modern industrial automation. This course explores PLC principles, networking, hardware and operation, with emphasis on ladder logic instruction sets, maintenance and

troubleshooting using the Allen-Bradley Compact Logix" platform and Control Logix" programming software.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 150](#) or instructor permission.

### **IST 170 : Introduction to Instrumentation**

Fundamentals of process control as it applies to process variables, measurement dynamics, & automatic corrective measures in the industrial environment.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 107](#) or instructor permission

### **IST 180 : Machining I**

Layout and fabrication techniques with the use of semi-precision and precision measurement tools. Introduction to drill press, engine lathe and vertical mill operations.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 102](#) and [MAP 103/MAP 117/MATH 094](#) or concurrent enrollment or Instructor Permission.

### **IST 182 : Machining II**

Fundamentals of machining processes on lathes and vertical mills. Precision measurement with micrometers, vernier calipers, and dial indicators.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 180](#) or instructor permission

### **IST 184 : Machining-Skill Enhancement**

Extra hands on time and instruction to supplement the students machining skill level using fundamental machining processes on lathes, vertical milling machines and other machine shop equipment.



**Credits** 4

**Lecture Hours** 11

**Lab Hours** 66

**Prerequisites**

[IST 182](#) or instructor permission

**IST 207 : Industrial Electricity II**

Electrical theory and function as it applies to various control schemes with a practical understanding of the logic and safety considerations required for efficient control of stand alone machinery and or a complex system.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 107](#) or instructor permission

**IST 208 : Industrial Electricity III**

Electrical theory, operation and set-up of variable frequency drives (VFD's), soft start devices, 4-20 ma. control loops and grounding issues associated with electronic devices.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 207](#) or instructor permission

**IST 221 : Electronics I (Principles)**

Introduction to principles and applications of analog and digital electronic devices, circuits, and systems.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 106](#) or instructor permission

**IST 222 : Electronics II (Applications)**

Construct and analyze operation of analog and digital electronic devices, circuits, and systems using schematic diagrams, test equipment, and logical trouble shooting procedures.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 221](#) or instructor permission

**IST 223 : Electronics III (Industrial)**

Instruction and training in troubleshooting, testing and repairing industrial control devices. Electrical motor drives, instrumentation, and programmable controllers will be covered.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 222](#) or instructor permission

**IST 252 : Programmable Automation Control III (HMI)**

Human Machine Interface (HMI) has become one of the essentials of modern industrial automation systems. HMI is a display on touch-sensitive screens that connects a person to a machine. Even though Programmable Logic Controls (PLC) often run behind the scenes without a screen displaying, an HMI allows the PLC to visually display what it is doing or has done. These HMI displays are often driven through an Ethernet connection by PLC programs, commonly used in industrial processes; such as, oil and gas, manufacturing, material handling, robotics, and food processing. This course introduces the fundamentals of HMI, including symbology and programming techniques. The student will write, configure, upload, and run HMI programs using HMI software.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 150](#) or Instructor Permission

**IST 270 : Instrumentation II & Control Actuators**

Maintenance procedures and troubleshooting techniques for control/measurement loops in the industrial environment along with fundamentals of control valves, actuators, their applications, techniques of safe trouble shooting, testing, repairing, and calibrating final control elements.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 170](#), 223, or instructor permission.

**IST 280 : Mechanical Power Transmission**

Fundamentals of industrial mechanical power transmission. Includes lubrication, bearings, speed reducers, gears, couplings, drive components, brakes, clutches, and adjustable speed drives.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 100](#), [IST 102](#), and [MAP 103](#)/[MAP 117](#)/[MATH 094](#) or concurrent enrollment or Instructor Permission.

**IST 282 : Fluid Power Transmission**

Fundamentals of industrial hydraulic, pneumatic, and vacuum systems. Includes pumps, piping, compressors, check valves, cylinders, motors, control valves and flow controls.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 100](#),[102](#), [MAP 103](#), or instructor permission

**IST 284 : Pumping Hydraulics & Mechanics**

This course explores the fundamentals of pump system characteristics, hydraulic principles, and pumping technology; including various designs, pump seals, lubrication, & mechanical maintenance.

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[IST 280](#) or instructor permission

**IST 295 : Work Based Learning**

A supervised work experience in industrial systems enhancing the application of classroom instruction and skills and/or area of specialization approved by the program advisor. May be repeated up to twelve (12) credits.

**Credits** 1-6

**Clinical Hours** 33-198

**Prerequisites**

Instructor permission

**Corequisites**

[IST 297](#)

**IST 297 : Work Based Learning Seminar**

Feedback and discussion to integrate and relate work based learning and classroom based instruction. Work ethic, leadership, safety and occupational health, environmental issues, and other student generated topics are examined. May be repeated up to six (6) credits.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

instructor permission

**Corequisites**

[IST 295](#): Work Based Learning

## Journalism

### Journalism Course Descriptions

**JOU 140 : Digital Photojournalism**

For persons interested in using digital cameras and computer techniques to produce images for newspapers, magazines, and other print media, and for Internet transmission and web sites. Students will be required to produce images showing specific examples of photojournalism.

**Degree Code**

Humanities Performance/Skill

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

## Library

# Library Course Descriptions

## **LIB 101 : Academic Research Skills**

This course is designed to prepare students with academic level research skills necessary to create search strategies, locate resources, identify formats, evaluate search results, understand APA and other citation styles, and avoid plagiarism.

**Credits** 2

**Lecture Hours** 22

### **Prerequisites**

Placement into ENGL 099 or successful completion of [ENGL 098](#) with a 2.0 or higher.

### **Quarters Offered**

Summer

# Manufacturing and Process Technology

[manufacturing@bigbend.edu](mailto:manufacturing@bigbend.edu)

The Manufacturing program provides students a broad range of career and academic options. Students can select direct entry into the workforce in areas such as manufacturing, processing, and facility operations by customizing their second year courses. Students can also tailor their degree to take advantage of possible transfer pathways available through Eastern Washington University.

## Advisor Approved Electives

CHEM& 105 Chemical Concepts (5 credits)

OR CHEM& 110 Chemical Concepts with lab

OR CHEM& 121 Introductory Chemistry

ENGR& 111 Engineering Graphics I (CAD) (5 credits)

ENGR& 112 Engineering Graphics II (SolidWorks) (5 credits)

IST 107 Industrial Electricity I.(5 credits)

IST 120 Intro. to Prevention/Predictive Maintenance (3 credits).

IST 150 Intro to Programmable Logic Controllers (PLCs) (5 credits)

ENGR& 111 Engineering Graphics I (CAD)(5 credits)

ENGR& 112 Engineering Graphics II (SolidWorks) (5 credits)

IST 107 Industrial Electricity I (5 credits)

IST 120 Intro. to Prevention/Predictive Maintenance (3 credits)

IST 150 Intro to Programmable Logic Controllers (PLCs) (5 credits)

IST 152 Programmable Automation Control (PLCs II). (5 credits)

IST 170 Intro to Instrumentation.(5 credits)

IST 221 Electronics I.(5 credits)

IST 222 Electronics II..(5 credits)

IST 223 Electronics III...(5 credits)

IST 252 Programmable Automation Control III (HMI)(5 credits)

IST 270 Instrumentation II & Control Actuators.(5 credits)

IST 280 Mechanical Power Transmission (5 credits)

IST 282 Fluid Power Transmission (5 credits)

IST 284 Pump Hydraulics/Mechanics (4 credits)

MCT 120 Robotics I (5 credits)

MCT 220 Robotics II (5 credits)

MPT 104 Intro to Electricity...(5 credits)

MPT 125 2.5-Axis Milling...(5 credits)

MPT 130 CNC Turning.(5 credits)

MPT 135 Intro to Additive Manufacturing..(3 credits)

MPT 140 Intro to IIOT and SCADA.(3 credits)

MPT 145 Intro to Coordinate Metrology (5 credits)

MPT 220 3-Axis Milling.(5 credits)

MPT 225 Multi Axis Machining (5 credits)

MPT 230 Cobot-Enabled Machining (3 credits)

WLD 145 Agricultural Welding.(4 credits)

## Manufacturing & Process Technology (Automation & Robotics Emphasis)-AAS-T

### Degree Type

Associate in Applied Science

### Program Learning Outcomes:

IO1 Communication

Communicate effectively and respectfully using verbal, written, and computer skills

IO2 Quantitative Reasoning

Students will be able to reason mathematically using methods appropriate to the profession

IO3 Human Relations/Workplace Skills

Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.

PO4 Conduct measurements, analyze and interpret data, and propose methods for resolving problems

PO5 Assist with the research, planning, and completion of projects, with consideration for processes, budgets, material, and time

PO6 Draft, modify, and/or interpret technical drawings

## Degree and General Education Requirements

\*See a program advisor for specific electives needed for an emphasis in Maintenance or Automation & Robotics

Course Code	Title	Credits
BIM 109	Internet Communications	1-2
BIM 180	Introduction to Microsoft Office	1-5
ENGL& 101	English Composition I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 100	Introduction to Industrial Safety and Health	3
IST 102	Technical Drawing Interpretation	3
MAP 117	Applied Math for Workforce Programs I	1-5
MPT 120	Intro to CAM (Computer Aided Manufacturing)	5
	CMST&210 or CMST& 220	
	PSYC& 100 or SOC& 101	5
	Advisor Approved MPT Elective (54+ credits)	

## Required Courses

Course Code	Title	Credits
IST 107	Industrial Electricity I	5
IST 150	Introduction to Programmable Logic Controllers	5
IST 152	Programmable Automation Control	5
IST 170	Introduction to Instrumentation	5
IST 221	Electronics I (Principles)	5
IST 222	Electronics II (Applications)	5
MCT 120	Robotics I	5
MPT 104	Introduction to Electricity	5
	Advisor Approved MPT Elective- (14+ credits)	
<b>Total Credits</b>		<b>90</b>

## Manufacturing & Process Technology (Maintenance Emphasis) AAS-T

### Degree Type

Associate in Applied Science-Transfer

### Program Learning Outcomes:

- IO1 Communication  
Communicate effectively and respectfully using verbal, written, and computer skills
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.
- PO4 Conduct measurements, analyze and interpret data, and propose methods for resolving problems
- PO5 Assist with the research, planning, and completion of projects, with consideration for processes, budgets, material, and time

- PO6 Draft, modify, and/or interpret technical drawings

The following schedule of courses is the recommended program for completing this degree. See a program advisor for specific courses needed for an emphasis in Maintenance or in Critical Missions.

## Required Courses

Course Code	Title	Credits
IST 107	Industrial Electricity I	5
IST 120	Introduction to Preventive/Predictive Maintenance	3
IST 150	Introduction to Programmable Logic Controllers	5
IST 170	Introduction to Instrumentation	5
IST 270	Instrumentation II & Control Actuators	5
IST 280	Mechanical Power Transmission	5
IST 282	Fluid Power Transmission	5
IST 284	Pumping Hydraulics & Mechanics	5
MPT 104	Introduction to Electricity	5
WLD 145	Agricultural Welding	4
	Advisor Approved MPT Elective	5
<b>Total Credits</b>		<b>36</b>

## Manufacturing & Process Technology: Maintenance Emphasis AAS/AAS-T

### Degree Type

Associate in Applied Science-Transfer

## Program Learning Outcomes:

### IO1 **Communication**

Communicate effectively and respectfully using verbal, written, and computer skills

### IO2 **Quantitative Reasoning**

Students will be able to reason mathematically using methods appropriate to the profession

### IO3 **Human Relations/Workplace Skills**

Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.

PO4 Conduct measurements, analyze and interpret data, and propose methods for resolving problems

PO5 Assist with the research, planning, and completion of projects, with consideration for processes, budgets, material, and time

PO6 Draft, modify, and/or interpret technical drawings

## Degree and General Education Requirements

\*See a program advisor for specific electives needed for an emphasis in Maintenance or Automation & Robotics.

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 109	Internet Communications	1-2
BIM 180	Introduction to Microsoft Office	1-5
ENGL& 101	English Composition I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 100	Introduction to Industrial Safety and Health	3
IST 102	Technical Drawing Interpretation	3
MAP 117	Applied Math for Workforce Programs I	1-5
MPT 140	Introduction to Industrial Internet of Things (IIoT), SCADA (Supervisory Control and Data Acquisition)	3
	PSYC& 100 or SOC& 101	5
	CMST& 220 or CMST& 210	5
	Approved Electives* (51+)	

## Program Electives

Course Code	Title	Credits
ENGR& 112	Engineering Graphics II	5
IST 107	Industrial Electricity I	5
IST 120	Introduction to Preventive/ Predictive Maintenance	3
IST 150	Introduction to Programmable Logic Controllers	5
IST 152	Programmable Automation Control	5
IST 170	Introduction to Instrumentation	5
IST 207	Industrial Electricity II	5
IST 221	Electronics I (Principles)	5
IST 222	Electronics II (Applications)	5
IST 252	Programmable Automation Control III (HMI)	5
HIST 270	The Roman World	5
IST 282	Fluid Power Transmission	5
IST 284	Pumping Hydraulics & Mechanics	5
MCT 120	Robotics I	5
MCT 220	Robotics II	5
MPT 104	Introduction to Electricity	5
MPT 125	2.5 Axis Milling	5
MPT 130	CNC Turning	5
MPT 135	Introduction to Additive Manufacturing	3
MPT 145	Intro to Coordinate Metrology	5
MPT 220	CAM for 3-Axis Milling	5
MPT 225	CAM for Multi-Axis Milling	5
MPT 230	Cobot-Enabled CNC Machining	3
WLD 145	Agricultural Welding	4
<b>Total Credits</b>		<b>90</b>

## Manufacturing & Process Technology: Mission Critical Emphasis AAS-T- (Currently NOT enrolling students)

### Degree Type

Associate in Applied Science-Transfer

### Program Learning Outcomes:

#### IO1 **Communication**

Communicate effectively and respectfully using verbal, written, and computer skills

#### IO2 **Quantitative Reasoning**

Students will be able to reason mathematically using methods appropriate to the profession

#### IO3 **Human Relations/Workplace Skills**

Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.

PO4 Conduct measurements, analyze and interpret data, and propose methods for resolving problems

PO5 Assist with the research, planning, and completion of projects, with consideration for processes, budgets, material, and time

PO6 Draft, modify, and/or interpret technical drawings

## First Year Fall Quarter

Course Code	Title	Credits
IST 100	Introduction to Industrial Safety and Health	3
IST 102	Technical Drawing Interpretation	3
IST 105	Basic Electricity-DC Circuit Analysis	5
WKED 101	Professional Preparation - Occupation Specific I	1
WKED 110	Mission Critical Operations Management I	3

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BUS 135	Fundamentals of Logistics, Transportation, and Supply Chain Management	1-3
IST 106	Basic Electricity - AC Circuit Analysis	5
WKED 102	Professional Preparation - Occupation Specific II	1
ENGL& 101	English Composition I	5
MAP 117	Applied Math for Workforce Programs I	1-5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 106	Advance Keyboarding	1-3
BIM 110	Microsoft Office Essentials	1-3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
	PSYC& 100 or SOC& 101	5
WKED 111	Mission Critical Operations Management II	4

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BUS 215	Customer Service	3
	CMST& 220 or CMST& 210	5
IST 130	Introduction to Refrigeration and Air Conditioning	5

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ENGL& 235	Technical writing	5
IST 120	Introduction to Preventive/Predictive Maintenance	3
	Elective (3-5 credits)	3-5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BUS 289	Project Management	5
	Elective (6-10 credits)	6-10
<b>Total Credits</b>		<b>90</b>

## Maintenance Mechanics Certificate of Achievement (59+ Credits)

### Degree Type

Certificate

As students make progress toward the completion of the Associate of Applied Science degree, they can also earn a Certificate of Achievement. The certificate incorporates fundamental skills and knowledge needed to be successful in entry-level positions. These certificates contain General Education instruction requirements and accepted course requirements.

Interested students must develop schedules with the program advisor for the certificate.

## Program Learning Outcomes

IO1 Communication

Students will be able to communicate clearly and effectively within a workplace context.

IO2 Quantitative Reasoning

Students will be able to reason mathematically using methods appropriate to the profession

IO3 Human Relations/Workplace Skills

Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations.

PO5 Students will be able to demonstrate proper mechanical techniques to assembly/disassembly activities

PO6 Students will be able to fabricate simple fixtures as situations generally require



## Required Courses

Some courses may have pre-requisites.

Interested students must develop schedules with the program advisor.

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
ENGL& 101	English Composition I	5
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 107	Industrial Electricity I	5
IST 120	Introduction to Preventive/Predictive Maintenance	3
IST 170	Introduction to Instrumentation	5
MPT 104	Introduction to Electricity	5
	SOC& 101 or PSYC& 100	5
	Advisor Approved MPT Maintenance Electives (24+ Credits)	
<b>Total Credits</b>		<b>59</b>

## Manufacturing - Mechatronics Certificate of Achievement (Currently NOT enrolling students) (46+ Credits)

### Degree Type

Certificate

As students make progress toward the completion of the Associate of Applied Science degree, they can also earn a Certificate of Achievement. The certificate incorporates fundamental skills and knowledge needed to be successful in entry-level positions.

Program Learning Outcomes:

- IO1 Communication  
Communicate effectively and respectfully using verbal, written, and computer skills

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork and/or workplace specific skills related to human relations
- PO4 Conduct measurements, analyze and interpret data, and propose methods for resolving problems
- PO5 Assist with the research, planning, and completion of projects
- PO6 Draft, modify, and/or interpret technical drawings

Interested students must develop schedules with the program advisor.

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
ENGL& 101	English Composition I	5
MAP 117	Applied Math for Workforce Programs I	1-5
	PSYC& 100 or SOC& 101	5
BIM 109	Internet Communications	1-2
BIM 110	Microsoft Office Essentials	1-3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
IST 100	Introduction to Industrial Safety and Health	3
IST 102	Technical Drawing Interpretation	3
MCT 100	Introduction to Modern Technology	2-5
MCT 101	Mechatronics I	2-5
MCT 102	Mechatronics II	2-5
<b>Total Credits</b>		<b>46</b>

# Manufacturing and Process Technology Course Descriptions

## **MPT 104 : Introduction to Electricity**

This course provides a comprehensive introduction to the principles of basic electricity. Students will learn about the basic terms and principles of electricity, analyze electrical circuits, and understand the properties of capacitors and inductors. They will also gain an understanding of Alternating Current (AC) and Direct Current (DC) circuits, transformers and motors, and the properties and applications of semiconductors, diodes, and transistors. Additionally, students will learn about electronic devices and circuit boards, and how to read and interpret circuit diagrams. Prerequisite: This course provides a comprehensive introduction to the principles of basic electricity. Students will learn about the basic terms and principles of electricity, analyze electrical circuits, and understand the properties of capacitors and inductors. They will also gain an understanding of Alternating Current (AC) and Direct Current (DC) circuits, transformers and motors, and the properties and applications of semiconductors, diodes, and transistors. Additionally, students will learn about electronic devices and circuit boards, and how to read and interpret circuit diagrams. Prerequisite: MAP 117 **and** IST 100 **and** IST 102 or Instructor Permission.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

### **Prerequisites**

MAP 117: Applied Math for Workforce Programs I

IST 100: Introduction to Industrial Safety and Health

IST 102: Technical Drawing Interpretation

## **MPT 120 : Intro to CAM (Computer Aided Manufacturing)**

This is an introductory course to Computer Aided Manufacturing (CAM) where students will learn the foundational knowledge in Computer Aided Design (CAD) and creation of G-Code for

Computer Numerically Controlled (CNC) equipment. This course covers skills that can be applied across a wide range of industries, and it is the first class in preparing for industry-recognized certifications using CAD and CAM software.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

### **Prerequisite or Corequisite**

This is an introductory course to Computer Aided Manufacturing (CAM) where students will learn the foundational knowledge in Computer Aided Design (CAD) and creation of G-Code for Computer Numerically Controlled (CNC) equipment. This course covers skills that can be applied across a wide range of industries, and it is the first class in preparing for industry-recognized certifications using CAD and CAM software.

### **Prerequisites**

[MAP 117](#) and [IST 102](#) or concurrent enrollment or Instructor Permission.

## **MPT 125 : 2.5 Axis Milling**

This is a Computer Aided Manufacturing course designed for students building upon the foundational skills learned in MPT 120 – Intro to CAM. Students will be able to demonstrate their CAM skills and be able to validate their skills through completion of the industry-recognized CAM 2.5 Axis Milling certification using CAM software.

**Credits** 5

**Lecture Hours** 20

**Lab Hours** 66

### **Prerequisites**

[MPT 120](#) – Intro to CAM

## **MPT 130 : CNC Turning**

This is a Computer Aided Manufacturing course designed for students building upon the foundational skills learned in MPT 120: Intro to CAM and concepts learned in MPT 125: 2.5 Axis Milling. Students will learn the basics of model prep, setup, programming, and export of 2-axis CNC lathe toolpaths. Students will be able to demonstrate their CNC Turning skills and validate their skills through manufacture of a turning project using CAM software, machine simulation, and CNC turning machines.

**Credits** 5

**Lecture Hours** 22

**Lab Hours** 66

**Prerequisites**

[MPT 120](#) – Intro to CAM

[MPT 125](#) – 2.5 Axis Milling OR concurrent enrollment

### **MPT 135 : Introduction to Additive Manufacturing**

This course is intended to provide students with an understanding of the principles and applications of additive manufacturing. The course will introduce students to the basic concepts of additive manufacturing, including the various types of technologies, their applications, materials, software used, and industry trends. Students will learn how to design, prepare, and print 3D objects using a range of additive manufacturing technologies.

Prerequisite: MPT 120 or instructor permission

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

**Prerequisites**

MPT 120: Intro to CAM (Computer Aided Manufacturing)

### **MPT 140 : Introduction to Industrial Internet of Things (IIoT), SCADA (Supervisory Control and Data Acquisition)**

This course provides an introduction to the Industrial Internet of Things (IIoT), SCADA (Supervisory Control and Data Acquisition) systems, and Digital Manufacturing in Industry 4.0, which are revolutionizing the way industries operate. Students will learn about the fundamental principles and concepts of IIoT and SCADA, including their architectures, security, data acquisition, communication networks, protocols, data analytics, visualization, applications, and future trends. Through hands-on exercises students will gain practical skills and knowledge that they can apply to real-world situations. By the end of this course, students will have a solid understanding of the IIoT and

SCADA systems, their potential applications, and the impact of emerging technologies on these systems.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

### **MPT 145 : Intro to Coordinate Metrology**

This course is designed to provide students an understanding of Geometric Dimensioning and Tolerancing (GD&T) principles and coordinate measurement systems using digital inspection tools and software. The course will cover the basic concepts of GD&T, including geometric tolerances, datums, size tolerances, positional tolerances, profile tolerances, orientation tolerances, and form tolerances. Students will learn how to interpret GD&T symbols and specifications on engineering drawings and apply GD&T concepts. The course will also cover computer-aided inspection and metrology techniques and how to apply them to verify and validate parts' GD&T features. By the end of the course, students will have a working knowledge of GD&T principles, coordinate measurement systems and how to apply them effectively in engineering and manufacturing settings.

**Credits** 5

**Lecture Hours** 11

**Lab Hours** 88

**Prerequisites**

[MPT 120](#), [MAP 117](#), [IST 102](#) or Instructor Permission.

### **MPT 220 : CAM for 3-Axis Milling**

This class is number four in a series intended to help students gain skills in CAM (Computer Aided Manufacturing) and preparation for an industry recognized certification. In this course, students will learn to create, optimize, and apply 3-axis toolpaths for manufacturing by analyzing a part for manufacture, identifying areas that require 3-axis toolpaths and identifying requirements to hold the part during final machining. Students will explore 3-axis tools to quickly remove unneeded material from rounded edges and angled faces. Students will then validate the toolpaths with simulation, create the supporting

documentation, and code needed to control a 3-axis CNC (Computer Numerically Controlled ) machine. Finally, students will bring their project into the physical world by running their program on a 3-axis CNC machine.

**Credits** 5

**Lecture Hours** 11

**Lab Hours** 88

**Prerequisites**

[MPT 125](#) and [MPT 130](#) or concurrent enrollment or Instructor Permission.

### **MPT 225 : CAM for Multi-Axis Milling**

This class is number five in a series intended to help students gain skills in CAM (Computer Aided Manufacturing) and prepare for an industry recognized certification. In this course, students will identify combinations of axes and how to create a CAM program for multi-axis machines. Students will review best practices to prepare an initial design for manufacture, set up a tool library and machine definition, create a digital twin of the physical manufacturing environment, and explore both multi-axis positioning and simultaneous multi-axis toolpaths.

**Credits** 5

**Lecture Hours** 11

**Lab Hours** 88

**Prerequisites**

MPT 220: CAM for 3-Axis Milling

### **MPT 230 : Cobot-Enabled CNC Machining**

This course is designed for students who have already taken a CAM (Computer Aided Manufacturing) and Robotics classes and are interested in learning how to integrate Collaborative Robots (Cobots) with CNC (Computer Numerically Controlled) machines for efficient and safe manufacturing processes. Students will learn about the advantages of using Cobots in CNC machining and programming Cobots to aid CNC machining operations. This course will also cover maintenance and troubleshooting for Cobots and CNC machines. By the end of the course,

students will have the skills and knowledge to effectively use Cobots with CNC machines for manufacturing applications.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

**Prerequisites**

[MPT 225](#) or instructor permission

## Math (Applied)

### Math (Applied) Course Descriptions

#### **MAP 100 : Applied Mathematics (AMT) Approved by FAA.**

Must be enrolled in the Aviation Maintenance Technology Program. This course will cover aircraft technical mathematics and is designed for the Aviation Maintenance Technology student. It will cover the fundamental mathematical principles required for successful completion of the Aviation Maintenance Technology program. This course is FAA approved under 14 CFR Part 147.

**Credits** 2

**Lecture Hours** 22

**Prerequisites**

Placement in [MATH 094](#)/[MAP 117](#) or higher. Must be enrolled in the Aviation Maintenance Technology program.

#### **MAP 101 : Applied Mathematics (AUT/WLD)**

This class provides review and instruction in whole numbers, decimals, fractions, measurement, ratio, proportion, percent, introduction to algebra, and introduction to geometry. This basic instruction and review is followed by vocational program specific mathematics instruction. Students will study mathematics for welding or automotive repair. The emphasis is on providing practice in related job specific skills.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Placement in [MATH 094](#)/[MAP 117](#) or higher.

**MAP 103 : Applied Mathematics (IST)**

This class provides review and instruction in whole numbers, decimals, fractions, ratio, proportions, percents, introduction to algebra, introduction to geometry, introduction to right-angle trigonometry, and number systems in vocational program specific applications. The students will study mathematics for electricity/electronics and maintenance applications for industrial facilities. The emphasis is on providing a solid mathematics base to facilitate assimilation of more complex mathematics as well as providing course work in relevant work-specific problems and situations.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Placement in [MATH 094](#)/[MAP 117](#) or above or instructor permission. GE

**MAP 117 : Applied Math for Workforce Programs I**

This course includes the study of basic arithmetic and algebraic concepts and operations including operations with integers, fractions, decimals and percents, order of operations, measurement, the metric system, algebraic expressions, formulas and simple linear equations. Students will complete exercises and problems providing practice in workforce program-specific applications. Credit cannot be earned in both MAP 117 and MATH 094.

**Credits** 1-5

**Lecture Hours** 11-55

**Prerequisites**

Placement into [MAP 117](#)/[MATH 094](#).

**MAP 119 : Applied Math for Workforce Programs II**

This course includes the study of intermediate algebraic operations/concepts and the structure/use of algebra. This includes solving, graphing, and solving applications of linear equations and systems of equations; simplifying, factoring, and solving quadratic functions, introduction to functions and models; and

exponential and logarithmic functions. Students will complete exercises and problems providing practice in workforce program-specific applications. Students cannot earn credit for both MAP 119 and Math 098.

**Credits** 1-5

**Lecture Hours** 11-55

**Prerequisites**

[MAP 117](#)/[MATH 094](#) or a higher placement.

**MAP 121 : Applied Math for Workforce Programs III**

This course is designed to prepare students for precalculus and finite math. It includes the study of inequalities, applications of systems, rational expressions, functions, radicals, rational exponents, radical equations, complex numbers, quadratic equations and their application. Students will complete exercises and problems providing practice in workforce program-specific applications. Credit cannot be earned in both MAP 121 and MATH 099.

**Credits** 1-5

**Lecture Hours** 11-55

**Prerequisites**

[MATH 098](#), [MAP 119](#) or placement

## Mathematics

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Math courses may be taken as part of the Associate in Arts and Science DTA degree or as part of the Associate in Science–Transfer degree. Within the Associate in Arts and Science DTA degree, these courses may be used toward the Basic Quantitative Reasoning (SQR), the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section “Degrees & Certificates” for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Study within the science disciplines and engineering is supported at the most fundamental level with Math. Consequently, Math courses make up a portion of each Associate in Science–Transfer degree, both the AS–T 1 and the AS–T 2 degrees. The Associate in Science–Transfer degree allows students to prepare for upper division study toward a Bachelor of Science degree. This degree gives students the opportunity to make substantial progress toward fulfilling major requirements while completing at least half of the Breadth requirements for Humanities and Social Science.

The mathematics department at BBCC prepares students for successful transfer to a four-year college or university. At the university level, a math major student may prepare for a career in industry, government, or education.

One of the processes to prepare students to take classes at BBCC is to determine a student’s math placement. There are multiple ways to determine what math class a student should begin with including standardized test scores such as the SAT or ACT, courses taken and grades earned in recent high school classes, a college transcript with prior math courses, or taking a placement

test at BBCC. A math placement score is required to enroll in any math or science course with a math prerequisite.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### Recommended Pre-Major Courses Credits

MATH& 151 Calculus I

MATH& 152 Calculus II

MATH& 163 Calculus 3

MATH 220 Linear Algebra

MATH 230 Differential Equations

MATH& 254 Calculus IV

## Mathematics Course Descriptions

### **MATH& 107 : Math in Society**

This course will introduce the non-math/science major to mathematical applications in a variety of disciplines.

#### **Degree Code**

Math/Science Non- Laboratory,      Symbolic or Quantitative Reasoning

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

[MATH 098](#) or [MATH 099](#) with a passing grade equivalent to a 2.0, or 5 credits of [MAP 119](#) with a 2.0 or better, or a higher placement

#### **Quarters Offered**

Fall, Winter, Spring, Summer



**MATH& 131 : Math for Elem Educ 1**

Covers the mathematics elementary teachers are responsible for teaching at K-8 levels, including computing with whole numbers, fractions, decimals and percents; multiplicative comparisons and reasoning; ratio, rates, and proportions; negative numbers; algebra and graphing; relationships between time, distance and rate; patterns and functions.

**Degree Code**

Math/Science Non- Laboratory, Symbolic or Quantitative Reasoning

**Credits** 5**Lecture Hours** 55**Prerequisites**

[MATH 098](#) or [MATH 099](#) with a passing grade equivalent to a 2.0, or 5 credits of [MAP 119](#) with a 2.0 or better, or a higher placement

**Quarters Offered**

Winter

**MATH& 132 : Math for Elem Educ 2**

Covers the mathematics elementary teachers are responsible for teaching at K-8 levels, including polyhedra, polygons, symmetry, tessellations, size changes, curves, curved surfaces, transformations, length, angles, area and surface area, volume, measure formulas, simulating probabilistic situations; sampling; and organizing and interpreting data with one and two variables.

**Degree Code**

Math/Science Non- Laboratory, Symbolic or Quantitative Reasoning

**Credits** 5**Lecture Hours** 55**Prerequisites**

[MATH 098](#) or [MATH 099](#) with a passing grade equivalent to a 2.0, or 5 credits of [MAP 119](#) with a 2.0 or better, or a higher placement. Can be taken concurrently with or before [MATH& 131](#).

**Quarters Offered**

Spring

**MATH& 141 : Precalculus I**

This course will present the following concepts: college level algebra, introduction to functions

and graphing, the graphs and properties of polynomial, rational, radical, exponential and logarithmic functions.

**Degree Code**

Math/Science Non- Laboratory, Symbolic or Quantitative Reasoning

**Credits** 5**Lecture Hours** 55**Prerequisites**

[MATH 099](#) with a passing grade equivalent to a 2.0, or 5 credits of [MAP 121](#) with a 2.0 or better, or a higher placement

**Quarters Offered**

Fall, Winter, Spring, Summer

**MATH& 142 : Precalculus II**

In preparation for calculus this is a comprehensive study of trigonometry, circular functions, right triangle trigonometry, analytical trigonometry. Sequences, series and induction are also covered.

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non- Laboratory

**Credits** 5**Lecture Hours** 55**Prerequisites**

MATH& 141 or Concurrent enrollment in MATH& 141.

**Quarters Offered**

Fall, Winter, Spring

**MATH& 146 : Introduction to Statistics**

This course is an introduction to descriptive statistics, probability and its applications, statistical inference and hypothesis testing, predictive statistics and linear regression.

**Degree Code**

Math/Science Non- Laboratory, Symbolic or Quantitative Reasoning

**Credits** 5**Lecture Hours** 55**Prerequisites**

[MATH 098](#) or [MATH 099](#) with a passing grade equivalent to a 2.0, or 5 credits of [MAP 119](#) with a 2.0 or better, or a higher placement

**Quarters Offered**

Fall, Winter, Spring, Summer

**MATH& 148 : Business Calculus**

This is an introductory calculus course for business and economics students. It includes an introduction to rates of change, differentiation, integration, areas, and appropriate calculus techniques. There are also applications to marginal analysis in economics, optimization and other relevant applications..

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 141, placement in the class or instructor permission.

**Quarters Offered**

Winter, Spring

**MATH& 151 : Calculus I**

This course will introduce the student to the basic concepts of the calculus. It will give the student an appreciation of the calculus and its applications in the real world and will prepare the student for future work in mathematics and the sciences. Course includes functions, limits, continuity, derivatives and their applications, and integration and its applications. (Formerly Math 171)

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 141 & MATH& 142, or BBCC placement exam, or instructor permission

**Quarters Offered**

Fall, Winter, Spring

**MATH& 152 : Calculus II**

This course will expand on the applications and techniques of differentiation learned in the first quarter and give a depth study of integration including the fundamental methods of integrating elementary algebraic and transcendental functions. It will include the

applications of the calculus to transcendental functions, analytical geometry and other relevant topics.

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 151 or instructor permission

**Quarters Offered**

Fall, Winter, Spring

**MATH& 163 : Calculus 3**

This course will expand on the applications and techniques of differentiation learned in the first and second quarters. It will introduce the student to the calculus of sequences and series and the use of the MaLauren and Taylor series to approximate functions. It will introduce the student to the calculus of curvilinear functions and the concept of the vector and vector functions. It will also introduce the concept of a partial derivative and the maximization of functions given in more than one independent variable.

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 152 or instructor permission

**Quarters Offered**

Winter, Spring

**MATH& 254 : Calculus IV**

This course is an introduction to multivariable calculus. It includes the study of three dimensional space curves, vector-valued functions, partial derivatives, differentials, directional derivatives, multiple integration, vector fields, line integrals, Greens and Stokes theorems, surface integrals, and the divergence theorem.

**Degree Code**



Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 163 or permission of instructor.

**Quarters Offered**

Fall

**MATH 094 : Introduction to Algebra**

This course includes the study of basic arithmetic and algebraic concepts and operations including operations with integers, fractions, decimals, percents, order of operations, measurement, the metric system, algebraic expressions, formulas and simple linear equations. Credit cannot be earned in both [MAP 117](#) and MATH 094. (Formerly MPC 090, Math 090)

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Placement into [MATH 094/](#) [MAP 117](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**MATH 098 : Intermediate Algebra I**

This course is designed to prepare the student for [MATH&146](#), [MATH&107](#), [MATH&131](#), [MATH&132](#), and [PHIL&120](#) as well as science course work. Topics include the study of intermediate algebraic operations and concepts, and the structure and use of algebra. This includes solving, graphing, and applications of linear equations; working with quadratic functions, introduction to functions and models; and exponential and logarithmic functions along with applications. Students cannot earn credit for both [MAP 119](#) and MATH 098 because they are equivalent courses. Students planning to take [MATH&141](#) should enroll in [MATH099](#) rather than this course. Prerequisite: Completion of [MATH 094/](#)[MAP 117](#) or a higher placement . (Formerly: MPC 095, 096).

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Completion of [MATH 094/](#)[MAP 117](#) or a higher placement.

**Quarters Offered**

Fall, Winter, Spring, Summer

**MATH 099 : Intermediate Algebra for STEM/ Business Majors**

This course is designed to prepare STEM and Business students for precalculus, [MATH&141](#). It includes the study of functions, including linear, quadratic, exponential, and logarithmic; inequalities; systems of equations; algebra of polynomials and exponents; rational expressions; radical expressions and equations; and complex numbers. Credit cannot be earned in both [MAP 121](#) and [MATH 099](#) because they are equivalent courses. Students who do not plan to take [MATH&141](#) should enroll in [MATH 098](#) rather than this course.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Completion of [MATH 094/](#)[MAP 117](#) or a higher placement

**Quarters Offered**

Fall, Winter, Spring, Summer

**MATH 220 : Linear Algebra**

A study of matrix algebra and systems of equations, abstract vector spaces including basis and dimension, linear transformations, eigenvalues and eigenvectors.

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 152 or instructor permission

**Quarters Offered**

Winter

**MATH 230 : Differential Equations**

This course will introduce the student to the solution elementary differential equations and standard applications of differential equations in science. It will include the solution of first order linear differential equations with applications to

exponential growth and decay problems, mixture problems, orthogonal trajectories, etc., solutions to second order differential equations with applications to harmonic motion, and the LaPlace transform.

**Degree Code**

Symbolic or Quantitative Reasoning, Math/Science Non-Laboratory

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

MATH& 163 or instructor permission

**Quarters Offered**

Spring

## Mechatronics

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The mechatronics courses are included in several programs at BBCC, such as Manufacturing and Industrial Systems Technology. They prepare students with the knowledge, skills, and abilities required to begin careers as technicians or entrepreneurs in electronics, robotics, internet of things (IoT), 3D manufacturing, control systems, communications, security, and many other emerging physical computing fields. Students will study, circuits, sensors, troubleshooting, programming, communications, data acquisition, and data collection.

Mechatronics involves gaining knowledge of electronics, microcontrollers, microcomputers, Open-Source hardware and software, programming, 3D printing, and CAD design. Instead of buying expensive textbooks, students begin buying and owning their own lab composed of electronics, devices, components, test equipment, tools, and computers. Using these items, they will study the theories of operation of both passive and active electronic components, servos, motors, sensors, LEDs, switches, indicators, breadboards, etc. Using their

own lab equipment, students may build and program electronic systems, 3D printers, rovers, radio-controllers, quadcopters, GPS trackers, navigation systems, cloud connectivity, and mission control software.

## Mechatronics Course Descriptions

**MCT 100 : Introduction to Modern Technology**

This course is an introduction to technology studies, core mechatronics, and physical computing: the integration of electrical, mechanical, microcontrollers, computers, electronics, input/output, programmable logic controller (PLC), sensors and controls. This course will introduce students to the fundamentals of electrical, electronics, communications, firmware, software, sensors and computational theory, which form the foundation for future studies in mechatronics, simulations, robotics and industrial control systems through an introductory focus on microcontrollers, microcomputers and PLC software and devices. This is a variable credit course where students can choose to enroll in 2 to 5 credits depending on their needs.

**Credits** 2-5

**Lecture Hours** 11-28

**Lab Hours** 22-55

**Prerequisites**

None

**MCT 101 : Mechatronics I**

This course is an introduction to the multidisciplinary field of mechatronics - the integration of systems design, electronic, mechanical, electrical, computers, PLC, and control sciences/ engineering. This course will introduce students to the fundamental electrical, electronics, communications, networks and computational theory that forms the foundation for future studies in the field of mechatronics. Students will build and demonstrate electronic projects using the Elegoo Uno R3 Project Kit. This

is a variable credit course where students can choose to enroll in 2 to 5 credits depending on their needs.

**Credits** 2-5

**Lecture Hours** 11-28

**Lab Hours** 22-55

**Prerequisites**

None

### **MCT 102 : Mechatronics II**

This course is the second in the mechatronics series. It will address microcontroller programming, data acquisition, sensors, actuators, computer-aided design (CAD), automated manufacturing, and 3D printing. In this course, students will build (and keep) their own Creality Ender 3 Printer as well as design, print and build a variety of projects using open-source software and their own 3D printer. This is a variable credit course where students can choose to enroll in 2 to 5 credits depending on their needs.

**Credits** 2-5

**Lecture Hours** 11-28

**Lab Hours** 22-55

**Prerequisites**

None

### **MCT 103 : Mechatronics III**

This (third) course in mechatronics will address the use of microcontrollers and microprocessors functioning with sensors and control systems. Students learn how to use and interface with a variety of physical world sensors. Using this knowledge, students will build several sensor projects and demonstrate a UAS, Rover, or other device as part of a team project.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

[MCT 102](#) and [MCT 120](#) (or concurrent enrollment).

### **MCT 110 : Introduction to Mechatronic Applications**

An exploratory, hands-on course in mechatronics (the merger of mechanical engineering, electrical engineering, computer

control and information technology), as related to the disciplines of computer science, medical simulation, and unmanned systems. This course addresses the skills required for effective career research and educational planning, as well as academic techniques for becoming a successful student in mechatronics related courses, certificates and majors

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

### **MCT 120 : Robotics I**

Students are introduced to the world of robotics, including the mechanisms, dynamics, control systems, sensors, vision, and basic programming and file management used in modern robotic systems. Students will build, program and test a robotic system as part of a group project.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Completion of [MCT 102](#) or instructor permission

### **MCT 129 : Independent Project**

MCT 129 is an independent study course allowing students to research, design and complete a mechatronics project incorporating the use of Global Position Systems (GPS) as a primary control component. Projects must be approved and supervised by a faculty member.

**Credits** 2-5

**Lab Hours** 22-110

### **MCT 220 : Robotics II**

This second course in robotics addresses challenges and trends in the engineering, manufacturing, and programming of automated mechatronics systems. Students will build, program and test a robotic system using open-source technologies, as well as apply course activities to real-world applications.

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Completion of [MCT 102](#) or instructor permission

# Medical Assistant

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The Medical Assistant Program at BBCC prepares students to successfully work side by side with a doctor and other health care professionals in a clinic or hospital setting. Students will maintain the highest quality of patient care, learn to room patients for examination, draw blood for basic lab studies, administer some medications, do ECG's, assist with minor surgical procedures, and perform front office skills related to medical records and billing. Medical Assistants will be prepared for diverse front and back office medical positions by learned theory, lab and clinical skills combined with an extern experience in a physician's office.

Successful completion of the Medical Assistant Program prepares the student to take the National Certification Examination offered through American Medical Technologists. Successful completion of the examination and subsequent licensure allows the student to enter the workforce as a Medical Assistant – Certified

The program provides a two year Associate in Applied Science Degree and a Certificate of Achievement in Medical Assisting. **Prerequisite and corequisite courses must be completed with a minimum of 2.0 in each course.**

## Physical and Psychosocial Requirements for the Medical Assistant Program:

Students planning on entering the Medical Assistant Program need to be aware of the fact that the physical requirements listed below are expected by employers. Therefore, students will be expected to meet the same criteria during clinical/lab instruction in the Medical Assistant program.

- Demonstrate good body mechanics, lift/carry a minimum of 25 lbs. independently and 50 lbs. with assistance.
- Have normal/corrected vision and hearing within normal range.
- Demonstrate ability to tolerate intermittent sitting, standing, stooping and walking. Full range of motion is required.
- Demonstrate good manual and finger dexterity.
- Demonstrate competency in computer documentation
- Demonstrate communication skills: Must be able to read and write in English. Must be able to communicate verbally in English both in person and on the phone.
- Demonstrate ability to stand on carpeting, linoleum, or be seated at a standard desk using an office chair for a varying amount of time.
- Demonstrate ability to work in high-paced facilities that include dealing with stress.
- Demonstrate emotional stability and maturity in various circumstances through interpersonal relationships with staff, patients, and visitors.
- Demonstrate ability to deliver care across the age spectrum with cultural and ethnic sensitivity.
- Demonstrate a consistent ability to deliver safe and competent patient care.

## Clinical Series (MA 115, 116, 195)

In order to be considered for placement in the clinical series starting in the Winter, students must submit a "Letter of Intent" by the specified due date. The letter of intent can be found on BBCC's Medical Assistant webpage.

### Requirements for the Medical Assistant Program

- Letter of intent must be submitted by due date if student wishes to be considered for the winter clinical cohort (MA 115, MA 116)
- Provide evidence of a satisfactory physical examination before the beginning of MA 115
- Provide evidence of a current Healthcare Provider CPR card prior to MA 115 (BBCC's Medical Assistant Program requires CPR cards to be updated annually)
- Provide evidence of up-to-date immunizations and have initiated the Hepatitis B series prior to MA 115
- Have a satisfactory criminal background check prior to MA 195
- Provide evidence of negative drug testing prior to the start of MA 195

## Medical Assisting AAS

### Degree Type

Associate in Applied Science

The MA program prepares students with the knowledge, skills, and abilities to obtain an entry level position as a national and state certified Medical Assistant. Completion of this program leads to roles in clinics, urgent care facilities and some larger hospitals. The certificate as well as the AAS degree will prepare students to use administrative and clinical skills in a healthcare setting that often includes multitasking, problem solving and the ability to work as a team with other healthcare professionals. Medical Assisting will prepare students to obtain adult and pediatric vital signs, perform clinic based laboratory testing, assist with minor surgeries and perform injections as well phlebotomy.

**Note: Students who earn the AAS in Medical Assisting also earn the Medical Office Receptionist Certificate of Accomplishment.**

Program Learning Outcomes:

- IO1 Communication  
Demonstrate clear, effective communications with patients members of the healthcare team in a variety of structured settings
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Demonstrate professional attitude and behavior when caring for patients and collaborating with other health care professionals at all times.
- PO4 Demonstrate cultural competency when caring for patients
- PO5 Prioritize, organize, and complete assignments in a timely manner as directed by the delegator
- PO6 Demonstrate delegated skills and procedures

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year

#### Fall Quarter – Prerequisites to MA Program Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MAP 117	Applied Math for Workforce Programs I	1-5
HED 119	Medical Terminology	5
HED 121	The Human Body and Disease I	5
HED 239	Medical Ethics	2

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
HED 122	The Human Body and Disease II	5
MA 115	Clinical Procedures I	7
ENGL& 101	English Composition I	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
HED 123	The Human Body and Disease III	5
HED 160	Pharmacology for Allied Health	3
MA 116	Clinical Procedures II	4
PSYC& 100	General Psychology	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MA 195	Externship/Practicum for the Medical Assistant	3
MA 197	Externship/Practicum Seminar	1
CMST& 220	Public Speaking	5
CSS 105	Introduction to Healthcare Studies	3
BUS 215	Customer Service	3

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 113	The Medical Office	5
BUS 115	Workplace Skills and Behaviors	4
BIM 109	Internet Communications	1-2
	MA Program Approved Electives (2 Credits)	2

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIM 117	Medical Office Accounts Receivable	4
BIM 131	Records Management	1-3
<b>Total Credits</b>		<b>90</b>

## MA Certificate of Achievement

### Degree Type

#### Certificate

The MA Certificate of Achievement as well as the AAS degree prepares students with the knowledge, skills, and abilities to obtain an entry level position as a national and state certified Medical Assistant.

#### Program Learning Outcomes

- IO1 Communication  
Demonstrate clear, effective communications with patients members of the healthcare team in a variety of structured settings
- IO 2Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Demonstrate professional attitude and behavior when caring for patients and collaborating with other health care professionals at all times.
- PO4 Demonstrate cultural competency when caring for patients
- PO5 Prioritize, organize, and complete assignments in a timely manner as directed by the delegator
- PO6 Demonstrate delegated skills and procedures

The following schedule of courses is the recommended program for completing this certificate. See an MA program advisor for substitute courses.

## Required Courses

### Fall Quarter – Prerequisites to MA Program Courses

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MAP 117	Applied Math for Workforce Programs I	1-5
HED 119	Medical Terminology	5
HED 121	The Human Body and Disease I	5
HED 239	Medical Ethics	2

### Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
HED 122	The Human Body and Disease II	5
MA 115	Clinical Procedures I	7
ENGL& 101	English Composition I	5

### Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
HED 123	The Human Body and Disease III	5
HED 160	Pharmacology for Allied Health	3
MA 116	Clinical Procedures II	4
PSYC& 100	General Psychology	5

## Second Year

### Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
MA 195	Externship/Practicum for the 3 Medical Assistant	
MA 197	Externship/Practicum Seminar	1
CMST& 220	Public Speaking	5
<b>Total Credits</b>		<b>65</b>

# Medical Assistant Course Descriptions

## MA 111 : Clinical Procedures I

This course is an introduction to medical assisting. It introduces basic clinical skills and medical front office skills as well as the importance of work ethics and interpersonal communications.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 22

### Prerequisites

Instructor permission required.

### Quarters Offered

Fall

## MA 112 : Clinical Procedures II

This course builds upon knowledge and skills acquired during Clinical Procedures I. Students will further their understanding of the medical front office by learning diagnosis and procedural coding, office management, scheduling and written communication. The students will also build upon previously learned clinical skills by understanding infection control, sterile field protocol, physical therapy and rehabilitation and administration of medication. During this class students will also learn and practice injection techniques.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44

### Prerequisites

Minimum final grade of 2.0 in [MA 111](#) or instructor permission required

### Quarters Offered

Winter

## MA 113 : Clinical Procedures III

This course builds upon knowledge and skills acquired during Clinical Procedures I and II. Students will further their understanding of the medical front office by learning about electronic medical records, as well as insurance and billing. The students will also investigate different specialty practices such as ENT, Ophthalmology,

Pediatrics, Radiology, Cardiology, Pulmonology, Geriatrics, Urology, OB/GYN, Phlebotomy and the clinical laboratory.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44

**Prerequisites**

Minimum final grade of 2.0 in [MA 112](#) or instructor permission required.

**Quarters Offered**

Spring

**MA 115 : Clinical Procedures I**

This course is an introduction to medical assisting. It introduces basic clinical skills and medical front office skills, the importance of work ethics and interpersonal communications, and medication and injection administration.

**Credits** 7

**Lecture Hours** 44

**Lab Hours** 66

**Prerequisites**

Admission to the Medical Assisting Program; completion of [HED 119](#), [HED 121](#), [HED 239](#), and 5 credits of [MAP 117](#), each with a 2.0 or better; and completion of or concurrent enrollment in [HED 122](#) and [ENGL& 101](#), each with a 2.0 or better

**MA 116 : Clinical Procedures II**

This course builds upon knowledge and skills acquired during Clinical Procedures I. The students will investigate different specialty practices, phlebotomy and the clinical laboratory, and medical abbreviations.

**Credits** 4

**Lecture Hours** 22

**Lab Hours** 44

**Prerequisites**

Minimum final grade of 2.0 in [MA 115](#), [HED 122](#) and [ENGL& 101](#); completion of or current enrollment in [HED 123](#), [HED 160](#), [FAD 150](#), and [PSYC& 100](#), each with a 2.0 or better.

**MA 195 : Externship/Practicum for the Medical Assistant**

The course will focus students on real life work in a medical office assisting physicians and office personnel by performing assigned duties in both

administrative and clinical procedures. The work experience is supported by instructor site visits and a classroom seminar where students and faculty can review on-the-job experiences.

**Credits** 3

**Clinical Hours** 198

**Prerequisites**

Passing score for the American Medical Technologist national certification examination and instructor permission; minimum final grade of 2.0 in [MA 116](#), [HED 123](#), [HED 160](#), [FAD 150](#), and [PSYC& 100](#); completion of or concurrent enrollment in [CMST& 220](#) with a 2.0 or better. Must be taken concurrently with [MA 197](#)

**Quarters Offered**

Summer

**MA 197 : Externship/Practicum Seminar**

This class enhances the students' abilities and work-based learning at the externship site. Students will review important topics by applying concepts acquired in the clinical area. Students will share information, procedures and experiences in different medical settings with other students. Visitation to medical facilities will be a component of this course.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

Minimum final grade of 2.0 in [MA 116](#), [HED 123](#), [HED 160](#), [FAD 150](#), and [PSYC& 100](#); completion of or concurrent enrollment in [CMST& 220](#) with a 2.0 or better; completion of or concurrent enrollment in [CMST& 220](#) with a 2.0 or better. Must be taken concurrently with [MA 195](#)

**Corequisites**

[MA 195](#).

**Quarters Offered**

Summer



# Music

**John Owens**  
**509.793.2140**

**music@bigbend.edu**

The music department emphasizes a worldwide perspective and appreciation for music, which includes cultural, historical, and hands-on musical study. Through specialized lecture courses, performance-based labs, and ensembles students have the ability to express themselves through a variety of musical endeavors. The department provides basic disciplines in music for music majors, non-majors, and people in the community.

Music courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and degree requirements.

This program offers of study for individuals preparing for a career in the music field that does not require a degree or for their own personal enrichment. Since programs differ at each college, students should contact BBCC's Music Instructor and consult program outlines published by the college or university they intend to transfer. Recommended courses are listed below.

## Recommended Pre-Major Courses

MUSC 115 Group Piano I

MUSC 116 Group Piano II

MUSC 117 Group Piano III

MUSC 215 Group Piano IV

MUSC 216 Group Piano V

MUSC 217 Group Piano VI

## Music Course Descriptions

### **MUSC& 105 : Music Appreciation**

This course is designed to acquaint students with the elements of music and enhance the students experience in listening to music from a global perspective. By drawing attention to the wide variety of music and the place/role of music in different cultures, students will develop an awareness of the diverse musical styles and cultures in the United States and throughout the world.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Fall, Winter, Spring, Summer

### **MUSC 100 : Introduction to Music**

A survey course for non-majors. Introduction to the materials of music and world music literature, with a special emphasis on the literature, composers and history of the Western European Art Music tradition.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

### **MUSC 101 : Ukulele Orchestra (Ukestra)**

The ukulele is an extremely popular instrument for good reason. It is inexpensive, portable, and approachable by everyone. This course covers everything you need to know about the ukulele. This includes uke anatomy, tuning, types, reading chord diagrams, and strumming patterns. Students will learn a wide variety of popular and classic songs they can play anywhere. This course is suitable for absolute beginners through intermediate players.

**Degree Code**

Humanities Performance/Skill

**Credits** 1**Lab Hours** 22**MUSC 110 : College Chorus**

This traditional ensemble made up of mixed voices rehearses a wide variety of choral literature for study and performance. This ensemble will perform quarterly for campus and community events. This course may be repeated for up to six credits.

**Degree Code**

Humanities Performance/Skill

**Credits** 1**Lab Hours** 22**Quarters Offered**

Winter

**MUSC 114 : Mariachi Workshop**

Through a variety of learning experiences students will be introduced to traditional Mexican Mariachi music. Through reading, listening, singing and playing, students will experience, discover, explore and create music from this rich musical heritage. Students will work as a group in a supervised workshop environment to develop vocal and instrumental performing skills. May be repeated for credit.

**Degree Code**

Humanities Performance/Skill

**Credits** 3**Lecture Hours** 11**Lab Hours** 44**MUSC 115 : Group Piano I**

This course presents the basic concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2**Lecture Hours** 22**Lab Hours** 11**Quarters Offered**

Fall, Winter, Spring

**MUSC 116 : Group Piano II**

This course presents the basic to intermediate concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2**Lecture Hours** 22**Lab Hours** 11**Quarters Offered**

Fall, Winter, Spring

**MUSC 117 : Group Piano III**

This course presents the intermediate concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**MUSC 120 : College Band**

This traditional ensemble made up of woodwind, brass, and percussion instruments rehearses a wide variety of concert band literature for study and performance. This ensemble will perform quarterly for campus and community events. This course may be repeated for up to six credits.

**Degree Code**

Humanities Performance/Skill

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Spring

**MUSC 124 : Orchestra I**

A community and college orchestra that plays for community musicals and graduation as well as other functions throughout the year. May be repeated for credit.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Prerequisites**

Performance ability on an orchestral instrument.

**MUSC 134 : Group Guitar**

This course provides students with an interactive approach to the fundamentals of playing the guitar. Each student's playing aptitude will be accommodated with different options within a unified set of goals. It will include reading tablature and standard notation, introducing chords and solo pieces using a variety of techniques, and provide an overview of basic guitar care and maintenance. This course may be repeated for up to six credits.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**MUSC 170 : History of Jazz**

This course covers the history and origin of Jazz and its stylistic development from the various periods of pre-jazz to today. The class will include an extensive study of important musicians, composers, arrangers, and styles which evolved the genre. The class will include detailed listening assignments and an introduction to jazz musical vocabulary and concepts.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter

**MUSC 174 : History of Rock and Roll**

This course presents the history of rock music from its origins to the present day. Students will study all major genres, as well as the social, political, technological, and economic forces that shaped the music. The class will include detailed listening assignments and an introduction to rock music vocabulary and concepts.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Spring

**MUSC 175 : Music of the World**

This course introduces world music tradition, including both sound and socio-cultural dimensions of music. Students will study the musical styles of major non-Western cultures, including Africa, India, Asia, Indonesia, and Eastern Europe. Topic will include instrumentation, rhythmic structure, melodic structure, song forms, composition,

improvisation, family and community participation, political/economic connection, and religious involvement.

**Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

**MUSC 204 : Music Technology Workshop**

This course introduces concepts in modern electronic music production. It will include acoustics, notation, MIDI, loops, sampling, audio recording, editing, and mixing through class instruction and hands-on learning. Student projects will culminate in the preparation of student compositions and arrangements. Students can repeat this course for up to 6 credits.

**Degree Code**

Humanities Lecture

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Quarters Offered**

Spring

**MUSC 215 : Group Piano IV**

This course presents the intermediate concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lab Hours** 44

**Quarters Offered**

Fall, Winter, Spring

**MUSC 216 : Group Piano V**

This course presents the intermediate and advanced concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lab Hours** 44

**Quarters Offered**

Fall, Winter, Spring

**MUSC 217 : Group Piano VI**

This course presents the advanced concepts and skills to develop performing proficiency at the piano. Musical activities and projects will build growth in technical skills such as major and minor scale patterns, musical skills such as sight reading and improvisation, theoretical concepts such as notation, rhythm patterns, melodic shapes and forms, and creative skills such as completing melodic phrases and inventing melodic variations. Repertoire will reflect the development of increasingly advanced solo and ensemble pieces.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lab Hours** 44

**Quarters Offered**

Fall, Winter, Spring

**MUSC 224 : Orchestra II**

A community and college orchestra that plays for community musicals and graduation as well as other functions throughout the year. May be repeated for credit.

**Degree Code**

Humanities Performance/Skill

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

**Prerequisites**

Performance ability on an orchestral instrument.

**MUSC 260 : Percussion Ensemble**

This ensemble rehearses, studies, and performs percussion music suitable for performance and/or competition. Scheduled performances and rehearsals are required. May be repeated for up to six (6) credits.

**Degree Code**

Humanities Performance/Skill

**Credits** 1

**Lab Hours** 22

**Prerequisites**

Instructor permission. Auditions may be required.

**MUSC 270 : Musical Theatre Workshop**

This class explores Musical Theatre in a studio workshop setting. Students will study the work of the actor/singer/dancer and use their gained knowledge to develop as performers. Also, students will prepare and present as soloists as well as members of small groups and larger ensembles. Since this is a workshop course, students will prepare material for class presentation and critique. The class will also focus on the audition process, musical theatre history, and repertoire selection. Finally, the entire class will participate in a culminating showcase performance at the end of the quarter. This course may be repeated for up to six credits. Some performances may be held at off-campus venues.

**Degree Code**

Humanities Performance/Skill

**Credits** 1

**Lab Hours** 22

# Nursing

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Nursing education presents concepts from the humanities, life and social sciences, and biological and physical sciences. It promotes competency-based learning at all levels of nursing practice. The goal of nursing education is the provision of a theoretical knowledge base, competent skill base, and professional value insights that enable a beginning nurse to deliver safe care and to demonstrate accountability for care delivered or delegated to others. The Nursing Program's curriculum is designed to incorporate the program's philosophy/ mission and nursing paradigm concepts. It is designed to demonstrate learning from the simple to the complex, from the conceptual to the empirical.

Successful completion of this degree prepares the student to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Successful completion of the examination and subsequent licensure allows the student to enter the workforce as a Registered Nurse.

The Associate in Nursing DTA MRP degree is approved by the Washington State Board of

Nursing and the Washington State Board for Community and Technical Colleges, and accredited by the Accreditation Commission for Education in Nursing, 3390 Peachtree Rd NE, Suite 1400, Atlanta, GA 30326; tel 404.975.5000.

The program provides a three year Associate in Nursing DTA MRP as well as a Certificate of Certificate of Accomplishment Nursing Assistant Program (one quarter).

### **Physical and Psychosocial Requirements for the Nursing Program:**

Students planning on entering the Nursing Program need to be aware of the fact that the physical requirements listed below are expected by employers. Therefore, students will be expected to meet the same criteria during clinical/lab instruction in the Nursing program.

- Demonstrate ability to tolerate intermittent sitting, standing, stooping and walking. Full range of motion is required.
- Demonstrate good manual and finger dexterity.
- Demonstrate ability to differentiate odors and colors in the clinical setting.
- Demonstrate competency in computer documentation
- Demonstrate communication skills: Must be able to read and write in English. Must be able to communicate verbally in English both in person and on the phone.
- Demonstrate ability to stand on carpeting, linoleum, or be seated at a standard desk at the nurse's station using an office chair for a varying amount of time (i.e. 2-4 hours).
- Demonstrate ability to work in high-paced facilities that include dealing with stress.
- Demonstrate emotional stability and maturity in various circumstances through interpersonal relationships with staff, patients, and visitors.
- Demonstrate ability to deliver care across the age spectrum with cultural and ethnic sensitivity.

- Demonstrate a consistent ability to deliver safe and competent nursing care.

## **Application Procedure**

Students are admitted each year in the fall quarter only. Prerequisite courses are done independently prior to applying to the nursing program. Students may apply to the program through the online application on the program's website; applications for Fall 2024 will be accepted from March 15, 2024-April 2, 2024. The program's website explains, in detail, how to prepare a complete application file. Incomplete application files will not be considered for admission.

## **Selection and Acceptance Process**

Selection of new students to the nursing program is done on a points-based system (see application information on the nursing program website). Prerequisite courses must be completed or in progress prior to applying for a position in the BBCC Nursing program. Prerequisite and corequisite courses must be completed with a minimum of 2.0 in each course. The top 24 applicants will be admitted to the program. There will be an alternate pool of applicants that will be utilized if necessary should any of the first 24 accepted students decide not to attend. Admissions from the alternate pool will continue until the class has 24 confirmed new students. The alternate pool will remain in existence until the first day of orientation. Applicants must re-apply to be considered for admission in subsequent years.

## **Nursing ADN Program Requirements**

Before beginning the core Nursing program courses, the applicant will need to:

- Provide evidence of a satisfactory physical examination within the preceding six months, validating all physical requirements (see above)
- Provide evidence of a current AHA BLS Provider CPR Card\*\*
- Have a satisfactory criminal background check
- Provide evidence of up-to-date immunizations and have initiated the Hepatitis B series
- Provide evidence of negative drug testing

\*\*BBCC's Nursing Program requires CPR cards to be updated annually\*\*

## Transfer Students

Transfer students may be accepted from other nursing programs on a space-available basis following an evaluation of qualifications. Transfer students must meet all BBCC and nursing program requirements

(See application packet for application process). BBCC allows transfer credits from regionally accredited post-secondary institutions. The grade acceptable for credit must be a minimum of 2.0 in each class. Students must submit official transcripts from each institution attended to the Admissions/Registration Office, and copies of transcripts to the Director of Health Education Programs. Nursing course credit will be considered on an individual basis.

Attendance at BBCC is required for a minimum of two quarters prior to the completion of the nursing program. Twenty-four quarter credits, including the final twelve necessary to complete the degree, must be earned through enrollment in BBCC courses.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## Nursing Assistant

[nursingprogram@bigbend.edu](mailto:nursingprogram@bigbend.edu)

Successful completion of the one-quarter program prepares students to take the National Nurse Aid Assessment Examination. Successful completion of the examination is required to become licensed as a Nursing Assistant – Certified (NAC) in Washington State, prepared to work in community, long-term, and acute care settings.

The program is approved by the Washington State Nursing Care Quality Assurance Commission and is a valuable first step into the nursing profession.

### Nursing Assistant Program Certificate of Accomplishment

#### Degree Type

Certificate

Program Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

#### Required Course

Course Code	Title	Credits
NUR 100	Nursing Assistant	9
<b>Total Credits</b>		<b>9</b>

### Associate in Nursing DTA/MRP

#### Degree Type

Direct Transfer Agreement/Major Related Program

Nursing education presents concepts from the humanities, life and social sciences, and biological and physical sciences. It promotes competency-based learning at all levels of nursing practice. The goal of nursing education is the provision of a theoretical knowledge base,

competent skill base, and professional value insights that enable a beginning nurse to deliver safe care and to demonstrate accountability for care delivered or delegated to others. The Nursing Program's curriculum is designed to incorporate the program's philosophy/ mission and nursing paradigm concepts. It is designed to demonstrate learning from the simple to the complex, from the conceptual to the empirical.

Successful completion of this degree prepares the student to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). Successful completion of the examination and subsequent licensure allows the student to enter the workforce as a Registered Nurse.

The Associate in Nursing DTA MRP is approved by the Washington State Nursing Care Quality Assurance Commission and the Washington State Board for Community and Technical Colleges, and accredited by the Accreditation Commission for Education in Nursing, 3342 Peachtree Rd NE, Suite 500, Atlanta, GA 30326; tel 404.975.5000.

Since programs differ at each college, students should consider program outlines published by the college or university where the student plans to continue his/her course of study. The following recommended courses will prepare students for most senior institutions. In addition to the general requirements listed below, derivative programs may have additional requirements as listed in the Programs of Study section. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in their transfer area. Students should seek out their advisor for more information and guidance on possible courses to take to complete this degree and to prepare and plan for future transfer

Program Learning Outcomes:

- IO1 Communication  
Communicate effectively to deliver relevant, accurate and complete information to patients, families, and the healthcare team
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Participate as a member of the healthcare team for educational and institutional growth
- PO4 Deliver safe and effective physical, psychosocial, cultural, and spiritual care to the whole person in a variety of settings
- PO5 Plan, initiate, and evaluate patient teaching including assessment of current knowledge, use of appropriate materials and techniques
- PO6 Demonstrate clinical decision-making from a theoretical knowledge base utilizing the nursing process to develop patient care plans that ensure safe, effective care in a variety of settings
- PO7 Assume responsibility and accountability in the practice of registered nursing as defined by the professional standards and codes of nursing

### **Associate in Nursing DTA MRP Degree Requirements:**

To earn the Associate in Nursing DTA MRP degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 135 transferable credits in designated courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 2.0 in each prerequisite and corequisite course.



- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being used for the Associate in Nursing DTA MRP degree may not be taken pass/fail.

The 135 transferable credits must include the following:

## Basic Requirements (15 credits)

### A. Communication Skills (BS)

Course Code	Title	Credits
ENGL& 101	English Composition I	5
	ENGL& 102 or ENGL& 235 or ENGL& 201	5

### B. Quantitative Skills (SQR) Symbolic or Quantitative Reasoning

Course Code	Title	Credits
MATH& 146	Introduction to Statistics	5

Note: A minimum grade of 2.0 or higher in Intermediate Algebra or higher placement score is required for entrance into all SQR courses. Enrollment into any BBCC math course requires placement at the appropriate entrance level.

## Breadth Requirements

### A. Humanities (HU, HP)

Course Code	Title	Credits
CMST& 220	Public Speaking	5
PHIL 102	Ethics and Policy in Healthcare I	1
PHIL 103	Ethics and Policy in Healthcare II	1
PHIL 201	Ethics and Policy in Healthcare III	1
PHIL 202	Ethics and Policy in Healthcare IV	1
PHIL 203	Ethics and Policy in Healthcare V	1
	Student choice for remaining 5 credits in this category	5

### B. Social Science (SS)

Course Code	Title	Credits
PSYC& 100	General Psychology	5
PSYC& 200	Lifespan Psychology	5
PSYC 101	Psychosocial Issues in Healthcare I	1
PSYC 102	Psychosocial Issues in Healthcare II	1
PSYC 103	Psychosocial Issues in Healthcare III	1
PSYC 201	Psychosocial Issues in Healthcare IV	1
PSYC 202	Psychosocial Issues in Healthcare V	1

### C. Natural Science (NS, LS, MS)

Course Code	Title	Credits
CHEM& 121	Intro to Chemistry	5
BIOL& 160	General Biology with Lab	5
BIOL& 241	Human Anatomy and Physiology I	5
BIOL& 242	Human Anatomy and Physiology II	5
NUTR& 101	Nutrition	5
BIOL& 260	Microbiology	5

## Nursing Core Requirements

Course Code	Title	Credits
NUR 110	Fundamentals of Nursing	4
NUR 111	Fundamentals of Nursing Practicum	3
NUR 114	Pharmacology	2
NUR 120	Beginning Nursing Concepts I	5
NUR 121	Beginning Nursing Practicum I	4
NUR 130	Beginning Nursing Concepts II	5
NUR 131	Beginning Nursing Practicum II	5
NUR 135	Nursing Skills Laboratory	1
NUR 136	Nursing Skills Laboratory	1
NUR 137	Nursing Skills Laboratory	1
NUR 210	Advanced Nursing Concepts I	4
NUR 211	Advanced Nursing Practicum I	5
NUR 220	Advanced Nursing Concepts II	4
NUR 221	Advanced Nursing Practicum II	5
NUR 230	Advanced Nursing Concepts III	5
NUR 231	Advanced Nursing Practicum III	4
NUR 235	Nursing Skills Laboratory	1
NUR 236	Nursing Skills Laboratory	1

**Note:** No course may be used more than once for meeting degree requirements.

Most courses in this degree are designated. Refer to the Humanities distribution list to help you choose a class within this distribution category that meets your educational goals and interests. Refer to the Programs of Study pages for a full listing of courses in each discipline and which quarter each course will be taught; ask your advisor to help you. Prerequisite and corequisite courses must be completed with a minimum of 2.0 in each course.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year – Prerequisites to Apply to Nursing ADN Program Fall Quarter

Course Code	Title	Credits
BIOL& 160	General Biology with Lab	5
CHEM& 121	Intro to Chemistry	5
ENGL& 101	English Composition I	5

### Winter Quarter

Course Code	Title	Credits
BIOL& 241	Human Anatomy and Physiology I	5
ENGL& 102	Composition II	5
Advisor approved Humanities (5 credits)		

### Spring Quarter

Course Code	Title	Credits
BIOL& 242	Human Anatomy and Physiology II	5
BIOL& 260	Microbiology	5
PSYC& 100	General Psychology	5

## Second Year – Level I ADN Program Fall Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 110	Fundamentals of Nursing	4
NUR 111	Fundamentals of Nursing Practicum	3
NUR 135	Nursing Skills Laboratory	1
NUR 114	Pharmacology	2
PHIL 102	Ethics and Policy in Healthcare I	1
PSYC 101	Psychosocial Issues in Healthcare I	1
BIOL& 260	Microbiology	5

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 120	Beginning Nursing Concepts I	5
NUR 121	Beginning Nursing Practicum I	4
NUR 136	Nursing Skills Laboratory	1
PHIL 103	Ethics and Policy in Healthcare II	1
PSYC 102	Psychosocial Issues in Healthcare II	1
NUTR& 101	Nutrition	5

## Spring Quarter

Note: PSYC& 100 General Psychology\* if not taken previously

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 130	Beginning Nursing Concepts II	5
NUR 131	Beginning Nursing Practicum II	5
NUR 137	Nursing Skills Laboratory	1
PSYC 103	Psychosocial Issues in Healthcare III	1
PSYC& 100	General Psychology	5

## Third Year – Level II ADN Program Fall Quarter

Note: PSYC& 200 Lifespan Psychology\* if not taken previously

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 210	Advanced Nursing Concepts 4 I	
NUR 211	Advanced Nursing Practicum I	5
NUR 235	Nursing Skills Laboratory	1
PHIL 201	Ethics and Policy in Healthcare III	1
PSYC 201	Psychosocial Issues in Healthcare IV	1
PSYC& 200	Lifespan Psychology	5

## Winter Quarter

Note: CMST& 220 Public Speaking\* if not taken previously

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 220	Advanced Nursing Concepts 4 II	
NUR 221	Advanced Nursing Practicum II	5
NUR 236	Nursing Skills Laboratory	1
PHIL 202	Ethics and Policy in Healthcare IV	1
CMST& 220	Public Speaking	5

## Spring Quarter

Note: MATH& 146 Introduction to Statistics\* if not taken previously

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
NUR 230	Advanced Nursing Concepts 5 III	
NUR 231	Advanced Nursing Practicum III	4
PHIL 203	Ethics and Policy in Healthcare V	1
PSYC 202	Psychosocial Issues in Healthcare V	1
MATH& 146	Introduction to Statistics	5

NOTE: All noted courses may be completed at any point prior to entering the Nursing ADN program or during the quarter in which they are listed.

**Total Credits**

**135**

## Associate in Pre-Nursing DTA/MRP Degree Type

Direct Transfer Agreement/Major Related Program

This pathway is applicable to students planning to prepare for an upper division Bachelor of Science degree in Nursing BSN (Entry-to-practice/basic BSN pathway). Students should enter the college or university at junior standing however, admission to the nursing program at that college or university is not guaranteed. Students choosing this degree are advised to contact their potential transfer institution early his/her course of study regarding specific course choices in each degree area where options are listed as well as for minimum GPA requirements.

Since programs differ at each college, students should consider program outlines published by the college or university where the student plans to continue his/her course of study. The following recommended courses will prepare students for most senior institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in their transfer area. Students should seek out their advisor for more information and guidance on possible courses to take to complete this degree and to prepare and plan for future transfer.

## Associate in Pre-Nursing DTA/MRP (90 credits)

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Cultural, Social, Political Aspects  
Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Problem Solving  
Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

## Degree Requirements

To earn the Associate in Pre-Nursing DTA/MRP degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.  
**Note:** Nursing related programs are competitive and may require a higher GPA than 2.0 overall.
- Earn a grade of at least a 1.0 in each college level course used in the degree. **Note:** Minimum GPA requirements may vary among nursing programs.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree with be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being

used for the basic or breadth requirements in the Associate in Pre-Nursing DTA/MRP degree may not be taken pass/fail.

The 90 transferable credits must include the following:

### Basic Requirements (15 credits) Communication Skills (BS)

Course Code	Title	Credits
ENGL& 101	English Composition I	5
ENGL& 102 or ENGL& 235 or ENGL& 201		5

### Quantitative Skills (SQR)

#### Symbolic or Quantitative Reasoning

Note: A minimum grade of 2.0 or higher in Intermediate Algebra or higher placement score is required for entrance into all SQR courses. Enrollment into any BBCC math course requires placement at the appropriate entrance level

Course Code	Title	Credits
MATH& 146	Introduction to Statistics	5

## General Education Courses – 60 credits

### Humanities (HU, HP)

Select from at least two of the disciplines listed on the Humanities distribution list with no more than 10 credits from any one discipline. No more than 5 credits in foreign language **at the 100 level** may apply to this category. No more than 5 credits in humanities performance/skill credits (HP) may apply to this requirement.

Course Code	Title	Credits
CMST& 220 or CMST& 210		5
	Student choice for remaining 10 credits in this category – Students encouraged to take courses that provide them with an understanding of and sensitivity to human diversity	

### Social Science (SS)

Course Code	Title	Credits
PSYC& 100	General Psychology	5
PSYC& 200	Lifespan Psychology	5
	Social science course with diversity focus (5 credits)	

### Natural Science (NS, LS, MS)

Course Code	Title	Credits
BIOL& 160	General Biology with Lab	5
BIOL& 241	Human Anatomy and Physiology I	5
BIOL& 242	Human Anatomy and Physiology II	5
BIOL& 260	Microbiology	5
CHEM& 121	Intro to Chemistry	5
CHEM& 131	Intro to Organic/Biochem	5
NUTR& 101	Nutrition	5

## Physical Education/Health & Wellness

Complete one of the following:

No more than 3 PEH Activity (AC) credits may be used in the degree.

Course Code	Title	Credits
PEH 100	Lifetime Wellness	3
PEH 178	Principles of Fitness	3
	Three PEH Activity [AC] Credits	3

### General Electives

Course Code	Title	Credits
	Student choice for up to 7 credits	

## Advising Maps

An advising map for the As Pre-Nursing DTA/MRP degree is available on the BBCC Website; use the Academics dropdown and choose the Programs & Degrees link below the Explore heading and scroll down to the bottom of the page to the Advising Maps button. Once on the Advising Maps page look for Pre-Nursing – Transfer DTA MRP. The advising map is helpful to prepare for advising and registration each quarter. Students should maintain an accurate record of courses completed and bring their advising map with them for advising appointments.

The following schedule of courses is a recommended guide for completing this degree. See a program advisor for specific courses. Many courses are designated within this degree. Refer to the distribution lists to help you choose the remaining classes within each distribution category that meet your educational goals and interests. Refer to the Programs of Study pages for a full listing of courses in each discipline and which quarter each course will be taught. Ask your advisor to help you choose.

Note: No course may be used more than once for meeting degree requirements.

## First Year

### Fall Quarter

\* If you have placed directly into [MATH& 146](#), take it right away. If not, you will need to take courses in pre-college math before you can take MATH& 146. Since many students place into MATH& 146 we are showing a possible schedule using that starting point.

\*\* Instead of [PEH 100](#) take [PEH 178](#) or take 3 PEH AC classes during three different quarters.

Course Code	Title	Credits
ENGL& 101	English Composition I	5
MATH& 146	Introduction to Statistics	5
	General Elective (2 credits)	2
PEH 100	Lifetime Wellness	3

### Winter Quarter

Course Code	Title	Credits
ENGL& 102	Composition II	5
CHEM& 121	Intro to Chemistry	5
	CMST& 220 or CMST& 210	5

### Spring Quarter

\*Instead of BIOL& 100 (LS), take elective of your choice

Course Code	Title	Credits
BIOL& 100	Survey of Biology	5
CHEM& 131	Intro to Organic/Biochem	5
PSYC& 100	General Psychology	5

## Second Year

### Fall Quarter

Course Code	Title	Credits
BIOL& 160	General Biology with Lab	5
NUTR& 101	Nutrition	5
	Social science course with diversity focus (5 credits)	

## Winter Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIOL& 241	Human Anatomy and Physiology I	5
	Any Humanities Breadth from distribution list (HU) (5 credits)	
PSYC& 200	Lifespan Psychology	5

## Spring Quarter

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
BIOL& 242	Human Anatomy and Physiology II	5
	Any Humanities Breadth from distribution list (HU) (5 credits)	
BIOL& 260	Microbiology	5

Note: No course may be used more than once for meeting degree requirements.

**Total Credits** **90**

# Nursing Course Descriptions

## **NUR 100 : Nursing Assistant**

This course prepares students to take the Nursing Assistant examination as outlined by federal and state guidelines. Training will include classroom, skills lab, and clinical experience.

**Credits** 9

**Lecture Hours** 44

**Lab Hours** 110

### **Prerequisites**

Read, write, speak and understand English at the level necessary for performing duties of the nursing assistant. (Placement in ENGL 099 or above) GTE Dual Credit available.

### **Quarters Offered**

Fall, Winter, Spring

## **NUR 110 : Fundamentals of Nursing**

Focus is on fundamental nursing theory for the practice of nursing upon which the Level IADN

Nursing student may apply the nursing process to identify and meet the cultural, physical, psychological, social, and spiritual needs of the adult and geriatric client.

**Credits** 4

**Lecture Hours** 44

### **Prerequisites**

Admission into the Level I AD Nursing Program.

### **Quarters Offered**

Fall

## **NUR 111 : Fundamentals of Nursing Practicum**

Practical application in the clinical setting of nursing theory and skills taught in [NUR 110](#) and NUR 135. Practicum focuses on nursing care to a variety of adult and geriatric patients.

**Credits** 3

**Lab Hours** 66

### **Prerequisites**

Admission into the Level I ADN nursing program.

### **Quarters Offered**

Fall

## **NUR 114 : Pharmacology**

An introduction to nursing principles of medication administration. Explores the therapeutic actions, major side effects, and nursing implications of common drugs in major classifications. Principles of medication administration and dosage calculation are included.

**Credits** 2

**Lecture Hours** 22

### **Prerequisites**

Completion of [MATH 098](#)/[MAP 119](#) with a minimum grade of 2.0 or a higher placement.

### **Corequisites**

[NUR 110](#) or instructor permission.

### **Quarters Offered**

Fall

## **NUR 120 : Beginning Nursing Concepts I**

Focus is on nursing theory as it relates to the adult patient with commonly occurring health conditions, and includes an introduction to the care of the patient in the perioperative and maternal/newborn setting.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[BIOL& 260](#), with a 2.0 G.P.A. or above

**Quarters Offered**

Winter

**NUR 121 : Beginning Nursing Practicum I**

Practical application in the clinical setting of nursing theory and skills taught in previous nursing courses and introduced in [NUR 120](#) and NUR 136. Practicum focuses on nursing care to a variety of patients in the medical/surgical, perioperative, and maternal newborn setting.

**Credits** 4

**Lab Hours** 88

**Prerequisites**

[BIOL& 260](#) with a 2.0 G.P.A or above.

**Quarters Offered**

Winter

**NUR 130 : Beginning Nursing Concepts II**

This course continues to focus on nursing theory as it relates to basic needs throughout the lifespan, including care of the pediatric patient.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

Admission into the nursing program and NUTR& 101 with a 2.0 G.P.A or above.

**Quarters Offered**

Spring

**NUR 131 : Beginning Nursing Practicum II**

Practical application in the clinical setting of nursing theory and skills taught in previous nursing courses and introduced in [NUR 130](#) and NUR 137. Practicum focuses on nursing care to a variety of patients across the lifespan, and will include experience in the inpatient mental health environment.

**Credits** 5

**Lab Hours** 110

**Prerequisites**

[NUTR& 101](#) with a 2.0 G.P.A or above.

**Quarters Offered**

Spring

**NUR 135 : Nursing Skills Laboratory**

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of nursing care in the clinical setting ([NUR 111](#)). The content is based on theoretical nursing knowledge taught in [NUR 110](#).

**Credits** 1

**Lab Hours** 22

**Prerequisites**

Admission into the Level I ADN Program.

**Quarters Offered**

Fall

**NUR 136 : Nursing Skills Laboratory**

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of nursing care in the clinical setting ([NUR 121](#)). The content is based on theoretical nursing knowledge taught in [NUR 120](#).

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[BIOL& 260](#) with a 2.0 G.P.A or above.

**Quarters Offered**

Winter

**NUR 137 : Nursing Skills Laboratory**

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of nursing care in the clinical setting ([NUR 131](#)). The content is based on theoretical nursing knowledge taught in [NUR 130](#).

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[NUTR&101](#) with a 2.0 G.P.A or above.

**Quarters Offered**

Spring

**NUR 195 : Work-Based Learning Practicum**

A supervised work experience in the allied healthcare field designed to enhance the application of learned nursing theory and lab skills.

**Credits** 1-3

**Lab Hours** 33-99

**Prerequisites**

Instructor permission



**Corequisites**

[NUR 197](#)

**NUR 197 : Work-Based Learning Seminar**

A small group seminar setting in which students can discuss their Work-Based Learning Practicum ([NUR 195](#)) experience with a nursing instructor and other students.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

Instructor permission

**Corequisites**

NUR 195: Work-Based Learning Practicum

**NUR 210 : Advanced Nursing Concepts I**

Focus is on advanced nursing theory as it relates to complicated health deviations in patients throughout the lifespan.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[PSYC& 100](#) with a 2.0 G.P.A. or above, or current LPN Licensure and permission of program director.

**Quarters Offered**

Fall

**NUR 211 : Advanced Nursing Practicum I**

Practical application in the clinical setting of nursing theory and skills taught in previous nursing courses and introduced in [NUR 210](#) and NUR 235. Practicum focuses on advanced nursing care to a variety of patients, in various settings, and throughout all stages of the lifespan.

**Credits** 5

**Lab Hours** 110

**Prerequisites**

Admission to the Level II ADN Program.

**Quarters Offered**

Fall

**NUR 220 : Advanced Nursing Concepts II**

This course continues to focus on expansion of theoretical nursing knowledge related to complex disease states.

**Credits** 4

**Lecture Hours** 44

**Prerequisites**

[PSYC& 200](#), with a 2.0 G.P.A or above

**Quarters Offered**

Winter

**NUR 221 : Advanced Nursing Practicum II**

Clinical focus is on application of principles and skills taught in previous nursing courses and introduced [NUR 220](#) and NUR 236. Practicum focuses on advanced nursing care to less stable patients in a variety of setting throughout the lifespan.

**Credits** 5

**Lab Hours** 110

**Prerequisites**

[PSYC& 200](#) with a minimum 2.0 G.P.A or above

**Quarters Offered**

Winter

**NUR 230 : Advanced Nursing Concepts III**

Focus on advanced theoretical knowledge as it relates to complex/multiple disease entities and emergency situations.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[CMST& 220](#) with a minimum 2.0 G.P.A or above.

**Quarters Offered**

Spring

**NUR 231 : Advanced Nursing Practicum III**

This course focuses on increasing independence and skill in the performance and management of patient care in the clinical setting under the guidance of a registered nurse, based on nursing theory and skills taught in previous nursing courses.

**Credits** 4

**Clinical Hours** 132

**Prerequisites**

[CMST& 220](#) with a minimum 2.0 or above.

**Quarters Offered**

Spring

**NUR 235 : Nursing Skills Laboratory**

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of nursing care in the clinical setting ([NUR 211](#)). The content is based on theoretical nursing knowledge taught in [NUR 210](#).

**Credits** 1

**Lab Hours** 22

**Prerequisites**

Admission into the Level II ADN Program

**Quarters Offered**

Fall

**NUR 236 : Nursing Skills Laboratory**

This course provides for the practice of nursing skills in a controlled setting in order to gain proficiency for delivery of patient care in the clinical setting ([NUR 221](#)). The content is based on theoretical nursing knowledge taught in [NUR 220](#) and previous courses.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

[PSYC& 200](#), with a 2.0 G.P.A or above.

**Quarters Offered**

Winter

**NUR 240 : Professional Issues**

This course is designed to assist students in making the transition from the academic setting to a healthcare work environment. It provides preparation for the NCLEX examination, and information about the professional role of the nurse and the legal and ethical responsibilities related to the practice of nursing in the State of Washington.

**Credits** 1-4

**Lecture Hours** 0-44

**Lab Hours** 0-88

**Prerequisites**

Instructor permission.

**Quarters Offered**

Spring

**NUR 295 : Work-Based Learning Practicum**

A supervised work experience in the allied healthcare field designed to enhance the

application of learned nursing theory and lab skills. Area of learning must be approved by instructor.

**Credits** 1-3

**Lab Hours** 33-99

**Prerequisites**

Instructor permission

**Corequisites**

[NUR 297](#)

**NUR 297 : Work-Based Learning Seminar**

A small group seminar setting in which students can discuss their Work-Based Learning Practicum ([NUR 295](#)) experience with a nursing instructor and other students.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

Instructor permission

**Corequisites**

NUR 295: Work-Based Learning Practicum

## Nutrition

**Tyler Wallace, Division Chair**

**509.793.2151**

**[Tylerw@bigbend.edu](mailto:Tylerw@bigbend.edu)**

Nutrition courses may be taken as part of the Associate in Arts and Science DTA degree as well as one of the courses included within the Nursing DTA. These courses may be used toward the Natural Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree or the Nursing DTA should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Nutrition studies what we eat and how that food supports our health. This field studies health issues that are related to diet and our behaviors related to the foods that we eat. Nutrition

includes chemistry, biology, and social science. Many specialties include exercise science, health and wellness, and nutrition education.

Individuals with degrees in nutrition often become nutritionists or health educators for schools, corporations, and healthcare facilities. Others become registered dietitians that work alongside healthcare professionals.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Nutrition Course Descriptions

### **NUTR& 101 : Nutrition**

This course is intended for students pursuing careers in Nursing or other Allied Health fields. This course in nutrition will present information on the chemistry and the biological function of nutrients in the body. Diseases associated with an excess or deficit in nutrients will also be explored. Students will acquire a better understanding of some impacts of food choices on a personal level. Prerequisite: Highly recommend High School Biology with a B or better, BIOL 100, **OR** BIOL 160 with a 2.0 or higher within the last 5 years.

#### **Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

Highly recommend High School Biology with a B or better, BIOL 100, **OR** BIOL 160 with a 2.0 or higher within the last 5 years.

#### **Quarters Offered**

Fall, Winter, Spring, Summer

## Open Doors Program

**Jody Bortz, Director**

**509.793.2331**

**Jodyb@bigbend.edu**

### **General Information**

**509.793.2304**

**BEdAInfo@bigbend.edu**

## Open Doors Program Course Descriptions

### **OPD 010 : Reading/Writing/Communication (HS English 1)**

Reading/Writing/Communication (English 1) focuses on reading, writing, and language through the study of history, past and present, including conventions of traditional grammar, sentence structure, and paragraph structure. Speaking, listening, and study skills are reinforced through note taking, class discussion, and individual/group presentations and writing assignments. High school completion credit only. Students can earn 0.25–2.0 Freshman/Sophomore high school credits. This course may be repeated.

#### **Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

### **OPD 011 : Reading/Writing/Communication (HS English 2)**

Reading/Writing/Communication (HS English 2) focuses on reading, writing, and language through the study of history, past and present, including conventions of traditional grammar, sentence structure, and paragraph structure. Speaking, listening, and study skills are reinforced through note taking, class discussion, and individual/group presentations and writing assignments. High school completion credit only. Students can earn 0.25–2.0 Junior/Senior high school credits. This course may be repeated.

#### **Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 020 : General Lab–Science**

This lab course provides basic instruction and lab exposure related to physical, life and earth science content. High school completion credit only. Open Doors students can earn 0.25–2.0 high school credits. This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 021 : General Non–Lab Science**

This general non-lab science survey course provides basic instruction in physical, life and earth science, necessary for high school graduation. High school completion only. Students may earn 0.25–1 HS credit. This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 030 : United States Constitution and Government**

United States Constitution and Government traces the nation's history from the pre-colonial period to the present. Students learn about the Native American, European, and African people who lived in America before it became the United States. They examine the beliefs and philosophies that informed the American Revolution and the subsequent formation of the government and political system. Students investigate the economic, cultural, and social motives for the nation's expansion, as well as the conflicting notions of liberty that eventually resulted in civil war. High school completion credit only. Students may earn 0.25–1.0 HS credits. This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 031 : Washington State Government and History**

Washington State Government and History examines Washington history from native and European contact to the present. The study of Washington state includes an examination of the state constitution, key treaties, and tribal sovereignty issues, including the study of migration, differing cultural experiences, and human interactions with the environment. High school completion credit only. Students may earn 0.25–0.50 HS credit This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 032 : Contemporary World Events**

Contemporary World Events examines modern world history and geography to identify global themes rooted in environmental issues, economic development, human rights, and civic action and responsibility. High school completion only. Open Doors students may earn 0.25–1 HS CWP or World History credit. This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

**OPD 035 : Fine Arts**

This course will contextualize artistic study throughout other high school content areas including language, science, history, and elective credits or may be offered as a standalone class. Artistic expression and study may range from visual design, creative writing, textile, and natural product, performing arts or digital design as necessary for high school graduation. Independent study may be approved by instructor to include classes, specialized training or hobbies demonstrating artistic aptitude. High school completion credit only. Open Doors students can earn 0.25–2.0 high school credits. This course may be repeated.

**Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

### **OPD 045 : Elective and Personal Pathway (PPR)**

The elective course is designed to enable students to further explore and develop special interest skills through independent study. Students may focus on personal, educational, or career pathways aligned with their Personal Pathway (PPR) and/or Elective credit goals. High school completion credit only. Students can earn 0.25-2.0 high school credits. This course may be repeated.

#### **Prerequisites**

Students must be referred from participating school district and registered in a Basic Skills Open Doors class.

## Philosophy

**Dennis Knepp**

**509.793.2190**

**Philosophy@bigbend.edu**

Philosophy courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

A philosophy major may seek employment as a post-secondary teacher, a minister, or might plan to obtain a graduate degree in a profession such as law, for which a background in philosophy is often recommended. Philosophy, literally the "love of knowledge," is the parent of all other academic disciplines. One of philosophy's aims is to provide a way to see all knowledge as a whole in order to arrive at insights none of the other disciplines can

achieve. Another of philosophy's functions is to seek answers to problems in its own specialties such as ethics and logic. Philosophy's concern is to deal with perplexing questions, which no other discipline can cope with, that people have been asking for thousands of years.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### Recommended Pre-Major Courses

PHIL& 101 Intro to Philosophy

PHIL& 120 Symbolic Logic

PHIL 210 Ethics

### Recommended Philosophy Electives

PHIL 230 East Indian Philosophy

PHIL 240 Philosophy of Religion

## Philosophy Course Descriptions

### **PHIL& 101 : Intro to Philosophy**

This course is an introduction to philosophy for students who have no previous background in the subject. The course presents a broad overview of philosophical topics of interest and importance such as the nature of knowledge and the contents of reality.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter, Spring

### **PHIL& 120 : Symbolic Logic**

This course is a study of the methods and principles used to distinguish correct from incorrect reasoning. Students are expected to prove their understanding of formal deductive symbolic logic by completing logic proofs in categorical, propositional, and predicate logic. (Formerly: PHIL 106).

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

Completion of [MATH 098](#)/[MAP 119](#) or a higher placement.

#### **Quarters Offered**

Winter, Spring

### **PHIL 102 : Ethics and Policy in Healthcare I**

This is the first in a series of five courses exploring values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions.

#### **Degree Code**

Humanities Lecture

**Credits** 1

**Lecture Hours** 11

#### **Prerequisites**

Admission into the Level IADN Nursing Program or instructor permission.

#### **Corequisites**

[NUR 110](#) or instructor permission.

#### **Quarters Offered**

Fall

### **PHIL 103 : Ethics and Policy in Healthcare II**

This is the second in a series of five courses exploring values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions.

#### **Degree Code**

Humanities Lecture

**Credits** 1

**Lecture Hours** 11

### **Prerequisites**

[PHIL 102](#) or instructor permission

### **Corequisites**

[NUR 120](#) or instructor permission..

### **Quarters Offered**

Winter

### **PHIL 201 : Ethics and Policy in Healthcare III**

This is the third in a series of five course exploring values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions.

#### **Degree Code**

Humanities Lecture

**Credits** 1

**Lecture Hours** 11

#### **Prerequisites**

[PHIL 103](#) or instructor permission

#### **Corequisites**

[NUR 210](#) or instructor permission.

#### **Quarters Offered**

Fall

### **PHIL 202 : Ethics and Policy in Healthcare IV**

This is the fourth in a series of five courses exploring values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions.

#### **Degree Code**

Humanities Lecture

**Credits** 1

**Lecture Hours** 11

#### **Prerequisites**

[PHIL 201](#) or instructor permission

#### **Corequisites**

[NUR 220](#) or instructor permission.

#### **Quarters Offered**

Winter

### **PHIL 203 : Ethics and Policy in Healthcare V**

This is the fifth in a series of five courses exploring values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions.

#### **Degree Code**

Humanities Lecture

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[PHIL 202](#) or instructor permission.

**Corequisites**

[NUR 230](#) or instructor permission..

**Quarters Offered**

Spring

**PHIL 210 : Ethics**

An introduction to ethical theories and some of today's main moral problems such as abortion, euthanasia, war, and capital punishment. Topics vary.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**PHIL 211 : Ethics for Criminal Justice**

A study of the principal ethical theories and their application to individual and social morality tied to the field of Criminal Justice.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

CJ& 101: Intro Criminal Justice

**PHIL 230 : East Indian Philosophy**

This course will provide an introduction to the classical philosophical schools of India. It will discuss the problems and methods of these schools and their relationships with some of the major schools of Western Philosophy.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**PHIL 240 : Philosophy of Religion**

Philosophy of religion is an attempt to think critically and rationally about religious issues. This course will use classic and contemporary

texts to explore several interesting issues such as the problem of evil: if God is all knowing, all powerful, and all good, then why do the innocent suffer? Many philosophers have tried to answer that question and more.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**PHIL 250 : Asian Philosophy**

This course introduces to students the major intellectual currents in East Asia, with the focus on Confucianism, Taoism, and Buddhism. Student will follow the unfolding of the intellectual history chronologically, and discuss the teachings of most influential thinkers in East Asia.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**PHIL 340 : Professional Ethics**

This course explores ethical principles and the ethical problems that managers face in a business environment. Students will examine the role of ethics and social responsibility in the management of business. Students will be able to apply the codes of practice, standards of conduct, professional responsibilities and regulatory aspects associated with common professional business. A study of trends with respect to ethical, legal, economic, and regulatory conditions in the global marketplace is included.

**Credits** 5

**Lecture Hours** 55

**Lab Hours** 0

**Prerequisites**

Bachelor of Applied Science –Applied Management program admission.

# Physical Education and Health

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Physical education courses may be taken as part of the Associate in Arts and Science DTA degree satisfying the Physical Education/Health & Wellness Requirement or as Specified or General Elective credit. Several other BBCC degrees also have a Physical Education/Health & Wellness Requirement. Students seeking Associate in Arts and Science DTA degree or other transfer degree at BBCC should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

The physical education department outlines suggestions for students pursuing careers in the field of physical education, coaching and related activities. The P.E. major consists of a field of study in physical performance and human health.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

# Physical Education and Health Course Descriptions

## **PEH 100 : Lifetime Wellness**

Lifetime Wellness is designed to promote the students understanding of their physical, emotional, and social health needs, and to develop strategies to meet these needs and improve overall health and well-being.

### **Degree Code**

Specified Elective

### **Credits 3**

### **Lecture Hours 33**

### **Quarters Offered**

Fall, Winter, Spring, Summer

## **PEH 102 : Theory of Basketball**

Designed for students to learn the basic skills required to teach or coach basketball. Emphasis is placed on analyzing fundamentals, gaining knowledge of offensive and defensive strategy and becoming familiar with the responsibilities of a basketball program.

### **Degree Code**

Specified Elective

### **Credits 3**

### **Lecture Hours 22**

### **Lab Hours 22**

### **Quarters Offered**

Winter

## **PEH 103 : Theory of Wrestling**

A practical course relating to the coaching aspect of wrestling, emphasis is placed on rule familiarization, technique development of takedowns, escapes, reversals, and pinning combinations. Content also includes preparation of teams for contests and reviews of various philosophical approaches.

### **Degree Code**

Specified Elective

### **Credits 3**

### **Lecture Hours 22**

### **Lab Hours 22**

### **Quarters Offered**

Winter



**PEH 105 : Theory of Baseball**

A practical course relating to the coaching aspect of baseball. Emphasis is placed on teaching/coaching strategies, the body mechanics of the athlete, evaluation methods, and the organization of a baseball program.

**Degree Code**

Specified Elective

**Credits 3****Lecture Hours 22****Lab Hours 22****Quarters Offered**

Spring

**PEH 106 : Theory of Fastpitch Softball**

A practical course relating to the coaching aspect of fastpitch softball. Emphasis is placed on teaching/coaching strategies, the body mechanics of the athlete, evaluation methods, and the organization of a fastpitch softball program.

**Degree Code**

Specified Elective

**Credits 3****Lecture Hours 22****Lab Hours 22****Quarters Offered**

Spring

**PEH 107 : Theory of Volleyball**

Designed for students to learn the basic skills required to teach or coach volleyball. Emphasis is placed on analyzing fundamentals, gaining knowledge of offensive and defensive strategy and becoming familiar with the responsibilities of a volleyball program..

**Degree Code**

Specified Elective

**Credits 3****Lecture Hours 22****Lab Hours 22****Quarters Offered**

Fall

**PEH 112 : Running or Walking for Fitness**

Running or Walking for Fitness will give students an overview of the basics of designing and implementing a personal running or walking

fitness plan to achieve their specific goals. All ability levels are welcome, whether a student is hoping to complete a 5k or is an experienced runner looking to improve. The course will culminate with a timed 5k run/walk. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits 1****Lab Hours 22****PEH 114 : Basketball**

Basketball is designed to improve the students basketball skills/knowledge and to provide an awareness of the sport as a lifetime activity offering fun and fitness. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits 1****Lab Hours 22****Quarters Offered**

Spring

**PEH 119 : Fastpitch**

Fastpitch is designed to improve the students softball skills/ knowledge so to participate successfully and enjoyably in the team activity of softball. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits 1****Lab Hours 22****PEH 122 : Volleyball**

Volleyball is designed to improve the students volleyball skills/ knowledge so to participate successfully and enjoyably in the team activity of volleyball. Emphasis will be on executing proper fundamentals of the game. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits 1****Lab Hours 22**

**PEH 125 : Conditioning**

Conditioning is designed to introduce the student to the basic principles and training methods for body conditioning so they can establish an exercise program to enhance overall wellbeing. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**PEH 128 : Social Dance**

Social dance teaches students basic steps and techniques for partner dances such as swing, fox trot, waltz and cha cha. The course will cover fundamentals of footwork, music rhythms and dancing with a partner. Students do not need a dance partner to register for the class. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Winter

**PEH 130 : Indoor Cycling/Spinning**

Indoor cycling, often also called spinning, as an organized activity, is a form of exercise with classes focusing on endurance, strength, intervals, high intensity and recovery, and involves using a special stationary exercise bicycle with a weighted flywheel in a classroom setting.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**PEH 131 : Circuit Weight Training**

Circuit weight training is designed to introduce the student to the basic principles and training methods for weight training so to establish a

program to enhance build and maintain muscular strength and endurance. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**PEH 132 : Fitness**

An overall conditioning program with emphasis on developing strength, endurance, flexibility, and cardiovascular conditioning that lead to the development of a fitness attitude. May be repeated for up to three (3) credits

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**PEH 133 : Weight Training**

Weight training is designed to enhance the students knowledge and practices regarding the basic techniques of weight training using weight machines and free weights. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**PEH 135 : Beginning Yoga**

Introductory and intermediate yoga postures will be introduced to promote balance, strength, flexibility, and joint stability. Students will also be introduced to basic breath work and meditation practices to enhance stress relief and focus. Students will be exposed to the relationship between the mind and body and the role yoga can play in promoting lifelong health. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring, Summer

**PEH 137 : Beginning Brazilian JiuJitsu**

Designed to teach students the art and sport of Brazilian Jiu-Jitsu (BJJ). The purpose of this class shall be to provide a structured and safe environment, for learning and practicing the grappling art of Brazilian Jiu-Jitsu, along with some techniques from Judo, Sambo and wrestling. This class will focus on providing opportunities for students to gain effective self-defense and grappling experience, increase physical health, provide stress relief and promote a positive lifestyle of continual improvement. \*Emphasizes self-control and situational awareness in grappling-based self-defense using non-violent neutralization positions and techniques for life-threatening situations. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**PEH 153 : Lifeguard Training**

Instruction leading to qualification for American Red Cross Lifeguard/First Aid/CPR/AED training certification.

**Degree Code**

Physical Education Activity

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 24

**Prerequisites**

Persons are eligible who have passed their fifteenth birthday, are in sound physical condition, and have completed the following prerequisites:

**Quarters Offered**

Spring

**PEH 155 : Body Toning**

This course involves special exercise and calisthenics which enhance total fitness, figure improvement, body toning, weight control, and posture. Students will use balance/fitness balls

and light to medium dumbbells to improve overall core strength and balance of the body. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

**PEH 158 : Racquetball**

Racquetball is designed to introduce the student to the knowledge and basic skills of racquetball and to develop those skills to a level that enables the student to participate in the sport at a beginning level. May be repeated for up to three (3) credits.

**Degree Code**

Physical Education Activity

**Credits** 1

**Lab Hours** 22

**Quarters Offered**

Spring

**PEH 164 : Hiking**

Hiking will introduce students to the basics of wilderness foot-travel. Students will attend a one-hour classroom session (or online equivalent) each week which will introduce basic concepts such as navigation, route-planning, first-aid, packing, and emergency preparedness. Once per week student will attend a mandatory group hike to apply the classroom skills. Hikes will range in difficulty and be appropriate for beginner to intermediate hikers. No previous outdoor experience is needed. No specialty equipment will be needed; students should provide athletic shoes, a water bottle, and a small backpack (suitable for carrying personal items) for themselves.

**Credits** 3

**Lecture Hours** 11

**Lab Hours** 44

**PEH 178 : Principles of Fitness**

Principles of Fitness is designed to introduce the student to the components, administration, and

assessment of fitness programs. Lab component will include the building and execution of the students own fitness program.

**Degree Code**

Specified Elective

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

## Physics

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Physics courses may be taken as part of the Associate in Arts and Science DTA degree or as part of the Associate in Science-Transfer (AS-T 2) degree. Within the Associate in Arts and Science DTA degree, these courses may be used toward the Natural Science Breadth requirements or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Physics is the study of nature at its most fundamental level. It is the science upon whose principles all other sciences and technologies are based. Courses offered are designed to introduce the student to each of the major physical theories – Newtonian mechanics, thermodynamics, waves, sound, optics, electricity, and magnetism. There may also be an exposure to special relativity and quantum theory. The student tests the theories in the laboratory, learning some of the standard experimental techniques needed to work with modern apparatus such as computers and various electronic devices.

The curriculum is designed to prepare students transferring to a four-year college or university

with majors in the following: chemistry, mathematics, physics, engineering, computer science, and related physics fields.

Within the Associate in Science-Transfer degree, physics courses satisfy the AS-T 2 Physics or Computer Science pre-major. The Associate in Science-Transfer degree allows students to prepare for upper division study toward a Bachelor of Science degree in physics (as well as other sciences). This degree gives students the opportunity to make substantial progress toward fulfilling major requirements while completing at least half of the Breadth requirements for Humanities and Social Science.

The degree is accepted by many baccalaureate institutions in the state of Washington. Unlike the DTA degree, the AS-T degree does not automatically fulfill the lower division (first and second year) general requirements at a university. Typically, the AS-T degree holder's BBCC transcript will be evaluated on a course-by-course basis according to both its general requirements and major requirements.

While BBCC faculty advisors consult with students to help them plan effectively, the ultimate responsibility to plan rests with the student. The college recommends that the student identify one or two potential transfer institutions and then contact qualified program advisors at those institutions as early as possible to obtain specific, course-by-course advice. A BBCC advisor or the office of admissions at the transfer institution can help the student to contact these advisors. Ongoing contact with program advisors at the transfer institution facilitates a smooth and efficient transfer.

Since programs differ at each college, students who intend to transfer should consult program outlines published by the college or university. The following recommended courses prepare students for most baccalaureate institutions.

Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## AS-T 2 Computer Science or Physics Pre-major

### Degree Type

Associate in Science-Transfer

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Cultural, Social, Political Aspects  
Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.
- PO5 Problem Solving  
Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

### First Year

#### Summer Quarter

\* if student's placement is below MATH& 151

Course Code	Title	Credits
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5

### Fall Quarter

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
ENGL& 101	English Composition I	5
MATH& 151	Calculus I	5
	PEH Activity Course (1 credit)	1

### Winter Quarter

Course Code	Title	Credits
CHEM& 162	General Chem w/Lab II	5
MATH& 152	Calculus II	5
	Advisor Approved HU/SS (5 credits)	5
	PEH Activity Course (1 credit)	1

### Spring Quarter

Course Code	Title	Credits
CHEM& 163	General Chem w/Lab III	5
ENGL& 235	Technical writing	5
MATH& 163	Calculus 3	5
	PEH Activity Course (1 credit)	1

## Second Year

### Fall Quarter

Course Code	Title	Credits
MATH& 254	Calculus IV	5
PHYS& 221	Engineering Physics I w/Lab	5
	Advisor Approved HU/SS (5 credits)	5

### Winter Quarter

Course Code	Title	Credits
MATH& 163	Calculus 3	5
PHYS& 222	Engineering Physics II w/Lab	5
MATH 220	Linear Algebra	5

## Spring Quarter

\* If a student has not placed into MATH& 151, additional quarters will be required since this degree requires six sequential math classes to be taken starting with MATH& 151.

\*\* MATH& 254, MATH 220, and MATH 230 are only offered one time per year; plan your schedules well in advance

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
PHYS& 223	Engineering Physics III w/Lab	5
MATH 230	Differential Equations	5
	Advisor Approved HU/SS (5 credits)	5
<b>Total Credits</b>		<b>90</b>

## Associate in Science-Transfer, AS-Track 2

### Degree Type

Associate in Science-Transfer  
Engineering, Computer Science, Physics,  
and Atmospheric Sciences

Careful planning is important in all of the degrees offered by BBCC. In the case of the AS-T degree, it is essential to have information about general requirements and also major requirements for the specific Bachelor of Science degree at the intended baccalaureate institution from the beginning and throughout the degree planning process.

The purpose of the degree is to allow the student who plans to complete a Bachelor of Science degree in biology, chemistry, computer science, engineering or physics the opportunity to make substantial progress toward fulfilling major requirements while completing at least half of the liberal arts, or general requirements, in studies such as English, the humanities and the social sciences. The degree is accepted by many baccalaureate institutions in the state of

Washington. Completing the AS-T degree will prepare students for upper division study; it does not guarantee students admission to the major.

While BBCC faculty advisors consult with students to help them plan effectively, the ultimate responsibility to plan rests with the student. The college recommends that the student identify one or two potential transfer schools and then contact qualified program advisors at those institutions as early as possible to obtain specific, course-by-course advice. Throughout one's enrollment at BBCC, the program advisors at the transfer institution should be consulted.

Unlike the DTA degree, the AS-T degree does not automatically fulfill the lower division (first and second year) general requirements at a university. Typically, the AS-T degree holder's BBCC transcript will be evaluated on a course-by-course basis according to both its general requirements and major requirements. In the admissions process, the AS-T degree typically offers the same advantages as the DTA—it is generally easier to be admitted as a transfer student with a transferable degree.

### Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively.
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically.
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.
- PO4 Cultural, Social, Political Aspects  
Students will be able to recognize or articulate personal/interpersonal aspects of, or connections between, diverse cultural, social, or political contexts.

- PO5 Problem Solving  
Students will be able to solve problems by gathering, interpreting, combining and/or applying information from multiple sources.

Degree Requirements:

To earn the Associate in Science-Transfer degree, a student must:

- Complete their degree within three years from the quarter of entry based on the catalog in use at time of entering BBCC. After that date, students must meet any changes in graduation.
- Complete at least 90 transferable credits in courses numbered 100 or above with a grade point average (GPA) of 2.0 or higher.
- Earn a grade of at least a 1.0 in each college level course used in the degree.
- Complete and submit an application for graduation to the Student Administrative Support Services Office before a degree will be awarded.

Note: No course may be used more than once for meeting degree requirements. Courses being used for the basic or breadth requirements in the Associate in Science-Transfer degree may not be taken pass/fail.

The 90 transferable credits must include the following:

### Basic Requirements Communication Skills

Course Code	Title	Credits
	Communications - BS	
	ENGL& 101, ENGL& 102, ENGL& 235, or ENGL& 201	5

### Mathematics

Note: Enrollment into any BBCC math course requires placement at the appropriate entrance level.

Course Code	Title	Credits
	Quantitative Skills - SQR	
	MATH& 151 and MATH& 152	

### Humanities and Social Science

Select at least 5 credits from Humanities distribution list and at least 5 credits from Social Science distribution list plus an additional 5 credits from either the Humanities or the Social Science distribution lists. Cross listed courses may be used to meet credit requirements in only one distribution area.

1. Humanities distribution
2. Social science distribution
3. Humanities or Social Science distribution

Course Code	Title	Credits
	Humanities - HU	
	Humanities - HP	
	Social Science - SS	

### AS-T 2: Pre-major Program

Note: Sequence courses should not be broken up between institutions (e.g., the typical three-quarter physics sequence should be taken entirely at one institution).

Course Code	Title	Credits
CHEM& 161	General Chem w/Lab I	5
PHYS& 221	Engineering Physics I w/Lab	5
PHYS& 222	Engineering Physics II w/Lab	5
PHYS& 223	Engineering Physics III w/Lab	5
	MATH&163 (recommended) or MATH& 146	5

## Remaining Credits

1. The remaining credits should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend. A minimum of 90 transferable credits must be earned for an AS-T degree with no more than 5 credits of general electives.

2. For Engineering disciplines, be sure to refer to the Pre-Engineering AS-T 2 Pre-Engineering MRPs found in the Engineering Programs of Study Pages.

**Total Credits**

**90**

## Physics Course Descriptions

### **PHYS& 110 : Physics for Non-Science Majors with Lab**

This course is a general physics course for the non-science major. The course helps develop an awareness of the physical concepts which govern our everyday experiences and emphasizes problem-solving. Topics will include most of the following, depending on class preparation and interest: describing motion, Newton's laws of motion and gravitation, energy and conservation laws, states of matter and its behavior, thermodynamics, waves, electricity and magnetism, optics, atomic and nuclear physics, special relativity. Conceptual reasoning is stressed, and mathematics is kept to the level of intermediate algebra. Laboratories emphasize concepts learned in lectures, and graphing and data handling techniques are learned. (formerly PHYS& 100 and 101)

#### **Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

[MATH 098](#), placement in [MATH 099](#), or instructor permission

## **Quarters Offered**

Winter

### **PHYS& 114 : General Physics I with Lab**

The first course in a three-quarter algebra-based sequence for students pursuing degrees in biology, pre-dentistry, pre-medicine, pre-veterinary medicine, engineering technology, zoology, and other fields. This course is also strongly recommended for students who will be taking Engineering Physics but who have not had a prior physics class. Students should check with the requirements of their intended baccalaureate institution when considering this sequence. A balance of conceptual understanding and problem-solving ability is emphasized; This first course will begin with an introduction to units and unit conversion, scalars and vectors, and using right-angle trigonometry for analyzing two-dimensional motion, then continue to the study of mechanics: describing motion, with speed, velocity, and acceleration; application of Newton's laws in one and two dimensions; impulse and momentum conservation; work and energy conservation; rotational motion and torque.

#### **Degree Code**

Math/Science Laboratory

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

Successful completion of [MATH 099](#), placement in a higher-level mathematics course, or instructor permission.

## **Quarters Offered**

Spring

### **PHYS& 115 : General Physics II with Lab**

The second course in an three-quarter algebra-based sequence. A balance of conceptual understanding and problem-solving ability is emphasized; laboratory and lecture are integrated in the sequence. In this second quarter the topics studied will include fluids, oscillations, waves and sound, thermodynamics,



geometric and physical optics. Biological applications of physics will be studied whenever possible.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Completion of [PHYS& 114](#) with 2.0 or higher.

**PHYS& 116 : General Physics III with Lab**

The third course in an three-quarter algebra-based sequence. A balance of conceptual understanding and problem-solving ability is emphasized; laboratory and lecture are integrated in the sequence. In this third quarter the topics studied will include electricity, magnetism, electromagnetic induction and waves, quantum physics, atomic physics, and nuclear physics. Biological applications of physics will be studied whenever possible.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Completion of [PHYS& 115](#) with 2.0 or higher.

**PHYS& 221 : Engineering Physics I w/Lab**

The course is an introductory physics course intended for students majoring in science or engineering. This course is the first of a three-quarter sequence. Course content includes the laws of motion, energy, momentum, and static equilibrium.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Calculus I (Math& 151) or concurrent enrollment

**Quarters Offered**

Fall

**PHYS& 222 : Engineering Physics II w/Lab**

The second in a three-quarter calculus-based sequence in introductory physics intended for students majoring in science or engineering. Course content includes waves, optics, thermodynamics, and may include a unit on gravitation.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Successful completion of Engineering Physics I [PHYS& 221](#)

Calculus II ([MATH& 152](#)) or concurrent enrollment

**Quarters Offered**

Winter

**PHYS& 223 : Engineering Physics III w/Lab**

The third in a three-quarter calculus-based sequence in introductory physics intended for students majoring in science or engineering. Course content includes static electricity, current electricity, magnetism, and special relativity.

**Degree Code**

Lab Science

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

**Prerequisites**

Successful completion of [PHYS& 221](#) and [PHYS& 222](#)

**Quarters Offered**

Spring

**PHYS 102 : Physics of Exercise**

This course introduces physics in the context of sports and daily exercise. Topics include most of the following, depending on class preparation and interest: motion, force, energy, collisions, momentum, pressure, and fluids to explain what we see on the court, field, pool, and road. The course is intended to connect a student's genuine interest in athletics to concrete materials. The course is also aimed to show athletes & trainers how to perform in sports

games with optimal results. Conceptual reasoning is stressed, and mathematics is kept to the level of elementary algebra.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[MATH 094](#), placement into a higher-level mathematics course, or an instructor's permission

## Political Science

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Political science courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Social Science Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Political science undertakes the study of government and politics as it affects human affairs. It takes into account political conditions in America as well as in diverse areas of the world. As a discipline of study, political science is an important part of a general liberal arts education. Students who plan to major in political science may prepare for a number of careers, including public school teaching, government service, law, international business, or professional political scientist.

Since programs differ at each college, students should consult program outlines published by

the college or university to which they intend to transfer. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Recommended Pre-Major Courses

POLS& 101 Introduction to Political Science CWU & EWU\*

POLS& 202 American Government CWU & EWU\*

POLS& 203 International Relations CWU

CJ& 110 Criminal Law EWU

\* EWU: POLS& 101 and POLS& 202 have same course equivalent

## Political Science Course Descriptions

### **POLS& 101 : Introduction to Political Science**

In order to make politics relevant to the people, one must go where the people are. Many Americans find politics to be distant and irrelevant to their daily experience without ever realizing that politics are all around them in many different formats. This class brings students face-to-face with such realities while emphasizing an understanding of the nature, purpose, and practice of American politics within a global context. Topics covered include the American Constitution, the elections process, bureaucracies, the role of the media, and modern political culture in America.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter

### **POLS& 202 : American Government**

This course focuses upon the institutions which form the governmental structures of the United States. Students participate in activities and

discussions intended to broaden their understanding of what it means to serve in government and the importance of the role government plays in the functioning of the country.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Winter, Spring, Summer

**POLS& 203 : International Relations**

This course serves as an introduction to global relations, focusing on historical backgrounds, current struggles, and the struggle to define the post-cold-war world. Students taking this course are encouraged to adopt a global outlook and will participate in a mock international conference designed to provide direct experience in the world of diplomacy. Course meets BBCC diversity.

**Degree Code**

Social Science, Diversity

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall

## Psychology

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Psychology courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Social Sciences Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a

detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Psychology is a branch of science which seeks to describe and understand normal and abnormal human behavior. Students interested in psychology as a professional career usually spend several years beyond their bachelor's degree in graduate training to prepare themselves for such roles as psychotherapists, teachers of psychology, researchers, or industrial psychologists.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### Recommended Pre-Major Courses

PSYC& 100 General Psychology CWU, EWU

PSYC& 200 Lifespan Psychology CWU, EWU

BIOL& 100 Survey of Biology CWU

## Psychology Course Descriptions

### **PSYC& 100 : General Psychology**

A broad survey course designed to study human behavior with reference to biology, learning, motivation, emotion, perception, intelligence, human development, mental processes, personality, abnormal behavior, and research.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring, Summer

**PSYC& 200 : Lifespan Psychology**

This course examines the physical, intellectual, emotional, and social growth and development that occurs throughout the human life-span.

**Degree Code**

Social Science

**Credits** 5**Lecture Hours** 55**Prerequisites**

Completion of PSYC& 100

**Quarters Offered**

Fall, Winter, Summer

**PSYC 101 : Psychosocial Issues in Healthcare I**

This is the first in a series of five courses exploring concepts fundamental to psychosocial healthcare management. Examines some determinants of health and illness across the lifespan, including social, psychosocial, environmental, spiritual and cultural dimensions.

**Degree Code**

Social Science

**Credits** 1**Lecture Hours** 11**Prerequisites**

Admission into the Level IADN Nursing Program or instructor permission.

**Corequisites**

[NUR 110](#) or instructor permission.

**Quarters Offered**

Fall

**PSYC 102 : Psychosocial Issues in Healthcare II**

This is the second in a series of five courses exploring fundamental concepts of psychosocial healthcare management. Examines some determinants of health and illness across the lifespan, including social, psychosocial, environmental, spiritual and cultural dimensions.

**Degree Code**

Social Science

**Credits** 1**Lecture Hours** 11**Prerequisites**

[PSYC 101](#).

**Corequisites**

[NUR 120](#) or instructor permission.

**Quarters Offered**

Winter

**PSYC 103 : Psychosocial Issues in Healthcare III**

This is the third in a series of five courses exploring fundamental concepts of psychosocial healthcare management. Examines some determinants of health and illness across the lifespan, including social, psychosocial, environmental, spiritual and cultural dimensions.

**Degree Code**

Social Science

**Credits** 1**Lecture Hours** 11**Prerequisites**

[PSYC 102](#) or instructor permission.

**Corequisites**

[NUR 130](#) or instructor permission.

**Quarters Offered**

Spring

**PSYC 105 : Mental Health First Aid-Adult**

Mental Health First Aid is a course where students develop key skills to help someone who is developing a mental health problem or experiencing a mental health crisis. This course will provide knowledge of the most prevalent mental health problems people may encounter in our communities. Students will learn symptoms and criteria needed to recognize someone in mental health crisis. Students will also discuss the stigma associated with mental health in the United States and ways to promote positive mental health. This course will use the Mental Health First Aid internationally-focused and evidence-based curriculum to certify students as Mental Health First Aiders.

**Degree Code**

Social Science

**Credits** 1**Lecture Hours** 11**Quarters Offered**

Winter

**PSYC 201 : Psychosocial Issues in Healthcare IV**

This is the fourth in a series of five courses exploring fundamental concepts of psychosocial healthcare management. Examines some

determinants of health and illness across the lifespan, including social, psychosocial, environmental, spiritual and cultural dimensions.

**Degree Code**

Social Science

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[PSYC 103](#) or instructor permission.

**Corequisites**

[NUR 210](#) or instructor permission.

**Quarters Offered**

Fall

**PSYC 202 : Psychosocial Issues in Healthcare V**

This is the fifth in a five course series exploring fundamental concepts of psychosocial healthcare management. Examines some determinants of health and illness across the lifespan, including social, psychosocial, environmental, spiritual and cultural dimensions.

**Degree Code**

Social Science

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[PSYC 201](#) or instructor permission.

**Corequisites**

[NUR 230](#) or instructor permission.

**Quarters Offered**

Spring

**PSYC 225 : Psychology and the Legal System**

As the study of human behavior, psychology must also include the study of law, which is a primary instrument used by society to control human behavior. Psychology and law is a vibrant area of research interest within the discipline of psychology. This course is a survey of the major topics represented in the field of psychology and law. This course focuses on how psychological research (across sub-disciplines such as clinical, social, cognitive, and community psychology) can contribute to a better understanding of issues related to law or legal process, how the

legal system can be informed by the results of psychological research, and how psychological research can be more reactive to legal issues.

**Degree Code**

Social Science

**Credits** 5

**Lecture Hours** 55

**Prerequisite or Corequisite**

[PSYC& 100](#) or [CJ& 101](#)

## Religious Studies

**Dennis Knepp**

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**[religiousstudies@bigbend.edu](mailto:religiousstudies@bigbend.edu)**

Religious studies courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

A person majoring in religious studies might be preparing to be a member of the clergy, a church lay leader, or a teacher of religious studies. The purpose of religious studies is to seek to understand religion as an intellectual, historical, and cultural phenomenon. Big Bend's religious studies courses are designed to acquaint students with what members of various religions believe and why they believe what they do. Particular emphasis is placed on the basis for the major similarities and differences among religions and between denominations within religions.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate

institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Recommended Pre-Major Courses

REL 201 World Religions

REL 211 Religion in America

## Religious Studies Course Descriptions

### **REL 201 : World Religions**

A survey of the origin, development and present beliefs and practices of the worlds major religions: Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, Islam. Course meets BBCC diversity requirements.

#### **Degree Code**

Humanities Lecture, Diversity

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Fall, Spring, Summer

### **REL 211 : Religion in America**

A study of American religious groups, principally Christian denominations, including selected sects and cults. Various beliefs and practices will be examined in light of historical and social influences.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

## Science

## Science Course Descriptions

### **SCI 101 : Survey of Science**

An introduction to and survey of the natural sciences of astronomy, biology, chemistry, geology, and physics.

#### **Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

### **SCI 104 : Math for Science and Engineering**

Math concepts heavily used by science and engineering coursework are covered. Topics will include (but not limited to): unit conversions, scientific notation, right angle trigonometry, logarithms and exponents, applications of linear graphs, vectors, and significant figures. All topics will be covered with an emphasis on applications within the sciences.

#### **Degree Code**

Specified Elective

**Credits** 2

**Lecture Hours** 22

#### **Prerequisites**

[MATH 098](#)/[MAP 117](#) or a higher placement.

### **SCI 105 : Introduction to the History of Science**

This course is a survey course designed to give the student a basic understanding of the history of science from the Ancient Greeks to the present through the lens of the discoveries and scientific personalities that shaped its development.

Students will examine the connections between science and the humanities and come to appreciate that science is not done in a vacuum, but has consequences for wider society.

Through a series of written projects and examinations, the students will learn fundamental facts and theories of science as well as how to study and analyze them using the methodologies and techniques of both history and science. Course is cross-listed with [HIST 105](#) and students cannot earn credit for both

#### **Degree Code**

Natural Science

**Credits** 5

**Lecture Hours** 55

## Simulation Technician -currently not offered

## Simulation Technician -currently not offered Course Descriptions

### **SIM 110 : Introduction to SIM Programing**

This course covers basic concepts of simulation hardware and software in order to address the impact of hardware design on applications and systems software. Additionally, this course will strengthen an understanding of basic programming and maintenance for high and low fidelity manikins while concurrently developing team dynamics, problem solving, and critical thinking skills. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion. (Previous Title Fundamentals of SIM Programming) (Formerly: SIM 110 & 130)

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Quarters Offered**

Fall, Winter, Spring

### **SIM 120 : Medical Equipment Research**

This course will help students develop an understanding of human body systems in relation to equipment utilized in the healthcare profession in order to apply it to the medical simulation environment. Specifically, by researching common healthcare content areas such as general head-to-toe assessment equipment, IV therapy and medication administration equipment, and emergency resuscitation equipment, students will be able to exhibit critical thinking and problem solving skills to locate, analyze and apply medical equipment

information. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion.

**Credits** 2

**Lecture Hours** 22

### **SIM 130 : Fundamentals of Simulation Theory**

Medical simulation is a complex integration of technology that requires the use of online support materials. It is the Simulation Technicians role to organize and present this support material. This course is designed to train students how to develop and implement instructional support materials for high and low fidelity simulations. A strong focus will be placed on accessibility, instructional strategies, and assessment. Students will also focus on simulation theory and history. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion.(Previous Title Introduction to Medical Simulation) (Formerly SIM 130 & 230)

**Credits** 4

**Lecture Hours** 44

**Quarters Offered**

Fall, Winter, Spring

### **SIM 140 : Basic Simulation Diagnostics**

This course addresses the functionality of simulation equipment while focusing on equipment management and error prevention. Course topics include resource management, utility testing, and targeted assessment strategies. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion. (Formerly-Basic Simulation Maintenance)

**Credits** 3

**Lecture Hours** 33

**Quarters Offered**

Fall, Winter, Spring

### **SIM 161 : SIM Pharmacology Lab**

This course is designed to build on the content learned in Pharmacology Essentials. It provides students with an opportunity to apply pharmacology principles to simulated manikins in order to record the effects of medication



administration to simulated patients with varying disease conditions. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion.

**Credits** 1

**Lab Hours** 22

**Prerequisites**

MAP117/[MATH 094](#) or a higher placement.

**Corequisites**

[HED 160](#).

### **SIM 211 : Advanced Life Support & Pediatric Scenarios**

This course focuses on designing and running simulation case-based scenarios for emergencies involving infants, children & adults. Students will direct the management of simulation case-based scenarios in relation to cardiopulmonary arrest and other emergencies as related to ACES & PALS training scenarios for nursing instruction, hospital and medical providers, and emergency response teams. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion. (Formerly SIM 211 and 221)

**Credits** 8

**Lecture Hours** 44

**Lab Hours** 88

**Prerequisites**

[SIM 110](#), [SIM 120](#), [SIM 130](#), and [SIM 140](#).

**Quarters Offered**

Fall, Spring

### **SIM 221 : Pediatric Scenarios**

This course focuses on designing and running simulation case-based scenarios for emergencies involving infants and children. Students will be required to develop and implement PALS scenarios that can be used for emergency response, emergency medicine, intensive care, and critical response healthcare teams. Additional emphasis will be given to debriefing strategies and techniques. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion

**Credits** 5

**Lecture Hours** 33

**Lab Hours** 44

**Prerequisites**

[SIM 161](#) or Instructor permission.

**Corequisites**

SIM 211: Advanced Life Support & Pediatric Scenarios

### **SIM 222 : Clinical Focused Simulation**

This course will focus on the practical application of skills taught in previous simulation courses as applied to the Allied Healthcare setting. Comprehension, application, and leadership are all key skills that are required for students to begin to demonstrate as they engage in the process of running their own simulations for Allied Health end users.

**Credits** 5

**Lecture Hours** 11

**Lab Hours** 88

**Prerequisites**

[SIM 161](#) and [SIM 211](#) or Instructor permission

### **SIM 230 : Learning Management Systems**

Medical simulation is a complex integration of technology that requires the use of online support materials. It is the Simulation Technicians role to organize and present this support material electronically with the use of a Learning Management System. This course is designed to train students how to develop and implement instructional support materials for high and low fidelity simulations by using Learning Management Systems. A strong focus will be placed on accessibility, instructional strategies, and assessment.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[SIM 221](#) or Instructor permission

### **SIM 232 : SIM by Design**

By using principles of instructional design and high fidelity simulation standards, students will develop, pilot, revise, and implement new simulation scenarios. These scenarios will be employed in the students' practicum site and be evaluated using a 360 degree feedback process.

**Credits** 3

**Lecture Hours** 33



**Prerequisites**

[SIM 221](#) and [SIM 222](#) or Instructor permission.

**Corequisites**

[SIM 295](#)

**SIM 235 : Principles of Debriefing**

Briefing and debriefing practices are key to effective healthcare simulation practice. This course will prepare participants to apply essential principles of briefing and debriefing in the simulation environment. Students enrolled in this course should have experience working with medical simulation and access to medical simulation equipment. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion.

**Credits** 4

**Lecture Hours** 44

**Quarters Offered**

Summer

**SIM 245 : Basic Simulation Operations**

By engaging in hands-on training, students will learn to prepare, rehearse, and implement simulated training scenarios. This course also addresses preventative maintenance and basic maintenance for high fidelity and low fidelity patient simulators and task trainers. Student must pass this course with a minimum 2.0 grade in order to be applied to degree completion.

**Credits** 2

**Lab Hours** 44

**Corequisites**

[SIM 110](#) and [SIM 140](#).

**Quarters Offered**

Fall, Winter, Spring

**SIM 295 : Practicum in Community Simulation**

In this capstone course, students work on simulation projects in a healthcare setting, under the direct supervision of a healthcare professional, to practice the application of learned medical simulation theory and lab skills.

**Credits** 1

**Clinical Hours** 33

**Prerequisites**

[SIM 221](#) and [SIM 222](#) or Instructor permission.

**Corequisites**

[SIM 297](#) and [SIM 232](#) or Instructor permission.

**Quarters Offered**

Fall, Winter, Sp Su

**SIM 297 : SIM Seminar**

This class enhances students' abilities and work-based learning at the practicum site. Students will review important topics by applying the concepts acquired in the clinical and community areas. Students will share information, procedures and experiences in different medical settings with other students.

**Credits** 1

**Lecture Hours** 11

**Prerequisites**

[SIM 221](#) and [SIM 222](#) or Instructor permission..

**Corequisites**

[SIM 232](#) and [SIM 295](#)

## Social Work

### Social Work Course Descriptions

**SOCW 110 : Introduction to Social Work**

This course is a general introduction to the history of social work, the issues social workers encounter, the systems in which social workers work, the theories and practices social workers utilize, as well as the services they provide across the varying field of practice.

**Credits** 5

**Lecture Hours** 55

## Sociology

**David Holliway**

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Sociology and social welfare courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Social Sciences Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Sociology is the scientific study of human groups and their social systems. Sociology includes the study of the North American system of marriage and family and the major social problems facing our society and the world. Sociology is a valuable major not only for students planning careers in social research, criminal justice, demography, social work, and education, but also for those pursuing a course of study in public administration, law, market research, gerontology, and drug and alcohol rehabilitation programs. Although a two-year degree in this field can aid employment in the human service field, students should be prepared to go for their bachelor's degree in sociology or social work at a four-year institution.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Recommended Pre-Major Courses

SOC& 101 Intro to Sociology

SOC& 201 Social Problems

## Social Welfare

Social welfare is a course of study about our society's response to human need. This program is designed to enhance student awareness and understanding of the fields of social welfare and social work and their response to this human need. Social welfare is a valuable major for those seeking careers in such fields as services to families, health care, mental health, corrections, gerontology, law, drug and alcohol rehabilitation, vocational rehabilitation, the clergy, and industry. Although a two-year degree with emphasis in this area may aid employment in the social welfare system, students should be prepared to continue their education through a bachelor's degree in social work at a four-year institution.

Since programs differ at each college, students should consult program outlines published by the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

## Recommended Pre-Major Courses

SOCW 110 Intro to Social Work

## Sociology Course Descriptions

### **SOC& 101 : Intro to Sociology**

Sociology is the scientific study of human groups and their social systems. Sociologists study how groups are organized and structured, their character and interaction, how groups change, and their impact on individuals. The course focuses on applying the "sociological imagination" which in turn helps students understand and appreciate different societies and cultures both contemporary and historical. (Formerly: SOC 110).

**Degree Code**

Social Science, Diversity

**Credits** 5**Lecture Hours** 55**Prerequisites**

There are no prerequisites. Strongly recommended completion of [MATH 094/MAP 117](#) or a higher placement and completion of [ENGL 098](#) or a higher placement.

**Quarters Offered**

Fall, Winter, Spring, Summer

**SOC& 201 : Social Problems**

A sociological analysis of the major social problems facing both the United States and the world today. Among the topics analyzed are: Family and disorganization, social deviance, poverty, crime, over population, and environmental degradation. (Formerly: SOC 270).

**Degree Code**

Social Science

**Credits** 5**Lecture Hours** 55**Prerequisites**

There are no prerequisites. Strongly recommended completion of [MATH 094/MAP 117](#) or a higher placement and completion of [ENGL 098](#) or a higher placement.

**Quarters Offered**

Fall, Spring

**SOC 204 : Gender and Power**

This course is an introduction to the discipline of Women's Studies, surveying numerous academic areas and exploring concepts basic to the field. Students will critically examine the social understandings of gender, and the powerful role it plays in American culture. Areas of consideration will include the role of gender in education, labor, economics, and privacy issues.

**Degree Code**

Social Science, Diversity

**Credits** 5**Lecture Hours** 55**Prerequisites**

ENGL& 101 completion recommended

**SOC 220 : Marriage and the Family**

A comprehensive examination of the institution of marriage and family life, including past, current, and future trends. The course will help students understand different marriage and family patterns and will develop skills for meaningful, long-term, intimate relationships, and is structured to promote the critical thinking and problem-solving skills of students by using the sociological perspective. Topics include the social construction of the family, race/ethnicity, social class, gender, sexual orientation, and social change. (Formerly: SOC 270).

**Degree Code**

Diversity, Social Science

**Credits** 5**Lecture Hours** 55**Prerequisites**

Strongly recommend placement into ENGL 099 or higher and completion of [MATH 094/MAP 117](#) or placement into MATH 0 98/[MAP 119](#) or higher

**SOC 320 : Organizational Behavior**

Exploring current theory and research of organizational behavior, this course covers managing relationships within an organization. Students will study the concepts of corporate culture, organizational structure, environmental influences, decision making, group behavior, and organizational politics.

**Credits** 5**Lecture Hours** 55**Lab Hours** 0**Prerequisites**

Bachelor of Applied Science - Applied Management program admission.

## Uncrewed Aircraft Systems

*(formerly Unmanned Aerial Systems (UAS) Technology)*

[uas@bigbend.edu](mailto:uas@bigbend.edu)

Certifications in uncrewed aircraft systems (UAS) planning and operations support a broad range of local industry, as well as potential for entrepreneurship. This program provides students with the knowledge and skills to be professional remote pilots and small Uncrewed Aircraft Systems (sUAS) technicians.

Uncrewed Systems academic offerings are designed to meet the needs of local, regional and nationally growing industries. At BBCC, UAS is also offered in the Agriculture program

## Uncrewed Aircraft Systems (UAS) Professional Remote Pilot Certificate of Accomplishment

### Degree Type

Certificate

Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
UAS 112	Uncrewed Aircraft Systems (UAS) Ground School I	5
UAS 208	Uncrewed Aircraft Systems (UAS) Mission Planning	6
UAS 107	Commercial UAS Remote Pilot (Part 107)	2
UAS 142	Uncrewed Aircraft Systems (UAS) Flight Lab	6
<b>Total Credits</b>		<b>19</b>

## Uncrewed Aircraft Systems (UAS) Remote Sensing Analyst Certificate of Accomplishment

### Degree Type

Certificate

Certificate Learning Outcomes:

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

### Required Courses

Course Code	Title	Credits
UAS 112	Uncrewed Aircraft Systems (UAS) Ground School I	5
GIS 110	Geographic Information Systems (GIS) I	4
GIS 210	Geographic Information Systems (GIS) II	5
UAS 107	Commercial UAS Remote Pilot (Part 107)	2
<b>Total Credits</b>		<b>16</b>

## Uncrewed Aircraft Systems Course Descriptions

### UAS 107 : Commercial UAS Remote Pilot (Part 107)

Students will receive an in-depth introduction to FAA Part 107 rules and regulations, associated theory, procedures, requirements and operating concepts, as well as actual hands-on flight training in the BBCC enclosed UAS Flight Lab, with an emphasis on safety of flight. This course provides students with the knowledge base required to effectively prepare for FAA Part 107 Commercial Uncrewed Aircraft System (UAS) Remote Pilot certification. Note: The Part 107 UAS Remote Pilot testing fee is not included in the tuition for this course. (Formerly: UMS 107)

**Credits** 2

**Lecture Hours** 16

**Lab Hours** 11

**Quarters Offered**

Fall, Spring

### **UAS 112 : Uncrewed Aircraft Systems (UAS) Ground School I**

This uncrewed aircraft system (UAS) ground school course addresses UAS performance, principles of flight/aerodynamics, power plants and systems, the National Airspace System, navigation, weather, rules and regulations, incident reporting procedures, communications procedures, advisory circulars, operating limitations, aeronautical decision making and judgment, documentation/logbook requirements, runaway UAS/ emergency flight procedures, and preflight planning/flight approval processes.(Formerly UMS 112)

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

#### **Prerequisites**

Completion of [MAP 117](#)/ [MATH 094](#) or higher placement or instructor permission.

#### **Quarters Offered**

Fall

### **UAS 142 : Uncrewed Aircraft Systems (UAS) Flight Lab**

This course provides students with extensive hands-on flight experience of both rotary wing and fixed wing UAS. Focus in on safety of flight, preflight/post-flight inspection, pilot-in-command (PIC) and observer communications requirements, flight control techniques, precision flight maneuvers, runaway/ emergency flight procedures, and execution of flight profiles for successful sensor/data collection. (Formerly UMS 142)

**Credits** 6

**Lecture Hours** 11

**Lab Hours** 110

#### **Prerequisites**

Any UAS Course or Instructor Permission.

#### **Quarters Offered**

Spring

### **UAS 208 : Uncrewed Aircraft Systems (UAS) Mission Planning**

Using mission planning software, students will plan a variety of UAS missions in support of simulated operations. This will include (but not

limited to) operations in support of agriculture, real estate marketing, search and rescue (SAR), law enforcement, construction, avalanche control, natural disaster response, power line and transportation infrastructure inspection, including both night flight and beyond line of sight (BLOS) operations. (Formerly UMS 208)

**Credits** 6

**Lecture Hours** 44

**Lab Hours** 44

#### **Quarters Offered**

Winter

### **UMS 101 : Introduction to Unmanned Systems (UMS)**

This course will introduce students to the world of unmanned systems, including air, ground, maritime, and space-based platforms.

Unmanned systems interoperability, propulsion, communications, sensors, and autonomous systems will be addressed, along with various types of unmanned system simulator operations

**Credits** 5

**Lecture Hours** 44

**Lab Hours** 22

### **UMS 210 : Unmanned Aerial Systems (UAS) Laws & Policies**

This course addresses local, state and federal unmanned aerial system (UAS) laws, regulations, policy statements, orders and guidance, as well as civil rights, liberties, ethics, and aircraft/ pilot certification.

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Winter

### **UMS 220 : Beyond Line of Sight (BLOS) Operations**

This course addresses the challenges of command and control, communications, autopilot, navigation, and aviation safety in successfully performing beyond line of sight (BLOS) unmanned aerial systems (UAS) operations.

**Credits** 3

**Lecture Hours** 33

#### **Prerequisites**

Completion of [UMS 101](#) or instructor permission.

### **UMS 295 : Independent Project**

UMS 295 is an independent study course for students to research, design and complete an unmanned systems related project. Projects must be approved and supervised by a faculty member.

**Credits** 2-5

**Lecture Hours** 6

**Lab Hours** 33-99

### **Prerequisites**

Instructor Permission.

## Welding

**Shawn McDaniel**

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**welding@bigbend.edu**

The Welding Technology program is designed for persons to acquire the technical knowledge and skills required to obtain a career in welding, fabrication, and related occupations.

Graduates may qualify for positions in industries such as machinery fabrication, structural fabrication, pipe fabrication, plant maintenance, and trade occupations which require welding skills. Students who complete the first year of the program will gain sufficient training to obtain entry-level employment. The second year of the program will focus on advanced skills in welding applications in specialty areas.

Persons who complete the two-year program of study may earn the Associate in Applied Science degree in Welding Technology with an emphasis in structural welding, industrial production welding, or pipe welding. The one-year welding certificate of achievement is available for students who do not wish to complete a two-year degree. Local employers indicate that there are jobs available for students who complete either the certificate or the AAS degree.

Interested students must work out their individual programs with a department advisor. This program has been designed to allow students to enroll at the beginning of each quarter. Students entering the program will progress sequentially through the lab classes; lecture classes are offered during scheduled quarters only.

## Welding Program Electives

Students must meet with their faculty advisor before enrolling in Work-Based Learning

WLD 190 Skills Improvement\*

WLD 290 Skills Improvement\*

WLD 295 Work-Based Learning

WLD 297 Work-Based Learning Seminar

\* Skill level improvement classes are not required but may be needed to achieve desired skill levels. See the program advisor.

## Welding Technology AAS

### **Degree Type**

Associate in Applied Science

Program Learning Outcomes:

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context
- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills
- PO4 Students demonstrate safe shop practice by safely using tools and equipment
- PO5 Students demonstrate competent cutting procedures and welds to appropriate welding codes.

- PO6 Students diagnose and cure common welding defects

The following schedule of courses is the recommended program for completing this degree. See a program advisor for substitute courses.

## First Year

### Fall Quarter

Course Code	Title	Credits
MAP 117	Applied Math for Workforce Programs I	1-5
WLD 110	Welding Theory I	5
WLD 111	Welding Process I	3-6
WLD 112	Thermal Cutting and Welding	3
WLD 151	Technical Drawings Interpretation	3

### Winter Quarter

Course Code	Title	Credits
	ENGL 109 or ENGL& 101	3
WLD 120	Welding Theory II	5
WLD 121	Welding Process II	3-6
WLD 122	Gas Metal Arc Welding I	3
WLD 152	Welding Layout I	3

### Spring Quarter

Course Code	Title	Credits
	PSYC& 100 or SOC& 101	5
WLD 130	Welding Theory III	5
WLD 131	Welding Process III	3-6
WLD 132	Gas Tungsten Arc Welding I (T.I.G.)	3
WLD 153	Welding Layout II	3

## Second Year

### Fall Quarter

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
WLD 205	Weld Testing Methods	4
WLD 212	Gas Metal Arc Welding II	3
	WLD 241 or 261 or 281	6

### Winter Quarter

Course Code	Title	Credits
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
WLD 206	Welding Codes and Standards	4
WLD 242	Structural Welding I	3
	WLD 243 or 262 and 263 or 282 and 283	6

### Spring Quarter

Course Code	Title	Credits
WLD 207	Welding Metallurgy	4
WLD 244	Submerged Arc Welding	3
	WLD 245 or 264 and 265 or 284 and 285	6
<b>Total Credits</b>		<b>106</b>

## Welding Technology Certificate of Accomplishment

### Degree Type

Certificate

The Certificate of Accomplishment is designed to provide recognition of completion of certain approved courses or modules of courses offered through a particular technical program. This certification is designed for the occasional and or part-time student who does not plan to complete an AAS degree or a Certificate of Achievement.

Program Learning Outcomes

- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

## Required Courses

Course Code	Title	Credits
WLD 110	Welding Theory I	5
WLD 111	Welding Process I	3-6
WLD 112	Thermal Cutting and Welding	3
WLD 120	Welding Theory II	5
WLD 121	Welding Process II	3-6
WLD 122	Gas Metal Arc Welding I	3
WLD 132	Gas Tungsten Arc Welding I (T.I.G.)	3
WLD 151	Technical Drawings Interpretation	3
WLD 152	Welding Layout I	3
<b>Total Credits</b>		<b>37</b>

## Welding Technology Certificate of Achievement

### Degree Type

Certificate

The Certificate of Achievement is designed to provide recognition for the student who does not plan to complete an Associate in Applied Science degree program. This certificate includes general education requirements and a minimum of 45 credits in the program.

### Program Learning Outcomes

- IO1 Communication  
Students will be able to communicate clearly and effectively within a workplace context

- IO2 Quantitative Reasoning  
Students will be able to reason mathematically using methods appropriate to the profession
- IO3 Human Relations/Workplace Skills  
Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills
- PO4 Students demonstrate safe shop practice by safely using tools and equipment
- PO5 Students demonstrate competent cutting procedures and welds to appropriate welding codes.

Interested students must work with the program advisor to determine appropriate program courses and schedules with the program advisor.

## Required Courses

Course Code	Title	Credits
	CMST& 220 or CMST& 210	5
	ENGL 109 or ENGL& 101	3
FAD 150	Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2
	MAP 101 or 117	5
	PSYC& 100 or SOC& 101	5
WLD 110	Welding Theory I	5
WLD 111	Welding Process I	3-6
WLD 112	Thermal Cutting and Welding	3
WLD 120	Welding Theory II	5
WLD 121	Welding Process II	3-6
WLD 122	Gas Metal Arc Welding I	3
WLD 132	Gas Tungsten Arc Welding I (T.I.G.)	3
WLD 151	Technical Drawings Interpretation	3
WLD 152	Welding Layout I	3
<b>Total Credits</b>		<b>55</b>



# Welding Course Descriptions

## **WLD 101 : Oxy-Acetylene Welding for Auto Mechanics**

Fundamentals of oxy-acetylene welding and cutting. Lessons include carbon-steel welding and brazing, aluminum and cast-iron welding and cast-iron welding and oxy-acetylene, plasma arc cutting. Practical knowledge of safety in the use and handling of equipment and compressed gases will be stressed throughout the quarter.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

### **Prerequisites**

Enrollment in automotive technology program.

### **Quarters Offered**

Winter

## **WLD 102 : ARC/GMAW Welding for Automotive Technicians**

This course covers the fundamentals of the GMAW process for welding carbon steel, stainless steel and aluminum. Using these materials, the student will learn to run stringer beads, butt, lap and 'T' joints, in all positions with various modes of metal deposition and using different gasses.

**Credits** 2

**Lecture Hours** 11

**Lab Hours** 22

### **Prerequisites**

Enrollment in automotive technology program.

### **Quarters Offered**

Winter

## **WLD 110 : Welding Theory I**

General introduction to industrial welding and cutting. Safety rules of oxy-fuel, electric and other welding processes, principles, and electrodes.

**Credits** 5

**Lecture Hours** 55

### **Quarters Offered**

Fall

## **WLD 111 : Welding Process I**

An introduction to the Shielded Metal Arc Welding process. Students will perform beads, fillets and Plate tests in all position with E6010 and E7018 Electrodes. Students must complete all 6 credits of WLD 111 prior to enrolling in WLD 121.

**Credits** 3-6

**Lab Hours** 66-132

### **Quarters Offered**

Fall, Winter, Spring, Summer

## **WLD 112 : Thermal Cutting and Welding**

Various techniques of steel cutting with oxy-fuel, air carbon arc, plasma arc processes and oxy-acetylene welding and brazing with various metals.

**Credits** 3

**Lab Hours** 66

### **Quarters Offered**

Fall, Winter, Spring, Summer

## **WLD 120 : Welding Theory II**

Fundamentals of G.M.A.W. and F.C.A.W. processes with their related equipment. Basics of electrical theory and welding machines. Shielding gasses, filler materials, and general welding procedures including carbon steel, stainless steel, and aluminum.

**Credits** 5

**Lecture Hours** 55

### **Prerequisites**

[WLD 110](#) or instructors permission

## **WLD 121 : Welding Process II**

An introduction to welding open root joints. Students use E6010 to complete open root corner joints out of position and open root plate tests out of position. Students must complete all 6 credits of WLD 121 prior to enrolling in WLD 131.

**Credits** 3-6

**Lab Hours** 66-132

### **Prerequisites**

6 credits of [WLD 111](#).

### **Quarters Offered**

Fall, Winter, Spring, Summer

## **WLD 122 : Gas Metal Arc Welding I**

Students will learn to apply the Gas Metal Arc Welding (MIG) process on steel in all positions

using the short circuit transfer mode and the spray transfer mode in the flat and horizontal positions.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 112](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 130 : Welding Theory III**

Basic welding blueprint reading and interpretations of conventional drafting, symbology, and specialized welding symbols: basic lines and views, dimensions, welding symbols, abbreviations, pipe welding symbols, NDT symbols and ISO welding symbols.

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[WLD 120](#) or Instructors permission

**WLD 131 : Welding Process III**

Using E-7018 electrodes, students weld corner joints, groove plates in all positions and ASME and WABO performance certification tests. Students must complete all 6 credits of WLD 131 prior to enrolling in more advanced welding classes.

**Credits** 3-6

**Lab Hours** 66-132

**Prerequisites**

6 credits of [WLD 121](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 132 : Gas Tungsten Arc Welding I (T.I.G.)**

Students will learn to apply the Gas Tungsten Arc Welding (TIG) process on steel and aluminum, short circuit transfer mode.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 122](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 145 : Agricultural Welding**

This course will cover cutting, repairing and welding metals using a variety of tools and techniques. Students will learn to choose the appropriate metal for various repair situations and techniques to accurately assess the amount of material needed. By course completion, students will be able to MIG and Arc weld proficiently and will be comfortable fabricating and building basic parts and tools. Additionally, this course will introduce students to oxy acetylene welding and brazing.

**Credits** 4

**Lab Hours** 88

**Prerequisites**

[AGM 102](#) Agricultural Equipment and Workplace Safety (required) [AGM 109](#) Shop Skills I (recommended).

**WLD 151 : Technical Drawings Interpretation**

Basic technical drawings interpretation skills for welding engineering to develop abilities in reading and understanding technical drawings; emphasis on visualization and sketching of multi-view, isometric, schematic, and pictorial drawings.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

None

**Quarters Offered**

Fall

**WLD 152 : Welding Layout I**

Specialized weldment drafting techniques; intersections and developments, patterns for geometric shapes used in cardboard, sheet metal and structural shapes: fabrication and model construction.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

[WLD 151](#) or instructors permission.

**Quarters Offered**

Winter

**WLD 153 : Welding Layout II**

Basic technical pipe drawing interpretations and developments. Patterns for geometric shape used in pipe component fabrication and model construction.

**Credits** 3

**Lecture Hours** 22

**Lab Hours** 22

**Prerequisites**

[WLD 152](#) or instructors permission.

**Quarters Offered**

Spring

**WLD 190 : Skill Improvement**

Extra welding time and instruction to enhance students welding skills and/or update their qualifications for testing. This is an open enrollment course offered throughout each quarter. (May be repeated for credit; graded on pass-fail basis.)

**Credits** 2-6

**Lab Hours** 44-132

**Prerequisites**

Instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 205 : Weld Testing Methods**

Upon successful completion of the course the student will understand the various methods used to test welds. Students will be capable of applying a variety of destructive tests to assess the soundness, ductility, and strength of various weldments. Students will also have a working knowledge of the common methods used in industry to non-destructively examine weldments for acceptability.

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Prerequisites**

[WLD 130](#) or instructors permission.

**WLD 206 : Welding Codes and Standards**

Upon successful completion of the course the student will be able to follow codes to interpret their workmanship. Use procedure qualifications

and performance qualifications. Use DT and NDT methods to inspect the students own weldments. Use visual inspection of welded structures.

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Prerequisites**

[WLD 205](#) or instructors permission.

**WLD 207 : Welding Metallurgy**

An introduction to metallurgy. Ferrous and nonferrous metals, alloys and their groupings will be covered.

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Prerequisites**

[WLD 206](#) or instructors permission

**WLD 212 : Gas Metal Arc Welding II**

Students will learn to apply both types of Flux core arc welding process on steel and perform Gas Metal Arc Welding on aluminum and stainless steel.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 132](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 241 : Structural Weld Process I**

This course focuses on student learning of structural connection mockups applying the Shielded Metal Arc and Flux Cored Arc Welding processes.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 131](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 242 : Structural Welding I**

An introductory course focusing on fabrication of structural weldments utilizing shielded metal arc welding and flux cored arc welding on structural connections.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 212](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 243 : Structural Weld Process II**

A structural welding course focusing on student application of Shielded Metal and Flux Cored Arc Welding processes on large outdoor structural weldments in accordance with drawings.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 241](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 244 : Submerged Arc Welding**

This course focuses on student learning of submerged arc welding process which entails an arc that takes place beneath a bed of granular flux. This is a high deposition industrial orientated welding process that is used to manufacture light to heavy weldments.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 242](#) or instructor permission

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 245 : Structural Weld Process III**

A structural welding course focusing on student application of Shielded Metal and Flux Cored Arc Welding processes on tubular structural weldments in accordance with drawings.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 243](#) and [WLD 152](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 261 : Production Weld Process I**

An introductory course focusing on student learning of production welding techniques by applying the Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 131](#) or instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 262 : Production Welding I**

This course focuses on student learning of production welding within a shop setting.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 212](#) or instructors permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 263 : Production Weld II**

An intermediate course that focuses on student learning of production welding techniques by applying the Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes on large parts in accordance with drawings.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 261](#) or instructor permission

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 264 : Advanced Weld Process**

An advanced course focusing on student learning of welding processes such as pulsed gas metal arc, pulsed gas tungsten arc, and welding on advanced materials i.e., titanium and inconel.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 262](#) or instructors permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 265 : Production Welding Process III**

An advanced production welding course focusing on application of Gas Metal Arc, Flux Cored Arc, and Gas Tungsten Arc Welding processes on small parts in accordance with drawings. Parts will be welded in student manufactured fixtures.

**Credits** 6

**Lab Hours** 132

**Prerequisites**

[WLD 263](#) or instructor permission

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 281 : Pipe Welding I**

Students will be introduced to pipe welding in the 1G, 2G, 5G, and 6G positions using E-6010 electrodes with schedule 60, 80, 100,120 and various size pipes. May be repeated for credit up to six credits.

**Credits** 3-6

**Lab Hours** 66-132

**Prerequisites**

[WLD 131](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 282 : Gas Tungsten Arc Welding II (TIG)**

This course introduces students to carbon steel pipe welding in the 1G, 2G, 5G, and 6G positions using cup walk methods with 1/8" electrodes on various sizes of pipes.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 212](#) or instructors permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 283 : Pipe Welding II**

Students will enhance carbon steel pipe welding in 1G, 2G, 5G, and 6G positions using E-6010 and E-7018 electrodes with schedule 60,80,100 and 120 pipes and various other sizes of pipes. May be repeated for credit up to six credits.

**Credits** 3-6

**Lab Hours** 33-132

**Prerequisites**

[WLD 281](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 284 : Gas Tungsten Arc Welding III (TIG.)**

Students will gain advanced skills on carbon steel pipe in the 2G, 5G, 6G positions, carbon steel pipe with stainless steel rods, and stainless steel pipe in the 2G, 5G, and 6G positions.

**Credits** 3

**Lab Hours** 66

**Prerequisites**

[WLD 282](#) or instructors permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 285 : Pipe Welding III**

This course focuses on pipe welding 1G, 2G, 5G, and 6G positions using E-6010 and E-7018 rods and a combination of G.T.A.W. and S.M.A.W. process with schedule 40,60,80,100, 120, and various other sizes of pipes.

**Credits** 3-6

**Lab Hours** 33-132

**Prerequisites**

[WLD 283](#).

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 290 : Skill Improvement**

Extra welding time and instruction to enhance students welding skills and/or update their qualifications for testing. This is an open enrollment course offered throughout each quarter. (May be repeated for credit; graded on pass-fail basis.)

**Credits** 2-6

**Lab Hours** 44-132

**Prerequisites**

Instructor permission.

**Quarters Offered**

Fall, Winter, Spring, Summer

**WLD 295 : Work Based Learning**

A supervised work experience in the welding technology field to enhance the application of classroom instruction and skills and/or area of specialization approved by the program

instructor. May be repeated up to twelve (12) credits. WLD Instructor permission and concurrent enrollment in WLD 297.

**Credits** 1-6

**Clinical Hours** 33-198

**Quarters Offered**

Fall, Winter, Spring

**WLD 297 : Work Based Learning Seminar**

Feedback and discussion to integrate and relate Work Based Learning and classroom based instruction. Work ethic, leadership, safety and occupational health, environmental issues, and other student generated topics are examined. May be repeated up to six (6) credits.

**Credits** 1

**Lecture Hours** 11

**Corequisites**

[WLD 295](#).

**Quarters Offered**

Fall, Winter, Spring

## Workforce Education

### Workforce Education Course Descriptions

**WKED 101 : Professional Preparation - Occupation Specific I**

An introduction to work related and job search components specific to each occupation (or similar) including direct contact with peers, advisors, mentors, employers, and others directly related to the industry.

**Credits** 1

**Lecture Hours** 7

**Lab Hours** 11

**WKED 102 : Professional Preparation - Occupation Specific II**

A continued exploration of work-related components specific to each occupation/ industry (or similar) including direct contact with peers, advisors, mentors, employers, and others

directly related to the industry. Creation of a job search portfolio. The job shadow is a required element for this course

**Credits** 1

**Lecture Hours** 7

**Lab Hours** 11

**Prerequisites**

[WKED 101](#) or instructor permission

**WKED 103 : Professional Preparation - Occupation Specific III**

Continued contact with peers, advisors, mentors, employers, and others directly related to the industry. This course covers job preparation components in which emphasis is given to job search and interviewing techniques. The mock interview is a required element of this course.

**Credits** 1

**Lecture Hours** 7

**Lab Hours** 11

**Prerequisites**

[WKED 102](#) or instructor permission

**WKED 110 : Mission Critical Operations Management I**

Introduction to the technical operations management of systems, facilities, equipment, and processes critical to the production of goods and services. Students may explore this topic within a related industry of their choice.

**Credits** 3

**Lecture Hours** 33

**WKED 111 : Mission Critical Operations Management II**

Exploration and practical application of technical systems management and the related data required to maintain operationally sound facilities, equipment, and processes critical to the production of goods and services. Students may explore this topic within a related industry of their choice.

**Credits** 4

**Lecture Hours** 33

**Lab Hours** 22

**Prerequisites**

Computer Science students are strongly encouraged to take [WKED 110](#) prior to taking this course.

### **WKED 152 : Industrial Forklift Training**

In this course, students will learn the safety and operation regulations needed to meet forklift operator competencies. Students will engage in interactive competency-based online activities, including the use of a virtual reality (VR) forklift simulator prior to taking their final practical exam on a sit-down forklift. Students that successfully complete the course will be issued an industry recognized (Overton) Operators License.

**Credits** 2

**Lecture Hours** 17

**Lab Hours** 11

## World Languages

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World language courses may be taken as part of the Associate in Arts and Science DTA degree. These courses may be used toward the Humanities Breadth requirement or for Specified or General Elective credit. Students seeking Associate in Arts and Science DTA degree should refer to the catalog section "Degrees & Certificates" for a detailed description of the degree, its program outcomes, and courses that will satisfy degree requirements.

Understanding other languages and cultures is vital in communicating with the increasingly global environment. Language and cultural skills open doors for careers in a wide variety of fields, particularly education, social services, translating and interpreting, international business and travel.

The world language curriculum is designed to prepare the student to transfer to a baccalaureate institution offering more advanced language study.

Since programs differ at each college, students should consult program outlines published by

the college or university to which they intend to transfer. The following recommended courses prepare students for most baccalaureate institutions. Students should prepare their quarterly schedules with the assistance of an advisor knowledgeable in this transfer area.

### **Recommended Pre-Major Courses Credits**

World language sequence, two years of a language sequence

## Prior Learning Credit Policy

The World Language Department will award Prior Learning Credit to students who meet the following academic or prior learning criteria:

1. Students who have taken a year of high school level world language may be placed into the 122 level of the language offered at Big Bend Community College. If the student completes the 122 level of the language at the college and earns a 3.0 grade point or higher, the student will be awarded the same grade point for the 121 level of that world language. Students must have instructor approval to register.
2. Students who have taken two years of high school level world language may be placed into the 123 level of the language offered at Big Bend Community College. If the student completes the 123 level of the language at the college and earns a 3.0 grade point or higher, the student will be awarded the same grade point for the 121 level and the 122 level of that world language. Students must have instructor approval to register.

Prior learning credit is awarded based on a student's performance, a grade point of 3.0 or higher, in the first language class that the student attempts at Big Bend Community College. A student that takes 122 and then 123 will be awarded prior learning credit for 121 if they satisfy the student performance requirement in 122. A student that takes 122 twice and receives a



3.0 grade in their second attempt but not their first attempt will not receive prior learning credit for 121.

## World Languages Course Descriptions

### **ASL& 121 : Am Sign Language I**

Basic manual communication skills, including the American manual alphabet—approximately 550 basic signs developing minimum vocabulary and skills for communicating with severely hearing impaired individuals who are dependent of this form of communication; incorporation of body language and facial expression into the use of the sign language; and development of an understanding of the conceptual aspects of the language. This course is not meant to prepare students as interpreters for the deaf.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

### **ASL& 122 : Am Sign Language II**

Conversational manual communication and implementation of basic vocabulary, introduction of broader vocabulary and development of conversational skills; vocabulary is presented and practice given. This course is not meant to prepare students as interpreters for the deaf.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

ASL& 121 or demonstrated competency

### **ASL& 123 : Am Sign Language III**

Introduction to meta- and para-language areas of manual communication to more esoteric ideographic signs reflecting usage among different regional dialects. Difficulties of communication with more severely language-deprived individuals are discussed.

Understanding of deaf culture explored and developed. This course is not meant to prepare students as interpreters for the deaf.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

ASL& 122 or demonstrated competency

### **FRCH& 121 : French I**

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Quarters Offered**

Fall, Winter, Spring

### **FRCH& 122 : French II**

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

#### **Prerequisites**

FRCH& 121: French I

#### **Quarters Offered**

Fall, Winter, Spring

### **FRCH& 123 : French III**

Beginning French language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the French-speaking world.

#### **Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55



**Prerequisites**

FRCH& 122: French II

**Quarters Offered**

Fall, Winter, Spring

**GERM& 121 : German I**

Beginning German language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the German-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**GERM& 122 : German II**

Beginning German language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the German-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

GERM& 121: German I

**Quarters Offered**

Fall, Winter, Spring

**GERM& 123 : German III**

Beginning German language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the German-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

GERM& 122: German II

**Quarters Offered**

Fall, Winter, Spring

**SPAN& 121 : Spanish I**

Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Quarters Offered**

Fall, Winter, Spring

**SPAN& 122 : Spanish II**

Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

SPAN& 121: Spanish I

**Quarters Offered**

Fall, Winter, Spring

**SPAN& 123 : Spanish III**

Beginning Spanish language and culture taught using a communicative approach. Through the use of drama and themes, this course focuses on listening, speaking, reading and writing skills and the culture of the Spanish-speaking world.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

SPAN& 122: Spanish II

**Quarters Offered**

Fall, Winter, Spring

**SPAN& 211 : Spanish for Spanish Speakers I**

Written and oral communication skills are developed further, focusing on the specific needs

of native speakers educated in the U.S. Cultural awareness is broadened through a study of other Spanish-speaking countries and literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**SPAN& 212 : Spanish for Spanish Speakers II**

**Credits** 5

**SPAN& 213 : Spanish for Spanish Speakers III**

**Credits** 5

**SPAN& 221 : Spanish IV**

Intermediate study of the language and culture of the Spanish-Speaking world. Further development of oral and written skills taught in first year Spanish plus an introduction to literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[SPAN& 123](#); or departmental placement

**SPAN& 222 : Spanish V**

Intermediate study of the language and culture of the Spanish-Speaking world. Further development of oral and written skills taught in first year Spanish plus an introduction to literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

SPAN& 221; or departmental placement

**SPAN& 223 : Spanish VI**

Intermediate study of the language and culture of the Spanish-Speaking world. Further development of oral and written skills taught in first year Spanish plus an introduction to literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

SPAN& 222; or departmental placement

**SPAN 211 : Spanish for Spanish Speakers I**

Written and oral communication skills are developed further, focusing on the specific needs of native speakers educated in the U.S. Cultural awareness is broadened through the study of other Spanish-speaking countries and literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

departmental placement

**SPAN 212 : Spanish for Spanish Speakers II**

Written and oral communication skills are developed further, focusing on the specific needs of native speakers educated in the U.S. Cultural awareness is broadened through the study of other Spanish-speaking countries and literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[SPAN 211](#); or departmental placement

**SPAN 213 : Spanish for Spanish Speakers III**

Written and oral communication skills are developed further, focusing on the specific needs of native speakers educated in the U.S. Cultural awareness is broadened through the study of other Spanish-speaking countries and literature.

**Degree Code**

Humanities Lecture

**Credits** 5

**Lecture Hours** 55

**Prerequisites**

[SPAN 212](#); or departmental placement

# Transfer WFE Schedules

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**AGRICULTURAL MECHANICS****(schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
AGM 129 Hydraulics I	5									
AGM 141 Hydraulics I	6									
AGM 151 Drivetrains I	6									
AGM 161 Diesel I	5									
AGM 221 Electrical II (Continuation of AUT 121)	6									
AGM 241 Hydraulics II	5									
AGM 251 Drivetrains II	5									
AGM 261 Diesel II	6									
AGM 291 Diagnostics (Capstone)	8									

**Agriculture  
(schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
AGR 101 Orientation to Agricultural Industries & Careers	2		W 10:30-12:30				W 10:30-12:30			
AGR 110 Water Management in Agriculture	3				MW 2:15-3:20				MW 2:15-3:20	
AGR 120 Intro to Precision Agriculture	5		MW 8:00-10:20	MW 8:00-10:20			MW 8:00-10:20			
AGR 211 Agriculture Weeds Identification and Control	5				MTWTh 8:00-9:05				MTWTh 8:00-9:05	
AGR 212 Ag Safety and Pesticides	5			MTWTh 9:15-10:20				MTWTh 9:15-10:20		
AGR 241 Farm and Ranch Management	5		T 9:15-10:20 TH 9:15-11:15					T 9:15-10:20 TH 9:15-11:15		
AGR 251 Integrated	5				MTWTh 10:30-11:35				MTWTh 10:30-11:35	

**Agriculture  
(schedule  
subject to  
change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
Pest Management										
AGR 261 Plant Science	5		M 10:30-12:30				M 10:30-12:30			
AGR 263 Soils	5			MTWTh 10:30-11:35 Lab: F 8-10				MTWTh 10:30-11:35 Lab: F 8-10		
AGR 265 Crop Production	5		MTWTh 1:00-2:05				MTWTh 1:00-2:05			
AGR 271 Agriculture Sales and Marketing	5				MTWTh 9:15-10:20				MTWTh 9:15-10:20	
AGR 272 Food Sustainability and Safety	5			MW 11:45-12:50				MW 11:45-12:50		
AGR 295 Work-based Learning (Internship)	44932					(ARR)				(ARR)
AGR 297 Work-based Learning Seminar	1					(ARR)				(ARR)

**Automotive Maintenance  
Technology (schedule  
subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
AMT 148 General Electricity	44964		DAY	DAY			DAY	DAY		
AMT 149 Airframe Electricity	3		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 150 General	45032		DAY	DAY			DAY	DAY		
AMT 151 Airframe Mechanic I	45038		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 152 Airframe Mechanic II	45037		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 153 Airframe Mechanic III	45040		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 249 Powerplant Electricity	2		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 251 Powerplant Mechanic I	45032		DAY	DAY	DAY		DAY	DAY	DAY	

**Automotive Maintenance  
Technology (schedule  
subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
AMT 252 Powerplant Mechanic II	45030		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 253 Powerplant Mechanic III	45032		DAY	DAY	DAY		DAY	DAY	DAY	
AMT 254 Powerplant Mechanic IV	45032		DAY	DAY	DAY		DAY	DAY	DAY	

**ART**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
ART& 100 Art Appreciation HU	5	OL	OL	OL	OL, Hyb	OL	X	X	X	OL
ART 101 2D Foundations I HP	5		Hyb TT				Hyb TT			
ART 102 Color Theory HP	5			Hyb TT				Hyb TT		
ART 103 3D Foundations HP	5				Hyb TT				Hyb TT	
ART 104 Drawing I HP	5		OL		Hyb TT		OL		Hyb TT	
ART 105 Drawing II HP	5			OL				OL		
ART 106 Drawing III HP	5									
ART 121 Ceramics I HP	5		Hyb MW	Hyb MW	Hyb MW		Hyb MW	Hyb MW	Hyb MW	
ART 122 Ceramics II HP	5		Hyb MW	Hyb MW	Hyb MW		Hyb MW	Hyb MW	Hyb MW	
ART 123 Ceramics III HP	5		Hyb MW	Hyb MW	Hyb MW		Hyb MW	Hyb MW	Hyb MW	
ART 140 Introduction to Digital Art HP	5	OL		OL	OL	OL		OL	OL	
ART 198 Special Projects HP	5									
ART 212 American Art HU	5									
ART 216 Prehistoric–Medieval Art History HU	5				X				X	
ART 217 Renaissance –Mid- nineteenth Century HU	5			X				X		
ART 218 Western Art: Impressionism to Art after 1945 HU	5		X				X			
ART 221 Watercolor I HP	5	OL			OL	OL			OL	OL
ART 222 Watercolor II HP	5	OL			OL	OL			OL	OL
ART 223 Watercolor III HP	5	OL			OL	OL			OL	OL

<b>ART</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
ART 230 Painting/Drawing Workshop HP	5									
ART 231 Oil Painting I HP	5		Hyb TT	Hyb TT			Hyb TT	Hyb TT		
ART 232 Oil Painting II HP	5		Hyb TT	Hyb TT			Hyb TT	Hyb TT		
ART 233 Oil Painting III HP	5		Hyb TT	Hyb TT			Hyb TT	Hyb TT		

**Automotive Technology  
(schedule subject to  
change)**

	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
AUT 069 Chassis Component Repair	2	Not currently offered								
AUT 081 Mechanical Diagnosis & Repair	2									
AUT 105 Automotive Personal Computer Applications	2				Day				Day	
AUT 111 Automotive Engine Service	9				Day				Day	
AUT 115 Automotive Shop Safety & Environmental Issues	1		ARR	ARR	ARR		ARR	ARR	ARR	
AUT 121 Automotive Electrical & Electronic Systems	15			Day				Day		
AUT 124 Brake System Service	9			Day				Day		
AUT 125 suspension, Steering, & Alignment	9			Day				Day		
AUT 131 Manual Drive Train & Axles	8				Day				Day	
AUT 132 Hydraulic Systems	3		Day				Day			
AUT 190 Skills Laboratory I	2				EVE				EVE	
AUT 211 Automobile Convenience Systems	2				Day				Day	
AUT 212 Automatic Transmission Repair	9		Day				Day			
AUT 213 Automotive Services I	6		Day				Day			
AUT 220 Engine Performance	18		Day					Day		
AUT 223 Automotive Servicing II	6				Day				Day	
AUT 231 Automotive Heating & AC	6				Day				Day	





<b>Commercial Pilot (schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
AVF 213 Advanced Meteorology	5									
(not currently offered)										
AVF 221 Commercial Pilot Ground School	5							Day		
AVF 223 Instrument Ground School	5						Day			
AVF 225 Effective Communication in Flight Instruction	5								Day	
AVF 227 Aircraft Systems for Pilots ( not currently offered)	5									
AVF 251 Commercial Pilot Flight (Stage 4)	4						ARR			
AVF 252 Commercial Pilot Flight (Stage 5)	4							ARR		
AVF 253 Commercial Pilot Flight (Stage 7)	4								ARR	
AVF 254 Night Flying	1		ARR	ARR	ARR		ARR	ARR	ARR	
AVF 261 Instrument Flight (Stage 6)	4								ARR	
AVF 270 Flight Instructor	4									
AVF 271 Flight Instructor Instrument-Airplane	2	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 272 Seaplane Flight	2	ARR	ARR		ARR	ARR	ARR		ARR	ARR
AVF 275 Multi-Engine Flight	2	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 276 Simulator Training/Instrument Training	0.5-1	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 291 Multi-Engine Instructor	2	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 292 ATP Multi-Engine	1	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 295 Work-based Learning	1.-6	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
AVF 297 Work-based Learning Seminar	1	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
<b>Avionics (schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025

**Avionics (schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
AVIO 100 Aircraft Electrical Fundamentals	8	not currently offered								
AVIO& 102 Aircraft Electronic Fundamentals	8									
AVIO& 103 Aircraft Wiring Systems	2									

**Bachelor of Applied Science–Applied Management (schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
MGMT 305 Business Management	5				OL				OL	
MGMT 310 Accounting for Managers	5				OL				OL	
MGMT 350 Marketing for Managers	5				OL				OL	
MGMT 370 Organizational Leadership	5			OL				OL		
MGMT 380 Human Resource Management	5		OL				OL			
MGMT 410 Financial Management	5			OL				OL		
MGMT 430 Project Management	5			OL				OL		
MGMT 440 Operations Management	5				OL				OL	
MGMT 460 Applied Management Capstone	5				OL				OL	
<b>CMST 330 Organizational Communication</b>	<b>5</b>			<b>OL</b>				<b>OL</b>		
PHIL 340 Professional Ethics	5		OL				OL			
SOC 320 Organizational Behavior	5		OL				OL			

<b>BIOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
BIOL& 100 Survey of Biology LS	5	OL	Hyb , OL	Hyb , OL	Hyb , OL	OL	Hyb , OL	Hyb , OL	Hyb , OL	OL
BIOL 104 Core Concepts in Biology SE	5									
BIOL& 160 General Biology with Lab LS	5		Hyb , OL	Hyb	Hyb		Hyb , OL	Hyb	Hyb	
* required for Nursing DTA										
BIOL& 170 Human Biology NS	5				OL				OL	
BIOL& 221 Majors Ecology/Evolution LS	5		Hyb				Hyb			
* required for AS-T 1: BIOL Pre-major										
BIOL& 222 Majors Cell/Molecular LS	5			Hyb				Hyb		
* required for AS-T 1: BIOL Pre-major										
BIOL& 223 Majors Organismal Phys LS	5				Hyb				Hyb	
* required for AS-T 1: BIOL Pre-major										
BIOL& 241 Human A & P 1 LS	5		Hyb MW	Hyb TT, OL			Hyb MW	Hyb TT, OL		
* required for Nursing DTA										
BIOL& 242 Human A & P 2 LS	5			Hyb MW	HybMW, OL			Hyb MW	HybMW, OL	
* required for Nursing DTA										
BIOL& 260 Microbiology LS	5		Hyb TT		Hyb MW			Hyb TT		Hyb MW
* required for Nursing DTA										

<b>BOTANY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
BOT 130 Botany LS	5			Hyb				Hyb		
BOT 140 Field Botany LS	5				Day				Day	

**Business (Schedule subject to change)**

<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
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**Business (Schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
BUS& 101 Introduction to Business	5	ONLINE	DAY	ONLINE	DAY	ONLINE	DAY	ONLINE	DAY	ONLINE
BUS& 201 Business Law	5		DAY	DAY	DAY		DAY	DAY	DAY	

**BUS 102 Business Mathematics**      5      **not currently offered**

(See MAP 117/119)

BUS 114 Business Ethics	5			HYBRID/DAY					HYBRID/DAY	
BUS 115- Workplace Skills and Behaviors	4	Hybrid/Day		HYBRID/DAY		hybrid/day			HYBRID/DAY	
BUS 119-Business Grammar and Edit	5	Hybrid/Day	hybrid/day			hybrid/day	hybrid/day		HYBRID/DAY	
BUS 120 Human Relations on the Job	4									not currently offered
BUS 121 Business English	5									not currently offered
BUS 122 Business Communications	5			Hybrid		Hybrid			Hybrid	
BUS 161 Business calculators	2		DAY					DAY		
BUS 170 Consumer Finance	5			DAY					DAY	
BUS 200 Supervision	5		Hybrid					Hybrid		
BUS 215 Customer Service	3	online	hybrid			online	hybrid			online
BUS 289 Project Management	5			EVE					EVE	
BUS 295 Work-based Learning	1-6									

\*available all quarters with instructor/advisor approval

**BUS 102 Business Mathematics**      **5**      **not currently offered**

BUS 297 Work-based Learning Seminar      1

\*available all quarters with instructor/advisor approval

**Business Information Management (Schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
BIM 101 Basic Keyboarding	1 to 2	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	
BIM 102 Document Formatting	1 to 4	not currently offered								
BIM 103 The Administrative Professional	2	not currently offered								
BIM 104 Intermediate Keyboarding	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 106 Advanced Keyboarding	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 109 Internet Communications	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 110 Microsoft Office Essentials	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
		online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	
BIM 112 Proof & Edit	1 to 3	not currently offered								
BIM 113 The Medical Office	5	online			online					
BIM 117 Medical Office Accounts Receivable	4	online			online					
BIM 130 Filing	1 to 2	not currently offered								
BIM 131 Records Management	1 to 3		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
BIM 173 Word Processing I	1 to 5		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
BIM 177 BIM Lab	1 to 6									

**Business Information Management (Schedule subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
*arranged with instructor permission only										
BIM 180 Introduction to Microsoft Office	1 to 5	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 181 Introduction to Microsoft Word	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 182 Introduction to Microsoft Excel	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 183 Introduction to Microsoft Access	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 184 Introduction to Microsoft PowerPoint	1 to 3	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 186 Microsoft Publisher	1 to 3		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
BIM 187 Adobe Acrobat	1 to 3		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
BIM 190 Spreadsheets I	1 to 5		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
BIM 198 Special Topics	1 to 5									
*arranged with instructor permission only										
BIM 210 Internet	1 to 2	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 280 Advanced Microsoft Office	1 to 5	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online
BIM 285 MOS Prep & Certification	1 to 5	online	hybrid	hybrid	hybrid	online	hybrid	hybrid	hybrid	online

<b>CHEMISTRY</b>	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
CHEM& 105 Chemical Concepts NS	5		F2F	OL	F2F		F2F	OL	F2F	
CHEM& 110 Chemical Concepts w/Lab LS	5		OL	OL	OL		OL	OL	OL	
CHEM& 121 Intro to Chemistry LS	5	F2F	F2F, OL	F2F, OL	F2F, OL	F2F	F2F, OL	F2F, OL	F2F, OL	F2F
* required for Nursing DTA										
CHEM& 131 Intro to Organic/Biochem LS	5				F2F Day				F2F Day	
* required for BSN										
CHEM& 161 General Chem w/Lab I LS	5		F2F Day				F2F Day			





<b>Composites (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
CPT 130 Composite Repair	4									
CPT 145 Special Projects	3									

<b>Computer Science (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
CS 101 Intro to Computer Science	3	not currently offered								
CS 103 Intro to Computer Hardware & Operating Systems	6		EVE				EVE			
CS 104 Intro to Computer Hardware	3		EVE	EVE			EVE	EVE		
CS 105 Intro to Computer Operating Systems	3		EVE	EVE			EVE	EVE		
CS 106 Intro to Virtualization	5		EVE				EVE			
CS 110 Networking Fundamentals	4		EVE	EVE			EVE	EVE		
CS 111 Intro to Programming	5		EVE		EVE		EVE		EVE	
CS 115 Intro to Database Design & Mgmt	5		EVE				EVE			
CS 116 Networks & Network Security I	3		EVE	eve			EVE	eve		
CS 117 Networks & Network Security II	3			EVE	eve			EVE	eve	
CS 120 A+ Certification Prep	1			EVE	EVE			EVE	EVE	
CS 121 Network+ Certification Prep	1		EVE		EVE		EVE		EVE	
CS 122: Server+ Prep & Certification	1		eve				eve			
CS& 131 Computer Science I: C++	5									
CS 132 Advanced Programming with C++	5									
CS& 141 Computer Science I: Java	5		EVE		EVE		EVE		EVE	
CS 142 Advanced Programming with Java	5				EVE				EVE	

**Computer Science  
(Schedule subject to  
change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
CS 151 Digital Forensics	5				EVE				EVE	
CS 152 Ethical Hacking	5				EVE				EVE	
CS 156 Cisco Networking: Intro to Networks	5									
CS 157 Cisco Networking: Routing & Switching Essentials	5									
CS 158 Cisco Networking: Scaling Networks	5									
CS 159 Cisco Networking: Connecting Networks	5									
CS 171 Cisco Networking: Intro to Networks	6				EVE				EVE	
CS 172 Cisco Networking: Routing & Switching	6			eve	eve			eve	eve	
CS 173 Cisco Networking: Enterprise Networking	6				eve				EVE	
CS 195 Internship: Work- based Learning	1 to 4									
*arranged with instructor permission										
CS 197 Internship: Work- based learning Seminar *arranged with instructor permission	1									
CS 205 Windows Server Administration	5			EVE				EVE		
CS 206 Linux Server Administration	5	eve			EVE				EVE	
CS 207 Introduction to Security Administration	5			EVE				EVE		
CS 211 Scripting	3	eve			EVE				EVE	
CS 235 Data Structures & Algorithms – C++	5									
CS 245 Data Structures & Algorithms – Java	5				EVE				EVE	
CS 260 Computer Programming Topics	5									
CS 295 Internship: Work- based Learning II	1 to 4									
*Arranged with instructor permission										

**Computer Science  
(Schedule subject to  
change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
CS 297 Internship: Work-based Learning Seminar II *arranged with instructor permission	1									

**CRIMINAL JUSTICE**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
CJ& 101 Intro Criminal Justice SS	5	OL	Hyb MW	Hyb TT	OL	OL	OL, Hyb MW	Hyb TT	X	OL
CJ& 105 Introduction to Corrections SE	5								Hyb MW	
CJ& 106 Juvenile Justice SE	5			Hyb MW						
CJ& 110 Criminal Law SE	5							OL		
CJ 198 Special Topics	1-2									
*scheduled with instructor permission only										
CJ 203 Police Administration & Leadership	5									
CJ 209 Police Psychology	5		OL							
CJ 210 Introduction to American Policing SE	5						OL			
CJ 215 Criminal Investigations	5				Hyb MW					
CJ 217 Advanced Report Writing	3								OL	
CJ 295 Work-based Learning (CJ)	1-8									
*scheduled with instructor permission only										
CJ 297 Work-based Learning Seminar (CJ)	1									
*scheduled with instructor permission only										

**High School  
Completion/OPD/DVS  
(Schedule subject to  
change)**

Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
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**High School  
Completion/OPD/DVS  
(Schedule subject to  
change)**

	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
DVS 011 Basic Skills Review		X	X	X	X	X	X	X	X	X
DVS 012 Adult Secondary Education I		X	X	X	X	X	X	X	X	X
DVS 013 Adult Secondary Education II		X	X	X	X	X	X	X	X	X
DVS 014 Adult Basic Skills		X	X	X	X	X	X	X	X	X
DVS 015 Accelerated Learning Support		X	X	X	X	X	X	X	X	X
DVS 016 Accelerated Learning Support: English		X	X	X	X	X	X	X	X	X
DVS 017 Accelerated Learning Support: Math		X	X	X	X	X	X	X	X	X
DVS 031 Beginning English Language Acquisition		X	X	X	X	X	X	X	X	X
DVS 032 Intermediate English Language Acquisition		X	X	X	X	X	X	X	X	X
DVS 033 Advanced English Language Acquisition		X	X	X	X	X	X	X	X	X
DVS 036 English Language Acquisition/Citizenship				X				X		
DVS 080 College Transitions Math		X	X	X	X	X	X	X	X	X
DVS 090 Transition to College		X	X	X	X	X	X	X	X	X

**COMMUNICATIONS**

	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
CMST& 101 Intro to Communication	4		OL				OL			
CMST& 102 Introduction to Mass Communications HU	5		OL	OL	OL		OL	OL	OL	
CMST& 210 Interpersonal Communications HU	5		Vir, OL	Vir, Hyb MW	Vir		Vir, OL	Vir, Hyb MW	Vir	
CMST& 220 Public Speaking HU	5	OL	OL, Hyb TT, Hyb MW	OL, Hyb TT, Hyb MW	OL, Hyb TT, Hyb MW	OL	OL, Hyb TT, Hyb MW	OL, Hyb TT, Hyb MW	OL, Hyb TT, Hyb MW	OL
CMST 225 Intercultural Communication HU	5		OL	OL			OL	OL		

<b>COMMUNICATIONS</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
CMST 229 Advanced Public Speaking HU	5				Hyb TT				Hyb TT	
CMST 230 Small Group Discussion HU	5				Hyb TT				Hyb TT	

<b>ECED/EDUC (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
ECED& 105: Intro Early Child Ed	5	online	hybrid	hybrid	hybrid		Hybrid	hybrid	hybrid	
ECED& 107: Health/Safety /Nutrition	5	online	online	online	online		online	online	online	
ECED& 120: Practicum (prerequisite: ECED& 105)	2	hybrid	hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	
ECED& 132: Infants/Toddlers Care	3			online				online		
ECED& 134: Family Child Care	3	online				online				online
ECED& 138: Home Visitor/Family Engagement	3	online				online				online
ECED& 139: Administration of Early Learning Programs	3	online				online				online
ECED& 160: Curriculum Development (concurrent enrollment in ECED& 190 required)	5			virtual				virtual		
ECED& 170: Environments-Young Child	3		virtual				virtual			
ECED& 180: Lang/Literacy Develop	3				online				online	
ECED& 190: Observation/Assessment (concurrent enrollment in ECED& 160 required)	3			hybrid				hybrid		
EDUC& 115: Child Development	5	online	online	online	online	online	online	online	online	online
EDUC& 130: Guiding Behavior	3	online	online	online	online	online	online	online	online	online
EDUC& 136: School Age Care	3	online				online				online
EDUC& 150: Child/Family /Community	3		online				online			
EDUC 190: Classroom Experience (prerequisite: ECED& 120 or EDUC & 201) *required for AA in ECE	3		hybrid	hybrid	hybrid		hybrid	hybrid	hybrid	

<b>ECED/EDUC (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
EDUC& 202: Intro to Education  (prerequisite: successful completion of ENGL 99 or placement in ENGL &101) This course is suggested for students who plan to transfer into an elementary or secondary education program at a 4-year institution. It is NOT required for the AAS in ECE degree. (Formerly EDUC& 201-3 credits)	5		online	online	online		online	online	online	
EDUC& 204: Inclusion Education (formerly Exceptional Child)	5				hybrid				hybrid	
HUM 220: Diversity in Education	5		online		online		online		online	

<b>Economics (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
ECON 200 Introduction to Economics	5	not currently offered								
ECON& 201 Micro Economics	5		X	X	X		X	X	X	
ECON& 202 Macro Economics	5	OL		X	X	OL		X	X	OL

<b>ENGLISH</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
ENGL 094 Applied Technical Writing Foundations	5			Hyb	Hyb			Hyb	Hyb	
ENGL 099 English Skills	5		OL, Hyb	OL, Hyb	OL, Hyb		OL, Hyb	OL, Hyb	OL, Hyb	
ENGL& 101 English Composition I BS	5	OL	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL
* required in AA&S DTA										
ENGL& 102 Composition II BS/HU	5	OL	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL, Hyb MW, Hyb TT	OL



<b>Engineering</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
ENGR 110 Intro to Science and Engineering	3		X				X			
ENGR& 111 Engineering Graphics I SE	5									
* elective for AS-T 2 MRP Mech/Civ/Aero/MatSci										
ENGR& 112 Engineering Graphics II SE	5									
* elective for AS-T 2 MRP Mech/Civ/Aero/MatSci										
ENGR 201 Material Science NS	5									
ENGR 202 Design of Logic Circuits SE	6									
* elective for AS-T 2 MRP Ele/Comp										
ENGR& 204 Electrical Circuits NS	5									
* required for AS-T 2 MRP Ele/Comp										
ENGR 205 Electrical Circuits Lab NS	2									
ENGR& 214 Statics NS	5									
* required for AS-T 2 MRP Mech/Civ/Aero/MatSci										
ENGR& 215 Dynamics NS	5									
* required for AS-T 2 MRP Mech/Civ/Aero/MatSci										
ENGR& 224 Thermodynamics NS	5									
ENGR& 225 Mechanics of Materials NS	5									
* required for AS-T 2 MRP Mech/Civ/Aero/MatSci										
ENGR 240 Applied Numerical Methods NS	5									
* elective for AS-T 2 MRP										
<b>ENVIRONMENTAL SCIENCE</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025



<b>ENVIRONMENTAL SCIENCE</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
ENVS& 100 Survey of Environmental Science NS	5	OL	OL	Hyb TT, OL	Hyb TT, OL	OL	OL	Hyb TT, OL	Hyb TT, OL	OL

<b>FILM STUDY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
FILM 101 Introduction to Cinema HU	5		Hyb TT	Hyb MW	Hyb TT		Hyb TT	Hyb MW	Hyb TT	

<b>FIRST AID (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
FAD 150 Industrial First Aid and Cardio Pulmonary Resuscitation Plus Bloodborne Pathogens	2	Hyb	Hyb MW	Hyb MW	Hyb TT	Hyb	Hyb MW	Hyb MW	Hyb TT	

<b>Geographic Information Systems (GIS) (schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
GIS 110 Geographic Information Systems (GIS) I	4			online				online		
GIS 210 Geographic Information Systems (GIS) II	5				online				online	

<b>GEOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
GEOL& 101 Intro Physical Geology LS	5		Hyb MW	Hyb MW	Hyb MW		Hyb MW	Hyb MW	Hyb MW	
GEOL& 103 Historical Geology LS	5				Hyb TT				Hyb TT	

<b>Health Education</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025

<b>Health Education</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
HED 105 Intro to Healthcare Studies	3		OL				OL			
HED 119 Medical Terminology	5		OL		OL		OL		OL	
HED 121 The Human Body & Disease I	5		Hyb TT, OL				Hyb TT, OL			
HED 122 The Human Body & Disease II	5			Hyb TT, OL				Hyb TT, OL		
HED 123 The Human Body & Disease III	5				Hyb TT, OL				Hyb TT, OL	
HED 160 Pharmacology for Allied Health	3				OL				OL	
HED 239 Medical Ethics	2		OL				OL			

<b>HISTORY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
HIST 105 Intro to History of Science, cross listed as SCI 105 SS	5				Hyb TT				X	
HIST 110 The American Experience SS	5		Hyb TT				OL			
HIST& 116 Western Civilization I SS	5									
HIST& 117 Western Civilization II SS	5									
HIST& 118 Western Civilization III SS	5									
HIST 121 History of Mexico SS	5		OL	Hyb MW			OL	Hyb MW		
HIST& 126 World Civilization I SS	5									
HIST& 127 World Civilizations II SS	5									
HIST& 128 World Civilizations III SS	5									
HIST& 136 U.S. History 1 SS	5	OL		Hyb TT	Hyb TT, OL	OL		Hyb TT	Hyb TT, OL	OL
HIST& 137 U.S. History 2 SS	5		Hyb TT, OL	Hyb MW	Hyb MW, OL		Hyb TT, OL	Hyb MW	Hyb MW, OL	
HIST 210 Tudor England SS	5									
HIST& 215 Women in American History SS	5			Hyb MW	OL			Hyb MW	OL	



**Homeland Security  
Emergency Mgmt**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
HSEM 250 Homeland Security Law and Ethics	3									

**HUMANITIES**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
HUM 102 Kick Ass Women in Pop Culture HU	5		Hyb TT				Hyb TT			
HUM 108 Introduction to Gender Studies HU	5				Hyb TT				Hyb TT	
HUM 110 Greek Mythology HU	5	OL				OL				OL
HUM 205 Diversity in French and German Language Cinema HU	5				X			X		
HUM 214 Diversity Issues: Race, Class and Gender HU	5		OL	Hyb TT	OLV		OL	Hyb TT	OLV	
HUM 220 Diversity in Education HU	5	OL					OL			

**Industrial Systems  
Technology (Schedule  
subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
IST 100 Intro. to Industrial Safety and Health	3		DAY				DAY			
IST 102 Technical Drawing Interpretation	3		DAY				DAY			
IST 105 Basic Electricity: DC Circuit Analysis	5	not currently being offered								
IST 106 Basic Electricity: AC Circuit Analysis	5									
IST 107 Industrial Electricity I	5		DAY				DAY			
IST 110 Intro. to National Electrical Code	2		DAY				DAY			
IST 111 National Electrical Code II	2			DAY				DAY		
IST 112 National Electrical Code III	2				DAY				DAY	



**Industrial Systems  
Technology (Schedule  
subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
IST 284 Pump Hydraulics/Mechanics	5								DAY	

**JOURNALISM**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
JOU 140 Digital Photojournalism HP	3									

**Library**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
LIB 101	1	x	x	x	x	x	x	x	x	

**Manufacturing & Process  
Technology (Schedule  
subject to change)**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025
MPT 104 Intro to Electricity	5			DAY				DAY		
MPT 120 Intro to CAM	5		DAY				DAY			
MPT 125 2.5 Axis Milling	5			day				day		
MPT 130 CNC Turning	5		day		day				day	
MPT 135 Intro to Additive Manufacturing	3			day				day		
MPT 140 Intro to IIoT and SCADA	3				day				day	
MPT 145 Intro to Coordinate Metrology	5				day				day	
MPT 220 3 Axis Milling	5		day				day			
MPT 225 Multi-Axis Milling	5			day				day		
MPT 230 Cobot-enabled Machining	3				day				day	

**MATHEMATICS**

	Credits	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
		2023	2023	2024	2024	2024	2024	2025	2025	2025



<b>Math Applied (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		offered								
MAP 103 Applied Mathematics (IST)	5									
MAP 117 Applied Math for Workforce I	5	OL	X	X	X	OL	X	X	X	
MAP 119 Applied Math for Workforce II	5	OL	X	X	X	OL	X	X	X	
MAP 121 Applied Math for Workforce III	5	not currently offered								

<b>Mechatronics (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
MCT 100 Intro to Modern Technology	5	not currently offered								
MCT 101 Mechatronics I	5									
MCT 102 Mechatronics II	5									
MCT 103 Mechatronics III	5									
MCT 120 Robotics I	5			day				day		
MCT 129 Independent Project/GPS (arranged with instructor)	1 to 5									
MCT 220 Robotics II	5								day	

<b>MEDICAL ASSISTANT</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
MA 115 Clinical Procedures I	7			Day				Day		
MA 116 Clinical Procedures II	4				Day				Day	
MA 195 Externship/Practicum for MA	6					ARR				ARR
MA 197 Externship/Practicum Seminar	1					OL				OL

<b>MUSIC</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
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<b>MUSIC</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
MUSC 100 Introduction to Music HU	5									
MUSC 101 Ukulele Orchestra (Ukestra) HP	1									
MUSC& 105 Music Appreciation HU	5		Hyb TT, OL	Hyb TT, OL	Hyb TT, OL		Hyb TT, OL	Hyb TT, OL	Hyb TT, OL	
MUSC 110 College Chorus HP	1									
MUSC 114 Mariachi Workshop HP	3									
MUSC 115 Group Piano I HP	2			Hyb TT				Hyb TT		
MUSC 116 Group Piano II HP	2			Hyb TT				Hyb TT		
MUSC 117 Group Piano III HP	2									
MUSC 120 College Band HP	1									
MUSC 124 Orchestra I HP	2									
MUSC 134 Group Guitar HP	2		Hyb TT		Hyb TT		Hyb TT		Hyb TT	
MUSC 170 History of Jazz HU	5			Hyb TT				Hyb TT		
MUSC 174 History of Rock and Roll HU	5		Hyb TT				Hyb TT			
MUSC 175 Music of the World HU	5				Hyb TT				Hyb TT	
MUSC 204 Music Technology Workshop HU	3									
MUSC 215 Group Piano IV HP	2									
MUSC 216 Group Piano V HP	2									
MUSC 217 Group Piano VI HP	2									
MUSC 260 Percussion Ensemble HP	1		Hyb TT Eve	Hyb TT Eve	Hyb TT Eve		Hyb TT Eve	Hyb TT Eve	Hyb TT Eve	
MUSC 270 Musical Theatre Workshop HP	1									

<b>NURSING ASSISTANT</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
NUR 100 Nursing Assistant	9		Day	Day	Day		Day	Day	Day	

<b>NURSING</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
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<b>NURSING</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
NUR 297 Work-Based Learning Seminar	1									
NUR 295 Work-Based Learning Practicum	1-3									
NUR 297 Work-Based Learning Seminar	1									

<b>NUTRITION</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
NUTR& 101 Nutrition NS	5	OL	Hyb, OL	Hyb, OL	Hyb, OL	OL	Hyb, OL	Hyb, OL	Hyb, OL	OL

<b>PHYSICAL EDUCATION</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
PEH 100 Lifetime Wellness SE	3	X	X	X	X	X	X	X	X	X
PEH 102 Theory of Basketball SE	3		X					X		
PEH 103 Theory of Wrestling SE	3			X				X		
PEH 105 Theory of Baseball SE	3				X					
PEH 106 Theory of Fastpitch Softball SE	3								X	
PEH 107 Theory of Volleyball SE	3						X			
PEH 112 Running or Walking for Fitness AC	1		X		X		X		X	
PEH 114 Basketball AC	1									
PEH 119 Fast Pitch AC	1									
PEH 122 Volleyball AC	1									
PEH 125 Conditioning AC	1			F2F, OL			F2F, ARR		F2F, OL	
PEH 128 Social Dance AC	1		Hyb	Hyb				X		
PEH 130 Indoor Cycling / Spinning AC	1									
PEH 131 Circuit Weight Training AC	1		F2F, ARR		F2F, OL			F2F, ARR		
PEH 132 Fitness AC	1		F2F, OL		F2F, ARR			F2F, OL		
PEH 133 Weight Training AC	1			F2F, ARR			F2F, OL		F2F, ARR	

<b>PHYSICAL EDUCATION</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
PEH 135 Beginning Yoga AC	1		F2F				F2F			
PEH 137 Beginning Brazilian Jiu-Jitsu AC	1				F2F				F2F	
PEH 153 Lifeguard Training AC	1									
PEH 155 Body Toning AC	1		F2F, OL	F2F, OL	F2F, OL		F2F, OL	F2F, OL	F2F, OL	
PEH 158 Racquetball AC	1									
PEH 164 Hiking AC	3									
PEH 178 Principles of Fitness SE	3		F2F	F2F	F2F		X	X	X	

<b>PHILOSOPHY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
PHIL& 101 Introduction to Philosophy HU	5				Hyb TT			Hyb TT	Hyb TT	
PHIL 102 Ethics and Policy in Healthcare I HU	1		OL				OL			
PHIL 103 Ethics and Policy in Healthcare II HU	1			OL				OL		
PHIL& 120 Symbolic Logic SQR/HU	5		OL		OL		OL	Hyb TT	OL	
PHIL 201 Ethics and Policy in Healthcare III HU	1		OL				OL			
PHIL 202 Ethics and Policy in Healthcare IV HU	1			OL				OL		
PHIL 203 Ethics and Policy in Healthcare V HU	1				OL				OL	
PHIL 210 Ethics HU	5		Hyb TT				Hyb TT			
PHIL 211 Ethics for Criminal Justice HU	5									
PHIL 230 East Indian Philosophy HU	5									
PHIL 240 Philosophy of Religion HU	5									
PHIL 250 Asian Philosophy HU	5									

<b>PHYSICS</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025

<b>PHYSICS</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
PHYS 102 Physics of Exercise NS	5		Hyb TT							
PHYS& 110 Physics for Non-Science Majors with Lab LS	5				X				X	
PHYS& 114 General Physics I with Lab LS	5		X				X			
PHYS& 115 General Physics II with Lab LS	5			X				X		
PHYS& 116 General Physics III with Lab LS	5				X				X	
PHYS& 221 Engineering Physics I w/Lab LS	5		X				X			
* required for AS-T 2: Physics/CompSci Pre-major										
PHYS& 222 Engineering Physics II w/Lab LS	5			X				X		
* required for AS-T 2: Physics/CompSci Pre-major										
PHYS& 223 Engineering Physics III w/Lab LS	5				X				X	
* required for AS-T 2: Physics/CompSci Pre-major										

<b>POLITICAL SCIENCE</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
POLS& 101 Introduction to Political Science SS	5				Hyb TT					
POLS& 202 American Government SS	5	OL	Hyb TT	Hyb TT, OL	Hyb TT	OL	Hyb TT	Hyb TT, OL	Hyb TT	OL
POLS& 203 International Relations SS	5		Hyb TT	OL			Hyb TT	OL		

<b>PSYCHOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
PSYC& 100 General Psychology SS	5	OL	Hyb TT, OL	Hyb TT, OL	Hyb TT, OL	OL	Hyb TT, OL	Hyb TT, OL	Hyb TT, OL	OL
PSYC 101 Psychosocial Issues in Healthcare I SS	1		X				X			
PSYC 102 Psychosocial Issues in Healthcare II SS	1			X				X		

<b>PSYCHOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
PSYC 103 Psychosocial Issues in Healthcare III SS	1				X				X	
PSYC 105 Mental Health First Aid	1				X			X	X	
PSYC 201 Psychosocial Issues in Healthcare IV SS	1		X				X			
PSYC 202 Psychosocial Issues in Healthcare V SS	1				X				X	
PSYC& 200 Lifespan Psychology SS	5	OL	Hyb	F2F TT	OL		Hyb	F2F TT	OL	
PSYC 225 Psychology and the Legal System SS	5									

<b>RELIGIOUS STUDIES</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
REL 201 World Religions HU	5							OL		
REL 211 Religion in America HU	5				OL				OL	

<b>SCIENCE</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
SCI 101 Survey of Science NS	5									
SCI 104 Math for Science and Engineering SE	5									
SCI 105 Intro to History of Science, cross listed as HIST 105 NS	5				Hyb TT				X	

<b>SOCIOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
SOC& 101 Intro to Sociology SS	5	OL	OL, Hyb MW	OL, Hyb MW	OL, Hyb MW	OL	OL, Hyb MW	OL, Hyb MW	OL, Hyb MW	OL
SOC& 201 Social Problems SS	5	OL		OL	Hyb MW	OL		OL	Hyb MW	OL
SOC 204 Gender and Power SS	5				OL				OL	

<b>SOCIOLOGY</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
SOC 220 Marriage and the Family SS	5		Hyb MW				Hyb MW			

<b>SOCIAL WORK</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
SOCW 110 Introduction to Social Work										

<b>Uncrewed Aircraft Systems (UAS) (Schedule subject to change)</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
UAS 107 Commercial Remote Pilot Certification	2				Online				Online	
UAS 112 Uncrewed Aircraft Systems (UAS) Ground School	5		Online				Online			
UAS 142 Uncrewed Aircraft Systems (UAS) Flight Lab	6				ARR				ARR	
UAS 208 Uncrewed Aircraft Systems (UAS) Mission Planning	6			Online				Online		

<b>WELDING</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
		2023	2023	2024	2024	2024	2024	2025	2025	2025
WLD 101 Oxy-Acetylene Welding for Auto Mechanics	2	TBD								
WLD 102 ARC/GMAW Welding for Automotive Technicians	2	TBD								
WLD 103 Beginning AMT Welding	2	Not currently offered								
WLD 110 Welding Theory I	5		DAY				DAY			
WLD 111 Welding Process I	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 112 Thermal Cutting and Welding	3		DAY				DAY			
WLD 120 Welding Theory II	5			DAY				DAY		
WLD 121 Welding Process II	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	

<b>WELDING</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
WLD 122 Gas Metal Arc Welding I	3			DAY				DAY		
WLD 130 Welding Theory III	5				DAY				DAY	
WLD 131 Welding Process III	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 132 Gas Tungsten Arc Welding I (T.I.G.)	3				DAY				DAY	
WLD 145 Agricultural Welding	4	Not currently offered								
WLD 151 Technical Drawings Interpretation	3		DAY				DAY			
WLD 152 Welding Layout I	3			DAY				DAY		
WLD 153 Welding Layout II	3				DAY				DAY	
WLD 190 Skill Improvement	2 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 205 Weld Testing Methods	4		DAY				DAY			
WLD 206 Welding Codes and Standards	4			DAY				DAY		
WLD 207 Welding Metallurgy	4				DAY				DAY	
WLD 212 Gas Metal Arc Welding II	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 241 Structural Weld Process I	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 242 Structural Welding I	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 243 Structural Weld Process II	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 244 Submerged Arc Welding	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 245 Structural Weld Process III	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 261 Production Weld Process I	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 262 Production Welding I	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 263 Production Weld II	3,6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 264 Advanced Weld Process	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 265 Production Welding Process III	6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 281 Pipe Welding I	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	



<b>WELDING</b>	<b>Credits</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>	<b>Winter</b>	<b>Spring</b>	<b>Summer</b>
WLD 282 Gas Tungsten Arc Welding II (TIG)	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 283 Pipe Welding II	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 284 Gas Tungsten Arc Welding III (T.I.G.)	3		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 285 Pipe Welding III	3 to 6		DAY	DAY	DAY		DAY	DAY	DAY	
WLD 290 Skill Improvement	2 to 6		DAY	DAY	DAY		DAY	DAY	DAY	