

2023

THROUGH

2024

CATALOG



3028 Lindbergh Avenue
Bellingham WA 98225-1599
Phone 360.752.7000
www.btc.edu

Bellingham Technical College would like to acknowledge that our service area today is within the usual and accustomed lands of the Lhaq'temish or Xwlemi (Lummi) Nation, and of the Noxws'a'ʔaq (Nooksack) Tribe of the Coast Salish peoples, as well as the original territory of the sʔéməš (Samish) Indian Tribe.

Our respect and gratitude go to our indigenous neighbors, whose care and protection of the land and water continues to this day.



MESSAGE FROM BELLINGHAM TECHNICAL COLLEGE PRESIDENT

Welcome to Bellingham Technical College!

Are you looking for an education that gives you the tools to start a meaningful career as soon as you graduate? Whether you're getting ready to enter the job market or are an experienced worker returning to college to train for the next level in your career, Bellingham Technical College offers a variety of two-year degrees and shorter certificates to help you meet your goals.

Our programs are informed by industry to give you the preparation and skills that employers are looking for, with hands-on training, high-tech equipment and opportunities for internships. BTC program graduates have high job-placement rates and earn high wages, so you can be confident that the time you spend on your education is going to pay off.

BTC student resources include programs that support first-generation and low-income students, tutoring and counseling, and we offer a variety of financial assistance programs and scholarships to help you afford college and cut down on college debt.

The future is technical, and BTC is here to get you ready for today's needs and tomorrow's opportunities.

Sincerely,

James Lemerond, Ed.D.
President

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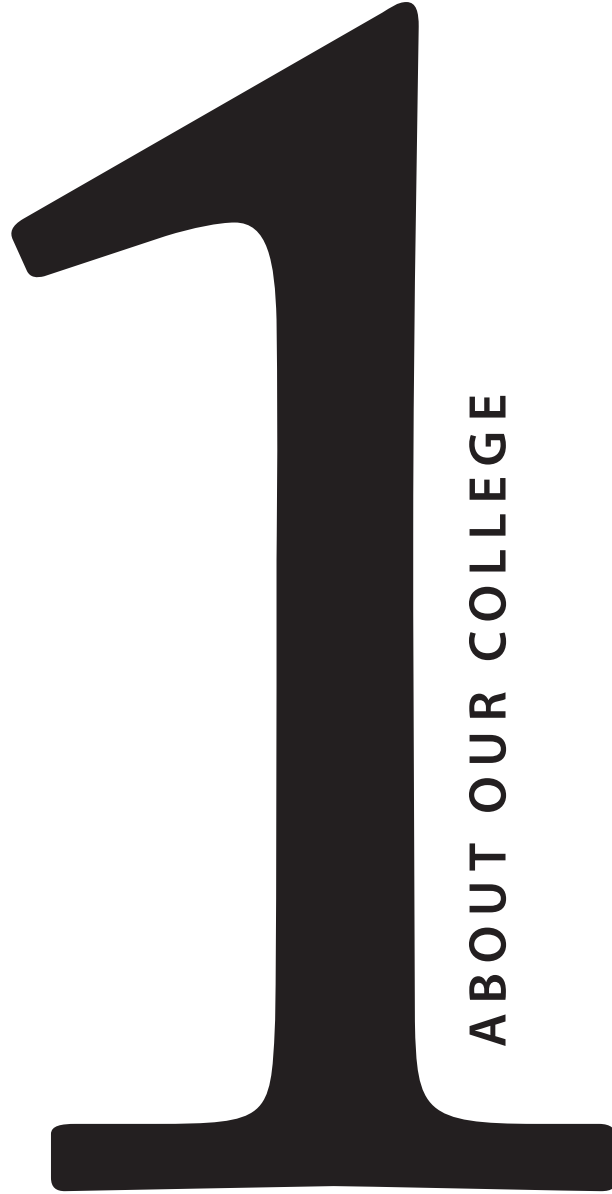
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ABOUT OUR COLLEGE

BTC History

Bellingham Technical College began in 1957, serving Whatcom County adults as Bellingham Vocational Technical Institute, and was operated by Bellingham School District. In 1991, through state legislative action, the institution was designated a member of the Washington State Community and Technical College system as Bellingham Technical College (BTC). The college is located in a district of 2,210 square miles with a population of over 212,284. The majority of students are local, with a growing number moving to the area to enroll at BTC.

About Our Students

In the 2020-21 academic year, the college served 4,100 students (1,579 full-time equivalent students). Of those students, 57% identified as female and 41% as male (2% not reporting), 25% identified as students of color (22% not reporting), and the average age was 29 years old. Of the 2,715 degree-/certificate-seeking students, 60% identified as first-generation college students, 55% attended full-time, and 56% received some kind of financial aid. Of students who left BTC during the 2019-20 academic year with at least 45 credits, 72% were employed within nine months of their last BTC course enrollment (Washington State Community and Technical College average was 71%).

(Data sources: BTC Operational Data Store, SBCTC After College Outcomes Dashboard)

Accreditation Status

Bellingham Technical College (BTC) is a Member institution with the Northwest Commission on Colleges and Universities (NWCCU). BTC's accreditation status is Accreditation Reaffirmed. The NWCCU's most recent action related to BTC's accreditation status was to reaffirm accreditation in June 2022. NWCCU is an institutional accrediting agency recognized by U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA).

Accreditation by NWCCU indicates that BTC meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one that 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.

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

Inquiries regarding BTC's accredited status should be directed to BTC's administrative staff or by contacting:

Northwest Commission on Colleges and Universities
8060 165th Avenue NE, Suite 200, Redmond, WA, 98052
425.558.4224
www.nwccu.org

In addition to institutional accreditation, many of BTC's programs (e.g., Culinary Arts, Dental Hygiene, Nursing, Surgery Technology, Veterinary Technician, Emergency Medical Technician) have national certification or accreditation. These are highlighted in the program descriptions.

Advisory Committees

The degree and certificate programs at Bellingham Technical College rely on the involvement and support of approximately 225 businesses, industry employers and employees from the community. Advice and direction offered by experts in the working world ensure that students are acquiring knowledge and skills that are in demand in the workforce.

An advisory committee representing each specific professional technical field meets regularly with faculty of the same instructional area on

matters of curriculum review and development, facilities and equipment, guidance and career advisement, employment opportunities and placement, plus public relations and promotional activities.

Drug-Free Workplace

Bellingham Technical College is committed to providing a drug-free, healthful, safe, and secure workplace and environment, and has implemented a drug and alcohol abuse, prevention, and assistance program. The College annually notifies employees and students that the unlawful possession, use, or distribution of illicit drugs and alcohol on College property, or as any part of College activity, is prohibited (WAC 495B-121-265 (10)).

Bellingham Technical College intends to promote a drug-free, healthful, safe, and secure work environment. The unlawful manufacture, sale, distribution, dispensation, possession, or use of alcohol or any controlled substance is prohibited in or on property owned or controlled by Bellingham Technical College. The use of alcohol or any unlawful controlled substance while in or on property owned or controlled by Bellingham Technical College is prohibited. While state law permits the recreational use of marijuana, federal law prohibits such use on college premises or in connection with college activities. Prescription drug usage must be accomplished in a lawful and safe manner pursuant to a valid medical prescription. No employee will report to work while under the influence of alcohol or any unlawful controlled substance. A controlled substance is defined by RCW 69.50.201 through RCW 69.50.214 or pursuant to Title 21 USC Section 821 (Schedules I-IV), as now enacted or subsequently amended.

BTC recognizes drug dependency to be an illness and major health problem. The institution also classifies drug usage and abuse as a potential safety and security problem. Employees needing assistance in dealing with such problems are strongly encouraged to utilize the Employee Assistance Program, provided by health insurance plans, when appropriate.

Equal Opportunity Statement

Bellingham Technical College provides equal opportunity and access in education and employment and does not exclude, deny benefits to, or otherwise discriminate against any person on the basis of race, ethnicity, creed, color, sex, gender, citizenship status, national origin, age, marital status, religious preference, the presence of any sensory, mental, or physical disability, reliance on public assistance, sexual orientation, veteran status, political opinions or affiliations, or genetic information under any of its programs, activities, and services. The College complies with all Washington State anti-discrimination laws (RCW 49.60) and the following federal laws relating to equal opportunity: Title VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans with Disabilities Act (ADA) of 1990.

The following person has been designated to handle inquiries regarding non-discrimination, equal opportunity, affirmative action or the ADA policies: Executive Director of Human Resources, 3028 Lindbergh Avenue, Bellingham, WA 98225, 360.752.8354. For Title IX/504 compliance, contact: Vice President of Student Services, 3028 Lindbergh Avenue, Bellingham, WA 98225, 360.752.8440.

BTC publications are available in alternate formats upon request by contacting the Accessibility Resources office at 360.752.8576.

Diversity, Equity, and Inclusion

Bellingham Technical College is committed to maintaining a welcoming, safe, and accessible campus environment by strengthening diversity, equity, and inclusivity in its campus community. The College recognizes these are essential elements of a healthy campus community.

The College believes every student deserves an opportunity for success in their education, so the College welcomes all students, inclusive of any race, color, creed, religion, sex, honorably discharged veteran or military status, sexual orientation, the presence of any sensory, mental, or physical

disability, or the use of a trained guide or service animal by a person with a disability, or national origin, citizenship or immigration status, or genetic information under any of its programs, activities, and services.

The College states that Equity means that BTC seeks to create an educational experience that prepares all students to live as critical thinkers and engaged members of a global world. Our graduates will be prepared to enter their careers as leaders who honor the importance of diverse communities. BTC is dedicated to the ongoing training and education of our students and employees around topics of justice, equity, diversity, and inclusion.

BTC is engaged in reducing institutional barriers and harm that students of historically underrepresented groups are experiencing daily. BC is committed to supporting our Black, Indigenous, and People of Color community (BIPOC) members and working to define, identify, and dismantle inequitable structures of power, privilege and oppression that have and continue to hinder the education of historically underrepresented peoples.

The Bellingham Technical College Board of Trustees recognizes the importance of these as essential elements of a healthy campus community, supports efforts to achieve their ends, and acknowledges that this commitment to diversity applies to employees, students, and guests of Bellingham Technical College.

In order to manifest these values across campus, BTC has established a Diversity, Equity, and Inclusion Office and the Diversity, Equity, and Inclusion Committee (DEI Committee). The DEI Committee is a cross-constituency group that provides policy direction and recommendations to the College Assembly, and is a deliberative body that sets the DEI agenda for the college and monitors its progress toward achieving its goals. DEI Committee also serves as an operation committee, serving in a communication and advocacy capacity to maintain consistency of major college diversity, equity, and inclusion processes and procedures.

2018-2023 STRATEGIC PLAN

The Strategic Plan was developed by the employees and students of Bellingham Technical College and guides our institutional work. We prioritize our activities, allocate our resources, and collaborate with others based on our strategic themes and goals, and are committed to creating, evaluating, and improving college practices and policies to support the Strategic Plan.

MISSION Bellingham Technical College provides student-centered, high-quality professional technical education for today's needs and tomorrow's opportunities.

VISION Bellingham Technical College will be a recognized leader in providing innovative and effective technical education, maximizing student potential and supporting the regional economy through development of a competitive workforce.

VALUES As a learning community, Bellingham Technical College is committed to educational excellence and equity realized through a positive, values-based campus environment. To fulfill BTC's mission and vision, the college will adhere to the following values:

Student Centered: Creating a supportive and inclusive community that results in a high level of student competence, professionalism, and success.

Responsive: Embracing positive, effective change that creates opportunity and meets current and emerging needs.

Collaborative: Creating and leveraging partnerships and resources to achieve shared values and goals for students, the college, and the community.

Principled: Promoting a culture of respect and accountability, reflecting

integrity in decision-making, and ensuring responsible stewardship of all resources.

THEMES Teaching & Learning: Foster teaching and learning through quality instructional methods, effective student learning environments, job skills training, and professional development.

Student Career Preparation & Achievement: Facilitate student career preparation and achievement through career advising, workplace readiness and soft skills training, job placement and support, and strong employer relationships.

Innovation & Responsiveness: Promote innovation and responsiveness by keeping up with current workplace practices, trends, and latest technology; supporting adaptation to change; and developing external partnerships.

Campus Community & Culture: Strengthen campus community and culture through a collaborative workplace, connected infrastructure, transparent governance, respectful and open communication, and a welcoming and safe environment.

BELLINGHAM TECHNICAL COLLEGE FOUNDATION

The Bellingham Technical College Foundation's mission is to *change lives by expanding access to quality education*.

The Foundation Board of Directors and staff forward this mission by partnering with individuals, businesses, alumni, grant-making institutions, and other community organizations.

The Foundation Board set an ambitious three-year fundraising goal (2023-2026), including the commitment to raise:

- \$1,500,000 to support scholarships for BTC students;
- \$600,000 in direct support of BTC programs;
- \$300,000 to support the foundation's "Greatest Need Fund," which supports a variety of campus priorities, including: emergency grants and other assistance for students; faculty and staff professional development; support for BTC veterans; and the campus food pantry.

There are many ways to support BTC through the Foundation, including: making an annual or named scholarship donation, establishing an endowed scholarship, donating gifts of stock or other assets, making a pledged gift over time, or donating equipment to support our college's programs.

If you or someone you know would like to support the BTC Foundation's mission, you may do so online at www.btc.edu/donate or by calling us at 360.752.8684. We are happy to assist you in any way possible.

The BTC Foundation is located on the second floor of the Morse Center Building (rooms 201-202).

Bellingham Technical College Foundation
3028 Lindbergh Ave Bellingham, WA 98225
360.752.8684
www.btc.edu/foundation

Tax ID #91-1658027

FOUNDATION SCHOLARSHIPS FOR STUDENTS

The BTC Foundation typically awards more than \$300,000 in scholarships each year to an average of 50% of the students who apply. The scholarship application is available online at the beginning of Spring Quarter with the application deadline typically on or around June 30.

Learn more at www.btc.edu/scholarships.

2023-2024 About Our College

SUMMER 2023

Independence Day Holiday	July 4
Summer BTC Classes Begin	July 5
Summer Nelnet Last Day to Sign Up.....	July 11
Summer Last Day for 100% Refund.....	July 11
Fall "What's Happening" Available.....	July 13
Summer Last Day to Drop without a W on transcript ***	July 17
Summer Last Day for 50% Refund **	July 24
Summer Residency & Waiver Request Deadline	Aug 3
Summer Grade Rosters Open in Faculty Center	Aug 15
Summer Last Day to Withdraw or Change Schedule ***	Aug 17
Summer Quarter Ends.....	Aug 29
Summer Grades Final - Check Your Transcript	Sept 1
Labor Day Holiday	Sept 4
Fall Tuition & Fees Due in Full *	Sept 11

FALL 2023

Fall BTC Classes Begin.....	Sept 20
Fall Nelnet Last Day to Sign Up.....	Sept 26
Fall Last Day for 100% Refund **	Sept 26
Fall Last Day to Drop without a W on transcript ***	Oct 3
Fall Last Day for 50% Refund **	Oct 9
Check your Winter Enrollment Appointment in myBTC.....	Oct 16
Winter Class Information Available Online.....	Oct 18
Fall Residency & Waiver Request Deadline	Oct 19
Winter 2023-2024 FAFSA / WASFA Due	Nov 1
All Documents for Winter to Student Financial Resources.....	Nov 1
Winter "What's Happening" Available.....	Nov 3
Winter Early Enrollment Begins	Nov 6
Faculty In-service Day (no daytime program classes)	Nov 9
Veterans Day Holiday.....	Nov 10
Winter Nelnet First Day to Sign Up.....	Nov 13
Winter Open Enrollment Begins.....	Nov 13
Fall Last Day to Withdraw or Change Schedule ***	Nov 16
Fall Grade Rosters Open in Faculty Center	Nov 22
Thanksgiving Holiday.....	Nov 23-24
Fall Quarter Ends	Dec 8
Winter Break.....	Dec 11-Jan 2
Fall Grades Final - Check Your Transcript.....	Dec 13
Winter Holiday	Dec 23-26
Winter Tuition & Fees Due in Full *	Dec 26

WINTER 2024

New Year's Day Holiday	Jan 1
Winter BTC Classes Begin	Jan 3
Winter Nelnet Last Day to Sign Up	Jan 9
Winter Last Day for 100% Refund **	Jan 9
Martin Luther King Day Holiday	Jan 15
Winter Last Day to Drop without a W on transcript ***	Jan 17
Winter Last Day for 50% Refund **	Jan 17
Spring 2022-2023 FAFSA / WASFA Due	Feb 1
All Documents for Spring to Student Financial Resources.....	Feb 1
Winter Residency & Waiver Request Deadline.....	Feb 1
Spring Class Information Available Online	Feb 5
Check your Spring Enrollment Appointment in myBTC.....	Feb 5
Spring "What's Happening" Available	Feb 16
Presidents Day Holiday	Feb 19
Faculty In-service Day (no daytime program classes)	Feb 20
Spring Nelnet First Day to Sign Up.....	Feb 26
Spring Early Enrollment Begins	Feb 26
Spring Open Enrollment Begins.....	Mar 4
Winter Last Day to Withdraw or Change Schedule ***	Mar 4
Winter Grade Rosters Open in Faculty Center.....	Mar 8
Winter Quarter Ends.....	Mar 22
Spring Tuition & Fees Due in Full *	Mar 25
Spring Break.....	Mar 25-Apr 1
Winter Grades Final - Check Your Transcript.....	Mar 27

SPRING 2024

Spring BTC Classes Begin	Apr 2
Spring Nelnet Last Day to Sign Up	Apr 8
Spring Last Day for 100% Refund **	Apr 8
Spring Last Day to Drop without a W on transcript ***	Apr 15
Spring Last Day for 50% Refund **	Apr 21
Summer 2022-2023 FAFSA / WASFA Due	May 1
All Documents for Summer to Student Financial Resources.....	May 1
Spring Residency & Waiver Request Deadline.....	May 1
Summer & Fall Class Information Available Online	May 3
Check your Summer & Fall registration time in myBTC	May 3
Summer "What's Happening" Available.....	May 19
Summer & Fall Nelnet First Day to Sign Up	May 23
Summer & Fall Early Enrollment Begins.....	May 23
Memorial Day Holiday.....	May 27
Faculty In-service Day (no daytime program classes)	May 28
Summer & Fall Open Enrollment Begins	May 29
Fall 2024-2025 FAFSA / WASFA Due.....	Jun 1
Spring Last Day to Withdraw or Change Schedule ***	Jun 3
Spring Grade Rosters Open in Faculty Center.....	Jun 7
Juneteenth Holiday.....	Jun 19
Commencement Ceremony.....	Jun 21
Spring Quarter Ends.....	Jun 21
Summer Tuition & Fees Due in Full *	Jun 24
Spring Grades Final - Check Your Transcript	Jun 26

NOTES:

- * If enrolling after Tuition & Fee Due Date, payment is due within 48 hours. After quarter start, payment is due within 24 hours.
 - ** Published Refund dates are for full-quarter length classes. Shorter classes are pro-rated. Please see the Refund Policy.
 - *** Published Drop & Withdrawal dates are for full-quarter length classes. Dates vary for classes with alternative schedules.
- The College Calendar is tentative, pending final approval, and is subject to change. Visit us on the web at www.btc.edu/calendar

LIMITS OF CATALOG

- Bellingham Technical College reserves the option to amend, modify, or revise any provision of this catalog and its programs for any reason, including but not limited to:
- A lack of funds to operate a program or course
 - Unavailability of faculty
 - A change in administrative or Board of Trustees policy
 - A change of local, state, or federal laws, rules, or regulations which govern the operation of technical colleges.

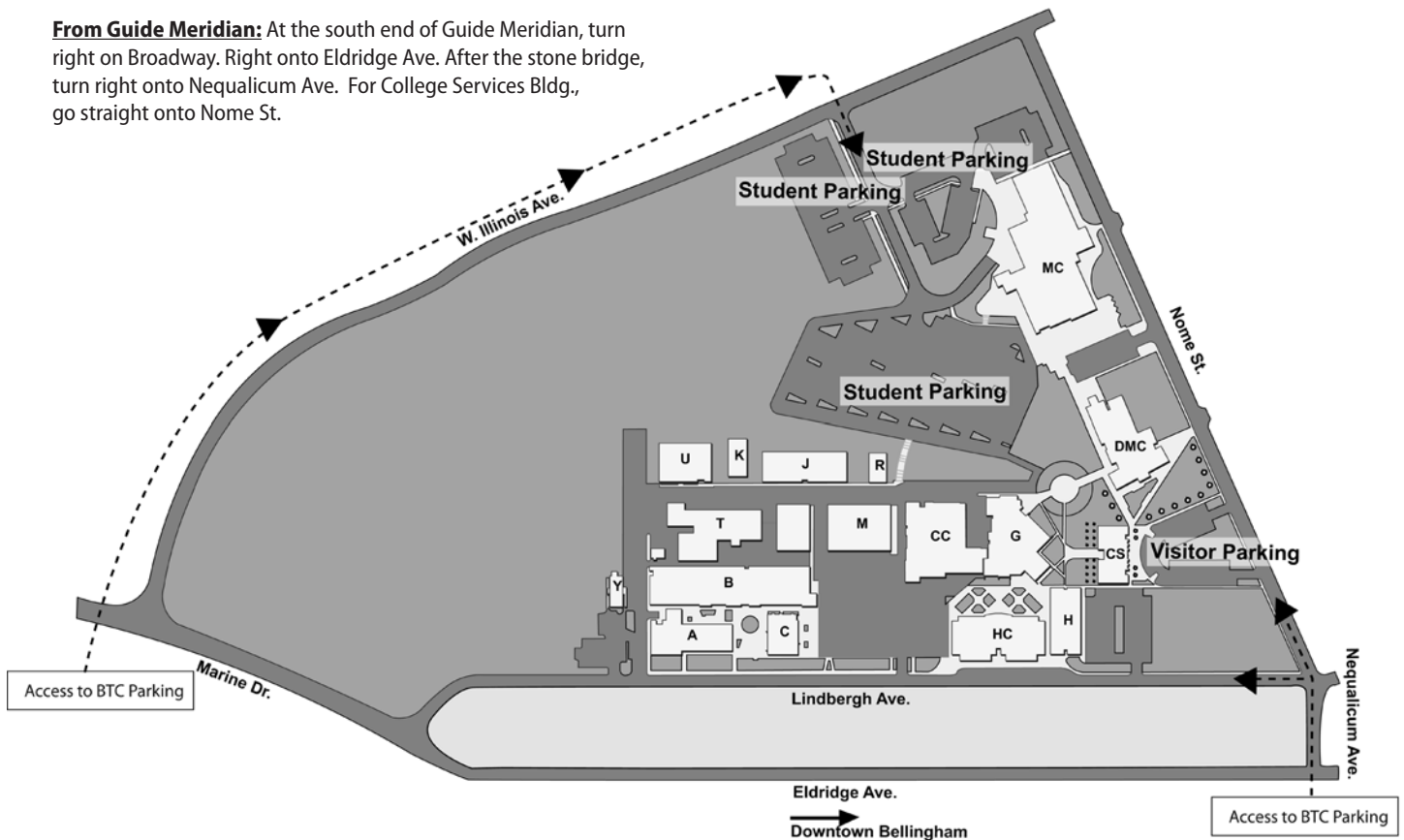
BTC Map & Directions to Campus

How to Find our Campus

From I-5: Take Exit 258 (airport exit). Follow the signs - left off the exit, left onto Bennett Drive, left onto Marine Drive, left onto Lindbergh Ave. For College Services Bldg., turn left onto Nome St.

From Downtown Bellingham: Follow Holly St. to Eldridge Ave. After the stone bridge (watch for sign), turn right onto Nequalicum Ave. For College Services Bldg., go straight onto Nome St.

From Guide Meridian: At the south end of Guide Meridian, turn right on Broadway. Right onto Eldridge Ave. After the stone bridge, turn right onto Nequalicum Ave. For College Services Bldg., go straight onto Nome St.



A	Literacy Council, Transitional Studies/Basic Education for Adults	J	Engineering Technology, Civil Engineering, Geomatics (formerly Surveying & Mapping), Mechanical Design
B	Electrician, Machining, Industrial Maintenance & Mechatronics	K	Facilities
C	Dental Assisting & Dental Hygiene, Dental Clinic	M	Automotive Technology
CC	Campus Center Campus Store, Business Courses, Cafe Culinaire, Culinary Arts, Computer Networking, Library, Settlemyer Hall, Student Center, Tutoring Center	MC	Morse Center Welding, Auto Collision, Foundation
CS	College Services Bldg. Student Services, Administration, Human Resources, Cashier	R	Veterinary Technician
DMC	Desmond McArdle Center Instrumentation & Control Technology, Process Technology	T	Diesel Technology
G	Lindbergh Avenue Deli & Grill and Common Grounds Coffee Shop	U	HVAC
H	Health Sciences, Nursing Skills and Simulation Lab, Continuing Ed	Y	Family Learning Center
HC	Haskell Center Nursing, Radiologic Technology, Surgery Technology, Sciences, Assessment Center		

Off Campus locations: Technology Development Center (TDC), 1000 F St., Bellingham: Composites Engineering; Perry Center for Fisheries & Aquaculture Sciences, 1600 C St., Bellingham: Fisheries & Aquaculture Sciences.

Instructional sites are easily accessible to students using wheelchairs or crutches. Building M is not barrier-free. Disabled students who wish to take a class at a site which does not accommodate their disability should contact Accessibility Resources at 360.752.8345 or AR@btc.edu.



ADMISSION AND ENROLLMENT

College Services Building, Room 106

Email: admissions@btc.edu Phone: 360.752.8345

Prospective students must apply for admission to the college before they register for courses in a degree/certificate program. Students may only declare one program/major and can register for full-time or part-time, based on personal preference, availability of space, and/or specific program offerings. Many core courses within a program will be offered at various times throughout the program, as scheduled by the instructor. General education course offerings vary; some may be offered in online and hybrid format. In some programs, specific courses required for a degree or certificate may only be offered in certain quarters. Students should consult their college navigator or BTC faculty advisor to assist in determining the best schedule option to meet their needs.

Full-time program students typically enroll in 15-21 credits per quarter: 15 credits if taking primarily academic classes and a higher credit load if taking core program classes. To qualify as full-time, students must enroll in at least 12 credits of program-related coursework. Part-time program students typically enroll in 6-11 credits. Not all programs allow for a part-time schedule. The maximum amount of credits a student may enroll in per quarter is 26. Enrollment in more than 26 credits requires written permission from your program faculty and approval from the program Dean.

Specific program information is defined in the Programs of Study section of this catalog.

MULTIPLE PROGRAM ENROLLMENT

Students may officially declare only one degree or certificate program. Specific program information and requirements are defined in the Programs of Study section of this catalog.

Although students may take classes for and pursue multiple programs simultaneously, quarterly financial aid awarding is restricted to the declared program on a student's record. See the Financial Aid Handbook for more information.

ASSESSMENT CENTER

PLACEMENT TESTING

Haskell Center 116

Email: assessment@btc.edu Phone: 360.752.8335

The Assessment Center provides testing and proctoring for a variety of educational, industrial, and career-related testing. For an overview of available testing opportunities, please see the Assessment Center page of the BTC website at www.btc.edu/Assessment. BTC's Assessment Center is a member of the National College Testing Association and follows its professional testing standards. BTC is committed to ensuring equal access for participation in any college program, activity, or event.

Please be aware that we monitor the testing center via recorded video cameras. Cheating and misconduct are not tolerated in the Assessment Center. Testing candidates are expected to conduct themselves with honesty and integrity at all times, during all phases of the testing process, and agree to abide by the terms and conditions of testing set forth by the Assessment Center.

Testing in the Assessment Center is by appointment only. Email the Assessment Center with the exam you would like to schedule as well as days and times you are available to test. Please contact the

Assessment Center through email or by phone to ask about different exam modalities.

GED TESTING

Haskell Center 116

Email: assessment@btc.edu Phone: 360.752.8335

GED testing is offered through the BTC Assessment Center. Visit GED.com for information about the computerized GED test, registering and scheduling your GED test, transcript information and more. Contact the Assessment Center for additional information. Students must present a government-issued picture ID at the time of testing.

Testing candidates under the age of 19 need to complete a Request for Approval to Test, available at their last school of attendance, with a signature from their former school administration. Students must access the GED website to request testing accommodations.

ENROLLMENT SERVICES

PROGRAM ADMISSION PROCEDURE

New students may be admitted into degree/certificate programs at the beginning of each quarter. Some programs have established entry dates or multiple start dates throughout the year. Contact Admissions at 360.752.8345 to schedule an appointment with a College Navigator for more information or to explore career options.

1. Complete an online application for BTC programs through the Online Admissions Application Portal at: www.btc.edu/apply. Applications for college admission are accepted at any time. Students are encouraged to apply for financial aid by completing the Free Application for Federal Student Aid (FAFSA) online. Learn more at www.btc.edu/FinancialAid. Students may complete their Washington Application for State Financial Aid (WASFA) at wsac.wa.gov/WASFA if they are not eligible to complete the FAFSA due to immigration status, defaulted federal loans, or other issues with federal aid. Once BTC receives your FAFSA or WASFA other information may be requested from you to complete your file.
2. Assess your starting point. BTC requires that persons seeking admission to a degree or certificate program of study demonstrate their ability to perform entry-level English (reading, writing) and math skills before enrolling in a technical training program. Exceptions to the published requisite scores for enrollment into specific courses may be determined by appropriate Deans or faculty. In extraordinary cases, exceptions to programs of study are made by the Dean(s) of the area of study or designee. Students may demonstrate their math and English skill levels by:
 - a. Completing a placement assessment at BTC or another community/technical college in Washington State. Placement test scores are valid for three years. Persons returning or re-enrolling after three years with no other form of placement are required to retest to demonstrate current skill level regardless of previous score achievement. BTC will charge a placement test fee for testing through the BTC Assessment Center which includes one retest in each subject area that may be completed in a twelve-month period. Testers may not retest within five business days of the last attempt. The fee will be waived for all prospective students who are administered testing through Whatcom, Island, Skagit, and Snohomish County high schools, or a student who demonstrates financial need according to the Placement Fee Waiver. Once a student

has started a class using a placement score, they may not retest in order to achieve a different placement.

- b. Students who place into Basic Education for Adults (BEaA) levels will be referred for additional testing in the Assessment Center or through Transitional Studies using a different assessment tool. Students who place into Basic Education for Adults (BEaA) or English Language Acquisition (ELA) classes must satisfactorily complete those courses at an appropriate level before enrolling in a technical program or college level course that has basic skill minimum requirements except when participating in an approved I-BEST pathway. Students who have not completed courses or placement tests in all subject areas (math, English) need to be tested or have placement scores in those areas for appropriate placement into courses.
- c. Providing an official college transcript indicating satisfactory completion with a 2.0 or better in English and/or math from an accredited college.
- d. Provide Smarter Balance results in English and math with an appropriate score from no more than three years prior to the time of evaluation.
- e. Provide recent SAT or ACT results with an appropriate score of no more than three years prior to the time of evaluation.
- f. Providing a high school transcript documenting minimum grades in math and/or English classes of no more than three years prior to the time of transcript evaluation.
- g. Provide AP, IB, or CLEP test results with an appropriate score of no more than three years prior to the time of evaluation.
- h. Provide placement test results from another college with an appropriate score and of no more than three years prior to the time of evaluation.

Certain programs require higher placement in general education requirements in reading and mathematics.

- Students interested in programs that require English Composition I (ENGL& 101), such as Associate Degree Nursing, must test into the course or complete preparatory coursework, such as Fundamentals of English (ENGL 092) and Reading Skills (RDG 085), or Oral and Written Communications (AENGL 100).
 - Students interested in programs that require Precalculus I (MATH& 141), such as Engineering or Instrumentation and Control Technology, must test into Precalculus I or complete Intermediate Algebra (MATH 099) at a minimum.
3. GET Started at BTC. Meet with a Navigator as they help you navigate your **G**oals, create an **E**ducation Plan, and give you the tools to be **T**ech ready. An enrollment hold will be placed until the student meets with a College Navigator.
 4. Prepare to attend your classes. New students are encouraged to participate in an optional Technology Camp offered through the BTC Library.

Some programs have core program course requirements, which may include but are not limited to:

- Criminal background check
- Prerequisite course requirements
- Evidence of high school completion or equivalent
- Driving record (for advising purposes only) & valid driver's

license with no restrictions

Please view program description for additional details.

Applicants seeking advanced placement admission should follow the procedures listed under Transferring & Earning Credits.

ADMISSION AND ENROLLMENT POLICY

1. In accordance with WAC 131-12-010, any applicant for admission to Bellingham Technical College shall be admitted when, as determined by the President or their designee, such applicant:

- I. Is competent to profit from the curricular offerings of the College; and
- II. Would not, by their presence or conduct, create a disruptive atmosphere within the College inconsistent with the purposes of the institution; and
- III. Is eighteen years of age or older; or
 - a. Is a high school graduate; or
 - b. Has applied for admission under the provisions of a student enrollment options program such as Running Start or a successor program; or other local student enrollment options program.

2. However, an applicant transferring from another institution of higher education who meets the above criteria, but who is not in good standing at the time of their transfer may be conditionally admitted to the College on a probationary status as determined by the president or their designee.

Any appeal of the Admissions and Enrollment Policy should be submitted under the general Student Grievance Procedure.

LOCAL ENROLLMENT OPTION

Bellingham Technical College will admit a student to degree/ certificate programs and courses who:

1. Is 16 years of age or older, and
2. Meet the requirements of Section 1 and Section 2 of the Admissions and Enrollment Policy, and
3. Are not currently enrolled in high school, or
4. Are currently enrolled in high school, has written approval from their sending high school to enroll, and agrees to pay all regular tuition and fees.

UNDERAGE ADMISSION OR ENROLLMENT APPEAL

The College does not desire to replace or duplicate the functions of local public and private schools. Persons who do not meet the regular admission and enrollment standards and who are under sixteen (16) years of age may appeal for special admission to degree/certificate programs or continuing education courses. Requests for consideration of an underage admission or permission to register in a course must be submitted to the Vice President of Student Services in writing at least one week prior to the start of a quarter or start date of a continuing education class. The written request by the student must include evidence that the person:

1. Is competent at an appropriate academic level and/or technical skill level.
2. Demonstrates the ability to participate in an adult learning environment.

(Also see Local Enrollment Option listed above.)

SELECTIVE ADMISSIONS

Admissions entitles a student to enroll in college classes within a program. However, some instructional programs have selective application procedures and requirements that students must meet in order to progress through the program. In these cases, the College may not allow a student to progress through a program after general admission to the college is approved.

IMPACT! A YOUTH RE-ENGAGEMENT PROGRAM FOR AGES 16-21

The IMPACT! Program provides an opportunity for a free college education for older youth (ages 16 to 21 years old) who have either left high school without earning a diploma or are not expected to graduate by the age of 21.

Flexible scheduling in the IMPACT! Program creates space for IMPACT! students to work closely with program staff to develop realistic education, career, and life goals. Once students are accepted into the program, they will work on earning their high school equivalency certificate (GED). Once their GED is complete, students may continue with college classes at BTC. Students who earn an associate's degree receive a Washington State High School Diploma posted to their college transcript.

IMPACT! students are eligible to have most expenses for testing, books, tuition, and fees covered while in the IMPACT! Program.

The IMPACT! Program is part of the Open Doors Youth Reengagement system in the state of Washington to partner with local school districts to provide a dual-enrollment educational opportunity. This means all IMPACT! students are dually enrolled in the IMPACT! Program and a local high school. We work with both students and high schools to ensure this step is completed.

To learn more about the IMPACT! Program, or to obtain a current list of upcoming informational sessions, email impact@btc.edu or visit www.btc.edu/impact.

DUAL CREDIT (Earn college credit while still in high school)

BTC offers two pathways to students who want to earn college credit while in high school, giving students a great way to jump-start their college degree and save money. Students can check out our options, Running Start and Career and Technical Education (CTE) Dual Credit, through the BTC website at www.btc.edu. For more information, contact the Admissions office at admissions@btc.edu or at 360.752.8345. BTC also accepts Advanced Placement (AP) and International Baccalaureate (IB) credit.

Advanced Placement (AP)

Students who have completed college-level Advanced Placement courses in high school and have taken the Advanced Placement (AP) exams administered by the College Board may receive college credit in selected courses at BTC. AP scores may also be used to waive portions of the Accuplacer exam. To request credit based on AP scores, students must submit official AP test scores from the College Board to BTC's Admissions Office. Credit will be awarded according to the Advanced Placement Credit Chart which outlines the minimum required scores and corresponding courses. See the college website for additional information at www.btc.edu.

International Baccalaureate (IB)

Students who have completed IB courses in high school may receive college credit for selected courses at BTC. IB scores may also be used to waive portions of the Accuplacer exam.

To request credit based on IB scores, students must submit official scores from IB to the BTC Admissions Office. See the college website for additional information at www.btc.edu.

Career and Technical Education (CTE) Dual Credit

CTE Dual Credit is a dual credit program offering high school students the opportunity to earn college credit for articulated high school courses. Working together, high school and college instructors have identified certain high school career and technical education courses that meet the course requirements of comparable college courses. These courses are identified as CTE Dual Credit approved. Students enrolled in these courses may be eligible to receive BTC college credit through the schools' articulation agreements with BTC.

Students who complete approved high school CTE Dual Credit courses with a grade of B or better and complete all required course competencies will be eligible for BTC college credit. However, the student will not automatically receive credit; they must complete online registration for the course in the Statewide Enrollment and Reporting System (SERS) and print, complete, and submit the registration form to the Whatcom County CTE Dual Credit Consortium. Registration instructions are available in the career and counseling centers at each area high school. All high school CTE Dual Credit courses articulated for college credit at BTC will be transcribed with the grade earned in the student's high school course. Courses are only transcribed within the academic year the student completes the coursework. Backdating is not allowed.

Award of articulated credits through BTC does not guarantee or imply acceptance of such credits by other higher education institutions. To inquire about course acceptance/transferability, please contact the destination institution. For a list of eligible courses by high school and additional information, visit Whatcom County's CTE Dual Credit website at www.btc.edu/ctedualcredit.

Running Start

The Running Start program provides tuition-free college-level courses for high school students (up to 15 credits per quarter, other costs apply).

To participate in Running Start, high school students must be of eleventh or twelfth grade standing, as determined by the public high school or private-school district. (This includes students attending a private school or receiving home-based instruction.) Specific procedures regarding enrolling in courses under the Running Start program are available on the BTC Running Start website at www.btc.edu/RunningStart or from the BTC Admissions Office.

TRANSITIONAL STUDIES

Building A

Email: ts@btc.edu Phone: 360.752.8494

Transitional Studies provides opportunities, resources, and practice in basic academic skills to foster student personal growth and independence to ultimately become life-long learners and active workforce members of the community.

Find out more about Transitional Studies programs online at www.btc.edu/TransitionalStudies.

The Transitional Studies program offers:

- College Readiness, including reading, writing, and math
- High school equivalency (GED)
- High school completion (WA State diploma)
- English Language Acquisition (ELA) for immigrants and Limited English Proficient (LEP) DSHS clients
- Career pathway planning
- Integrated Basic Education and Skills Training (I-BEST)

Adults seeking Transitional Studies classes should contact the Transitional Studies office for information. Transitional Studies hours are Monday through Friday from 8 a.m. to 4 p.m.

The Transitional Studies program is open to adults who meet the following requirements:

- Need basic education skills (reading, writing, math, English language)
- Lack a high school diploma or equivalency (GED)
- Commit to regular attendance
- Have ability to participate positively in an adult learning environment
- 16 years or older and not enrolled in a K-12 school

Sixteen- to eighteen-year-olds must submit a Request for Approval to Test Form signed by a high school representative.

VETERANS SERVICES

Bellingham Technical College is honored to have veterans as part of our community and is committed to ensuring that all veterans, active-duty personnel, reservists, and their families have access to the educational benefits and resources entitled to them. BTC offers selected degree and certificate programs 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. Veterans, Service Members, Reservists, and eligible dependents are encouraged to contact BTC's School Certifying Official (veterans@btc.edu, 360.752.8387) for information on accessing education benefits, eligibility information, information about funding opportunities, and required paperwork.

Students using federal education benefits are required to declare an approved degree or certificate program and authorized to enroll in only the courses necessary to satisfy declared degree or certificate requirements. All prior credits earned from military service and prior institutions must be evaluated and applied to the declared program or certificate. Transcript review is required by the Department of Veteran Affairs and is not an optional step. BTC College Navigators will provide students using federal education benefits with a degree plan or program of study that will outline the requirements to graduate and a timeline for expected completion of requirements. BTC's School Certifying Official can provide military connected students with referrals to career and academic advising, academic counseling, financial aid and financial information, and accessibility resources.

It is the responsibility of the student to enroll in courses that satisfy declared degree or certificate requirements and stay in contact with the School Certifying Official to ensure continuation of benefits on a quarterly basis. This includes changes to the student's enrollment status, such as adding or dropping classes, change of declared program, changes to tuition and fees, changes to residency or in-

state tuition, and contact information. Veteran benefit recipients are required to maintain satisfactory academic progress according to the College's policies. Federal education benefits users are required to request the use of VA education and Department of Defense education benefits each quarter and must approve of their course enrollment before certification to the VA. BTC's School Certifying Official is not authorized to enroll students in classes or certify a student for VA education benefits without their consent and quarterly request for use of federal education benefits. Failure to comply with Veterans Administration and Department of Defense regulations and College policies may result in termination or delay of benefits. This may also result in student responsibility for repayment of funds to BTC and/or the Veterans Administration.

BTC and the School Certifying Official will inform students using federal education benefits about the availability of federal student aid, not administered by the VA, before packaging or arranging student loans or alternative funding.

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 (DVA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, or Survivors' and Dependents' Educational Assistance (DEA) (Ch. 35) 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 student 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 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 educational benefits offered by VA is available at the official U.S. government Web site at <https://www.benefits.va.gov/gibill>.

INTERNATIONAL STUDENTS

Students wishing to enter the College as international students using an F1 or M1 visa must follow separate, additional admission procedures as outlined by the Student and Exchange Visitor Program (SEVIS).

Bellingham Technical College issues the M-1 and F-1 Certificates of Eligibility for technical professional program and Direct Transfer Degree students. Based on program and length of study, the Principal Designated School Official (PDSO) will determine which VISA is most appropriate for international applicants.

The M-1 Certificate of Eligibility is issued for a period of 12 months. If enrolled in a program longer than 1 year, an Extension of Stay I-538 or application for M-1 VISA is required. M-1 students must be enrolled full-time every quarter (including summer quarter), may not change their program of study, and may not hold employment while in attendance

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at BTC.

In comparison, F-1 Certificate of Eligibility is not limited to the 12-month period but is issued for the length of the program. F-1 students may change their program of study and may hold employment on campus.

Before international students can be admitted into Bellingham Technical College or issued a Certificate of Eligibility Form I-20 for Student Visa, the following admissions requirements and steps must be completed:

General International Student Requirements:

- **Age Restriction:** Applicants must be 16 years of age before enrollment.
- **Admissions Application:** Applicants may complete and submit an application online through the Online Admissions Application Portal.
- **Placement Assessment:** Applicants must demonstrate competency in English before an I-20 can be issued. English and math assessment is required before an application can be accepted for program entry. Students in the United States may take the BTC assessment test to accomplish math, sentence structure, and reading placement. BTC also accepts equivalent college placement scores, the TOEFL (contact Admissions & Advising for specifics), IELTS, or certain college coursework for assessment waiver. To inquire more about assessment requirements, please email the Admissions Office at admissions@btc.edu or call 360.752.8345.
- **Other Requirements:** The following programs have additional prerequisites or admissions requirements: Automotive Technology, Dental Assisting, Dental Hygiene, Diesel Technology, Nursing, Process Technology, Radiologic Technology, Surgery Technology, and Veterinary Technician. Applicants to these programs should contact the Admissions Office at admissions@btc.edu or 360.752.8345 regarding requirements before submitting an application.

When the admissions process is complete and space is available, applicants are accepted into their program of study. Program start times vary depending on the program and space availability. Some programs have prerequisites, which may impact the VISA application time frame. Once confirmation of start date has been received, international program students must make an appointment with a Designated School Official in the Admissions Office to be issued an I-20 to begin the VISA application process. The following items are required for issuance of an I-20:

I-20 Issuance Requirements:

- **Confirmation of acceptance and start date:** Applicants must receive confirmation that they have been admitted into a BTC program of study and given confirmation of when they will be allowed to begin their full-time program of study.
- **Financial Responsibility:** Applicants must provide evidence of ability to finance educational and living costs while in attendance. Students independently supporting themselves must submit the International Student Verification of Funds form with the appropriate signatures. If the applicant is being supported by family funds or other patron, the party who provides the support should sign the Sponsor's Statement of Support form. Bank verification showing the availability of funds meeting or exceeding

annual program costs is also required.

- **Student Agreement:** Applicants are required to read and sign and adhere to the International Student Agreement.

An official transcript must accompany any request for acceptance of transfer credit, prerequisite credit, or test waiver from the college or university attended. If the college or university is located outside the United States, the class and credits must be evaluated to the US grading/credit system by an independent credit evaluation agency. Several of these services are listed below.

Independent Credit Evaluation Services:

World Education Services	www.wes.org
Foundation for International Services	www.fis-web.com
International Education Research Foundation	www.ierf.org

CLASS REGISTRATION

Students may select and enroll for a variety of courses intended for employment training, retraining, or upgrading, as well as for personal enrichment, and business and professional development. Degree and certificate class information is published online under ctcLink Class Search. Continuing Education courses do not require an admission application in order to register and are published under Class Search.

REGISTRATION & ENROLLMENT

- A student is considered officially enrolled in a course or program after registering and paying all tuition and fees by published due dates.
- Students are responsible for registering for classes each quarter. For details about how to register, go to www.btc.edu/register. Students are responsible for reviewing the accuracy of their student schedule. Students are also responsible to make sure tuition and fees are paid in full, by funding, self-payment, setting up a payment plan by the due date published on the BTC calendar, located at www.btc.edu/calendar.
- Registering with instructor permission requires staff assistance. Complete and submit an Override Request Form or email the class instructor, and copy in registration@btc.edu. If and when permission is granted, your instructor will notify Registration to add you to their class.
- The maximum amount of credits a student may enroll in per quarter is 26. Enrollment in more than 26 credits requires a written recommendation from your program faculty and approval from the program Dean.
- Students may be dropped for nonpayment from classes if the student's tuition and fees are not paid in full when due.
- Attend the first class! Students may be dropped from classes if the student fails to attend and there is no class participation in a course activity by the second day of class. Non-attendance and no course participation by the second class is considered a No Show.

ENROLLMENT DATES AND TIMES

- Enrollment dates and deadlines are posted on the BTC Calendar, located at www.btc.edu/calendar.
- The Open Enrollment date is published on the BTC calendar.

New and returning students who have completed the admissions process may enroll beginning on this date.

- Early enrollment is reserved for student veterans, currently enrolled Accessibility Resources students, and continuing degree or certificate students. Your assigned enrollment appointment can be viewed in ctcLink Student Center on the date posted on the BTC calendar to "Check your Enrollment Appointment in myBTC."
- Refund dates and drop/withdraw dates are posted for full-quarter-length state-support classes. If your class is shorter the dates are calculated on a pro-rated basis.
- The last day to withdraw or change your schedule for quarter-length classes is published in the 2023-2024 Academic Calendar. Classes that are shorter than a standard quarter may have alternative dates. Contact Enrollment Services regarding specific classes if you have questions.

CLASS WAITLISTS

Class waitlists are available for open enrollment classes. One-day classes do not have a class waitlist. There is no waitlist on a class reserved for a continuing cohort of students.

Students are responsible for choosing to be placed on a class waitlist and removing a class waitlist if they no longer wish to take the class. Students can view and manage class waitlists in myBTC. Students are automatically registered into a class through the first night of the quarter. Instructor permission is required beyond the first day of class. Refunds will not be granted if a student registered into a class from a class waitlist and did not drop the class.

CHANGING CLASSES

Students can add and drop classes through myBTC. Written requests are accepted on a signed Add/Drop Form, Override Request Form, or by a specific and detailed email from the student's BTC email account. Non-attendance of a class for which a student is officially enrolled in does not constitute an official drop or withdrawal.

Students receiving financial aid should consult with Student Financial Resources before requesting to drop a class, as doing so may impact their financial aid award.

Students may change their schedule prior to the quarter start, as class space allows. Once the quarter begins, students will have the first five (5) instructional days of the quarter to change their schedule. Adding a class will depend on class space availability. Instructor permission is required to add a program class after the fifth (5th) day through the tenth day of the quarter. Academic/General Education classes require permission to add a class after the second (2nd) day of the quarter. A few programs require permission if the class has started. If there is a class waitlist, priority will be given to students based on their class waitlist position. If space is available and students have met all prerequisite requirements of the course, they may enroll. If the class is full, students may enroll in the class by obtaining written permission from the instructor. Classes cannot be added after the 10th day of the quarter without permission from the instructor, Dean, and Registrar.

DROPPING CLASSES

Students may remove a class from their schedule through myBTC. Written requests are also accepted on a signed Add/Drop Form, or by a specific and detailed email from the student's BTC email account.

A class is dropped if the student removes the class by the census date of the class, which is the 10th day (excludes weekends and legal holidays) of the quarter or 20% of the class as calculated by the computer. A dropped class is removed from the student's class schedule and transcript.

WITHDRAWAL PROCEDURE

1. We strongly recommend that you meet with your College Navigator to discuss plans for withdrawal and potential plans for return.
2. Removing a class after the class census date (the 10th day of the quarter or 20% of the class) results in a withdrawal. The class will appear on your student schedule and transcript with a W grade. This will not calculate into your GPA, but it will count as a class repeat and as a class attempt for financial aid according to the Financial Aid Satisfactory Academic Progress policy.
3. Students receiving financial aid should contact Student Financial Resources to give notification of intent to withdraw and to determine the impact on their financial aid status of withdrawing.
4. To officially withdraw from a course, students must withdraw online or submit an Add/Drop Form to Registration by the quarterly withdrawal deadline. Refer to the online calendar for specific dates each quarter. Students who do not officially withdraw from the college, or never attended, will forfeit any refund to which they may be entitled and may be issued a failing grade by their instructor. For short classes, BTC calculates withdrawal deadlines based on start date, end date, and 75% of instructional days.
5. A petition for Hardship Withdrawal allows students who cannot complete a quarter to be withdrawn from all classes by the last day of their enrolled quarter. Examples include 1) unanticipated medical emergencies (not short-term or chronic illnesses), 2) a call to active military duty, 3) a family crisis or emergency. Third-party documentation is required, and tuition and fee refunds apply only to medical reasons and military call up. No petitions for Hardship Withdrawals will be accepted after the last day of the quarter.
6. BTC reserves the right to administratively withdraw students with notification under the following conditions:
 - Student meets the criteria of a No Show
 - Student has not paid tuition and fees in full by the payment deadline or financial aid funding has been terminated
 - Student has not successfully fulfilled the prerequisites for a class or program
 - Student has exceeded the three-time class repeat limit
 - Student is academically suspended, enrolled for the next quarter, and does not have an academic improvement plan by the 5th day of the quarter
 - Student violates the Student Code of Conduct

COST OF ATTENDANCE

When estimating the cost of attending Bellingham Technical College, consider:

1. Tuition rates
2. Program & class fees

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- Books, supplies, uniforms, tools, and any additional items needed for your specific program
- Living expenses

Cost information is available online at www.btc.edu/tuition.

TUITION AND FEES

All tuition and fees must be paid in full by the due date for the enrollment period. The College evaluates and adjusts the tuition and fees annually to conform to state legislative regulations and program/course costs. Adjustments in tuition and fees become effective at the time they are implemented. Because changes may be made during the academic year, an up-to-date listing of tuition and fees for any program is available on the BTC website. All applicants should go to www.btc.edu/tuition to obtain a current tuition and fee schedule at the time of application and before payment is due. Tuition and fee charges will vary depending on credit load and program fees.

TUITION

Tuition is based on residency. See www.btc.edu/residency. Tuition rates are published online at www.btc.edu/tuition.

PROGRAM AND COURSE FEES

Program and course fees are in addition to tuition and address distinct costs such as lab fees and assistants, supplies, materials, equipment, rentals, software licensing/replacement/upgrade, maintenance, and other operational costs.

OTHER FEES

Check www.btc.edu/tuition for up-to-date fee information for:

- Official Transcript (order online)
- Replacement Degree/Certificate diploma (per copy)
- Replacement First Aid or CPR Card
- Replacement Student Body Card
- Background check for Health programs

REFUND POLICY FOR TUITION AND FEES

STATE-FUNDED CREDIT CLASS REFUND POLICY

(Supported with State funds)

- 100% refund if a student withdraws from a class through the 5th instructional day of the quarter.
- 50% refund if a student withdraws after the 5th instructional day through the 20th calendar day of the quarter.

Classes with start and end dates other than the start and end of the quarter:

- Refunds for state-supported classes that start before or after the regular quarter begins will be processed in proportion to the tuition and fee refund percentages above. Refund

deadlines may differ for classes with different start dates and classes that start mid-quarter.

- Refunds for state-supported classes that are shorter than the full quarter and begin any time during the quarter will be processed in proportion to the tuition and fee refund percentages above.
- State-supported classes that meet only once must be dropped prior to the class meeting time to be refund eligible.
- Instructional days are defined as days the college is in session, not including weekends or scheduled holidays.*
- Calendar days are defined as all days the college is in session, including weekends and scheduled holidays.*

SELF-SUPPORT CLASS REFUND POLICY

(Supported by student fees)

- 100% refund if drop is submitted by midnight two calendar days prior to the start date of the class.
- There are NO refunds after midnight two calendar days prior to start date of the class. A signed Add/Drop Form is required to drop/withdraw after midnight two calendar days prior to the start date.

CANCELED CLASS REFUNDS

- A 100% refund will be made when Bellingham Technical College cancels a class.

REFUND INFORMATION

- The refund will be calculated based on the date the drop or withdrawal takes place online, or the date the Add/Drop Form is submitted to Registration rather than the last day of attendance. No refund of tuition and fees will be made beyond the current quarter.
- Students who fail to attend or stop attending a course or program without notice, and do not officially withdraw, will forfeit all claims to the refund of tuition and fees, and may receive a failing grade of F.
- Refunds for financial aid awards may be adjusted based on the type of aid received. Contact the Student Financial Resources Office at 360.752.8351 for more information.
- Petitions for exceptions to the refund policy must be submitted in writing to the Executive Director of Admissions and Registration for determination. Required documentation for consideration includes an Add/Drop Form, and a Hardship Withdrawal Form with third-party supporting documentation. Circumstances warranting a refund exception are medical reasons or being called into military service of the United States. All petitions, forms, and documentation must be submitted by the last day of the enrolled quarter.
- If you are eligible for a refund, refunds are determined by your original payment method:
 - Paid online by credit card – 7 to 10 business days – credit back to original card
 - Paid by credit card in person or over phone – 10 to 15 business days – credit back to original card
 - Paid by check or cash – 20 business days – refund by

- check
 - o Paid by Nelnet – 20 business days – refund by check (\$30 Nelnet Fee is non-refundable)
 - o Any outstanding balance owed will be deducted from refunds.
- Refund amounts are based on prior full payment of tuition and fees. If you have not paid in full, you may still owe a balance if you drop or withdraw from your class during a partial or zero refund period.

ENROLLMENT HOLDS

An enrollment hold may be placed on a student's record that will prevent the student from registering until action has been taken to resolve the issue. There are various reasons for holds that may include, but are not limited to:

- Unpaid tuition and fees
- Missing Admission documentation
- Advising required
- Academic probation or suspension
- Student Code of Conduct
- Overdue loaned books and equipment from programs
- Library fines
- Parking tickets
- Administrative holds

WASHINGTON STATE RESIDENCY

Students will be initially classified as a resident or non-resident based on the information provided on the Admissions Application. Bellingham Technical College complies with applicable state laws regarding residency classification. Washington residency law is codified in RCW 28B.15 and further explained in WAC 250.18.

In general, a student is considered a resident for tuition and fee purposes under the following conditions:

1. The student is a US citizen, or has permanent or temporary resident status, or holds Refugee-Parolee or Conditional Entrant status with the United States Immigration and Naturalization Service, or is otherwise permanently residing in the United States under color of law; and
2. The student is financially independent for the current calendar year and the calendar year prior to which application is made (if the student is not financially independent, then their residency is based on whether one or both parents have met all residency requirements); and
3. The student (or, if financially dependent, at least one of the student's parents) is in Washington primarily for reasons other than educational and has officially established Washington as their true, fixed, and permanent home and place of habitation for a period of at least one year prior to the start of the quarter of enrollment.

For information about how to request reclassification, BTC accepted waivers, and residency forms, including the Washington Higher Education Residency Affidavit (SB 5194) see www.btc.edu/residency.

Students taking only classes in Transitional Studies, Child & Family

Studies, First Aid, or self-support classes are not subject to residency requirements. If you move from these classes into state-funded academic and/or vocational classes, residency requirements will be applicable.

BTC Tuition Waiver

Bellingham Technical College offers a partial Tuition waiver for U.S. Citizens and students holding Permanent Resident status who are residents of the 50 States and U.S. Territories. This waiver is applied as part of our Admissions process, and provides a waiver of a percentage of tuition costs for students who will pay out-of-state tuition rates. Washington State residents are not eligible for this waiver.

TAX CREDIT INFORMATION

Several education tax benefits are available to lessen the burdens of higher education. Tax credits such as the American Opportunity Tax Credit or the Lifetime Learning Credit may be claimed for qualified tuition and educational expenses. After the end of each tax year, students will be mailed a 1098T form reflecting qualified payments to BTC from the Washington State Board of Community and Technical Colleges. This form, which is also viewable online using your student login information, can be used to complete the appropriate tax credit claim forms. Contact your tax advisor or the IRS for assistance with these credits or other tax questions.

PAYING FOR COLLEGE

Student Financial Resources
College Services Building, Room 101
Email: finaid@btc.edu Phone: 360.752.8351

BTC Federal School Code: 016227

The Student Financial Resources office provides access, aid, and advisory services for the BTC community to facilitate student enrollment, retention, and completion at Bellingham Technical College. Financial aid can assist with educational expenses which include tuition and fees, books, supplies and tools, housing and food, transportation, and personal expenses. To learn more about how to receive funding to complete a program of study, visit our website at www.btc.edu, read the Student Financial Aid Handbook on the Student Financial Aid page of the BTC website or contact our office. Print copies of the Student Financial Aid Handbook are available upon request in the Student Financial Resources office.

HOW TO APPLY FOR FINANCIAL AID

FINANCIAL AID APPLICATION PROCEDURE

Complete and submit either the Free Application for Federal Student Aid (FAFSA) or the Washington Application for State Financial Aid (WASFA) online. The application collects financial data and other information used to calculate the Expected Family Contribution (EFC), which is used to determine a student's eligibility from various financial aid programs. Students may complete their FAFSA online at <https://studentaid.gov>. To use this site, you must create an FSA ID at fsaid.ed.gov. Students may complete their WASFA at wsac.wa.gov/WASFA if they are not eligible to complete the FAFSA due to immigration status, defaulted federal loans, or other limitations for eligibility for federal aid. Once BTC receives your

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FAFSA or WASFA, other information may be requested from you in order to verify the information provided on your application and to determine your eligibility. Student Financial Resources staff will contact you via the email address on your application to notify you of any outstanding requirements that must be satisfied before an offer of financial aid can be made. Most of the necessary forms may be downloaded from myBTC, or from the financial aid forms section of the BTC Financial Aid website at www.btc.edu/financialaidforms.

Students must reapply for financial aid each academic year by submitting a new FAFSA or WASFA. Applications for the upcoming school year generally open on October 1. Each financial aid year begins with Summer Quarter and ends with Spring Quarter. Since some funding is first-come, first-served, you should apply as soon as possible.

ELIGIBILITY REQUIREMENTS

Students are eligible for federal financial aid if they:

1. Attend a financial aid-eligible program for the purpose of obtaining a degree or certificate at the college. Only classes required for a student's aid-eligible program are included in the enrollment level for awarding purposes.
2. Are a U.S. citizen, permanent resident of the United States, or an eligible non-citizen.
3. Submit all required information and documentation.
4. Maintain satisfactory academic progress in their program of study as defined by the financial aid Satisfactory Academic Progress Policy.
5. Are not in default on any previous student loans or do not owe a repayment on any grants received from BTC or another institution. Some federal student loan borrowers in default may regain eligibility under the Fresh Start Initiative.
6. Enroll in a minimum number of credits required for various financial aid programs.
7. Are a high school graduate, have a GED, or have completed homeschooling as defined by state law or gained eligibility under Ability to Benefit.

Students who have the equivalent of a bachelor's degree (including degrees earned in a foreign country) are limited to receiving scholarships, institutional grants, student loans and work-study assistance. Students will be notified of their financial aid offer by email.

FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS REQUIREMENTS

The Satisfactory Academic Progress (SAP) policy for financial aid purposes intends to ensure students' progress toward completion of their degree or certificate program. To maintain eligibility for all aid programs, students must meet the Satisfactory Academic Progress (SAP) measures and fulfill reinstatement steps when required each quarter. All quarters of a student's enrollment in an aid-eligible program are considered, including quarters in which a student did not receive financial aid. Attempted credits include repeated, failed, incomplete, and credits withdrawn from after census. Students who do not meet the SAP measures are notified by email. Students who experience extenuating circumstances may regain eligibility by completing an appeal or by fulfilling the requirements listed below.

To learn more please see the Student Financial Aid Handbook on the Student Financial Aid page of the BTC website.

The SAP process for financial aid purposes may differ from college Academic Standards and Progress processes. See page 33 for more information.

Satisfactory Academic Progress Measures

1. Grade Point Average. Students must maintain a 2.0 cumulative grade point average (GPA).
2. Credit Completion. Students must complete the required number of credits based on their enrollment level as of the quarterly census date and complete a minimum of 66.67% of all attempted credits.
3. Maximum Time Frame. Eligibility is limited to 150% of the number of credits required for completion of a student's current program(s).

Satisfactory Academic Progress Statuses

At the end of each quarter, SAP measures are reviewed and students are placed on Good, Warning, or Suspended status for the following quarter. Students in Suspended status are ineligible for financial aid. While in Suspended status, students may appeal to regain eligibility. After successfully appealing, students are placed on Probation for one quarter. Students in Good, Warning, or Probation status may receive financial aid.

FEDERAL FINANCIAL AID REFUND POLICY

Students who receive federal financial aid are subject to the federal Return of Title IV Funds regulations. Under these regulations, eligibility for students receiving federal aid must be recalculated when a student withdraws from classes early or ceases to attend during the quarter. Students who do not complete 60% of the quarter may owe a repayment of federal aid. Financial aid funds are governed by state and federal regulations, and any amounts owed are separate from and may be in addition to balances according to BTC's tuition refund policy. For a copy of the Return of Title IV Funds refund policy, please see the Student Financial Aid Handbook.

TYPES OF FINANCIAL AID

This is a brief summary of some of the financial aid available at BTC. For a more detailed account of awards and requirements, please see the Student Financial Aid Handbook on our website.

FEDERAL PELL GRANT

The Federal Pell Grant is free monetary assistance for educational expenses. Pell Grant is a need-based grant awarded to eligible FAFSA-filers. Students who have earned a bachelor's degree or higher are not eligible. Award amounts are based on the Expected Family Contribution, Cost of Attendance, and enrollment level. Pell Grant does not have to be repaid, except under limited circumstances such as a withdrawal from courses.

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG)

The Supplemental Educational Opportunity Grant is awarded to students who demonstrate exceptional financial need. Funds are limited and generally only awarded to students who apply early.

WASHINGTON COLLEGE GRANT (WCG)

The Washington College Grant is available for Washington residents only. WCG is a need-based grant awarded to students from low- and middle-income families. Students may apply by completing a FAFSA or WASFA. Award amounts are based on the Median Family Income and enrollment level.

COLLEGE BOUND SCHOLARSHIP (CBS)

The College Bound Scholarship is an early commitment of state financial aid to eligible students who enroll in middle school and meet the pledge requirements. CBS is a need-based grant awarded to eligible FAFSA or WASFA filers. Award amounts are based on the Median Family Income and enrollment level.

SCHOLARSHIPS

Scholarships, like grants, offer free monetary assistance for educational needs. Scholarships are offered by the BTC Foundation, organizations associated with the college, and by outside agencies. Scholarships may be need-based or merit-based. For a current list of resources, please visit our website or read the Student Financial Aid Handbook on our website.

STUDENT WORK STUDY

Federal and State Work Study is a need-based financial aid program offering part-time employment to students. Funds are provided directly to students in the form of a bi-monthly paycheck based on the number of hours worked. Work Study jobs are posted on the Student Financial Resources website. Interested students should contact Student Financial Resources to assess their eligibility. State Work Study is available only to Washington state residents. Students must be enrolled at least half-time (6-8 credits) and may work up to 19 hours a week.

FEDERAL DIRECT STUDENT LOANS AND PARENT PLUS LOANS

The Federal Direct loan program provides funds to students or parents of dependent students that must be repaid. Loans through the Direct Loan program are guaranteed by the federal government and are offered by request from students. Federal student loans do not require a credit check whereas approval of Parent PLUS Loans do require that borrowers pass a credit check. Students must be enrolled in at least 6 program-eligible credits (half-time) to qualify. Repayment begins after a six-month grace period. The grace period begins after the student leaves school or enrolls for fewer than six credits during the regular academic year. Students may borrow an annual maximum amount based on their class level. If approved, parents may borrow up to the student's cost of attendance, minus any other aid.

VETERANS BENEFITS

Veterans and spouses or dependents of veterans who are eligible for education benefits must apply for admission to the College. Contact the College's Veteran School Certifying Official as early as possible before enrolling. Most certificate and degree programs are eligible for veteran education benefits. Call 360.752.8345 for an appointment with a College Navigator to discuss enrollment in an eligible program.

Selected programs of study at Bellingham Technical College 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.

BTC FOUNDATION SCHOLARSHIPS FOR STUDENTS

Over the past five years, the BTC Foundation has awarded an average of \$500,000 in scholarships each year to an average of 50% of the new and returning students who apply. The scholarship application

is available online at the beginning of Spring Quarter with the application deadline typically on or around June 30. Learn more at www.btc.edu/scholarships.

PASSPORT TO CAREERS SCHOLARSHIP

Passport to Careers assists former foster youth and Unaccompanied Homeless Youth with funding and specialized support services from a designated college staff member. Passport serves former foster youth who: 1) spend at least one year in foster care in Washington state after their 13th birthday, 2) enroll at least half-time in an eligible college by their 22nd birthday, and 3) are working toward earning their first degree or certificate.

Passport serves Unaccompanied Homeless Youth who:

1. Are not in the physical custody of a parent or guardian;
2. Lack fixed, regular, and adequate nighttime residence; and
3. Experience homelessness on or after July 1 of the prior academic year, or during the current academic year before age 21.

For more information call 360.752.8460 or visit www.btc.edu/financialaid.

EMERGENCY FUNDING

The Student Financial Resources Office offers funding to students who experience financial difficulties that impact their ability to continue their education. BTC aims to make access to emergency funding as low-barrier as possible and is designed to be inclusive of all students regardless of whether they meet the traditional definition of a "needy student." However, funding may be limited based on calculated need. Funding is reserved for BTC students who experience unexpected expenses only. Students may submit an emergency funding application to detail their circumstances and request funds. The Emergency Funding Committee reviews requests no later than one week after requests are received.

WORKFORCE FUNDING & STUDENT SUPPORT

Workforce Funding provides financial assistance and support services to needy students pursuing professional or technical programs. Students may be eligible for funding beyond the types of financial aid offered through the FAFSA (see Financial Aid section).

Basic Food Employment & Training (BFET)

BFET provides funding and services that assist students with achieving their educational goals. Students may participate in the BFET program if they receive or are eligible to receive federal Basic Food Assistance (food stamps) and do not receive TANF (Temporary Assistance to Needy Families). BFET participants may receive funding for school expenses such as tuition, books, supplies, and tools. In addition, BFET participants receive services provided by dedicated staff in support of achieving their educational goals. BFET at BTC facilitates childcare subsidy eligibility through the Department of Social and Health Services (DSHS). Enrolling in the BFET program also keeps Basic Food recipients in good standing with DSHS so their food benefits will continue while they attend college. Call 360.752.8351 for more information and find us at www.btc.edu/workforcefunding.

Opportunity Grant

The Opportunity Grant program is designed to help low-income students prepare for and enter programs at Bellingham Technical College that will result in high-demand, high-wage occupations. The grant provides tuition for 45 credits and fees up to \$200, as well as \$1,000 for books and tools. The program is available to students below 200% of the federal poverty level who are Washington state residents,

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have earned less than an associate's degree, and are interested in any of the following programs: Automotive Technology, Computer Networking, Computer Support Specialist, Dental Assisting, Dental Hygiene, Electrician, Diesel Technology, HVAC, Industrial Maintenance & Mechatronics, Instrumentation & Control, Mechanical Engineering, Medical Administration, Medical Office Support, Nursing Assistant, Nursing (full-time program students only), Paramedic and Emergency Medical Technician, Process Technology, Surgery Technology, Veterinary Assistant, Veterinary Technician, Welding, and Machining (eligible programs are subject to change). Opportunity Grant supports students through financial aid planning, program choice, academic advising, and support services. For more information on how to apply call 360.752.8351 and find us at www.btc.edu/opportunitygrant.

WorkFirst

WorkFirst provides funding and support services to low-income parents who receive Temporary Assistance to Needy Families (TANF) through DSHS. WorkFirst may assist with tuition, books, and fees for qualified students. WorkFirst can financially assist parents who are receiving a TANF cash grant, and do not qualify for other types of financial aid to pay for tuition, books, and fees. Students in this program are required to work closely with the WorkFirst staff at BTC, even when other funding is paying for college. To apply, contact your Case Manager or Social Worker at DSHS. Students choose a career plan that may include development of basic skills, better employability skills, or a new career, in order to progress in a pathway toward employment. Contact WorkFirst staff at 360.752.8351 and find us at www.btc.edu/workfirst.

Worker Retraining

The Worker Retraining program is designed to help unemployed or displaced workers in a variety of situations. The Worker Retraining program may provide assistance to students who:

1. Have been laid off or have received a layoff notice,
2. Currently receive or are eligible to receive unemployment benefits,
3. Have exhausted unemployment benefits within the last four years,
4. Are displaced homemakers,
5. Were self-employed but closed the business due to economic conditions in the community, or
6. Are veterans who were discharged within the past four years.

The Worker Retraining program typically provides funding to eligible students during their first quarter of enrollment, or to bridge a gap in funding at any point in a program of study. In addition to potential funding for a quarter, Worker Retraining offers assistance in a variety of other arenas and coordination of programs and services with WorkSource and the Employment Security Department. To find out more, please contact the Bellingham Technical College Worker Retraining Coordinator at 360.752.8351 and find us at www.btc.edu/workforcefunding.

Undocumented Students

Bellingham Technical College is committed to assisting all students succeed regardless of citizen status. Washington State offers financial aid to eligible undocumented students through the Washington Application for State Financial Aid (WASFA). Students may submit a WASFA at www.wsac.wa.gov/WASFA. Washington State Senate Bill 5194 allows eligible undocumented students to pay in-state

tuition if they earned a high school diploma or GED before their first quarter of enrollment in college and maintained a primary residence in Washington for at least 12 consecutive months before their first quarter of enrollment. For more information on admissions, in-state tuition, and financial aid, please call 360.752.8468 or find us at www.btc.edu/undocumented.

Dual Program

Financial aid is limited to assist with a student's primary program of study as indicated in the ctcLink system. The enrollment level associated with the student's primary program is utilized for determining financial aid eligibility. Courses associated with additional programs are not included in the enrollment level. See the Student Financial Aid Handbook on the BTC website for the enrollment levels used for financial aid awarding purposes. Students are encouraged to consult with a College Navigator in the Admissions Office if they wish to update their primary program of study.

Tuition Payment Plan

Nelnet Business Solutions, an approved third-party vendor, allows students to pay for tuition and fees gradually during the quarter. Tuition payment plans break down your tuition balance into affordable monthly payments. There's no interest, payment options are flexible, setup fees are affordable, and it's easy to enroll. Find out more at www.btc.edu/paymentplan.

ADVISING & NAVIGATION SERVICES

College Services Building, Room 106
Email: advising@btc.edu Phone: 360.752.8345

After students declare their intended program at BTC, they will be assigned a College Navigator who will help ensure they are on track with course planning and ready to enter their program of choice. Once the student is enrolled in their program, a faculty member will serve as their advisor for the remainder of the program. Their College Navigator will stay connected with the student to assist with career development activities.

College Navigators work with students in a variety of ways to help them achieve both their educational and career goals, including to:

- Set academic goals that are relevant to the student's desired career field
- Create an education plan that helps guide a student in choosing courses for future quarters
- Learn about the different technology resources students use at BTC and practice tech readiness

Enrolled students may find their College Navigator's name and contact information in myBTC.



ADVISING & NAVIGATION SERVICES

College Services Building, Room 106
Email: advising@btc.edu Phone: 360.752.8345
Website: www.btc.edu/Advising

Advising & Navigation Services offers educational pathway planning and career development to BTC students through individualized support services. Employees work with students to:

- Explore career pathways using vocational assessments, employment trends, and more
- Build an educational plan to meet program entry requirements and satisfy graduation requirements
- Provide support with job and internship searching, including resume and cover letters, interviewing, applications, etc.
- Identify action items and next steps to address challenges that may impact success in college
- Establish realistic and attainable academic and career goals
- Connect with potential funding sources to pay for college

TRIO STUDENT SUPPORT SERVICES

Campus Center Building, Room 220A
Email: trio@btc.edu Phone: 360.752.8640
Website: www.btc.edu/TRIO

TRIO supports students in achieving their goals of navigating and adjusting to college life, succeeding in their classes, graduating with a degree or certificate, and starting their career or transferring to a four-year university. The TRIO program includes personalized success coaching, 1:1 academic tutoring, assistance with applying for financial aid, student events and activities, leadership opportunities, and a supportive community of staff and students. TRIO Student Support Services at BTC is a federally funded program and one of a national network of TRIO programs. Students can learn more about eligibility for TRIO and apply online at www.btc.edu/TRIO.

COUNSELING SERVICES

College Services Building, Room 106
Email: counseling@btc.edu Phone: 360.752.8345

BTC Counseling provides free, confidential personal counseling to enrolled students. This service is short-term and solution-focused. Issues that could impact your academic success, well-being, or safety can be addressed. Many students benefit from working with the counselor on issues like adjusting to college life, balancing role expectations, stress management, depression, anxiety, loneliness, grief and loss, identity and personal development, relationship issues, navigating cultural differences, substance misuse, healthy communication and boundaries, crisis management, and suicidal thoughts. Referrals to campus and community resources and services may be provided, as needed.

REGISTRATION

College Services Building, Lobby
Email: registration@btc.edu Phone: 360.752.8350

Registration provides support to students in meeting their educational and career goals. Our goal is to educate and empower students to successfully navigate the enrollment process from program start through completion. Services provided by Registration include processing class enrollment and class changes (adds/drops/withdrawals), enrollment and degree verifications, processing official transcript requests, maintaining accurate student records, notifying students of their academic standing, Academic Advisement Report assistance, and verifying program course requirements at the time of completion.

ACCESSIBILITY RESOURCES: ACCESS AND DISABILITY SERVICES

College Services Building, Room 111
Email: ar@btc.edu Phone: 360.752.8576

Accessibility Resources (AR) strives to create an accessible college community where students with disabilities have an equal opportunity to fully participate in all aspects of the educational environment. No student shall, on the basis of their disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any college program or activity. We cooperate through partnerships with students, faculty, staff, and outside agencies to promote student independence, self-efficacy, and self-advocacy. AR maintains compliance with the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, and State of Washington Laws of 1994, Chapter 105.

Students who believe they are experiencing a barrier to their education due to a disability are responsible for formally requesting accommodations and may be asked to provide documentation prepared by a certified medical doctor, psychologist, or psychiatrist with credentials to diagnose the student's disability. To register with AR, fill out the AR application at www.btc.edu/ARApplication. For complete documentation guidelines, please visit our website at www.btc.edu/ar. While documentation is only submitted once, accommodation renewals must be made each quarter of attendance through myAR (optimally four weeks prior to the quarter start date). Late requests are accepted, but may result in a delay in accommodation placement. AR students' Rights and Responsibilities can be found on the AR website as well as on the AR Canvas Course for current, enrolled students.

VETERANS SUPPORT SERVICES

College Services Building, Room 101
Email: veterans@btc.edu Phone: 360.752.8387

Bellingham Technical College is honored to have veterans as part of our community and is committed to ensuring that all veterans, active-duty personnel, reservists, and their families have access to the educational benefits and resources entitled to them. Below is a selection of services that we offer to our veteran community.

Early Registration for Veteran Students

Students actively using VA education benefits are eligible for early enrollment each quarter. Additionally, any veteran may provide

proof of eligible veteran status to BTC's School Certifying Official to access early enrollment. Watch for your enrollment appointment time in myBTC and enroll right after your assigned time.

Residency Status Review

If you are a veteran with non-resident status, we would like to review your residency status. Please contact BTC's School Certifying Official or contact residency@btc.edu.

Advising/Educational Plan

Our Admissions and Advising offices have staff available to meet with veterans to assist with course planning and scheduling. Email advising@btc.edu to set up an appointment.

Graduation Honor Cords

BTC veteran graduates are given Veteran Honor Cords for the Commencement Ceremony. Pick up your Veteran Honor Cord during Commencement check-in.

ASSOCIATED STUDENT GOVERNMENT

Campus Center Building, Room 300
Email: asbtc@btc.edu Phone: 360.752.8357

The Associated Students of Bellingham Technical College (ASBTC) comprises all enrolled BTC students. Through the ASBTC, students have a voice to assure that student issues and concerns are heard. ASBTC's mission is to enhance the academic and personal lives of students by providing diverse and cultural opportunities with meaningful learning experiences that complement classroom education and enrich student life.

Students who participate in student government help establish campus policies and procedures, allocate the services and activities fees, serve on college governing and student committees, and evaluate student programs and services to meet the changing needs and interests of the students.

Interested in participating in student governance? Contact ASBTC now!

ASBTC Goals:

- Provide a means of self-governance for BTC students.
- Promote the educational, cultural and social welfare of BTC students.
- Guarantee an equitable opportunity for student participation and representation.
- Foster cooperation among students, faculty, administration, and the community.

ASBTC recognizes and supports student clubs. Come to the Student Center (Campus Center, Room 300) to learn about all the clubs that are available.

ASBTC is fully supported by BTC employees, administration, and trustees. Participating in ASBTC is a great way to build community, attend programming events, and learn outside of the classroom. ASBTC Executive Team members support all students and develop skills in leadership, cooperative governance, and community building.

PHI THETA KAPPA HONOR SOCIETY

Bellingham Technical College is pleased to offer membership in Phi Theta Kappa to students who exhibit academic excellence in

associate degree programs. Phi Theta Kappa, the international honor society of two-year colleges, aims to recognize and encourage scholarship among associate degree students. BTC's Beta Lambda Beta chapter of Phi Theta Kappa was chartered in 2002.

Invitation to membership is extended by the chapter to students who have completed at least 24 credits of coursework leading to an associate degree, in which they have a grade point average of 3.5 or higher. Phi Theta Kappa will be posted on their BTC transcript. Students pay a one-time membership fee and are given access to online services and activities provided by Phi Theta Kappa.

Phi Theta Kappa provides opportunities for the development of leadership and service through chapter involvement and community service projects. All members are encouraged to participate and get involved, but participation is not a requirement of membership. Interested in PTK? Email phithetakappa@btc.edu.

eLEARNING

Campus Center Building, 3rd Floor
Email: elearninghelp@btc.edu Phone: 360.752.8555

The eLearning Department supports online learning and teaching at Bellingham Technical College. eLearning manages Canvas, BTC's online Learning Management System, as well as other instructional technologies, including lecture capture and virtual meeting software. eLearning promotes inclusive, accessible course design and technology to reduce barriers and increase success for all students.

LIBRARY

Campus Center Building, 3rd Floor
Email: library@btc.edu Phone: 360.752.8383

The BTC Library supports student research and education with books, journals, eBooks, and digital resources that align with the college curriculum. These resources, including academic databases with full-text journals and newspapers, are accessible through OneSearch on the Library website at www.btc.edu/library.

Library staff offer both in-person and online research assistance and instruction at the Information Desk, in the classroom, and through "Book a Librarian" and the 24/7 "Ask a Librarian" chat service. As BTC's student technology helpdesk, the Library supports and resolves technology issues for students. The Information Commons is an open computer lab within the Library, where students can log in using their BTC credentials. The Information and Digital Literacy computer lab classroom (CC317) is also available for Library, eLearning, and instructional purposes.

At the Library Information Desk, students can check out a variety of materials including books, laptops, iPads, calculators, cameras, and more. To cater to different study needs, the Library provides accessible workstations and Wi-Fi, eight media-enhanced study rooms, and various table and seating options for quiet or collaborative study.

LOST AND FOUND

Campus Center Building, 3rd Floor
Email: library@btc.edu Phone: 360.752.8383

The Lost and Found is located at the Information Desk in the BTC Library. The college is not responsible for lost or stolen articles. Students use campus lockers at their own risk.

CAMPUS STORE

Campus Center Building, Main Floor
Email: bookstore@btc.edu Phone: 360.752.8342

Visit the Campus Store at www.btc-store.com to find required texts, materials, and supplies necessary for your degree/certificate programs and courses. Email, call, or stop by and let the Campus Store staff invest in your success. We are here to help you!

Preview or purchase course materials using the Textbook Lookup tool on the Campus Store home page.

Students receiving funding via a third-party agency (ex. DVR, Labor and Industries, etc.) or Workforce Investment Act (WIA) must work with counselors from their agency prior to purchasing books and supplies. Students receiving financial aid refunds from BTC will need to pay for books and supplies at the time of purchase.

FOOD SERVICES

G Building, Main Floor
Phone: 360.752.8471

Food service is available Monday through Friday in the Common Grounds Coffee Shop in G building, where they serve breakfast and lunch items, espresso, coffee, and fresh baked goods.

Conference and meeting rooms are available. For booking information, please call Conference and Events Services at 360.752.8303 or email events@btc.edu.

The Culinary Arts program operates the Café Culinairé restaurant in the Campus Center building and the Culinairé Express window in the Cafeteria (G Building). Both are open to the public at selected times throughout the year. Please visit www.btc.edu/CafeCulinaire for more information.

Vending machines are located in the Campus Center building, C Building, G Building, J Building, U Building, Haskell Center, Desmond McArdle Center, and Morse Center. The Campus Store, located in the Campus Center building, also sells a variety of snacks and beverages.

INSURANCE

The college does not provide students with medical or accident insurance. We encourage students who lack personal accident insurance to purchase it if they are enrolled in any degree/certificate program that involves working with machinery. Some programs require student insurance before beginning clinical internships.

Bellingham Technical College students may purchase voluntary student accident and health insurance. Insurance information is available online on BTC's Student Resources page at www.btc.edu/resources.

PARKING

Visitor parking is located in front of the College Services building, at the east end of the campus off of Nome Street in the V1 lot, and at the west end of campus off of Lindbergh in the V2 lot. The GP lot, on Lindbergh Avenue and Gilligan Way, is reserved for Dental patients and Café Culinairé customers. Registered students and employees are not visitors and are subject to parking violation

tickets, immobilization, and/or towing. *Visitors are required to sign in at the Visitor sign-in counters for each lot. Sign-in locations are in the foyers of the College Services building for the V1 lot, the A building lobby for the V2 lot, and in the Dental Clinic in C building and Café Culinairé for the GP lot.* Visitor parking is limited to 2 hours.

General free parking in designated spots only is accessed via West Illinois Street in the P1, P2, and P3 lots located north of the campus buildings. *Designated spots are those parking spaces indicated by a white line on both sides of the vehicle when parked.* Parking lots off of Nome Street or Lindbergh Avenue are restricted parking for permit, carpool, and handicap parking as designated.

Motorcycle parking is available in four (4) areas around campus and is marked M1 - M4.

Maps indicating the appropriate place to park for general, visitor, ADA, and motorcycle parking are available at the Information desk in the College Services lobby as well as in the Library on the third floor of the Campus Center.

Failure to adhere to parking rules as designated on parking lot signage will result in the following:

- Parking violation ticket
- Fines
- Immobilization, and/or towing
- Enrollment hold

ADA parking is available in the P1, R1, V1, R2, R3, and R4 parking lots. Parking in ADA-designated spaces requires an approved ADA parking permit. You can obtain the ADA parking permit by accessing the required form at www.dol.wa.gov/forms/420073.pdf. A portion of this form will need to be filled out by your physician. Once completed take the form to any licensing office to receive your ADA permit over the counter.

Information on carpool parking spaces can be obtained by visiting or calling the Cashier in the College Services building at 360.752.8311.

The following situations are subject to vehicle immobilization and/or towing (*fees are associated with the release of the immobilization device and with towing at the owner's expense*):

- Any vehicle that receives three (3) parking violations will be subject to immobilization and/or towing when the third violation or subsequent violations are issued regardless of whether prior fines are paid in full. Towing companies charge by the hour and by the day for impounded vehicles.
- Any vehicle parked in a fire lane or in handicap parking without a handicap parking permit are subject to towing and a parking citation by the Bellingham Police Department.
- Vehicles left overnight or through the weekend on college property are subject to towing.

The Parking Hotline number for immobilized or towed vehicles is 360.752.8798.

The college assumes no liability for vehicles parked in the campus parking lots.

Disputes or appeals on violations must be made in writing, giving full particulars, including a list of witnesses and evidence expected to be presented, and be submitted to the Facilities Manager or designee within five (5) days of the date of issuance, or the right to appeal is deemed waived. If the appeal is not resolved to the satisfaction of the alleged violator, they have five additional business days to

appeal to the Vice President of Administrative Services.

TUTORING SERVICES

Campus Center Building, 2nd Floor
Email: tutoring@btc.edu Phone: 360.752.8499

Bellingham Technical College provides free drop-in tutoring to students enrolled in tuition and fee-bearing courses all year when classes are in session. Tutors are recruited in all subjects where tutoring assistance is requested. To request in-person or online tutoring, contact the Tutoring Center. The current drop-in tutoring schedule is available at www.btc.edu/tutoring. If students request tutoring in an area not currently offered on the schedule, staff will do their best to locate a tutor in that subject.



**POLICIES, REQUIREMENTS,
AND RECORDS**

ACADEMIC REQUIREMENTS

DEGREE/CERTIFICATE PROGRAMS

The Associate of Applied Science (AAS) degree is awarded for completion of a comprehensive program of study in professional technical education designed to prepare graduates for technician-level employment. Programs leading to the AAS degree are 90 or more credits in length.

The Associate of Applied Science - Transfer (AAS-T) option contains the technical courses needed for job preparation; also a minimum of 20 credits of transferable general education coursework in English, math, humanities, social science, or natural science. Be sure to check with the receiving institution advisor to confirm which courses will transfer.

Direct Transfer Agreement/Major-Related Program (DTA/MRP) degree options are designed for students who intend to complete a bachelor's degree at a four-year institution prior to entering the workforce. Completion of these BTC 90-plus credit degrees prepares students to transfer with junior status to a participating college or university. Be sure to check with the receiving institution advisor to confirm which courses will transfer.

The Bachelor of Applied Science (BAS) degree is a two-year degree added on top of an existing associate degree or prior bachelor's degree.

A certificate of completion is awarded for successful completion of an approved course of study totaling less than 90 credits within a program of professional technical education.

Upon successful completion of an AAS, AAS-T, or DTA/MRP degree, a Washington state high school diploma is available to students who have not otherwise satisfied the State Board of Education's high school graduation requirements. Students must meet eligibility criteria as defined in SHB 1758 and submit an online High School Diploma application. Once verified, High School Diploma will be posted to the student's BTC transcript along with the earned degree.

Students may elect to graduate under the provisions of the catalog in force either at the time of entry or at the time of completion, providing four (4) years have not lapsed and the student has remained continuously enrolled in the program. Students needing longer than four years to complete a given degree or certificate will be subject to any updated completion requirements.

In determining whether requirements for graduation have been met, the college provides assistance through faculty advisors, college navigators, counselors, and the college catalog. However, the final responsibility for meeting all completion requirements rests with the student. Students have the responsibility of verifying specific completion requirements with their advisor and Academic Advising Report (AAR).

GENERAL COMPLETION REQUIREMENTS FOR DEGREES AND CERTIFICATES

1. Complete, with a passing grade, all listed technical and academic core courses as outlined in the BTC Catalog, Chapter 5, Programs of Study or www.btc.edu/Academics. Some degree/certificate programs may require minimum grades in required courses.
2. Complete the online BTC Graduation Application and Academic Advising Report (AAR) for each degree or certificate requested.
3. Meet all financial obligations to the college.

4. Earn a cumulative grade point average of 2.0 or higher. Individual programs may require a higher grade point average.
5. Complete 15 college-level credits in the required course work at BTC.
6. BTC may verify and award certificates and degrees as they are earned.

PROGRAM CLOSURE

BTC is committed to student completion of professional technical degrees and certificates. In the event of a degree or certificate program termination, the college will make an effort to assist students in the completion of program requirements within a specific time-frame.

COMMENCEMENT CEREMONY

All students who complete a program of 45 credits or more by the preceding fall, winter, spring, and following summer quarters are eligible to participate in the June commencement ceremony. Students must submit an online graduation application and sign up to participate in Commencement by the published deadline. Complimentary guest tickets are required for the commencement ceremony. Black cap and gown are required and can be purchased through the BTC Campus Store.

GENERAL EDUCATION REQUIREMENTS

General education courses are included in the programs to prepare students with communication, computation, and interpersonal skills required for success. All candidates for degrees and certificate options of one year, 45 credits, or longer in length must satisfy the requirements for general education.

Each program has specific requirements unique to that field of study and employment or transfer. For specific general education requirements, see individual program pages in the catalog, online at www.btc.edu/Degrees, or in an Academic Advising Report (AAR).

Minimum General Education Requirements

Certificates of 45 credits or more and Associate of Applied Science (AAS) degrees require a minimum of 3-5 credits in communications, 3-5 credits in mathematics, and 3-5 credits in human relations.

Associate of Applied Science-Transfer (AAS-T) degrees require a minimum of 5 credits in English Composition (ENGL& 101), 5 credits in college-level mathematics, and 10 credits in science, social science, or humanities.

Direct Transfer Agreement/Major-Related Program (DTA/MRP) degrees require general education to satisfy transfer requirements for universities. See requirements at www.btc.edu/Degrees.

Bachelor of Applied Science degree requirements are posted at www.btc.edu/Degrees.

Classes falling into each of the required categories are listed at www.btc.edu/Academics. Specific programs may be more prescriptive and require a particular class within one of these categories or may require additional general education requirements. These requirements are catalog year specific. Refer to program information at www.btc.edu/Degrees and talk with your college navigator regarding particular requirements.

STUDENT GRADES

GRADING POLICY

BTC uses the following letter grading symbols:

GRADE	POINT VALUE
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	0.0

INTERPRETATION OF GRADE SYMBOLS

A (4.0) Excellence in Achievement of Competency

In relation to the standards set for the course, the student has done an exceptionally high level of work and has achieved all competencies.

B (3.0) Above Average Achievement of Competency

In relation to the standards set for the course, the student has significantly exceeded the average and has achieved all competencies.

C (2.0) Average Achievement of Competency

In relation to the standards set for the course, the student accomplished an average level of work and, at a minimum, has achieved all competencies.

D (1.0) Below Average Achievement of Competency

In relation to the standards set for the course, the student did not do average work and did not meet the minimum level competencies.

F (0.0) Failure to Achieve Minimum Competency

The student failed to progress toward minimum competencies and performed at exceptionally low level of skill. Student must repeat degree/certificate program course requirement in which an F grade has been earned.

NOTE: + and - symbols are used with traditional letter grades A through D to differentiate level of achievement within a grade range. The + symbol is not used with the letter grade A, the - symbol is no longer used with the letter grade D, and neither the + or - symbols are used with the letter grade F.

The following grades do not carry grade point values and therefore are not computed into the grade point average (GPA).

GRADE	DESIGNATION
AU	Audit
CR	Academic Credit for Prior Learning (ACPL)
I	Incomplete
I (after letter grade)	In-Progress (valid grade prior to Fall Quarter 2005)
NP	No Pass
P	Pass
R (after letter grade)	Repeat (valid indicator prior to Fall Quarter 2021)
T	Transfer (valid grade prior to Summer Quarter 2009)
V	Unofficial Withdrawal (valid grade prior to Fall 2010)
W	Official Withdrawal

AU - Audit

This designation is used for continuing education courses only and must be requested by the student before the course begins or prior to the second class session. This grade is not used for academic courses or degree/certificate programs course requirements. No credit will be awarded for Audit classes. The student must pay regular tuition and fees.

CR - Academic Credit for Prior Learning (ACPL)

ACPL is credit granted toward the award of a degree or certificate for prior learning experiences, demonstrated through various means of assessment, to be the equivalent of learning gained through formal collegiate instruction. Credits are earned.

I - Incomplete

The student has completed a significant portion (75% or more) of the course requirements, but did not complete all requirements by the end of the quarter. For a student to receive a letter grade, a contract for completing the competencies must be established with the instructor and all work completed according to the contract within one year from the date the I grade was received. Failure to achieve satisfactory completion by the deadline will result in the grade changing from an I to an F.

I after letter grade - In-Progress (valid grade prior to Fall Quarter 2005)

The student has completed a significant portion of the course at the time of grading and is performing at the level of the grade identified. In-Progress grades will post each quarter until all course requirements are completed. A final grade will be posted in the quarter of completion.

NP - No Pass

In relation to the standards set for the course, the student did not meet the requirements. No Pass is used for internship courses, work-based learning experiences, and clinical courses.

P - Pass

In relation to the standards set for the course, the student met all requirements. Pass/No Pass is used for internship courses, work-based learning experiences, and clinical courses. Credits are earned.

R after letter grade - Repeat (valid indicator prior to Fall Quarter 2021)

A grade qualifier that indicates the course has been repeated. Only the highest grade will compute into the cumulative GPA. This indicator appears after the letter grade of the lowest grade.

T - Transfer credit (valid grade prior to Summer Quarter 2009)

Transfer Credit granted for coursework completed from other regionally accredited institutions, as determined by the designated transcript evaluator or dean through evaluation of official transcripts. Effective Summer Quarter 2009, cumulative transfer credits will be noted on the student transcript.

V - Unofficial Withdrawal (valid grade prior to Fall Quarter 2010)

The student discontinued the course and did not officially withdraw.

W - Official Withdrawal

A system-awarded grade for students who officially withdraw from a course or program prior to the end of the quarter, or the designation of an administrative withdrawal of the student by the college.

GRADING POLICY/GRADING CHANGES

A grade posted on a student's transcript is considered final. If a student believes there has been a grading error, it is the student's responsibility to contact the instructor right away. Instructors can submit grade changes due to an error no more than four quarters from the time the grade was awarded.

ACADEMIC INTEGRITY

Acts of cheating, plagiarism, facilitation, and fabrication by students demean the institution, debase the degrees awarded, have no place in the college, and are serious offenses to academic goals and objectives and to the rights of fellow students. Academic consequences for academic dishonesty or abetting in academic dishonesty may be imposed at the discretion of a faculty member up to and including a failing grade for the course or dismissal from an academic program. The college may also impose disciplinary sanctions against a student who commits, attempts to commit, aids, abets, incites, encourages, or assists another person to commit act(s) of academic misconduct.

ACADEMIC APPEALS

Bellingham Technical College believes in the right of all students to receive a fair and equitable review process when a grade complaint arises. These procedures will ensure that the grade awarded was not an arbitrary or capricious evaluation of the student's fulfillment of the course requirements as described in the course syllabus.

PROCEDURE

1. INITIATION OF APPEAL

All Bellingham Technical College students have a right to receive a fair and equitable review process when a grade complaint arises or after having been sanctioned for an academic integrity violation.

Students who believe they received an improper final grade or an unwarranted academic sanction shall have until the tenth

instructional day of the subsequent quarter to appeal. For example, if action was taken in fall quarter, it must be appealed no later than the tenth instructional day of winter quarter. However, if the action was taken in spring quarter, the complaint may be appealed through the tenth instructional day of the next fall quarter.

Students are responsible for retaining all papers, tests, and projects from the class in question. Appeals of grades must demonstrate an arbitrary or capricious evaluation of student work or a calculation error. W (Withdrawal) grades are not appealable.

2. INFORMAL PROCESS — RESOLUTION BETWEEN STUDENT AND FACULTY

The student initiates the academic process by speaking to the course instructor. This process should facilitate good faith efforts on the part of both the student and faculty member to resolve the matter.

PLEASE NOTE: If the instructor is no longer employed by the college, or is away from the campus for an extended period of time, the appropriate Dean will appoint two faculty members to review the student's work and the grade which is under appeal. The grade can only be changed upon the recommendation of both faculty members. If there is no agreement, the grade shall remain as awarded.

3. FORMAL PROCESS WITH THE DEAN

If the informal process with the instructor does not reach resolution, the student may initiate a formal academic appeal process by submitting a completed grade appeal form to the appropriate Dean by the end of the fourth week of the quarter. Once the Dean has received the completed form, they have ten (10) instructional days in which to discuss the situation with the instructor and the student. The student must make themselves reasonably available to meet with the Dean. The Dean has another ten (10) instructional days following their discussion(s) with the instructor and student within which to make a written recommendation to the student which may:

1. Deny the appeal or grade change.
2. Move forward the appeal and convene a Hearing Committee.

If the Dean convenes a Hearing Committee, the decision of the Hearing Committee shall be final.

3A. APPEAL OF THE PROGRAM DEAN'S DECISION TO DENY THE GRADE CHANGE

If the student wishes to appeal the Dean's decision to deny the appeal, it should be done within five (5) instructional days of receipt of the Dean's decision. The written appeal should be submitted to the Chief Academic Officer (CAO) or designee and should stipulate the reasons for the appeal. The CAO or designee has ten (10) instructional days following their receipt of the appeal to review the documents and meet with the student. The CAO or designee has another ten (10) instructional days following their meeting with the student to make a written recommendation to the student which may:

1. Uphold the decision of the Dean and deny the appeal, which will end the appeal process.
2. Move forward with grade appeal and request the Dean convene a Hearing Committee.

If the CAO requests the Dean to convene a Hearing Committee, the decision of the Hearing Committee shall be final.

4. COMPOSITION OF THE GRADE APPEAL HEARING COMMITTEE

The Grade Appeal Hearing Committee will be drawn from a pool of ten (10) volunteer faculty members (approved in advance, by the CAO) who serve on-call for a one-year term.

From the pool of ten (10) names, five (5) will be chosen randomly by the Dean (with the student and, if possible, the instructor of record, present). The student will then remove two of the five (5) names. The remaining three (3) faculty members will make up the Hearing Committee. Chosen faculty may abstain from any Hearing Committee if they stipulate that serving poses a conflict of interest. In that case another member would be selected randomly from the pool by the CAO.

A designated administrator will serve as facilitator and an ex-officio member of the Grade Appeal Hearing Committee.

4A. GRADE APPEAL HEARING COMMITTEE PROCESS

The Academic Dean or designee will contact the Grade Appeal Hearing Committee within ten (10) days of the request by the CAO.

The Hearing Committee will set a date for a hearing, review all documentation, and may interview all parties, including other students who may serve as student and/or faculty advocates. At the hearing, the instructor and the student will have a maximum of 30 minutes each in which to present their case. The Hearing Committee may vote to extend the 30-minute limit to an additional amount of time and provide the same number of minutes to both the student and instructor.

The Hearing Committee will render their decision within ten (10) business days of the Hearing. The decision of the Hearing Committee is final and the appeals process ends.

Copies of the decision will go to the CAO, the student, and the instructor. A copy also will be placed in the student's file.

COURSE REPEAT

Repeated classes will be identified on the transcript. Only the highest grade will be computed in the cumulative GPA. Students will need to fill out a Course Repeat Form if repeating a course taken prior to 2022.

Students may not take a class more than three (3) times per state regulation (this is defined as two repeats in addition to the original enrollment). A course applies to the repeat rule if the student receives a grade or withdraws.

Some programs may have more stringent restrictions for repeating courses (e.g. nursing). Requests for an exception to the course repeat rule may be submitted in writing to the appropriate Dean for review and determination.

Students receiving financial aid or veterans benefits should consult the respective office(s) prior to repeating a course, as benefits or eligibility may be reduced or canceled as a result of the repeat.

GRADES AND TRANSCRIPTS

Quarterly grades for all graded programs and courses are available in myBTC or at www.btc.edu/transcripts within three business days following the end of the quarter. Grades can be viewed on unofficial transcripts. An unofficial transcript is an unsigned and unsealed copy of the student's academic record and is available online. There is no charge for unofficial transcripts. The official transcript is a sealed copy of the student's academic record bearing the college's seal and the signature of the Registrar. Requests for official transcripts

require a student signature and must be accompanied by the appropriate transcript fee. Official transcripts are requested online at www.btc.edu/transcripts.

GED transcripts are available at www.ged.com.

Student records require a student's legal name. In myBTC, students may enter a preferred name for faculty class rosters.

It is the student's responsibility to review their transcript for accuracy.

GRADE POINT AVERAGE (GPA)

Quarterly grade point averages are calculated as follows:

1. The number of credits for a course multiplied by the numerical grade awarded to obtain the grade points for that course.
2. Add the grade points for all courses taken.
3. Divide the sum of the grade points earned by the total number of credits attempted in course awarding numerical grades to obtain the GPA for a particular quarter.

AU, CR, I, P/NP, T, and W grades are not used in computing grade point average.

CONVERSION OF CLOCK HOURS TO QUARTERLY CREDITS

Prior to Summer Quarter 2007, Bellingham Technical College was a Clock-Hour institution. Here are the appropriate equivalency formulas for converting clock hours to credits at Bellingham Technical College.

- Starting in 2001, courses taken equate to 11 clock hours to one (1) quarterly credit. For example, English 101, English Composition in the past was listed in our catalog as 54 clock hours. Using this formula, this would equate to 5 quarterly credits (rounded to the nearest whole number).
- Courses taken prior to 2001 equate to 16.5 clock hours to one (1) quarterly credit.

From 2004-05 to 2006-07 the BTC Catalog lists both clock hours and credits for courses. In the summer of 2007, BTC converted from a clock hours to a credits institution.

ACADEMIC ACHIEVEMENT

Dean's List

Students who carry a 12-credit load or more in graded courses and who earn a quarterly grade point average of 3.75 or higher are placed on the Dean's List for the quarter.

Honors Designation (effective Fall Quarter 2016)

Awarded to each full-time student enrolled in a degree with a cumulative grade point average of 3.50 or higher at the completion of all degree requirements. Full-time is defined as being enrolled for a minimum of 12 credits per quarter.

- Cum Laude: with honor
3.50-3.74 cumulative GPA
- Magna Cum Laude: with great honor
3.75-3.89 cumulative GPA
- Summa Cum Laude: with highest honor
3.90-4.00 cumulative GPA

Certificate of Merit

Full- or part-time degree/certificate program students who demonstrate academic and/or program excellence in their program may be awarded the Certificate of Merit by full-time program faculty upon program completion. Certificate of Merit recipients

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are announced at the June commencement ceremony and will be mailed their certificate. This achievement is not posted on the transcript.

Phi Theta Kappa

This is the international honor society for two-year colleges. Its primary goal is to recognize and encourage scholarship among associate degree students. To be eligible, a student must:

- Be a full-time student without an advanced degree
- Complete at least 24 credits of coursework towards an associate degree
- Have a GPA of 3.5 or higher at the time of membership application
- Pay a membership fee

ACADEMIC STANDARDS AND PROGRESS

ACADEMIC PROGRESS

The primary objective of Bellingham Technical College is to prepare an educated workforce. In educating students, BTC stresses equally the development of technical skills, communication and interpersonal skills, positive work habits, and attitudes that are required for employment. In light of this, BTC expects that students demonstrate academic progress.

In 2003, the Legislature of the State of Washington established a law requiring colleges to develop policies to ensure that undergraduate students complete degree and certificate programs in a timely manner in order to make the most efficient use of instructional resources and provide capacity within the institution for additional students.

ACADEMIC STANDARDS/CREDIT COMPLETION POLICY

Students who wish to graduate and receive a degree or certificate must earn a quarterly grade point average of 2.0 or higher in the program course requirements for the specific degree or certificate.

In order to demonstrate satisfactory progress:

1. All students will maintain regular attendance for each enrollment period. See Attendance below.
2. All students will demonstrate satisfactory progress toward meeting program objectives. This standard is defined as maintaining a quarterly grade point average minimum of 2.0*.

* Individual programs may require higher-level grades in program or individual course requirements in defining satisfactory progress. These requirements will be published and made available to students upon enrollment in the program.

ACADEMIC STANDING

Students who do not demonstrate satisfactory progress as defined above will be placed on academic alert and notified of their status. Students who do not demonstrate satisfactory progress for the following quarter will be placed on academic probation, notified of their status, informed to submit an Academic Improvement Plan and to meet with their assigned point of contact. Students will be suspended after three consecutive quarters of unsatisfactory progress, notified of their status and their future enrollment will be blocked.

Students who have been suspended as a result of unsatisfactory academic progress may petition for re-admission by the 5th instructional day of the quarter. The suspended student can find the steps to submit their petition for academic re-admission on the Student Appeals page located on the BTC website. With their petition they will need to submit an Academic Improvement Plan and an unofficial transcript. Their program dean will determine if they are approved or denied to continue enrollment at Bellingham Technical College. Students approved for re-admission will be placed on academic probation.

ATTENDANCE

Regular attendance is required to maintain satisfactory academic progress. BTC believes that attendance is a critical workplace competency and is important for overall student success. It is the student's responsibility to attend all scheduled classes or notify their instructor of any absences. Attendance may be part of the grade in certain programs or classes.

Students who fail to attend and do not participate in a course activity by the second day of class may be dropped from class by the Instructor as a No Show.

It is the student's responsibility to officially withdraw from a class and review their Student Schedule for accuracy.

STUDENT RECORDS

NOTIFICATION OF RIGHTS UNDER FERPA PRIVACY OF RECORDS/RELEASING OF INFORMATION

Bellingham Technical College policy on privacy of records and releasing of information follows the directives outlined in the Family Educational Rights and Privacy Act (FERPA), the federal law governing the protection of educational records. Registered students will be notified of this policy on an annual basis. Others can find the policy in the Bellingham Technical College catalog and website.

Personally identifiable information will not be released from an education record without the prior written consent of the student, unless an exception has been granted by FERPA (see Exceptions under FERPA section below).

RIGHTS UNDER FERPA

FERPA affords students certain rights with respect to their education records:

1. The right to inspect and review the student's education records within forty-five (45) days of the day the college receives a request for access.

Students should present to the Executive Director of Admissions and Registration a signed, written request that identifies the record(s) they wish to inspect. The Executive Director of Admissions and Registration will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Executive Director of Admissions and Registration, the director shall advise the student of the college official to whom the request should be addressed. At the time of viewing, the student shall present a form of picture identification, such as a valid driver's license, before being allowed to view the record.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

Students may ask the college to amend a record they believe is inaccurate or misleading. Students should request forms for this purpose from the Executive Director of Admissions and Registration. Students should clearly identify the part of the record they want changed and specify why it is inaccurate or misleading. If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of their right to file a formal student grievance regarding the denial of the request for amendment. Additional information regarding the formal student grievance process can be found on the Student Appeals page of the BTC website.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent (see Exceptions under FERPA below).
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures of the college to comply with the requirements of FERPA.

The office that administers FERPA is:
Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue SW
Washington D.C. 20202-5920

EXCEPTIONS UNDER FERPA

Under certain conditions, as authorized by FERPA, information can be released without student consent:

DIRECTORY INFORMATION

The term directory information is a legal term applying to that information the college may release, without student consent, to any third party, with the exception of GED candidates or graduates, and subject to college staff approval. The use of the term directory information does not imply that the college actually has documents containing student directory information or that the college has any obligation to produce such a document. It is the college's practice not to provide student contact lists to third parties.

BTC has defined directory information as the following:

- Student name
- Major field of study
- Enrollment status
- Dates of enrollment
- Date of completion
- Degree/certificate awarded
- Honors

The fact that a person has or has not taken a GED test will be treated as confidential information. This information will be released only with written permission by the GED candidate or graduate.

Students have the right to restrict the disclosure of directory information at any time. To restrict the disclosure of directory information, a student may add a privacy restriction (FERPA block) in myBTC under Student Profile or submit a written request to the Executive Director of Admissions and Registration. The written request to restrict disclosure of directory information will be honored until such time as the student presents signed written notification to the Executive Director of Admissions and Registration to remove the

restriction. A student's name will not appear in the Commencement program or any press releases, no degree or enrollment verifications will be processed for a third party and the ability to register online may need to be arranged.

U.S. MILITARY

According to federal law, the college must release to the U.S. Armed Forces student name, address, phone number, date of birth, and field of study. To restrict the disclosure of this information, a student may file a signed written request with the Executive Director of Admissions and Registration.

AUTHORIZED FEDERAL, STATE, AND LOCAL AUTHORITIES

Student authorization is not required for disclosure to an authorized representative of the following individuals or entities:

- The Comptroller General of the United States
- The Secretary of the U.S. Department of Education
- State educational authorities
- Any party legitimately connected with the student's application for or receipt of financial aid
- Accrediting organizations
- Agencies involving an audit or evaluation of compliance with education programs
- Organizations conducting studies for or on behalf of educational institutions

OTHER INSTITUTIONS

Information can be released to other schools to which a student seeks or intends to enroll.

EMERGENCY SITUATIONS

In an emergency, information can be released to law enforcement personnel, emergency personnel, and college officials in order to protect the health or safety of students or other persons.

LEGITIMATE EDUCATIONAL INTEREST

Officials of the college who are determined by the college to have a legitimate educational interest may have access to student records without obtaining consent from the student. Officials of the college is defined as:

- Persons employed by the college in an administrative, supervisory, academic, research, or support staff position
- Persons serving on college governing bodies
- Persons employed by or under contract to the college to perform a specific task, such as an attorney
- Auditors
- Persons or companies with whom the college has contracted, such as attorneys, third party services (such as National Student Clearinghouse, Parchment or BankMobile, auditors, or collection agents/ agencies)
- Persons serving on the Board of Trustees
- Students serving on official committees (such as a disciplinary or grievance committee) or who are assisting other school officials in performing their tasks

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Officials of the college have a legitimate educational interest if they need to:

- Perform duties specified in their job description or under terms of contractual agreement
- Provide campus services related to a student, such as advising, financial aid, and counseling
- Conduct tasks related to a student's education or campus discipline

JUDICIAL ORDER

Information must be released to comply with a judicial order or lawfully issued subpoena. The college will make a reasonable effort to notify the student of the order or subpoena in advance of compliance, so that the student may seek protective action. However, if the court (or other issuing agency) has ordered that the existence or the contents of the subpoena or judicial order not be disclosed, the college will comply, and notification to the student will be withheld.

Grievance hearing information about a student or students involved in a grievance investigation or grievance hearing may be released to members of the Grievance Committee, including any students assigned to that committee, if such information is germane to the investigation or hearing.

DISCIPLINARY HEARING

The results of a disciplinary hearing may be released to an alleged victim of a crime of violence without the permission of the accused.

BELLINGHAM TECHNICAL COLLEGE FOUNDATION

Student names and addresses may be released to the Bellingham Technical College Foundation for foundation-related activities. The Foundation is considered part of the college and will hold confidential such information, using the information only in specific activities intended to aid and support the college. Release of such information to the Foundation will be made only with the approval of the college president or their designee.

U.S. PATRIOT ACT

The college must release, without consent or knowledge of the student, personally identifiable information from a student's education record to the Attorney General of the United States or their designee in connection with the investigation or prosecution of terrorism crimes specified in sections 233b (g)(5)(B) and 2331 of Title 18, U.S. Code.

WRITTEN RELEASE

Personnel employed by the college who have consent in the form of a written release of information signed by the student may disclose student information to appropriate outside agencies or persons.

Student seeking to use BTC faculty or staff as a reference for employment are required to complete the Student Release for Reference or Recommendation form. Students obtain this form from their faculty.

STUDENT NAMES

PREFERRED NAME

Bellingham Technical College is committed to promoting and providing a safe and inclusive learning environment for all students. Referring to students by the name they wish to be called in classrooms and when interacting with college personnel supports a respectful learning environment. The reasons for choosing a preferred name that may be different from a legally changed name can be personal and different for each individual.

A preferred name is a name a student wishes to be known by in the college community that is different from a student's legal name. Typically, preferred names are first names. Surnames (last names) can be changed only with a legal name change.

Use of a preferred name is optional. Preferred names can be updated in myBTC under Student Profile. Preferred names will appear on class rosters, grade rosters, and the Student Homepage.

Students may have many reasons for asking to have their preferred names, over their legal names, displayed on non-legal documents:

- Students known by names that are different from their legal names
- Transgender or gender nonconforming identities
- International students or other students who wish to adopt an English language name

Staff may use your preferred name or your legal name.

- Since your preferred name is available to the instructor and in the classroom via CANVAS and your legal name remains in other systems, staff may use your legal name at times
- When this is the case, please confirm your legal name and let us know you have a preferred name that you would rather we use when interacting with you

Preferred names may not be used for purposes of fraud or misrepresentation. Bellingham Technical College reserves the right to remove a preferred name if it contains inappropriate or offensive language.

When you set your preferred name, you agree that:

- You have not set a preferred name with an intent to impersonate someone else, to deceive, or to defraud
- Hate speech, inappropriate language, or repeated frequent use of this feature may bar you from using this option, at Bellingham Technical College's discretion

LEGAL NAME

A legal name is the name that appears on your passport, driver's license, birth certificate, or U.S. Social Security Card.

Your legal name will be used in business processes and other activities that require use of a legal name. These include:

- Student Financial Resources documentation
- Financial Aid
- Student employment records
- Federal requests for information
- National Student Clearinghouse
- Parchment

- Transcripts
- Academic certifications
- Student records
- Diplomas
- International education documentation

Your legal name will appear on your BTC student ID card. Last name cannot be changed. You may request for your legal first name to be shortened (i.e., Matthew to Matt or Christine to Chris).

CHANGING YOUR LEGAL NAME

The Name Change form is available online. For a legal name change, please fill out the Name Change form and bring it to the Registration Office. You must provide official documentation to prove the legal name change.

Official documentation for a legal name change is considered one of the following:

- Government issued ID and Social Security Card with the new name
- Certified Court Order
- Marriage certificate
- Dissolution/Divorce decree

STUDENT IDENTIFICATION NUMBERS

In accordance with Washington State Law SB 5509, BTC uses randomly assigned ctcLink ID numbers as the primary identifier for students' academic records. This law is intended to add additional protection to students' identity, records, and privacy.

In response to Senate Bill 5463 the 34 Washington State Community and Technical Colleges modified how ctcLink ID numbers are assigned to new students. The purpose of this change is to move toward a common ctcLink ID number across the system, where students eventually will have one single ctcLink ID number regardless of which and how many colleges in the system they attend.

Students may have the same student ID assigned that was assigned at a previously attended college when they provide a correct social security number (SSN). This common ctcLink ID number process only affects students who apply to colleges after Dec. 15, 2011. It does not apply to previously applied or attended colleges within the Washington State Community and Technical college system.

Although a student's social security number (SSN) will not be listed as the primary student identifier, the college will still need to record it for a number of uses including financial aid, tax credits, employment verification, workforce or unemployment data, assessment/accountability research projects authorized by the college and/or the state of Washington, transcripts, and other legitimate uses authorized under state law and/or federal law.

STUDENT ID CARDS

BTC student ID cards are available in the Student Center in Campus Center Room 300. The picture identification card includes the student identification number, which may be needed for enrollment, library usage, and other campus functions. The ID card may also entitle the student to some community and retail discounts.

STUDENT RIGHTS & RESPONSIBILITIES

DISCRIMINATION AND HARASSMENT

Bellingham Technical College is committed to providing a learning and working environment characterized by mutual respect and fair treatment among all its constituents. An essential component of this environment is a strong ethic and practice of equality, acceptance, and nondiscriminatory interactions. Harassment or discrimination on the basis of race, color, sex, gender identity, sexual orientation, religion, age, marital status, national origin, perceived or actual physical or mental disability, pregnancy, genetic information, veteran's status, use of a trained guide dog or service animal, or any other basis prohibited by college policy or by state or federal laws is unacceptable and will be addressed through this policy.

According to federal law, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance."

Furthermore, Bellingham Technical College strives to provide a safe environment in which students and employees can pursue their education and/or employment free from the detrimental effects of sexual misconduct, which includes, but is not limited to, sexual harassment, domestic violence, intimate partner violence, stalking, sexual assault, and other forms of non-consensual sexual behavior.

Sex- and gender-based harassment, discrimination or violence will be addressed through the College's Grievance Rules - Discrimination and Harassment available online (Grievance Rules -- Discrimination and Harassment).

Office of the Title IX Coordinator for BTC: 360.752.8440 or titleIX@btc.edu.

Office of the Equal Employment Opportunity/Affirmative Action Officer for BTC: 360.752.8354 or hr@btc.edu.

STUDENT CONDUCT CODE

All students are subject to the Bellingham Technical College Student Conduct Code published in Chapter 495B-121 of the Washington Administrative Code and as defined in this catalog.

Copies of the entire Student Conduct Code are available to students and the campus community in the Office of the Vice President of Student Services and on the Student Resources page of the BTC website.

Enrollment in the college carries with it the requirement that the student will conduct themselves as a responsible member of the community. This includes an expectation that the student will obey appropriate laws, will comply with the rules of the college and its departments, and will maintain a high standard of integrity and honesty. Sanctions for violations of college rules or for conduct that interferes with the operation of college affairs will be dealt with by the college, and the college may impose sanctions independently of any action taken by civil or criminal authorities. In the case of minors, misconduct may be referred to parents or legal guardians.

Disciplinary action may be taken for a violation of any provision of the Student Conduct Code or violation of other college rules.

STUDENT GRIEVANCE POLICY

Bellingham Technical College believes in the right of all students to access a fair and equitable review process when a complaint arises.

2023-2024 Policies, Requirements & Records

These procedures will ensure that service received by students is proper and fair and not arbitrary, prejudiced, or capricious.

DEFINITION OF GRIEVANCE

A grievance is a complaint by a student against the application of a policy or practice of the college or college staff that is considered improper or unfair, or where there has been deviation from or misinterpretation or misapplication of a practice or policy. A grade appeal is not a grievance and is covered by a separate policy and process, as are appeals of student conduct decisions.

STUDENT GRIEVANCE PROCEDURE

1. INITIATION OF GRIEVANCE

The student will first try to resolve the matter with the appropriate BTC employee. If resolution is not achieved between the student and the BTC employee, the student will ask the employee's immediate supervisor to resolve the complaint. If resolution is not achieved at the supervisory level, the student may file a formal grievance using the appropriate online grievance form.

2. INFORMAL PROCESS — RESOLUTION BETWEEN STUDENT AND EMPLOYEE

The student wishing to initiate a complaint process must first try to resolve the matter with the appropriate BTC employee. This process should facilitate good faith efforts on the part of both the student and BTC employee to resolve the matter. In the event that the employee is no longer employed by the college, or is away from the campus for an extended period of time, the appropriate supervisor will hear the complaint.

3. INFORMAL PROCESS WITH THE SUPERVISOR

If the informal process with the employee does not reach resolution, the student may initiate an informal complaint process with the appropriate supervisor (usually a dean or director) within 10 business days of the final response from the employee. Once the supervisor has received the complaint, they have 10 business days in which to discuss the situation with the employee and the student. The student must make themselves reasonably available to meet with the supervisor. The supervisor has another 10 business days following their discussion(s) with the employee and student within which to make a written recommendation to the student which may:

1. Offer a resolution to the complaint.
2. Find the complaint unfounded.

If the supervisor finds the complaint unsupported or if the student does not accept the resolution, the student may file a formal grievance.

4. FILING A FORMAL GRIEVANCE

If the student wishes to appeal the supervisor's decision regarding their complaint, they may file a formal grievance within 5 business days of receipt of the supervisor's decision. The written appeal should be submitted through the online form available on the BTC website and will be routed to the appropriate Vice President or designee for review and response. The student will receive acknowledgment of the filing of the grievance and may withdraw the grievance at any point during the formal procedure. The Vice President or designee will notify the employee with whom the complaint was originally filed, and the employee will receive a copy of the complaint. Note: if a complaint involves a Vice President at the informal level, the formal grievance will be assigned to a different Vice President.

The Vice President has 10 business days following their receipt of the grievance to contact the involved parties and an additional 10 business days to make a written recommendation that may:

1. Uphold the decision of the supervisor.
2. Offer a resolution to the student.
3. Move forward with the grievance and convene a Review Committee.

If the Vice President upholds the decision of the supervisor or if the student does not accept the resolution, the student may request within 5 business days of receipt of the decision to move to the Grievance Review Committee stage.

4a. COMPOSITION OF THE GRIEVANCE REVIEW COMMITTEE

The Grievance Review Committee will consist of five individuals representing the various college constituencies. The committee will be made up of one administrator and four others determined through the BTC committee/governance process. The complainant may request student representation on the committee. If requested, the President will select two students to substitute for a like number of existing members of the committee. Members of the Grievance Review Committee will not be biased or personally interested in the outcome of grievance.

The appropriate Vice President or designee will serve as facilitator and an ex-officio member of the Grievance Review Committee.

4b. GRIEVANCE REVIEW COMMITTEE PROCESS

The Grievance Review Committee will review the grievance and the recommendations of the Vice President and make one of the following determinations within 10 business days:

1. That the grievance is unsupported.
2. That the grievance is supported and the committee can make a recommendation for remedy.
3. That the nature of the grievance requires a full hearing.

The committee will make its report in writing to the Vice President. The deliberations of the committee will not be disclosed to anyone except the Vice President, who will hold them confidential.

If the grievance is found to be unsupported by the committee, the Vice President will notify the student and the involved employee(s), and the grievance will be closed. The student may appeal this decision to the President.

If the grievance is found to be supported by the committee, they may make a recommendation for remedy. The Vice President will communicate the remedy to the student and the involved employee(s). If the recommendation is not acceptable to the student, they may appeal this decision to the President.

If the committee determines that the nature of the grievance requires one, they will call a full hearing.

4c. GRIEVANCE HEARING PROCESS

The appropriate Vice President or designee will establish a date for the hearing to be held within 10 business days from the date of the hearing notice. The notice establishing the date, time, and place of the hearing will be provided to all involved parties. The hearing will be conducted as expeditiously as possible and on successive days, if possible.

The student and the involved employee will each have the privilege to present a challenge if it is felt that a member of the committee is

biased. In the case of a challenge for bias, a majority of the Grievance Hearing Committee members must be satisfied that a challenged member cannot hear the case impartially before the member can be disqualified. In the case of removal of a member through the challenge process, the President will restore the committee to full membership. Challenges for bias will be resolved before the hearing date.

At the hearing, the involved employee and the student will have a maximum of 30 minutes each in which to present their case. The Grievance Hearing Committee may vote to extend the 30-minute limit to an additional amount of time and provide the same number of minutes to both the student and employee.

The student, the employee, and any others the committee deems necessary to the proceedings will make themselves available to appear at the proceeding unless they can verify to the committee that their absence is unavoidable.

The student and the employee will be permitted to have with them a party of their own choosing to act as advisor and counsel. The hearing may be monitored by the Assistant Attorney General assigned to the college.

The hearing will be closed to all except those persons directly involved in the case as determined by the Grievance Hearing Committee. Statements and materials given at the hearing will be confidential, will not be released to anyone, and may be used by the committee only for the purpose of making its findings and recommendations.

The facilitator of the Grievance Hearing Committee will convene and regulate the proceeding. The student, the employee, and the members of the hearing panel must be present during the proceeding, unless excused by the chair for good cause. Repeated failure, without reasonable explanation, of either the student or the employee to appear will be grounds for default. The student will have the burden of presenting their grievance.

All parties will have the opportunity to question participants, to present materials and documentation and to respond to materials and documentation presented.

The hearing panel will be empowered to question participants and receive materials and documentation, to exclude any person(s) felt to be unreasonably disruptive of the proceedings, to hold conferences for the settlement of the issues involved, to make decisions or proposals for decisions, and to take any other actions consistent with this procedure.

After the conclusion of the hearing, the Grievance Hearing Committee will have 10 business days to deliver a written disposition of the grievance to the involved parties. The student may appeal this decision to the President within 10 business days.

5. APPEALS TO THE PRESIDENT

The student may submit a written appeal to the President within 10 business days from the date the decision is made by the Grievance Hearing Committee. The appeal must specify in detail what findings, recommendations, or other aspects of the decision were inappropriate or inaccurate. The appeal should also include what corrective action the student desires after consideration of the appeal by the President. The President may uphold the decision of the Grievance Hearing Committee, at which point no further appeals within the college will be considered, or the President may determine a remedy. After considering an appeal, the President will issue a written decision to the parties involved within 30 business days of the receipt of the appeal. The decision of the President will

be final and no further appeals within the college will be considered.

ABSENCES DUE TO FAITH OR CONSCIENCE

BTC complies with RCW 28B.137.010 and accommodates student absences or rescheduling of learning activities for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization. Students' grades may not be adversely impacted by absences authorized under this policy.

Bellingham Technical College requires regular attendance for students. If you have special circumstances and know you will be absent from class, you must notify your instructor prior to the absence. Students seeking accommodation for reasons of faith or conscience must provide written notice to the faculty within the first two weeks of the beginning of the course of the specific dates requested. All requests for accommodation under this policy must be in writing and contain a concise explanation of how the requested holiday is related to a reason of faith or conscience or an organized activity conducted under the auspices of a religious denomination, church, or religious organization.

After an instructor is notified by the student of an upcoming absence, the instructor will determine what adjustments, if any, will need to be made to the student's scheduled classwork or assignments. The instructor shall inform the student of these adjustments within two days of receiving the student's notification. If the student's desired absence date is on a day when a test was scheduled or an assignment was due, the instructor may require that the student take the test or submit the assignment before or after the regularly assigned date. Regardless of an instructor's class expectations or grading policies, absences authorized under this policy shall not adversely impact a student's grades. If a student fails to notify any of their instructors of an absence that would have been accommodated under this policy, the instructor is not obligated to make any accommodations for the student's absence or treat the absence as authorized under this policy or the law.

CHILDREN ON CAMPUS

No employee, student, or visitor to the College should leave a child unattended at the College including in campus buildings, on campus grounds, or in a vehicle. Children are not permitted in classrooms, the library, or other learning environments except with the specific approval of the appropriate instructional dean, or the Vice President of Academic Affairs & Student Learning on an emergency basis, and for a specified and limited period of time. Children are not allowed in areas where dangerous equipment is operated and/or where chemicals, cleaning products, solvents, or hazardous products are stored or used.

SERVICE ANIMALS

In compliance with state and federal laws, service animals are permitted on Bellingham Technical College's premises or in facilities. This affords individuals with disabilities who require the assistance of a service animal equal opportunity for access to the college facilities, courses, programs, and activities.

Individuals whose animals do not meet the criteria of service animal by state and federal laws are encouraged to consult with the Accessibility Resources Office.

Definitions:

Service Animal: A dog or miniature horse trained to do work or perform tasks for an individual with a disability. The trained tasks

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directly mitigate the effects of the disability. Disabilities may be physical, sensory, psychological, intellectual, or other mental disabilities.

Handler: The person with a disability who has control, custody, or possession of the Service Animal that has been trained to perform tasks for that individual.

Physical Control: Control by means of a leash or other restraining device held by the handler. Service Animals must be under control of the Handler at all times.

Emotional Support Animal (ESA): An animal that provides emotional or passive comfort alleviating one or more of the identified symptoms or effects of a disability. An Emotional Support Animal is not a service animal under this policy.

STUDENT RIGHTS

As members of the Bellingham Technical College academic community, students are encouraged to develop the capacity for critical judgment and to engage in an independent search for truth. Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the larger community. Students should exercise their freedom with responsibility. The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the college community.

For more information on student rights, see the Bellingham Technical College Student Conduct Code published in Chapter 495B-121 of the Washington Administrative Code and as defined in this catalog.

STUDENT RIGHT TO KNOW AND CAMPUS SECURITY ACTS

In compliance with Public Law 101-542, the Student Right To Know Act and Campus Security Act, as amended by Public Law 102-26 (Higher Education Technical Amendments Act of 1991), Bellingham Technical College provides students with information about the student completion rates for the institution, as well as substance abuse prevention information, campus crimes, and security. All of this information is provided to students by e-mail and is also available on the college's website: www.btc.edu.

TRANSFERRING & EARNING CREDITS

CREDIT ACCEPTANCE POLICY

Transfer credit is granted for coursework that matches in content a course required for a BTC program. Only courses completed at a regionally accredited college or university with an earned grade of C (2.0) or higher will be considered for transfer credit. Recency of coursework may be considered in acceptance of transfer credit. Transfer credit may not exceed fifty percent (50%) of the total credits required for the degree or certificate.

BTC does not release or certify copies of transcripts from other institutions. Transcripts reflecting a student's previous secondary and college education, which have been submitted to BTC as part of the official file, will not be returned to the student. Students who need transcripts of course work completed elsewhere must order transcripts directly from the institution where the work was completed.

CREDIT EVALUATION PROCEDURES

Students seeking transfer credit must submit official, sealed transcripts or electronic from the sending institution to the Admissions Office. The official transcript will be reviewed by the college-designated transcript evaluator. Processing typically takes 2 - 4 weeks and may take longer during peak registration periods. It is recommended that students plan ahead and send records in advance of the quarter they plan to attend. For some courses, course syllabi or other descriptive information may be required in addition to an official transcript.

TECHNICAL COURSE REQUIREMENTS

Students seeking transfer credit for technical courses must submit an official transcript, and syllabus or equivalent documentation to the Admissions Office. Program faculty will be consulted to evaluate and determine credit granted for equivalent technical content. Students may be asked to provide syllabi from prior courses.

GENERAL EDUCATION COURSES

Students must submit official, sealed transcripts to the Admissions Office for evaluation and approval of credit granted for equivalent general education content. The official transcript will be reviewed by the college-designated transcript evaluator. Students may be asked to provide syllabi from prior courses.

ACADEMIC CREDIT FOR PRIOR LEARNING

Washington state is committed to fostering an educated and skilled workforce, which is essential for economic prosperity and meaningful work for its citizens. Increased enrollment in – and successful completion of – post-secondary learning programs is critical to achieving that goal. Academic Credit for Prior Learning (ACPL) can help more students complete their training and degree programs sooner by evaluating an individual's existing knowledge and competencies for college credit, including knowledge that may have been acquired through documented military training.

ACPL credits have the following limitations:

- ACPL credits are not eligible for Financial Aid and do not count toward full or part time enrollment
- ACPL credits are not eligible for payment through Running Start
- ACPL credits do not count toward residence requirements
- Only students who have completed the BTC admission process will be eligible to earn ACPL credits

For more information visit btc.edu/acpl.

CREDIT BY EVALUATION (STANDARDIZED TESTING)

CAMBRIDGE INTERNATIONAL (CI)

BTC awards unrestricted elective credit for a Cambridge (CI) score of E on A and AS level exams. Credit is awarded on the basis of official CI results, not transcript notation. Credits granted for general education or major requirements are specified on BTC's website.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

Students who have taken CLEP exams may receive credit in select courses at BTC. To request credit for CLEP scores, students must submit official CLEP scores to the Admissions Office. Credit will not be granted for scores below the ACE recommended score.

DANTES SUBJECT STANDARDIZED TESTS (DSST; FORMERLY DANTES)

The nationally recognized DSST provides college credits for learning acquired outside the traditional classroom through a suite of 38 exams in college subject areas such as Social Sciences, Math, Applied Technology, Business, Physical Sciences, and Humanities. The American Council on Education's College Credit Recommendation Service (ACE CREDIT) has evaluated and recommended college credit for all 38 DSST exams. To request credit based on DSST scores, students must submit official scores and a completed Evaluation Request to the Admissions Office. Credit awarded will be indicated in the student database and will appear on the graduate's record of cumulative waiver/transfer earned upon program completion.

CREDIT BY EXAMINATION (COURSE CHALLENGE)

The course challenge is a process permitting students to receive credit in courses in which the student demonstrates the knowledge and expertise of that course. Not all courses have a challenge procedure. Contact the ACPL coordinator to discuss the process for challenging a specific course. Course challenges require a per credit fee be paid to the Cashier prior to completing the challenge. To pass the course a minimum (B) grade is required. Students cannot challenge a course if they have completed the course or are enrolled in the course.

ASSESSMENT OF PRIOR EXPERIENTIAL LEARNING (PORTFOLIO)

Credit for Prior Experiential Learning allows students to receive credit for program course requirements in which the student demonstrates knowledge and expertise that meets the outcomes of the course(s). Credit for prior experiences can be shown through various means of assessment; however, these experiences must be equivalent to learning gained through formal collegiate instruction. This experience may include industry certifications, work experiences, and similar out-of-classroom learning. The college may recommend online instruction in portfolio development.

Prior learning credit is only available for some degree or certificate programs. Credit for prior experiential learning cannot duplicate credit granted by transfer or previously graded work. Contact the ACPL coordinator to discuss the process.

EXTRA-INSTITUTIONAL LEARNING

BTC accepts certain credentials from institutions other than regionally accredited colleges for credit. Students should provide documentation to the ACPL coordinator for evaluation. Program faculty and the ACPL coordinator may approve credit awards for additional credentials as appropriate.

AWARDING CREDIT FOR MILITARY TRAINING

BTC enrolled students who are veterans of any branch of the United States armed services must provide their official Joint Services Transcript (JST), Community College of the Air Force transcript, and/or transcript(s) from any other college/university attended to the Admissions & Advising Office.

Per the Veteran's Administration, all veteran student transfer credit must be evaluated within two quarters of program start. After the third quarter, if the student does not submit all transcripts, the student must be decertified for the use of VA education benefits.

Veteran students using education benefits are not permitted to opt out of prior credit evaluation.

DEGREE AND CERTIFICATE PROGRAM CHANGE

For students who want to change program or transfer to a different program the first step is to discuss the possibility of a program change with a College Navigator. Staff will assist with requirements needed for the new program, discuss a revised educational plan, and provide the steps for a program change. A Program Change Request form must be completed and submitted to the Admissions Office.

Those receiving financial aid or other funding should determine the effect of the change on funding status prior to initiating the change. If you change your class schedule, you will be responsible to pay any additional tuition and fees.

TRANSFERABILITY OF BTC CREDITS

To determine transferability of credits earned at Bellingham Technical College, students must request that an official BTC transcript be forwarded to the college where they want to have credits evaluated. The receiving college will determine the value of coursework completed at BTC. Contact the receiving college for evaluation information and instructions. Official BTC transcripts are ordered online at www.btc.edu/transcripts. The "&" in a BTC course prefix designates Washington State Community and Technical College Common Course Numbering (CCN). Common Course Numbering identifies those courses common within the 34 community and technical colleges in Washington State and to make course transfer between those institutions and to four-year colleges and universities as easy as possible for students, advisors, and receiving institutions.

Credits, qualifications, or requirements waived by one college may not necessarily be waived by another college. Those decisions are made at each institution.

Upon student application, each college evaluates and, if appropriate, transfers recognized or accepted credits that apply to the area of study for which the student has applied. The enrolling college determines transfer of credits earned elsewhere. When applicable, students may be accepted for advanced placement or receive a waiver of coursework.

TRANSFER RIGHTS AND RESPONSIBILITIES**STUDENT RIGHTS AND RESPONSIBILITIES**

Adapted from "The Intercollege Relations Commission (IRCR) Handbook," revised April 2022.

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 first year 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 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 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).

ARTICULATION AGREEMENTS

High School Articulations: Through county-wide agreements with school district superintendents and BTC, students may enroll in classes to receive high school and college credit at the same time. These articulation agreements are managed through the Whatcom County CTE Dual Credit Consortium and provide opportunities for high school students under five career pathways: science and natural resources, arts and communications, business and marketing, engineering and technology, and health and human services.

College Articulations: Agreements with certain public and private colleges and universities provide BTC students with transfer options to earn four-year degrees related to specific programs of study. To view a current listing of those colleges, please visit the BTC website at www.btc.edu/transferoptions. Beyond the formalized degree articulation agreements, BTC has a number of transfer agreements with state colleges and universities regarding courses. To determine if BTC credits are transferable to other colleges, contact the Registrar at the receiving college.

Participating schools and colleges must assure compliance with all applicable state regulations and the federal requirements of Title VI of the Civil Rights Act of 1964; Title IX of the Education Amendments of 1972; the American Disabilities Act of 1991, Section 504 of the Vocational Rehabilitation Act of 1973; and the Age Discrimination Act of 1975.

COPYRIGHT POLICY:

4.24.490, RCW 28B.10.842, TITLE 17 US CODE

It is the intention of Bellingham Technical College that all members of the College community adhere to the provisions of the United States Copyright Law (Title 17, United States Code, Sect. 101 et seq.). Bellingham Technical College recognizes the Copyright Act of 1976 and subsequent amendments including Guidelines for Off-the-Air Recording of Broadcast Programming for Education Purposes, The Digital Millennium Copyright Act of 1998, and The TEACH Act, which grants authors, publishers, and creators control over the copying, distribution, and performance of their original works.

Bellingham Technical College recognizes the importance of the Fair Use doctrine (Section 107 of the Copyright Act of 1976); all staff and faculty shall be responsible for acquainting themselves with its provisions so that the guidelines are followed when copying is done.



COURSES

Courses are listed under these categories in the catalog:

Core courses: Traditional program classes, usually identified by the program department code (e.g., WLD or HVACR).

Core elective courses: Some programs may offer some options for which courses fulfill the degree requirement.

Gen Ed courses: Related instruction with identified outcomes in at least the areas of communication, computation, and human relations; some programs require more.

Prerequisite courses: Classes that need to be taken to register for core classes.

IN RESPONSE TO THE CORONAVIRUS (COVID-19) OUTBREAK OR OTHER EXCEPTIONAL CIRCUMSTANCES, ALL INSTRUCTIONAL DELIVERY METHODS (E.G., ONLINE, FACE-TO-FACE, ETC.) ARE SUBJECT TO CHANGE.

COLLEGE READINESS AND SUCCESS

TRANSITIONAL STUDIES

Building A
Email: ts@btc.edu
Phone: 360.752.8341

Transitional Studies provides opportunities, resources, and practice in basic academic skills to foster student personal growth and independence to ultimately become life-long learners and active work-force members of the community.

The Transitional Studies program offers:

- Adult Basic Education (ABE) including reading, writing, and math
- High School Equivalency preparation (GED)
- High School Completion (HS+)
- English Language Acquisition (ELA) for immigrants and Limited English Proficient-LEP(DSHS) clients
- Career Pathway planning
- Integrated Basic Education and Skills Training (I-BEST)

The Transitional Studies program is open to adults who meet the following requirements:

- Complete a basic academic skills assessment (CASAS)
- Participate in orientation sessions

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

- Commit to regular attendance
- Have ability to participate positively in an adult learning environment
- 16 years or older and not enrolled in a K-12 school

ACCOUNTING

OVERVIEW

Choose Bellingham Technical College's Accounting program to prepare to get top accounting jobs. Employment choices are extensive in the high-demand field of accounting and financial jobs with this associate degree; you could work in a variety of office and business settings doing full-service bookkeeping, accounts receivable/payable, general ledgers, or payroll. If you're good with numbers and have a high attention to detail, BTC's associate degree Accounting Program will provide you a wide range of skills to use with top employers. Our graduates find bookkeeper and accountant jobs at wholesale firms and retail businesses; in local, state, and federal government; with service providers; and with health and education organizations.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Analyze and record business transactions; prepare and evaluate financial statements using Generally Accepted Accounting Principles.
- Use an integrated accounting software program (QuickBooks) to record transactions and create financial reports and statements.
- Demonstrate the ability to apply payroll laws, compute payroll, record payroll entries, and prepare federal and state forms that pertain to payroll.
- Interpret and apply managerial accounting information in various business decision-making roles.
- Solve business problems in Excel using formulas, functions, lists, and charts.
- Demonstrate the ability to apply Internal Revenue Code and prepare individual income tax returns.
- Demonstrate the ability to apply Internal Revenue Code, Washington State tax code to prepare federal and WA State B&O Tax returns.
- Apply communication and interpersonal skills in a business environment while providing effective accounting support to an employer.

After successfully completing the Accounting Assistant certificate, students will be able to:

- Analyze and record business transactions; prepare and evaluate financial statements using Generally Accepted Accounting Principles.
- Use an integrated accounting software program (QuickBooks) to record transactions and create financial reports

and statements.

- Demonstrate the ability to apply payroll laws, compute payroll, record payroll entries, and prepare federal and state forms that pertain to payroll.
- Solve business problems in Excel using formulas, functions, lists, and charts.

PLACEMENT REQUIREMENTS

ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and

ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and

ACCUPLACER Quantitative Reasoning (254) OR Math 098 with a C or higher.

DEGREE AND CERTIFICATE REQUIREMENTS

Accounting Technician AAS and Certificate completion requires a cumulative GPA of 2.0 or higher and a minimum grade of C/2.0 in all courses.

ASSOCIATE OF APPLIED SCIENCE

Accounting Technician, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 67-69 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
ACCT& 201	Principles of Accounting I	5 CR
ACCT& 202	Principles of Accounting II	5 CR
ACCT& 203	Principles of Accounting III	5 CR
ACCT 205	Taxation-Individuals	5 CR
ACCT 210	Taxation - Business Entities	5 CR
ACCT 245	Payroll Procedures	5 CR
ACCT 246	QuickBooks	5 CR
ACCT 275	Field-Based Experience	5-7 CR
BUS& 101	Introduction to Business	5 CR
BUS 191	Technical Communications	5 CR
BUS& 201	Business Law	5 CR
CAP 101	Microsoft Computer Applications	5 CR
CAP 142	Microsoft Excel	5 CR

ELECTIVE COURSES: 6-8 CREDITS

Students are encouraged to choose electives from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BIOL&, CHEM&, BUS, BUS&, CAP, CMST&, CS, CS&, ECON&, ENGL&, HIST&, HT, HUM&, IT, MATH&, PHYS&, POLS&, PSYC&, SOC&, and SPAN&.

GENERAL EDUCATION COURSES: 15 CREDITS

BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR
OR higher		
AENGL 100	Applied English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
OR		

BUS 188	Business English	5 CR
CMST& 210	Interpersonal Communication	5 CR

TOTAL PROGRAM CREDITS: 90

CERTIFICATE

Accounting Assistant Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 32 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
ACCT& 201	Principles of Accounting I	5 CR
ACCT& 202	Principles of Accounting II	5 CR
ACCT 245	Payroll Procedures	5 CR
ACCT 246	QuickBooks	5 CR
CAP 101	Microsoft Computer Applications	5 CR
CAP 142	Microsoft Excel	5 CR

GENERAL EDUCATION COURSES: 15 CREDITS

BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR
OR higher		
AENGL 100	Applied English	5 CR
OR		
BUS 188	Business English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 47

ADMINISTRATIVE ASSISTANT

OVERVIEW

Train for a career as an administrative assistant, administrative secretary, office administrator, or office manager and work in your choice of business and office settings. BTC's Administrative Assistant program will prepare you for success in today's business world, as you use your math, communication, and technical reading skills—and discover your personal strengths. The Administrative Assistant program will give you the hands-on and classroom instruction that all kinds of employers need. You could work in service firms like education and health, legal and finance, insurance or real estate. Manufacturing, construction, and transportation companies also hire skilled administrative assistants.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Demonstrate proper keyboarding technique with a minimum speed and accuracy.

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- Perform math calculations for business scenarios and analyze business financial documents.
- Communicate verbally and in writing using standard English.
- Prepare business documents using Microsoft Word, Excel, Access, PowerPoint, and Outlook.
- Create and manage files in Microsoft Office, Google, and Adobe applications.
- Analyze business organizational structure and the role of an administrative assistant in the office environment.
- Apply techniques for managing time, organizing records, and running meetings in an office environment.

After successfully completing the Office Assistant Certificate, students will be able to:

- Demonstrate proper keyboarding technique with a minimum speed and accuracy.
- Perform math calculations for business scenarios and analyze business financial documents.
- Communicate verbally and in writing using standard English.
- Demonstrate introductory skills in Microsoft Word, Excel, Access, PowerPoint and Excel.
- Analyze business organizational structure and the role of an administrative assistant.

PLACEMENT REQUIREMENTS

ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and

ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and

ACCUPLACER Arithmetic (254) or higher OR MATH 090 with a C or higher

DEGREE AND CERTIFICATE REQUIREMENTS

Administrative Assistant AAS Degree and Certificate of completion requires a cumulative GPA of 2.0 or higher and a minimum grade of C/2.0 in all courses.

ASSOCIATE OF APPLIED SCIENCE

Administrative Assistant, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 65-67 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
ACCT 141	Practical Accounting I	5 CR
OR		
ACCT& 201	Principles of Accounting I	5 CR
BUS& 101	Introduction to Business	5 CR
BUS 123	Records Management	3 CR

BUS 191	Technical Communications	5 CR
BUS& 201	Business Law	5 CR
BUS 276	Field-Based Experience	5-7 CR
CAP 101	Microsoft Computer Applications	5 CR
CAP 111	Skillbuilding and Document Formatting	5 CR
CAP 114	Microsoft Outlook	3 CR
CAP 138	Microsoft Word	5 CR
CAP 142	Microsoft Excel	5 CR
CAP 143	Adobe File Management	3 CR
CAP 146	Microsoft Access	3 CR
CAP 148	Microsoft PowerPoint	3 CR
IT 107	Using Cloud Services	3 CR

ELECTIVES COURSES: 15 CREDITS

Administrative Assistant students are encouraged to choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BIOL&, CHEM&, BUS, BUS&, CAP, CMST&, CS, CS&, ECON&, ENGL&, HIST&, HT, HUM&, IT, MATH&, PHYS&, POLS&, PSYC&, SOC&, and SPAN&.

GENERAL EDUCATION COURSES: 15 CREDITS

BUS 150	Math for Business	5 CR
AENGL 100	Applied English	5 CR
OR		
BUS 188	Business English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 95-97

CERTIFICATE

Office Assistant Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 12 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
BUS& 101	Introduction to Business	5 CR
CAP 101	Microsoft Computer Applications	5 CR

ELECTIVE COURSES: 15 CREDITS

Office Assistant students may choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BUS, BUS&, CAP, HT, and IT (excluding IT 105).

GENERAL EDUCATION COURSES: 15 CREDITS

AENGL 100	Applied English	5 CR
OR		
BUS 188	Business English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
BUS 150	Math for Business	5 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 42

AUTOMOTIVE COLLISION REPAIR TECHNOLOGY

OVERVIEW

Love cars and want to make fixing them your career? Bellingham Technical College's Automotive Collision Repair Technology program will give you training for a career as an automotive collision repair technician, automotive glass specialist, painter, or auto body repair shop manager. BTC's automotive classes will train you for all aspects of automotive repair using the latest technological processes and equipment in our full-service shop. Your training will include trade-specific skills, such as how to repair and refinish damaged vehicles.

BTC's Auto Collision Repair program will train you with hands-on instruction that will earn you top jobs with employers such as independent automotive repair shops, car detailing shops, automotive manufacturers, automotive recyclers, and more.

The Auto Collision Repair Technology program is an I-CAR Industry Training Alliance member.

PROGRAM OUTCOMES

Graduates of the Automotive Collision Repair Technology AAS and AAS-T Degree Program will be able to:

- Use basic industry tools, equipment and hazardous materials safely.
- Diagnose and repair basic non-structural auto body damage to I-CAR standards.
- Assess damaged vehicles and perform structural auto body repairs to I-CAR standards.
- Diagnose and repair various types of plastic and composites used in the automotive industry.
- Refinish various substrates to pre-accident condition.
- Obtain I-CAR aluminum welding certification.
- Obtain I-CAR steel welding certification.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ADDITIONAL REQUIREMENTS

A driver's license is not required to enroll in the program.

Driving citations will not restrict or prevent students from enrolling in the Automotive Collision Repair Technology Program; however, citations may prevent some internship and/or employment opportunities.

DEGREE REQUIREMENTS

Automotive Collision Repair Technology Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C-/1.7 for CRT courses and a minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Automotive Collision Repair Technology, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

CRT 101	Introduction to Shop Safety	3 CR
CRT 122	Non-Structural Body Repair	8 CR
CRT 203	Non-Structural Industry Simulation	6 CR
AENGL 100	Applied English	5 CR

QUARTER 2

CRT 102	Automotive Refinishing Basics	10 CR
CRT 223	Refinish Industry Simulation	6 CR
AMATH 100	Applied Occupational Math	5 CR

QUARTER 3

CRT 123	Auto Collision Exterior Lighting and Plastics	4 CR
CRT 202	Admin Industry Simulation	6 CR
CRT 222	Structural Industry Simulation	6 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

CRT 103	New Technology and Exterior Trim	3 CR
CRT 133	Alternative Exterior Panel Replacement	4 CR
CRT 201	Advanced Collision Concepts I	5 CR
CRT 221	Advanced Collision Concepts II	5 CR

QUARTER 5

CRT 121	Removable Panels & Glass	3 CR
CRT 131	Ferrous Auto Collision Welding	4 CR
CRT 132	Non-Ferrous Auto Collision Welding	5 CR

QUARTER 6

CRT 231	Final Industry Certification	2 CR
CRT 232	Weld Certification Aluminum	3 CR
CRT 233	Weld Certification Steel	3 CR
CRT 234	Field-Based Experience	7 CR

Total Program Credits: 108

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Automotive Collision Repair Technology, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

CRT 101	Introduction to Shop Safety	3 CR
CRT 122	Non-Structural Body Repair	8 CR
CRT 203	Non-Structural Industry Simulation	6 CR
ENGL& 101	English Composition I	5 CR

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QUARTER 2

CRT 102	Automotive Refinishing Basics	10 CR
CRT 223	Refinish Industry Simulation	6 CR
MATH& 141	Precalculus I	5 CR

QUARTER 3

CRT 123	Auto Collision Exterior Lighting and Plastics	4 CR
CRT 202	Admin Industry Simulation	6 CR
CRT 222	Structural Industry Simulation	6 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

CRT 103	New Technology and Exterior Trim	3 CR
CRT 133	Alternative Exterior Panel Replacement	4 CR
CRT 201	Advanced Collision Concepts I	5 CR
CRT 221	Advanced Collision Concepts II	5 CR

QUARTER 5

CRT 121	Removable Panels & Glass	3 CR
CRT 131	Ferrous Auto Collision Welding	4 CR
CRT 132	Non-Ferrous Auto Collision Welding	5 CR
Humanities, Social Science, or Natural Science		5 CR

QUARTER 6

CRT 231	Final Industry Certification	2 CR
CRT 232	Weld Certification Aluminum	3 CR
CRT 233	Weld Certification Steel	3 CR
CRT 234	Field-Based Experience	7 CR

Total Program Credits:

113

- Communicate work performed using trade specific language while documenting critical aspects clearly and concisely.
- Demonstrate positive work traits and excellent customer service skills.
- Research and identify emerging automotive related technologies.
- Model teamwork that is reflective of a diverse work environment.

CERTIFICATE OUTCOMES

After successfully completing the General Automotive Repair certificate, students will be able to:

- Comply with personal and environmental safety practices specific to the automotive industry.
- Perform fundamental maintenance and repairs on basic automotive systems
- Provide critical thinking skills while utilizing technical information to perform various repairs.
- Communicate work performed using trade specific language while documenting critical aspects clearly and concisely.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ADDITIONAL REQUIREMENTS

Prior to enrolling in program classes, students are required to submit the following documentation to the Admissions & Advising office:

1. Copy of your valid Driver's License (with no restrictions due to driving offenses);
2. Current complete 3-year driving record from Washington State DOL. This copy of your driving record will be kept on file for advising purposes only.

Important Program Notes:

1. You are required to maintain a valid driver's license as long as you are enrolled in this program.
2. Many employers and internship providers in this field will only hire applicants who have a clean driving record.
3. Driving records (abstracts) can be obtained for a fee. It is the responsibility of the applicant to pay for and order their driving records. You may obtain a copy of your current "Abstract of Driving Record" at your local Department of Licensing or by accessing the Washington State Department of Licensing on the web at www.dol.wa.gov.
4. A renewed copy of your valid driver's license (with no restrictions due to driving offenses) may again be required at the start of your second year in the program.
5. All General Education courses must be completed prior to

AUTOMOTIVE TECHNOLOGY

OVERVIEW

If you're interested in how cars and trucks run and how you can service and repair them, choose BTC's automotive technician training program, which will help prepare you for top jobs in the automotive field.

Career choices are extensive in the field of automotive technology; you'll be well-qualified for automotive technician or service technician jobs. Or you can work as a specialist in automatic transmission, brake, engine performance, or electrical systems. If you're looking for an Automotive Technology associate degree program or certificate program that provides a wide range of high-demand skills sought by top employers (including automotive dealerships, auto rental companies, federal and local government repair shops, and fleet maintenance businesses), then check out the program at Bellingham Technical College.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Comply with personal and environmental safety practices specific to the automotive industry.
- Perform advanced maintenance and light repairs on various automotive systems.
- Diagnose and repair electrical and electronic systems.
- Provide critical thinking skills while utilizing technical information and testing procedures to diagnose customer concerns.

the beginning of the 2nd year.

DEGREE AND CERTIFICATE REQUIREMENTS

Automotive Technology AAS Degree and Certificate completion require a cumulative GPA of 2.0 or higher with a minimum grade of D/1.0 in program courses. General education courses require a minimum grade of D/1.0.

ASSOCIATE OF APPLIED SCIENCE Automotive Technology, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AUTO 100	Introduction to Automotive Technology	8 CR
AUTO 102	Introduction to Automotive Lab	4 CR
AUTO 113	HVAC	4 CR
AENGL 100	Applied English	5 CR

QUARTER 2

AUTO 150	Engines	6 CR
AUTO 151	Electricity/Electronics 1	2 CR
AUTO 152	Engines Lab	8 CR
AMATH 100	Applied Occupational Math	5 CR

QUARTER 3

AUTO 160	Chassis Systems	8 CR
AUTO 162	Chassis Systems Lab	8 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

AUTO 219	Field Based Experience I	12 CR
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QUARTER 5

AUTO 220	Electricity/Electronics 2	6 CR
AUTO 222	Electricity/Electronics 2 Lab	6 CR
AUTO 229	Field Based Experience II	4 CR

QUARTER 6

AUTO 230	Transmission Systems	8 CR
AUTO 232	Transmission Systems Lab	4 CR
AUTO 259	Field Based Experience III	4 CR

QUARTER 7

AUTO 279	Field Based Experience IV	4 CR
AUTO 280	Engine Performance	4 CR
AUTO 282	Engine Performance Lab	6 CR
AUTO 290	Alternative Energy and Emerging Tech	2 CR

Total Program Credits: 123

CERTIFICATE

General Automotive Repair Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AUTO 100	Introduction to Automotive Technology	8 CR
AUTO 102	Introduction to Automotive Lab	4 CR
AUTO 113	HVAC	4 CR
AENGL 100	Applied English	5 CR

QUARTER 2

AUTO 150	Engines	6 CR
AUTO 151	Electricity/Electronics 1	2 CR
AUTO 152	Engines Lab	8 CR
AMATH 100	Applied Occupational Math	5 CR

QUARTER 3

AUTO 160	Chassis Systems	8 CR
AUTO 162	Chassis Systems Lab	8 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 63

BUSINESS

OVERVIEW

Bellingham Technical College offers your first step toward a successful career in business and finance. Earn your associate degree and a solid foundation at BTC in two years, and be ready to transfer to a four-year college or university to earn your bachelor's degree in business management to build a career in a field that is experiencing strong growth in Washington and nationwide.

BTC's Associate in Business transfer degree is designed for students who want to transfer to major in business at a Washington State college or university. After completing the 90-credit-hour associate degree program at BTC, you may transfer as a junior into a Bachelor of Arts (BA) or Bachelor of Science (BS) program in business administration, accounting, management information systems, and more.

At BTC you'll begin building your core of business knowledge with academic coursework in English, economics, business law, and accounting. You'll also develop top interpersonal and communication skills that will prepare you for today's global, diverse, and competi-

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

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tive business environment.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Business DTA/MRP Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for required courses.

DIRECT TRANSFER AGREEMENT/ MAJOR RELATED PROGRAM

Associate in Business, Direct Transfer Agreement/ Major Related Program

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

ADVISING NOTES

- Students must complete at least 90 quarter hours of transferable credit to receive a DTA degree.
- Students must complete a minimum of 60 credits of general education course work to receive a DTA degree.
- Any specific course may be credited toward no more than one distribution or skill area requirement.
- Students should make early contact with their potential transfer institution(s) regarding specific course choices within distribution areas.
- Students should check with their potential transfer institution(s) about requirements for overall minimum GPA, or higher GPA on a subset of courses.
- No more than 10 credits per discipline area, five credits maximum in world languages or ASL, and no more than five credits in performance/skills classes are allowed.

Classes may only be applied to one distribution area.

Some universities require specific classes. Please check with intended bachelor's institution.

COMMUNICATION SKILLS: 10 CREDITS

ENGL& 101	English Composition I	5 CR
ENGL& 102	English Composition II	5 CR

NOTE 1:

To meet current EWU requirements, the second English composition course must be equivalent to EWU's English 201- College Composition: Analysis, Research, and Documentation.

QUANTITATIVE/SYMBOLIC REASONING SKILLS: 10 CREDITS

MATH& 151	Calculus I	5 CR
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Choose an additional class from the following options:

MATH& 107	Math in Society	5 CR
MATH& 141	Precalculus I	5 CR
MATH& 142	Precalculus II	5 CR
MATH& 152	Calculus II	5 CR
MATH& 163	Calculus 3	5 CR

HUMANITIES: 15 CREDITS

Choose three classes from at least two subject areas. No more than 5 credits in world language at the 100-level.

CMST& 210	Interpersonal Communication	5 CR
CMST& 220	Public Speaking	5 CR
HIST& 146	United States History I	5 CR
HIST& 147	United States History II	5 CR
HIST& 148	United States History III	5 CR
HUM& 101	Introduction to Humanities	5 CR
SPAN& 121	Spanish I	5 CR
SPAN& 122	Spanish II	5 CR

NOTES 2 AND 3:

Students intending the international business major should consult their potential transfer institution(s) regarding the level of world language required for admission to the major. Five (5) credits in world languages may apply to the Humanities requirement.

Students are encouraged to include a speech or oral communication course (not small group communication).

SOCIAL SCIENCES: 15 CREDITS

ECON& 201	Micro Economics	5 CR
ECON& 202	Macro Economics	5 CR

Choose one additional class from the following options:

BUS& 101	Introduction to Business	5 CR
POLS& 202	American Government	5 CR
PSYC& 100	General Psychology	5 CR
PSYC& 200	Lifespan Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR

NATURAL SCIENCES: 15 CREDITS

MATH& 146	Introduction to Statistics	5 CR
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Choose two additional classes in physical, biological and/or earth sciences; one class must be a laboratory class.

BIOL& 160	General Biology with Lab	5 CR
BIOL& 260	Microbiology	5 CR
CHEM& 110	Chemical Concepts w/Lab	5 CR
CHEM& 121	Intro to Chemistry	5 CR
CHEM& 131	Introduction to Organic/Bio-Chemistry	5 CR
NUTR& 101	Nutrition	5 CR
PHYS& 110	Physics for Non-Science Majors w/Lab	5 CR
PHYS& 221	Engineering Physics I w/Lab	5 CR
PHYS& 222	Engineering Physics II w/Lab	5 CR

NOTE 4:

Students considering the manufacturing management major at WWU should consult WWU regarding the selection of natural science courses required for admission to the major.

BUSINESS: 20 CREDITS

ACCT& 201	Principles of Accounting I	5 CR
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ACCT& 202	Principles of Accounting II	5 CR
ACCT& 203	Principles of Accounting III	5 CR

NOTE 5:

International students who completed a business law course specific to their home country must take a business law course at a U.S. institution in order to demonstrate proficiency in U.S. business law.

ELECTIVES: 5 CREDITS

5 credits of non-business electives

NOTE 6:

Four institutions have requirements for admission to the major that go beyond those specified above. Students can meet these requirements by careful selection of the elective University Course Equivalent to:

- Gonzaga BMIS 235: Management Information Systems
- PLU CSCE 120: Computer Information Systems, or either an equivalent course or skills test
- WSU (all campuses): MIS 250 Management Information Systems
- WWU: MIS 220 Introduction to Business Computer Systems

Total Program Credits: **90**

BUSINESS MANAGEMENT

OVERVIEW

Choose Bellingham Technical College's Business Management program to prepare for entry-level positions in industry, government, and non-profit organizations or continue on the pathway to BTC's Bachelor of Applied Science - Operations Management degree. Students will acquire a background in basic business including accounting, business law, marketing, and economics as well as practical supervisory skills.

In addition to the required core classes, students choose from one of three specialty tracks (Social Media Marketing, Human Resources Specialist, and Operations Management), each comprising three specialty classes. For incumbent workers seeking to hone their skills, these specialty tracks are also designed as short certificates.

PROGRAM OUTCOMES

Students will learn core business practices, principles, and theories allowing them to make immediate and significant contributions in the workplace. Students will gain the knowledge, skills, and abilities necessary to coordinate human, financial and material resources to achieve organizational objectives while adhering to government guidelines.

After successfully completing the AAS degree, students will be able to:

- Effectively communicate in the context of business and in a business environment;
- Use data to engage in effective decision-making;
- Apply ethical and legal principles to the business environ-

ment;

- Demonstrate mastery of the core functional areas of business including accounting, economics/finance, marketing, management, and planning & strategy.

After successfully completing the Human Resources Specialist certificate, students will be able to:

- Describe the unique roles of Human Resources professionals and their impact on the organization;
- Explain the primary processes of workforce planning, job analysis and design, training and development, compensation and benefits, and performance appraisal
- Identify the key federal and Washington state employment laws, regulations, and terminology;
- Develop a written strategic compensation plan.

After successfully completing the Operations Management certificate, students will be able to:

- Analyze individual and group behavior, and understand the implications of organizational behavior on the process of management;
- Demonstrate an optimized approach to planning, executing, monitoring, and controlling projects;
- Describe and discuss the mechanics of operating a small business (pricing, human relations, purchasing, inventory, financial controls);
- Analyze and apply strategies to maintain quality and stability within operations.

After successfully completing the Social Media Marketing certificate, students will be able to:

- Describe SMART social media goals to achieve successful online campaigns;
- Evaluate a company's current situation, isolate social media issues, and provide solutions by identifying appropriate social media marketing portals to influence consumer and improve the company's reputation;
- Create a social media marketing plan and track progress in achieving goals with a variety of measurement tools, services, and metrics;
- Use analytics to monitor and evaluate progress.

PLACEMENT REQUIREMENTS

ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and

ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and

ACCUPLACER Quantitative Reasoning (254) or higher OR MATH 098 with a C or higher.

DEGREE AND CERTIFICATE REQUIREMENTS

Business Management Degree and Certificate completion requires

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a cumulative GPA of 2.0 or higher and a minimum grade of C/2.0 in all courses.

ASSOCIATE OF APPLIED SCIENCE

Business Management, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 45 CREDITS

ACCT 141	Practical Accounting I	5 CR
OR		
ACCT& 201	Principles of Accounting I	5 CR
BIT 100	Survey of Business and Information Technology	2 CR
BUS 120	Principles of Marketing	5 CR
BUS 191	Technical Communications	5 CR
BUS& 201	Business Law	5 CR
BUS 210	Organizational Leadership	5 CR
CAP 101	Microsoft Computer Applications	5 CR
CAP 114	Microsoft Outlook	3 CR
CAP 142	Microsoft Excel	5 CR
ECON& 201	Micro Economics	5 CR

SPECIALTY COURSES: 20 CREDITS

Human Resources Specialist

BUS& 101	Introduction to Business	5 CR
BUS 137	Introduction to Human Resources	5 CR
BUS 138	Introduction to Compensation and Benefits	5 CR
BUS 139	Introduction to Employment Law and Labor Relations	5 CR

Operations Management

BUS& 101	Introduction to Business	5 CR
BUS 137	Introduction to Human Resources	5 CR
BUS 152	Introduction to Operations Management	5 CR
BUS 153	Introduction to Lean Management	5 CR

Social Media Marketing

BUS& 101	Introduction to Business	5 CR
BUS 127	Social Media Marketing	5 CR
BUS 128	Search Engine Marketing	5 CR
BUS 129	Social Media Marketing Campaign	5 CR

REQUIRED ELECTIVE COURSES: 10 CREDITS

Business Management students are encouraged to choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BIOL&, CHEM&, BUS, BUS&, CAP, CMST&, CS, CS&, ECON&, ENGL&, HIST&, HT, HUM&, IT, MATH&, PHYS&, POLS&, PSYC&, SOC&, and SPAN&.

GENERAL EDUCATION COURSES: 15 CREDITS

AENGL 100	Applied English	5 CR
OR		
BUS 188	Business English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR

OR higher		
CMST& 210	Interpersonal Communication	5 CR
Total Credits:		90

CERTIFICATE

Human Resources Specialist Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 20 CREDITS

BUS& 101	Introduction to Business	5 CR
BUS 137	Introduction to Human Resources	5 CR
BUS 138	Introduction to Compensation and Benefits	5 CR
BUS 139	Introduction to Employment Law and Labor Relations	5 CR

Total Program Credits:		20
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Operations Management Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 20 CREDITS

BUS& 101	Introduction to Business	5 CR
BUS 137	Introduction to Human Resources	5 CR
BUS 152	Introduction to Operations Management	5 CR
BUS 153	Introduction to Lean Management	5 CR

Total Program Credits:		20
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Social Media Marketing Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 20 CREDITS

BUS& 101	Introduction to Business	5 CR
BUS 127	Social Media Marketing	5 CR
BUS 128	Search Engine Marketing	5 CR
BUS 129	Social Media Marketing Campaign	5 CR

Total Program Credits:		20
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COMPUTER SUPPORT SPECIALIST

OVERVIEW

In a world where everyday items are increasingly dependent upon computers – from phones to televisions to medical equipment – the need for skilled workers who can troubleshoot computer software issues is growing. If you enjoy combining technical and customer service skills in a variety of business and office settings, Bellingham Technical College's Computer Support Specialist associate degree could be a good fit to get your tech career started. BTC's Computer Support Specialist program will train you for top jobs in computer support, software, help desk support, PC support, and training and software support coordination.

BTC's classes will train you in valuable software and computer support skills needed by companies big and small, including hospitals, financial institutions, large corporations, school districts, and uni-

versities. Computer hardware and software manufacturers also hire BTC's program graduates to work as customer service representatives and help desk personnel.

Students in the Computer Support Specialist associate degree program at Bellingham Technical College will receive training in word processing, spreadsheets and databases; teaching others how to use computers and software; basic computer programming and website building; operating system installation and configuration; and more.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Apply industry standard IT networking solutions to understand and troubleshoot networking issues.
- Design and develop an IT Helpdesk disaster recovery plan.
- Troubleshoot operating systems or software problems.
- Design and develop a hardware-based user needs assessment.
- Use a variety of scripting tools or languages to automate routine tasks.
- Provide satisfactory helpdesk solutions to problems or scenarios with Microsoft Office software using industry standard helpdesk procedures.
- Provide efficient and effective IT technical support to clients in a manner that promotes safe computing practices and encourages effective working relationships.

After successfully completing the Computer Support Specialist certificate, students will be able to:

- Provide satisfactory helpdesk solutions to problems or scenarios with Microsoft Office software using industry standard helpdesk procedures.
- Troubleshoot operating systems or software problems.
- Provide efficient and effective IT technical support to clients in a manner that promotes safe computing practices and encourages effective working relationships.

PLACEMENT REQUIREMENTS

ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher.

ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

ACCUPLACER Arithmetic (238) or higher OR MATH 090 with a C or higher.

DEGREE AND CERTIFICATE REQUIREMENTS

Computer Support Specialist Degree and Certificate completion requires a cumulative GPA of 2.0 or greater and minimum grade of D/1.0 for all program courses. AAS-T Degree completion requires a

cumulative GPA of 2.0 or greater and minimum grade of D/1.0 for all program courses. General Education courses must have a minimum grade of C or higher.

ASSOCIATE OF APPLIED SCIENCE Computer Support Specialist, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AMATH 100	Applied Occupational Math	5 CR
OR		
BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR
BIT 100	Survey of Business and Information Technology	2 CR
IT 101	Using Network Computer Systems	5 CR
IT 141	A+ Operating Systems	5 CR

QUARTER 2

CAP 138	Microsoft Word	5 CR
CAP 142	Microsoft Excel	5 CR
IT 112	A+ Hardware	5 CR

QUARTER 3

AENGL 100	Applied English	5 CR
OR		
BUS 191	Technical Communications	5 CR
OR		
ENGL& 101	English Composition I	5 CR
OR		
ENGL& 102	English Composition II	5 CR
BUS& 101	Introduction to Business	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

QUARTER 4

CAP 146	Microsoft Access	3 CR
Elective		
Elective		

QUARTER 5

IT 120	Command Line Interface & Scripting	5 CR
IT 160	Network Technology I	5 CR
Elective		

QUARTER 6

IT 142	Windows Desktop I	5 CR
IT 270	Field-Based Experience	5 CR
Elective		

REQUIRED ELECTIVE COURSES: 20 CREDITS

Computer Software Support students may choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BUS, BUS&, CAP, CIS, CS, CS&, ECON, ECON&, HT, or IT.

2023-2024 Programs of Study

Courses taken to meet the general education or program core requirements may not be used for electives.

Total Program Credits: 90

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Computer Support Specialist, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

BIT 100	Survey of Business and Information Technology	2 CR
IT 101	Using Network Computer Systems	5 CR
IT 141	A+ Operating Systems	5 CR
MATH& 107	Math in Society	5 CR
Or any approved math course as described on the AAS-T math course options list.		

QUARTER 2

CAP 138	Microsoft Word	5 CR
CAP 142	Microsoft Excel	5 CR
IT 112	A+ Hardware	5 CR

QUARTER 3

BUS& 101	Introduction to Business	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR
ENGL& 101	English Composition I	5 CR

QUARTER 4

CAP 146	Microsoft Access	3 CR
Elective		
Elective		

QUARTER 5

IT 120	Command Line Interface & Scripting	5 CR
IT 160	Network Technology I	5 CR
Elective		

QUARTER 6

IT 142	Windows Desktop I	5 CR
IT 270	Field-Based Experience	5 CR
Elective		

ELECTIVE COURSES: 20 CREDITS

Computer Software Support students may choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BUS, BUS&, CAP, CIS, CS, CS&, ECON, ECON&, HT, or IT.

Courses taken to meet the general education or program core requirements may not be used for electives.

Total Program Credits: 90

CERTIFICATE

Computer Support Specialist Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AMATH 100	Applied Occupational Math	5 CR
OR		
BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR
OR higher		
BIT 100	Survey of Business and Information Technology	2 CR
IT 101	Using Network Computer Systems	5 CR
IT 141	A+ Operating Systems	5 CR

QUARTER 2

CAP 138	Microsoft Word	5 CR
CAP 142	Microsoft Excel	5 CR
IT 112	A+ Hardware	5 CR

QUARTER 3

AENGL 100	Applied English	5 CR
OR		
BUS 191	Technical Communications	5 CR
OR		
ENGL& 101	English Composition I	5 CR
OR		
ENGL& 102	English Composition II	5 CR
BUS& 101	Introduction to Business	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

Total Program Credits: 47

CULINARY ARTS

OVERVIEW

If you love cooking, have a passion for food and have always dreamed of being a chef, then Bellingham Technical College's Culinary Arts associate degree program is for you. BTC's programs and certificates in Culinary Arts are ideal for students with cooking skills and an interest in the fast-growing food service industry. You'll receive training from an award-winning faculty in state-of-the-art kitchens and get the skills and experience you'll need to get top jobs in the fast-paced culinary field. Hone your culinary arts skills and gain training in every aspect of food service – from chef to restaurant manager to front-

of-the-house service – at BTC’s Café Culinaire, where students run the International Buffet in winter quarter and a full-service a la carte restaurant in spring.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Conform and comply with health standards based on US Food and Drug Administration, Washington State, and local health department sanitation and hygiene codes and laws.
- Apply fundamentals and advanced skills in sustainable design and purchasing, butchery, Garde Manger, classical sauce, soups and stocks, farinaceous foods, classical cookery techniques in international cuisine, American regional cuisines, define product specifications, and food and beverage service.
- Plan, prepare, and cook foods a la carte and buffet style consistently in a visually appealing manner while maintaining taste, nutritive value, flavor, and texture in classical and contemporary cooking methods.
- Correctly prepare a variety of classical breads, artisan breads, classical pastry items, and desserts with the ability to correctly evaluate finished products for proper texture, color, palatability, shape, and doneness.
- Plan, develop and analyze the dining room layout, facility design, menu design, cost analysis, marketing plan, and projected profit and loss statements.
- Describe the fundamental nutrients in the human diet, identify a variety of contemporary dietary needs and demonstrate the ability to create and cook modified menus to meet those needs.

After successfully completing the Culinary Arts certificate, students will be able to:

- Conform and comply with health standards based on US Food and Drug Administration, Washington State, and local health department sanitation and hygiene codes and laws.
- Apply fundamentals and advanced skills in sustainable design and purchasing, butchery, classical cookery techniques in American regional cuisines, and define product specifications.
- Correctly prepare a variety of classical breads, artisan breads, classical pastry items, and desserts with the ability to correctly evaluate finished products for proper texture, color, palatability, shape, and doneness.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ACCUPLACER NextGen Arithmetic (230) or higher OR ABE 050 with a C or higher.

ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher.

ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher.

DEGREE AND CERTIFICATE REQUIREMENTS

Culinary Arts Degree and Certificate completion requires a cumulative GPA of 2.0 or greater and minimum grade of C-/1.7 in culinary courses and a minimum grade of C/2.0 in all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Culinary Arts, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

CUL 110	Sanitation and Safety	2 CR
CUL 112	Introduction to Hospitality	2 CR
CUL 114	Culinary Skill Development I	6 CR
CUL 118	Commercial Kitchen Equipment	2 CR

QUARTER 2

AMATH 100 OR higher	Applied Occupational Math	5 CR
CUL 122	Culinary Skill Development II	6 CR
CUL 126	Pastry Skill Development I	6 CR
CUL 142	Nutrition	2 CR

QUARTER 3

AENGL 100 OR higher	Applied English	5 CR
CUL 144	American Regional à la carte Cookery	7 CR
CUL 146	Pastry Skill Development II	7 CR

QUARTER 4

CUL 150	Field-Based Experience	6 CR
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QUARTER 5

CMST& 210 OR	Interpersonal Communication	5 CR
PSYC& 100 OR	General Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR
CUL 211	Meat Identification and Fabrication	4 CR
CUL 218	Garde Manger	6 CR
CUL 222	Supervisor Development	3 CR

QUARTER 6

CUL 220	Restaurant Management	5 CR
CUL 224	Food and Beverage Service	3 CR
CUL 226	International Cuisine	6 CR
CUL 228	Banquet and Catering Management	3 CR

QUARTER 7

CUL 230	A' la carte Cookery	8 CR
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CUL 232	Food and Beverage Service Lab	2 CR
CUL 236	Wine Appreciation	2 CR
Total Program Credits:		103

CERTIFICATE

Culinary Arts Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

CUL 110	Sanitation and Safety	2 CR
CUL 112	Introduction to Hospitality	2 CR
CUL 114	Culinary Skill Development I	6 CR
CUL 118	Commercial Kitchen Equipment	2 CR

QUARTER 2

CUL 122	Culinary Skill Development II	6 CR
CUL 126	Pastry Skill Development I	6 CR
CUL 142	Nutrition	2 CR
AMATH 100	Applied Occupational Math	5 CR
OR higher		
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

QUARTER 3

CUL 144	American Regional à la carte Cookery	7 CR
CUL 146	Pastry Skill Development II	7 CR
AENGL 100	Applied English	5 CR
OR higher		

Total Program Credits:		55
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DENTAL: ASSISTING

OVERVIEW

Choose BTC's Dental Assisting program to train for a position as a dental assistant. Learn how to provide patient care, perform office duties and lab work, while working alongside dentists as they examine and treat their patients. Graduates will find employment opportunities with dental, orthodontic, and periodontal offices, as well as hospitals, public health departments, or in clinics.

This non-accredited certificate course is designed to introduce the student to the fundamentals of dental assisting. The certificate is composed of two quarters, the first quarter includes core educational courses and an introduction to the dental assisting profession, plus dental anatomy. The second quarter offers the foundational knowledge that will allow the graduate to enter into the work force prepared to be trained on the job by a dentist. The certificate foundational courses will ensure that the student has the relevant training to perform their job safely, a component that is often missing for dental assistants who are trained on the job.

The Dental Assisting program is approved by the Commission on

Dental Accreditation.

This certificate will introduce the student to the National Entry Level Dental Assistant (NELDA) exam offered through the Dental Assisting National Board, should the student choose to take the exam. <https://www.danb.org/en/Become-Certified/Exams-and-Certifications/NELDA.aspx>.

The NELDA exam is comprised of three component exams:

1. Anatomy, Morphology and Physiology
2. Infection Control
3. Radiation Health and Safety

The certificate will be based on the Exam Outlines available through the Dental Assisting National Board website for each of the three components with additional content added to the Foundations of Clinical Procedures course.

PROGRAM OUTCOMES

After successfully completing the Dental Assisting certificate, students will be able to:

- Apply academic, technical, and professional skills to effectively contribute to the dental health team
- Apply cognitive retention of dental terminology, theory, and science
- Expose and evaluate intraoral and extraoral radiographs implementing radiation safety and processing skills
- Verify critical thinking, problem solving, and positive work ethics as they directly relate to the Dental Assistant profession
- Validate the importance of National Certification and participation in professional activities and education opportunities.

PLACEMENT REQUIREMENTS

Admissions application and assessment testing in Reading, Math, and Sentence Skills are required. Your score on the test and/or your previous transcripts will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

CERTIFICATE REQUIREMENTS

Dental Assisting Certificate completion requires a cumulative GPA of minimum grade of C/2.0 for all required courses.

CERTIFICATE

Dental Assisting Certificate

CORE COURSES: 35 CREDITS

QUARTER 1

DEN 101	Introduction to Dental Assisting	3 CR
AENGL 100	Applied English	5 CR
OR higher		
AMATH 100	Applied Occupational Math	5 CR
OR higher		
CMST& 210	Interpersonal Communication	5 CR

QUARTER 2

DEN 106	Fundamentals of Dental Safety	4 CR
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DEN 107	Dental Assisting Radiology	3 CR
DEN 108	Foundations of Clinical Procedures	4 CR
DEN 109	Dental Assisting Lab Practicum	6 CR
Total Program Credits:		35

DENTAL: HYGIENE

OVERVIEW

If you are interested in pursuing a career in the health care industry as a dental hygienist, then look into BTC's Dental Hygiene program. You'll learn the clinical skills and core professional values needed to launch a rewarding career in private and public settings, such as dental offices and public health clinics. Dental hygiene students learn under the supervision of licensed dentists and dental hygienists on state-of-the-art equipment in BTC's on-campus dental clinic. Program graduates are well-positioned for employment, with the hands-on clinical experience employers need today.

The Dental Hygiene program is approved by the Commission on Dental Accreditation.

PROGRAM OUTCOMES

After successfully completing the Dental Hygiene program, students will be able to:

- Demonstrate positive work ethics, team skills and professional values integral to the profession of Dental Hygiene.
- Utilize wellness, health determinants, and characteristics of various patient populations to promote oral health and reduce health risks in a variety of settings.
- Apply current dental hygiene techniques, instruments, and materials to provide preventive and therapeutic services in accordance with all safety and health standards.
- Assess, plan, implement, and evaluate community-based health promotion and prevention programs and activities to benefit the general population.
- Demonstrate cognitive retention of dental terminology, theory, and science.
- Identify and access opportunities for professional growth and development.
- Apply the principles of evidence-based research and decision making in the planning and implementation of dental hygiene care.
- Qualify for all national and regional examinations required to practice as a Registered Dental Hygienist in the State of Washington.
- Manage medical emergencies and provide appropriate life support measures using professional judgment.

PLACEMENT REQUIREMENTS

Healthcare & Work Experience. Dental Hygiene applicants must submit a Dental Hygiene Healthcare Experience Verification Form for prior approval. Experience in healthcare may be demonstrated by certification and work experience in an allied healthcare field.

DEGREE REQUIREMENTS

Dental Hygiene Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for required courses.

ADDITIONAL REQUIREMENTS

The Dental Hygiene Program has a separate admission process from admission to BTC. Students must be admitted into a cohort before beginning dental hygiene coursework. See the Dental Hygiene Program website for more information about the current admission requirements and process.

CLINICAL PLACEMENT REQUIREMENTS:

After acceptance into the Dental Hygiene Program but prior to beginning clinical rotations, students must complete the clinical placement process and be at least 18 years of age. Clinical requirements include:

- Criminal background check
- 10-Panel urine drug screen
- Physical examination
- Tuberculous screening
- Required immunizations
- Current American Heart Association BLS for Provider CPR certification
- Medical Insurance Coverage

More information about the clinical placement requirements process is on the Dental Hygiene Program website.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Dental Hygiene, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 65 CREDITS

The following courses must be completed with a 3.0 (B) or higher

BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
BIOL& 160	General Biology with Lab	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
CHEM& 131	Introduction to Organic/Bio-Chemistry	5 CR
ENGL& 101	English Composition I	5 CR
ENGL& 102	English Composition II	5 CR
NUTR& 101	Nutrition	5 CR
PSYC& 100	General Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR
MATH& 107	Math in Society	5 CR
or higher		
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 124 CREDITS

QUARTER 1

DHYG 112	Dental Hygiene Clinical Practice I	5 CR
DHYG 114	Principles of Dental Hygiene I	3 CR
DHYG 115	Oral & Dental Anatomy	2 CR

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DHYG 116	Oral Radiology I	4 CR
DHYG 128	General Pathology	4 CR
HLTH 154	Healthcare Provider First Aid and CPR	1 CR

QUARTER 2

DHYG 113	Dental Materials	4 CR
DHYG 122	Dental Hygiene Clinical Practice II	5 CR
DHYG 124	Principles of Dental Hygiene II	3 CR
DHYG 125	Medical Emergencies	3 CR
DHYG 126	Oral Radiology II	2 CR
DHYG 137	Pharmacology	3 CR

QUARTER 3

DHYG 118	Histology & Embryology	2 CR
DHYG 131	Restorative Dentistry I	4 CR
DHYG 132	Dental Hygiene Clinical Practice III	5 CR
DHYG 134	Principles of Dental Hygiene III	3 CR
DHYG 138	Periodontology	3 CR

QUARTER 4

DHYG 141	Restorative Dentistry II	1 CR
DHYG 142	Hygiene Clinical Practice IV	5 CR
DHYG 144	Principles of Dental Hygiene IV	3 CR
DHYG 149	Pain Management	4 CR

QUARTER 5

DHYG 211	Restorative Dentistry III	2 CR
DHYG 214	Principles of Dental Hygiene V	3 CR
DHYG 216	Community Oral Health I	4 CR
DHYG 219	Oral Pathology	3 CR
DHYG 212	Dental Hygiene Clinical Practice V	8 CR

QUARTER 6

DHYG 221	Restorative Dentistry IV	2 CR
DHYG 222	Dental Hygiene Clinical Practice VI	8 CR
DHYG 224	Principles of Dental Hygiene VI	3 CR
DHYG 226	Community Oral Health II	4 CR
DHYG 228	Oral Therapy	3 CR
DHYG 229	Dental Hygiene Seminar	1 CR

QUARTER 7

DHYG 231	Restorative Dentistry V	1 CR
DHYG 232	Dental Hygiene Clinical Practice VII	8 CR
DHYG 234	Principles of Dental Hygiene VII	3 CR
DHYG 236	Community Oral Health III	2 CR

Total Program Credits: 189

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Comply with personal and environmental safety practices specific to the diesel industry
- Perform advanced maintenance and repairs on various pieces of diesel equipment
- Provide critical thinking skills while utilizing technical information and testing procedures to diagnose customer concerns
- Diagnose and repair electrical and electronic systems
- Communicate work performed using trade specific language while documenting critical aspects clearly and concisely
- Demonstrate positive work traits and excellent customer service skills
- Research and identify emerging heavy equipment technologies
- Model teamwork that is reflective of a diverse work environment
- Evaluate and apply technical information and testing procedures

After successfully completing the Heavy Duty Chassis Maintenance and Repair certificate, students will be able to:

- Comply with personal and environmental safety practices specific to the diesel industry.
- Perform fundamental maintenance and repairs on diesel equipment.
- Provide critical thinking skills while utilizing technical information to perform various repairs.
- Communicate work performed using trade specific language while documenting critical aspects clearly and concisely.
- Diagnose and repair fundamental electrical and electronic systems.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ADDITIONAL REQUIREMENTS

Prior to enrolling in program classes, students are required to submit the following documentation to the Admissions & Advising office:

1. Copy of your valid Driver's License (with no restrictions due to driving offenses).
2. Current complete 3-year driving record from Washington State DOL. This copy of your driving record will be kept on file for advising purposes only.

Important Program Notes:

1. You are required to maintain a valid driver's license as long as you are enrolled in this program.
2. Many employers and internship providers in this field will only hire applicants who have a clean driving record.

DIESEL TECHNOLOGY

OVERVIEW

If you'd like a high-paying career upon graduating from BTC, then you should consider the Diesel Technology Program. You'll be prepared to work right away as a diesel technician, repairing and maintaining heavy trucks, buses, and road equipment like bulldozers and graders. Other positions you'd qualify for are diesel engine specialist, truck technician, marine technician, and construction and industrial machinery repair technician.

You will learn how to use leading-edge diesel technology, and work hands-on in an actual shop. Employers who hire graduates from the Diesel program include diesel automotive and trucking companies, rental companies, marine dealers, highway contractors, and farm and heavy equipment companies.

3. Driving records (abstracts) can be obtained for a fee. It is the responsibility of the applicant to pay for and order their driving records. You may obtain a copy of your current "Abstract of Driving Record" at your local Department of Licensing or by accessing the Washington State Department of Licensing on the web at www.dol.wa.gov.
4. A renewed copy of your valid driver's license (with no restrictions due to driving offenses) may again be required at the start of your second year in the program.
5. All General Education courses must be completed prior to the beginning of the 2nd year.

DEGREE AND CERTIFICATE REQUIREMENTS

Diesel Technology Degree and Certificate completion requires a cumulative GPA of 2.0 or higher.

ASSOCIATE OF APPLIED SCIENCE

Diesel Technology, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AUTO 113	HVAC	4 CR
DET 100	Introduction to Diesel Technology	8 CR
DET 102	Introduction to Diesel Technology Lab	4 CR
AENGL 100	Applied English	5 CR

QUARTER 2

DET 125	Service Industry Support	4 CR
DET 130	Chassis Electrical Systems	8 CR
DET 132	Chassis Electrical Systems Lab	4 CR
AMATH 100	Applied Occupational Math	5 CR

QUARTER 3

DET 134	Heavy Duty Chassis Systems	9 CR
DET 136	Heavy Duty Chassis Systems Lab	6 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

DET 139	Field-Based Experience I	12 CR
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QUARTER 5

DET 210	Electronic Engines & Emissions	9 CR
DET 212	Electronic Engines & Emissions Lab	6 CR

QUARTER 6

DET 219	Marine Systems	3 CR
DET 220	Drive Train	7 CR
DET 222	Drive Train Lab	5 CR

QUARTER 7

DET 224	Fluid Power	8 CR
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DET 226	Fluid Power Lab	4 CR
DET 241	Advanced Diagnostics	3 CR

Total Program Credits: 119

Heavy Duty Chassis Maintenance and Repair Certificate

PROGRAM REQUIREMENTS

QUARTER 1

AUTO 113	HVAC	4 CR
DET 100	Introduction to Diesel Technology	8 CR
DET 102	Introduction to Diesel Technology Lab	4 CR
AENGL 100	Applied English	5 CR

QUARTER 2

DET 125	Service Industry Support	4 CR
DET 130	Chassis Electrical Systems	8 CR
DET 132	Chassis Electrical Systems Lab	4 CR
AMATH 100	Applied Occupational Math	5 CR

QUARTER 3

DET 134	Heavy Duty Chassis Systems	9 CR
DET 136	Heavy Duty Chassis Systems Lab	6 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 62

ELECTRICIAN

OVERVIEW

Choose this program to prepare for an exciting career as an electrician. Students become registered "electrician trainees" with the State of Washington Department of Labor and Industries and are awarded work experience hours upon completion. Occupational choices are extensive in the field; many graduates work in the construction industry, while others work in manufacturing or maintenance.

In BTC's Electrician program, you'll learn how to install, maintain, and repair residential, commercial, industrial, and renewable electrical systems. You will also learn how to read blueprints and schematics, bend and install conduits, program VFDs and PLCs, and troubleshoot circuits.

PROGRAM OUTCOMES

After successfully completing this AAS degree program, students will be able to:

- Ensure safe work practices and installations through compliance with national, state and local regulations and industry standards including the National Electrical Code and WAC/RCW.
- Design, analyze, and diagnose basic electrical systems through the application of electrical theory fundamentals.
- Utilize proper tools, materials, and test equipment to construct a variety of code compliant service and branch circuits found in a typical residential setting.
- Utilize proper tools, materials, and test equipment to construct a variety of code compliant branch and lighting cir-

cuits found in a typical commercial setting.

- Utilize proper tools, materials, and test equipment to construct a variety of code compliant branch, signal, and control circuits found in a typical industrial setting.
- Summarize the financial and regulatory scope of the electrical industry including government fees, jobsite overhead, business operating expenses, time management, and cost of materials.
- Communicate clearly and effectively with team members, supervisors, and others in the workplace, using trade terminology, drawings, blueprints, and other documents.
- Demonstrate professional conduct conducive to the work environment including punctuality, safety, reliability, and customer service.
- Inspect electrical systems, equipment, or components to identify hazards, defects, or the need for adjustment, repair, or updating, and to ensure compliance with codes.

CERTIFICATE OUTCOMES

After successfully completing the Electrical Construction certificate, students will be able to:

- Ensure safe work practices and installations through compliance with national, state and local regulations and industry standards including the National Electrical Code and WAC/RCW.
- Design, analyze, and diagnose basic electrical systems through the application of electrical theory fundamentals.
- Utilize proper tools, materials, and test equipment to construct a variety of code compliant service and branch circuits found in a typical residential setting.
- Summarize the financial and regulatory scope of the electrical industry including government fees, jobsite overhead, business operating expenses, time management, and cost of materials.
- Communicate clearly and effectively with team members, supervisors, and others in the workplace, using trade terminology, drawings, blueprints, and other documents.
- Demonstrate professional conduct conducive to the work environment including punctuality, safety, reliability, and customer service.
- Inspect electrical systems, equipment, or components to identify hazards, defects, or the need for adjustment, repair, or updating, and to ensure compliance with codes.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ADDITIONAL REQUIREMENTS

Graduates can be credited with up to 1,472 supervised work experience hours per RCW 19.28.191 and WAC 296-46b-940. In order to

receive the approved experience hours students must have an electrical trainee card from L&I prior to enrolling in the program.

PHYSICAL REQUIREMENTS

Electricians deal with color coded wires on a daily basis, making it vital for all electricians to be able to see color.

DEGREE AND CERTIFICATE REQUIREMENTS

Electrician AAS Degree and Certificate completion requires a cumulative GPA of 2.0 or higher. AAS-T Degree requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Electrician, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 5 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AMATH 100	Applied Occupational Math	5 CR
ELCN 100	Trade Safety	2 CR
ELCN 101	DC Circuits	4 CR
ELCN 103	Electrical Drawings & Blueprints	2 CR
ELCN 125	Electrical Applied Mechanics	4 CR
ELCN 131	DC Circuit Lab	4 CR

QUARTER 2

CMST& 210 OR	Interpersonal Communication	5 CR
PSYC& 100 OR	General Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR
ELCN 102	AC Circuits	3 CR
ELCN 112	Introduction to National Electrical Code	4 CR
ELCN 132	AC Circuit Lab	3 CR
ELCN 142	Residential Wiring Projects	6 CR

QUARTER 3

AENGL 100	Applied English	5 CR
ELCN 104	Grounding & Bonding	2 CR
ELCN 105	Transformers, Motors & Generators	4 CR
ELCN 113	Advanced NEC Calculations	3 CR
ELCN 143	Electrical Distribution	3 CR
ELCN 151	Commercial Wiring Methods & Materials	5 CR

QUARTER 4

ELCN 201	Electronics for Electricians	2 CR
ELCN 202	Machine Control Fundamentals	5 CR
ELCN 251	Commercial & Renewable Energy Projects	5 CR
ELCN 261	Industrial Control Wiring Methods & Materials	6 CR
ELCN 280	Renewable Electrical Sources	4 CR

QUARTER 5

ELCN 203	PLCs & VFDs	5 CR
ELCN 214	Special Occupancies, Equipment & Conditions	3 CR
ELCN 262	Specialty Industrial Wiring Projects	5 CR
ELCN 263	Automated Control Projects	6 CR
ELCN 281	Electrical Estimating & Design	3 CR
Total Program Credits:		108

ELCN 262	Specialty Industrial Wiring Projects	5 CR
ELCN 263	Automated Control Projects	6 CR
ELCN 281	Electrical Estimating & Design	3 CR
Total Program Credits:		113

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Electrician, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 5 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

ELCN 100	Trade Safety	2 CR
ELCN 101	DC Circuits	4 CR
ELCN 103	Electrical Drawings & Blueprints	2 CR
ELCN 125	Electrical Applied Mechanics	4 CR
ELCN 131	DC Circuit Lab	4 CR
MATH& 141	Precalculus I	5 CR

Choose 5 credits or more from the AAS-T Acceptable Transferable Courses list to meet total credits required under the AAS-T degree.

QUARTER 2

CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR
ELCN 102	AC Circuits	3 CR
ELCN 112	Introduction to National Electrical Code	4 CR
ELCN 132	AC Circuit Lab	3 CR
ELCN 142	Residential Wiring Projects	6 CR

QUARTER 3

ELCN 104	Grounding & Bonding	2 CR
ELCN 105	Transformers, Motors & Generators	4 CR
ELCN 113	Advanced NEC Calculations	3 CR
ELCN 143	Electrical Distribution	3 CR
ELCN 151	Commercial Wiring Methods & Materials	5 CR
ENGL& 101	English Composition I	5 CR

QUARTER 4

ELCN 201	Electronics for Electricians	2 CR
ELCN 202	Machine Control Fundamentals	5 CR
ELCN 251	Commercial & Renewable Energy Projects	5 CR
ELCN 261	Industrial Control Wiring Methods & Materials	6 CR
ELCN 280	Renewable Electrical Sources	4 CR

QUARTER 5

ELCN 203	PLCs & VFDs	5 CR
ELCN 214	Special Occupancies, Equipment & Conditions	3 CR

CERTIFICATE

Electrical Construction Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AMATH 100	Applied Occupational Math	5 CR
ELCN 100	Trade Safety	2 CR
ELCN 101	DC Circuits	4 CR
ELCN 103	Electrical Drawings & Blueprints	2 CR
ELCN 125	Electrical Applied Mechanics	4 CR
ELCN 131	DC Circuit Lab	4 CR

QUARTER 2

CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR
ELCN 102	AC Circuits	3 CR
ELCN 112	Introduction to National Electrical Code	4 CR
ELCN 132	AC Circuit Lab	3 CR
ELCN 142	Residential Wiring Projects	6 CR

QUARTER 3

AENGL 100	Applied English	5 CR
ELCN 104	Grounding & Bonding	2 CR
ELCN 105	Transformers, Motors & Generators	4 CR
ELCN 113	Advanced NEC Calculations	3 CR
ELCN 143	Electrical Distribution	3 CR
ELCN 151	Commercial Wiring Methods & Materials	5 CR

Total Program Credits: 64

EMERGENCY MEDICAL TECHNICIAN

OVERVIEW

This intensive one-quarter program includes lectures, hands-on practice and techniques for: introduction to emergency care, bleeding and shock, soft tissue injuries, environmental emergencies, lifting and moving patients, emergency childbirth, and much more. At the end of the training, successful participants are qualified for the National Registry of EMT's examination.

PROGRAM OUTCOMES

After successfully completing the Emergency Medical Technician certificate, students will be able to:

- Demonstrate the ability to recall and apply knowledge of human structure, function, pathophysiology, and psychosocial development to patient care relative to the role of

entry-level emergency medical technician (EMT).

- Demonstrate, through knowledge and behavior, a commitment to the highest standards and competence, ethics, integrity, and accountability to the patient and the EMT profession.
- Demonstrate an ability to collect data from charts and patients and interpret patient data.
- Demonstrate an ability to use critical thinking skills to assess and treat patients in emergency settings.
- Demonstrate effective use of motor, cognitive, and critical thinking skills in diagnosis, management, and prevention of common health problems encountered in patient care necessary to fulfill the role of entry level EMT.
- Demonstrate an ability to perform patient assessment.
- Demonstrate an ability to communicate effectively in a healthcare setting.
- Demonstrate an ability to manage time efficiently while functioning in a healthcare setting.
- Demonstrate effective listening, verbal, and written communication skills with a wide range of individuals and groups in order to provide patient-centered care.
- Recognize and work effectively within the larger context and system of health care to advocate for and provide quality patient care relative to the role of entry level EMT.

PLACEMENT REQUIREMENTS

- High school diploma or GED certificate.
- Must have a current Driver's License.

CLINICAL PLACEMENT REQUIREMENTS

Prior to beginning clinical rotations, students must complete the clinical placement process. Clinical requirements include:

- Criminal background check
- 10-Panel urine drug screen
- Physical examination
- Tuberculous screening
- Required immunizations
- Current American Heart Association BLS for Provider CPR certification
- Medical Insurance Coverage

More information about clinical placement requirements process is on the EMT Program Website.

ADDITIONAL REQUIREMENTS

See the EMT Program Website for more information about current admission requirements and process. These include:

- Physical strength adequate to perform the normal functions of an EMT, including the ability to lift and move objects weighing up to 125 lbs.
- Students must have access to a computer with high speed internet as many program components and testing are done online.

- It is recommended, but not required, that students complete the IS 10.0a and IS 700.a courses that are available from the FEMA website (<http://training.fema.gov/IS/>) as the NREMT exam will address these areas in more depth than is covered in the EMT Program.

CERTIFICATE REQUIREMENTS

Emergency Medical Technician certificate completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for required courses.

CERTIFICATE

Emergency Medical Technician Certificate

CORE COURSES: 12 CREDITS

QUARTER 1

EMS 125	Emergency Medical Technician-Basic	12 CR
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Total Program Credits:	12
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ENGINEERING TECHNOLOGY: BACHELOR OF APPLIED SCIENCE

OVERVIEW

The Bachelor of Applied Science in Engineering Technology (BAS-ET) program at Bellingham Technical College prepares undergraduates by fostering the development of extensive problem-solving skills, design skills, and engineering judgment as well as fundamental industry knowledge and research experience through the combination of a rigorous curriculum and hands-on learning.

Our Engineering Technology program focuses on real-world application of engineering principles. Engineering technologists play a critical role in the fields of advanced manufacturing, electrical and mechanical systems, and chemical processing by serving as a nexus between engineers and technicians. From conception to design, development, testing and production of equipment, components, and processes, Engineering technologists make an essential contribution to the engineering field.

PROGRAM OUTCOMES

After successfully completing the Engineering Technology: Bachelor of Applied Science degree, students will be able to demonstrate:

- An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline.
- An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline.
- An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.

- An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.
- An ability to function effectively as a member or leader on a technical team.

PROGRAM ADMISSION REQUIREMENT

- Completed Accredited Associate Degree or higher
- Cumulative GPA of 2.5 or higher

PROGRAM APPLICATION/FORMS

- *NOTE: Earning an Associate degree does not mean that you will be automatically accepted into the BAS-ET program.*
- For more information please contact our Program Office Coordinator, Heide Willbrandt at 360.752.8478 or bachelorprograms@btc.edu.

DEGREE REQUIREMENTS

Engineering Technology: Bachelor of Applied Science degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for each ENGT course.

BACHELOR OF APPLIED SCIENCE
Engineering Technology, BAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 20 CREDITS

ENGL 310	Business Communications	5 CR
PSYC 310	Industrial Organizational Psychology	5 CR
PHIL 310	Professional Ethics	5 CR
ECON 310	Managerial Economics	5 CR

CORE COURSES: 48 CREDITS

ENGT 301	Applied Engineering Lab I	3 CR
ENGT 302	Applied Engineering Lab II	3 CR
ENGT 303	Applied Engineering Lab III	3 CR
ENGT 311	Manufacturing Processes and Systems	3 CR
ENGT 321	Applied Systems Engineering	3 CR
ENGT 350	Applied Chemical Engineering	3 CR
ENGT 490	Engineering Technology Capstone I	5 CR
ENGT 491	Engineering Technology Capstone II	5 CR
ENGT 492	Engineering Technology Capstone III	5 CR
MATH& 146	Introduction to Statistics	5 CR
MATH& 151	Calculus I	5 CR
MATH& 152	Calculus II	5 CR

ELECTIVE COURSES: 25 CREDITS

AMAT 312	Applied Linear Algebra	3-5 CR
AMAT 313	Applied Calculus	3-5 CR
AMAT 314	Applied Differential Equations	3-5 CR
AMAT 316	Numerical Methods for Technologists	3-5 CR
AMAT 490	Statistical Methods for Technologists	3-5 CR
ENGT 312	Applied Electricity and Electronics	5 CR
ENGT 313	Applied Statics	3-5 CR

ENGT 314	Applied Statics and Strength of Materials	5 CR
ENGT 316	Applied Fluid Mechanics and Heat Transfer	3-5 CR
ENGT 319	Programming for Technologists	3-5 CR
ENGT 352	Industrial Safety Engineering	3-5 CR
ENGT 395	Field-Based Experience/Internship	2-5 CR
ENGT 399	Special Problems	2-5 CR
ENGT 415	Technical Dynamics	3-5 CR
ENGT 441	Applied Process Control	3-5 CR
ENGT 465	Applied Environmental Engineering Processes	3-5 CR
ENGT 481	Special Topics in Engineering Technology I	2-5 CR
ENGT 482	Special Topics in Engineering Technology II	2-5 CR
ENGT 495	Field-Based Experience/Internship	2-5 CR
ENGT 499	Special Problems	2-5 CR
OPM 313	Quality Management	5 CR
OPM 315	Lean Concepts and Applications	5 CR
OPM 411	Facility Layout and Materials Handling	5 CR
OPM 412	Workplace Health and Safety Management	5 CR
OPM 413	Measurement and Statistical Process Control	5 CR

Total Program Credits: 93

ENGINEERING TECHNOLOGY:
CIVIL SPECIALIZATION

OVERVIEW

This program will prepare you for a career as a civil engineering technician, computer aided drafter, construction manager, transportation technician, or GIS technician. You'll learn valuable skills like civil drawing, design, geographic information systems (GIS), and field engineering.

If you're looking for a program that will put you on a solid career track with employers such as high-tech industries, civil engineering and surveying firms, the Department of Transportation, or civil construction companies, then look into Civil Engineering at BTC.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Produce a wide variety of design quality plan sets using computer aided drafting methods.
- Inspect and track project revisions to produce As-Built record drawings using appropriate design standards.
- Import, export, and create several types of GIS data for the production of specialized planning and demonstration maps.
- Calculate quantities and assign costs for the production of detailed cost estimates and schedules for a variety of construction projects.
- Assess and approve specifications for construction materials.
- Communicate, solve, and present engineering problems using Microsoft Office programs.
- Solve engineering problems using a variety of mathematical processes and quantitative reasoning.

2023-2024 Programs of Study

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE REQUIREMENTS

Engineering Technology: Civil Specialization degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 in all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Engineering Technology: Civil Specialization, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 15 CREDITS

AMATH 111	Applied Technical Math	5 CR
OR		
MATH& 141	Precalculus I	5 CR
AENGL 100	Applied English	5 CR
CMST& 220	Public Speaking	5 CR
OR		
CMST& 210	Interpersonal Communication	5 CR

CORE COURSES: 32 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR
ENGT 215	Applied Statics	5 CR
ENGT 216	Applied Mechanics of Materials	5 CR

SPECIALTY COURSES: 50 CREDITS

CET 102	Fundamentals of Surveying I	5 CR
CET 110	Construction and Highway Surveys	5 CR
CET 141	Fundamentals of GIS & GPS	5 CR
CET 142	Intermediate GIS	5 CR
CET 230	Estimating and Scheduling	5 CR
CET 235	Construction Materials	5 CR
CET 240	Earthmoving Fundamentals	5 CR
CET 251	AutoCAD Civil 3D I	5 CR
CET 252	AutoCAD Civil 3D II	5 CR
ENGT 132	Engineering Applications Using MS Office	5 CR

ELECTIVE COURSES: 10 CREDITS

Any ENGL, ENGR, ENGT, ENET, CENG, COMP, IT, CS, or CET course 100-level or higher*

Any Chemistry course 100-level or higher

Any Physics course 100-level or higher

Any Math course MATH& 141 or higher*

CAP 101	Microsoft Computer Applications	5 CR
ECON& 201	Micro Economics	5 CR
BIOL& 160	General Biology with Lab	5 CR

*Courses taken to meet the General Education, Program Core, or Pro-

gram Specialty requirements may not be used to meet the Elective requirements.

Total Program Credits:

107

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Engineering Technology: Civil Specialization, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 25 CREDITS

MATH& 141	Precalculus I	5 CR
MATH& 142	Precalculus II	5 CR
ENGL& 101	English Composition I	5 CR
ENGL& 235	Technical Writing	5 CR
OR		
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR
CHEM& 161	General Chemistry w/ Lab I	5 CR

CORE COURSES: 32 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR
ENGT 215	Applied Statics	5 CR
OR		
ENGR& 214	Engineering Statics	5 CR
ENGT 216	Applied Mechanics of Materials	5 CR

SPECIALTY COURSES: 40 CREDITS

CET 102	Fundamentals of Surveying I	5 CR
CET 141	Fundamentals of GIS & GPS	5 CR
CET 142	Intermediate GIS	5 CR
CET 230	Estimating and Scheduling	5 CR
CET 235	Construction Materials	5 CR
CET 240	Earthmoving Fundamentals	5 CR
CET 251	AutoCAD Civil 3D I	5 CR
CET 252	AutoCAD Civil 3D II	5 CR

ELECTIVE COURSES: 10 CREDITS

Any ENGR, ENGT, ENET, CENG, IT, CS, COMP or CET course 100-level or higher*

Any Math course MATH& 146 or higher*

Any Chemistry course CHEM& 110 or higher*

Any Physics course PHYS& 110 or higher*

*Courses taken to meet the General Education, Program Core, or Program Specialty requirements may not be used to meet the Elective requirement.

Total Program Credits:

107

ENGINEERING TECHNOLOGY: COMPOSITES SPECIALIZATION

OVERVIEW

The field of engineering technology develops, processes, and tests the efficiency, production quality, and safety of nearly every product available on the market. In particular, composites technicians work with innovative, lightweight composite materials that are in demand by the aerospace and high-tech industries. These associate degree programs provide excellent job and career training for students who are mechanically inclined, good at math, or interested in how the products we use every day are designed and developed.

BTC's Engineering Technology: Composites Specialization associate degree programs teach top skills that are in-demand for such positions as assembler, fabricator, machine operator, production worker, or supervisor in leading American industries.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Apply fundamentals of material science to solving hands-on engineering design and fabrication problems.
- Utilize CAD/CAM software to build 3D parametric models. (CATIA and Solidworks)
- Create CNC programs for machining and automation.
- Draft Detailed Engineering Drawings for aerospace manufacturing and related fields per industry standards (ANSI).
- Solve problems in composite design and fabrication including vacuum bagging, wet-layup, infusion, pre-impregnated layup, out-of-autoclave, additive and subtractive manufacturing.
- Apply Quality Assurance (QA) methodology and inspection techniques including Non-Destructive Testing (NDT), Ultra-Sound inspection, and metrology.
- Perform material testing and analysis including tensile and compression testing.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE REQUIREMENTS

Engineering Technology: Composites Specialization Degree completion requires a cumulative GPA of C/2.0 or higher and minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Engineering Technology: Composites Specialization, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 20 CREDITS

AMATH 111	Applied Technical Math	5 CR
OR		
MATH& 141	Precalculus I	5 CR
AND		
MATH& 142	Precalculus II	5 CR
OR higher Calculus		
CHEM& 121	Intro to Chemistry	5 CR
OR higher level Chemistry		
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 17 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGR 180	Parametric Modeling	5 CR

SPECIALTY COURSES: 38 CREDITS

COMP 101	Survey of Composites	2 CR
COMP 121	Composites Design & Fabrication I: Ski Building	5 CR
COMP 222	Composites Design & Fabrication II: Aerospace Applications	5 CR
COMP 290	Tooling for Composites	5 CR
COMP 235	Materials Testing	5 CR
ENGT 233	Intro to CATIA	5 CR
MACH 191	Manual Machining for non-Majors	5 CR
MACH 193	CNC Machining for non-Majors	5 CR

ELECTIVE COURSES: 15 CREDITS

Any 100-level or higher course with prefix CENG, CET, ENET, ENGR, ENGT*, or COMP

CAP 101	Microsoft Computer Applications	5 CR
CHEM& 161	General Chemistry w/ Lab I	5 CR
CHEM& 162	General Chemistry w/Lab II	5 CR
CS& 131	Computer Science I C++	5 CR
ENGL& 235	Technical Writing	5 CR
MATH& 146	Introduction to Statistics	5 CR
MATH& 151	Calculus I	5 CR
MATH& 152	Calculus II	5 CR
MATH& 163	Calculus 3	5 CR
PHYS& 114	General Physics I w/lab	5 CR
PHYS& 221	Engineering Physics I w/Lab	5 CR
PHYS& 222	Engineering Physics II w/Lab	5 CR
PHYS& 223	Engineering Physics III w/Lab	5 CR

Total Program Credits: 90

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Engineering Technology: Composites Specialization, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 25 CREDITS

CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
ENGL& 235	Technical Writing	5 CR
MATH& 151	Calculus I	5 CR
PHYS& 221	Engineering Physics I w/Lab	5 CR

CORE COURSES: 32 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGR 180	Parametric Modeling	5 CR
ENGR& 214	Engineering Statics	5 CR
ENGR 270	Introduction to Materials Science	5 CR
OR		
ENGT 216	Applied Mechanics of Materials	5 CR
ENGT 233	Intro to CATIA	5 CR

SPECIALTY COURSES: 32 CREDITS

COMP 101	Survey of Composites	2 CR
COMP 121	Composites Design & Fabrication I: Ski Building	5 CR
COMP 222	Composites Design & Fabrication II: Aerospace Applications	5 CR
COMP 290	Tooling for Composites	5 CR
COMP 235	Materials Testing	5 CR
MACH 191	Manual Machining for non-Majors	5 CR
MACH 193	CNC Machining for non-Majors	5 CR

ELECTIVE COURSES: 5 CREDITS

Any 100-level or higher course with prefix CENG, CET, ENET, ENGR, ENGT*, or COMP

CAP 101	Microsoft Computer Applications	5 CR
CHEM& 162	General Chemistry w/Lab II	5 CR
CS& 131	Computer Science I C++	5 CR
MATH& 152	Calculus II	5 CR
MATH& 163	Calculus 3	5 CR
MATH& 146	Introduction to Statistics	5 CR
PHYS& 222	Engineering Physics II w/Lab	5 CR
PHYS& 223	Engineering Physics II w/Lab	5 CR

Total Program Credits: 94

ENGINEERING TECHNOLOGY: GEOMATICS SPECIALIZATION

OVERVIEW

If you'd like to prepare for a career in a growing field that won't confine you to an office, then check out the Geomatic Engineering Technology associate degree program at Bellingham Technical College. You can put your math and computer skills to work as a surveying and mapping technician or land surveyor in a construction firm; a surveying and engineering firm; a mining, oil or gas company; a public utility; or a government agency, such as U.S. Geological Survey, Department of Natural Resources, the Bureau of Land Management, or the U.S. Forestry Service.

BTC's associate degree in Geomatics includes training in GIS, AutoCAD and GPS skills, as well as gain a working knowledge of Washington laws and standards related to surveying, boundaries and map preparation.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Demonstrate competency in basic GIS and surveying and mapping skills;
- Prepare for the Level I Survey Technical Exam given by the Career Development Committee of LSAW;
- Possess the ability to prepare a topographic map of a parcel of property that is evaluated by WAC 332-130 standards;
- Demonstrate entry level competency in using CAD skills;
- Demonstrate a working knowledge of the Global Positioning System (GPS) as well as demonstrate a working knowledge of Washington Law related to surveying and boundaries;
- Receive, interpret, and convey written, verbal, and graphic information.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE REQUIREMENTS

Engineering Technology: Geomatic Specialization AAS Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for all General Education courses.

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

ASSOCIATE OF APPLIED SCIENCE
**Engineering Technology:
 Geomatics Specialization, AAS**

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS**GENERAL EDUCATION COURSES: 15 CREDITS**

AMATH 111	Applied Technical Math	5 CR
OR		
MATH& 141	Precalculus I	5 CR
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 15 CREDITS

ENGR 115	Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR

SPECIALTY COURSES: 65 CREDITS

CET 102	Fundamentals of Surveying I	5 CR
CET 103	Fundamentals of Surveying II	5 CR
CET 110	Construction and Highway Surveys	5 CR
CET 141	Fundamentals of GIS & GPS	5 CR
CET 142	Intermediate GIS	5 CR
CET 143	Advanced GIS Applications	5 CR
CET 205	Survey of Public Lands	5 CR
CET 210	Boundary Law & Land Description	5 CR
CET 215	Environmental Mapping	5 CR
CET 220	GPS Systems	5 CR
CET 225	Advanced Survey Seminar	5 CR
CET 251	AutoCAD Civil 3D I	5 CR
ENGT 132	Engineering Applications Using MS Office	5 CR

ELECTIVE COURSES: 3 CREDITS

Any ENGR, ENGT, ENET, CENG, or CET course 100-level or higher*
 Any Chemistry course 100-level or higher
 Any Physics course 100-level or higher
 Any Math course MATH 141 or higher*

CET 230	Estimating and Scheduling	5 CR
CET 252	AutoCAD Civil 3D II	5 CR
BUS 123	Records Management	3 CR
ENGR 100	Engineering Orientation	2 CR
CAP 101	Microsoft Computer Applications	5 CR
ECON& 201	Micro Economics	5 CR
BIOL& 160	General Biology with Lab	5 CR

* Courses taken to meet the General Education, Program Core, or Program Specialty requirements may not be used to meet the Elective requirement.

Total Program Credits: 98

ENGINEERING TECHNOLOGY: MECHANICAL DESIGN SPECIALIZATION

OVERVIEW

Prepare for your engineering and design career through this program. Then, work in an engineering office environment at structural engineering companies, manufacturing firms, architectural firms, refineries, construction companies.

Learn drawing and design skills to use as a mechanical engineering technician, mechanical drafter, computer aided drafter, engineering technician, or production planner.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Utilize parametric solid modeling software to generate 3D digital models.
- Interpret rough sketches/drawings/actual parts and transform into 2D CAD drawings according to ANSI and industry standards for the purpose of manufacture, fabrication, and/or assembly.
- Apply statics principles to evaluate forces in structural elements that comprise trusses, machines, and frames.
- Apply the engineering design process to design systems and components.
- Fabricate parts and assemblies from blueprints.

CERTIFICATE OUTCOMES

After successfully completing the AutoCAD Certificate, students will be able to:

- Apply the AutoCAD commands, tools, and functions necessary to create accurate 2D manufacturing detail drawings per ANSI standards.
- Create multi-view drawings that include principal, auxiliary, and section views.
- Dimension 2D detail drawings per ASME/ANSI standards for the purpose of fabrication and manufacture.

After successfully completing the Solidworks certificate, students will be able to:

- Utilize parametric solid modeling software to generate 3D digital models of parts and assemblies.
- Create 2D dimensioned detail drawings from digital part models.
- Create exploded 2D assembly drawings from digital assembly models, and including a bill of material and item number balloons.

PLACEMENT REQUIREMENTS

Admissions application and assessment testing in Reading, Math and Sentence Skills is required. Your score on the test and/or your previous transcripts will determine where you begin your course sequence. Contact Admissions at 360-752-8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Engineering Technology: Mechanical Design Specialization Degree and Certificate completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Engineering Technology: Mechanical Design Specialization, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 20 CREDITS

MATH& 141	Precalculus I	5 CR
MATH& 142	Precalculus II	5 CR
AENGL 100	Applied English	5 CR
OR		
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 17 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGR 180	Parametric Modeling	5 CR

SPECIALTY COURSES: 50 CREDITS

ENGT 116	Advanced Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR
ENGT 208	CAD Project 3D	5 CR
ENGT 215	Applied Statics	5 CR
ENGT 216	Applied Mechanics of Materials	5 CR
ENGT 222	Advanced Parametric Modeling	5 CR
ENGT 250	Capstone Project	5 CR
MACH 191	Manual Machining for non-Majors	5 CR
MACH 193	CNC Machining for non-Majors	5 CR

ELECTIVE COURSES: 10 CREDITS

Any 100-level or higher course with prefix ENGR*, ENGT*, COMP, ENET, or CENG

Any Chemistry course with prefix CHEM* at the level of CHEM& 121 or higher.

Any Math course with prefix of MATH* at the level of MATH& 146 or higher.

Any Physics course with prefix of PHYS* at the level of PHYS& 110 or higher.

CAP 101	Microsoft Computer Applications	5 CR
CS& 131	Computer Science I C++	5 CR

*Courses taken to meet the General Education, Program Core, or Program Specialty requirements may not be used to meet Elective requirements.

Total Program Credits: 97

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Engineering Technology: Mechanical Design Specialization, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 25 CREDITS

MATH& 151	Calculus I	5 CR
PHYS& 221	Engineering Physics I w/Lab	5 CR
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
ENGL& 235	Technical Writing	5 CR
Or any Humanities course		5 CR

CORE COURSES: 27 CREDITS

ENGR 100	Engineering Orientation	2 CR
ENGR& 104	Introduction to Engineering & Design	5 CR
ENGR 115	Graphics	5 CR
ENGR 180	Parametric Modeling	5 CR
ENGR& 214	Engineering Statics	5 CR
ENGR 270	Introduction to Materials Science	5 CR
OR		
ENGT 216	Applied Mechanics of Materials	5 CR

SPECIALTY COURSES: 40 CREDITS

ENGT 116	Advanced Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR
ENGT 222	Advanced Parametric Modeling	5 CR
ENGT 233	Intro to CATIA	5 CR
ENGT 250	Capstone Project	5 CR
MACH 191	Manual Machining for non-Majors	5 CR
MACH 193	CNC Machining for non-Majors	5 CR

ELECTIVE COURSES: 10 CREDITS

Any 100-level or higher courses with prefix ENGR*, ENGT*, CET, COMP, ENET, or CENG

Any Math course with prefix MATH* at the level of MATH& 146 or higher.

Any Physics course with prefix PHYS* at the level of PHYS& 222 or higher.

Any Chemistry course with prefix CHEM* at the level of CHEM& 162 or higher.

CAP 101	Microsoft Computer Applications	5 CR
CS& 131	Computer Science I C++	5 CR

*Courses taken to meet the General Education, Program Core, or Program Specialty requirements may not be used to meet Elective requirements.

Total Program Credits: 102

CERTIFICATE

Engineering Technology: AutoCAD Certificate

PROGRAM REQUIREMENTS

ENGR 115	Graphics	5 CR
ENGT 116	Advanced Graphics	5 CR
ENGT 134	AutoCAD I	5 CR
ENGT 135	AutoCAD II	5 CR

Total Program Credits: 20

Engineering Technology: SolidWorks Certificate

PROGRAM REQUIREMENTS

ENGR 115	Graphics	5 CR
ENGR 180	Parametric Modeling	5 CR
ENGT 222	Advanced Parametric Modeling	5 CR

Total Program Credits: 15

FISHERIES & AQUACULTURE SCIENCES

OVERVIEW

If you have a love for the great outdoors and an interest in biology and wildlife, consider earning a certificate or an associate degree in Fisheries & Aquaculture Science at Bellingham Technical College. You can prepare for a rewarding career as a fish hatchery specialist, fish culturist, fisheries technician, shellfish hatchery worker, scientific aide, water quality technician, or habitat restoration specialist. In BTC's Fisheries and Aquaculture Science programs, you'll learn top skills such as fish culture, aquaculture, and fish spawning that will position you for the best aquatic science jobs in the fisheries industry. The Fisheries & Aquaculture hands-on classes take place in the classroom as well as at the Whatcom Creek Hatchery at the Maritime Heritage Park in Bellingham, which is operated by Bellingham Technical College's Fisheries & Aquaculture Science program. If you are interested in a tour of the Perry Center, please contact the Admissions department at admissions@btc.edu to schedule a tour.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Demonstrate competency in hatchery methods and apply appropriate techniques to spawn, incubate, rear, and release fish.
- Utilize proper tools, equipment and protective devices to safeguard against injury to self, others and workplace facilities.
- Act responsibly and ethically as an employee by being punctual, adhering to company policies and interacting positively and appropriately with co-workers and supervisors.
- Receive, interpret, and convey written, verbal, and graphic information to communicate effectively with co-workers, management and the general public.
- Compute, calculate, and convert standard and metric measurements for purposes of disease treatment and prevention, and the rearing of fish.
- Observe and comply with environmental laws and regulations related to the rearing of fish and the use and disposal of chemicals and drugs.
- Use current and emerging computerized systems or software to operate equipment, calculate results, keep records, and enter data on proper forms and records.
- Identify resources to stay current with new and emerging equipment and techniques

After successfully completing the Aquaculture Science Certificate,

students will be able to:

- Analyze aquaculture-related water quality issues and create appropriate maintenance and treatment plans for flow-through and recirculating systems.
- Describe common aquatic lifecycles and modern culturing techniques for optimal hatchery production, including proper health, feeding, and spawning.
- Communicate information in a professional setting for career success in the aquaculture industry.

After successfully completing the Fisheries and Aquaculture Techniques certificate, students will be able to:

- Demonstrate competency in hatchery methods and apply appropriate techniques to spawn, incubate, rear, and release fish.
- Demonstrate competency in shellfish hatchery and aquaculture methods and apply appropriate techniques to raise diatoms, spawn shellfish, set seed, plant seed, culture, and harvest shellfish.
- Demonstrate competency in Habitat Restoration methods and apply techniques to improve and restore habitat, plant native vegetation, eliminate invasive species, and add woody debris and gravel to streams.
- Demonstrate competency in field research, stream surveys, tag studies, spawning assessments, and smolt trap projects.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Fisheries and Aquaculture Sciences Degree completion requires a cumulative GPA of 2.0 or higher, a minimum grade of C-/1.7 for all core and elective courses, and a minimum grade of C/2.0 for all General Education courses. Certificate completion requires a cumulative GPA of 2.0 or higher and a minimum grade of C-/1.7 in all core courses.

ASSOCIATE OF APPLIED SCIENCE

Fisheries & Aquaculture Sciences, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AQUA 100	Introduction to Fisheries and Aquaculture	2 CR
AQUA 110	Water Quality	3 CR
AQUA 120	Aquatic Biodiversity	3 CR
AQUA 130	Reproduction	2 CR
AQUA 135	Hatchery Practicum I	4 CR

QUARTER 2

AQUA 140	Growth and Nutrition	3 CR
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AQUA 150	Fundamentals of Aquaculture	3 CR
AQUA 165	Aquaculture Practicum	3 CR
AQUA 190	Toxicology and Diseases	3 CR
AMATH 111	Applied Technical Math	5 CR
OR		
Higher		

QUARTER 3

AQUA 160	Fundamentals of Fisheries Biology	3 CR
AQUA 170	Freshwater Ecology	3 CR
AQUA 180	Oceanography	3 CR
AQUA 195	Fisheries Practicum	4 CR

QUARTER 4

AQUA 200	Genetics in Fisheries and Aquaculture	4 CR
AQUA 210	Hatchery Practicum II	3 CR
AENGL 100	Applied English	5 CR
OR		
BUS 191	Technical Communications	5 CR
OR		
ENGL& 101	English Composition I	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

QUARTER 5

AQUA 220	Professional Development	2 CR
AQUA 230	Current Topics	2 CR
AQUA 240	Independent Project	2 CR
AQUA 250	Advanced Sampling Techniques	4 CR
AQUA 260	Natural Resource Management	4 CR

QUARTER 6

AQUA 270	Introduction to GIS for Fisheries & Aquaculture	4 CR
AQUA 280	Field-Based Experience	4 CR
AQUA 290	Aquaculture Management	2 CR

ELECTIVES: 5 CR

Fisheries and Aquaculture Sciences students may choose elective credits from any 100-level or higher courses with the following prefixes: ENGL, BIO, BUS, CAP, CHEM, CET, ECON, ENGR, CS, CS&, or ENGT. Courses used to fulfill General Education requirements may not be used to fulfill elective requirements.

Total Program Credits: 90

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Fisheries & Aquaculture Sciences, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AQUA 100	Introduction to Fisheries and Aquaculture	2 CR
AQUA 110	Water Quality	3 CR
AQUA 120	Aquatic Biodiversity	3 CR
AQUA 130	Reproduction	2 CR
AQUA 135	Hatchery Practicum I	4 CR

QUARTER 2

AQUA 140	Growth and Nutrition	3 CR
AQUA 150	Fundamentals of Aquaculture	3 CR
AQUA 165	Aquaculture Practicum	3 CR
AQUA 190	Toxicology and Diseases	3 CR
MATH& 107	Math in Society	5 CR
OR Higher		

QUARTER 3

AQUA 160	Fundamentals of Fisheries Biology	3 CR
AQUA 170	Freshwater Ecology	3 CR
AQUA 180	Oceanography	3 CR
AQUA 195	Fisheries Practicum	4 CR

QUARTER 4

AQUA 200	Genetics in Fisheries and Aquaculture	4 CR
AQUA 210	Hatchery Practicum II	3 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR
ENGL& 101	English Composition I	5 CR
OR		
ENGL& 102	English Composition II	5 CR

QUARTER 5

AQUA 250	Advanced Sampling Techniques	4 CR
AQUA 260	Natural Resource Management	4 CR

TRANSFERABLE COURSES: 5 CR

Courses from the AAS-T Acceptable Transfer Courses list in humanities, social sciences, or physical and natural sciences.

QUARTER 6

AQUA 270	Introduction to GIS for Fisheries & Aquaculture	4 CR
AQUA 290	Aquaculture Management	2 CR

TRANSFERABLE COURSES: 10 CR

Courses from the AAS-T Acceptable Transfer Courses list.

Total Program Credits: 90

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

CERTIFICATE

Aquaculture Science Certificate

PROGRAM REQUIREMENTS

QUARTER 1

AQUA 100	Introduction to Fisheries and Aquaculture	2 CR
AQUA 110	Water Quality	3 CR
AQUA 120	Aquatic Biodiversity	3 CR
AQUA 130	Reproduction	2 CR

QUARTER 2

AQUA 140	Growth and Nutrition	3 CR
AQUA 150	Fundamentals of Aquaculture	3 CR
AQUA 190	Toxicology and Diseases	3 CR
AQUA 240	Independent Project	2 CR

Total Program Credits: 21

Fisheries & Aquaculture Techniques Certificate

PROGRAM REQUIREMENTS

QUARTER 1

AQUA 100	Introduction to Fisheries and Aquaculture	2 CR
AQUA 110	Water Quality	3 CR
AQUA 120	Aquatic Biodiversity	3 CR
AQUA 130	Reproduction	2 CR
AQUA 135	Hatchery Practicum I	4 CR

QUARTER 2

AQUA 140	Growth and Nutrition	3 CR
AQUA 150	Fundamentals of Aquaculture	3 CR
AQUA 165	Aquaculture Practicum	3 CR
AQUA 190	Toxicology and Diseases	3 CR

QUARTER 3

AQUA 160	Fundamentals of Fisheries Biology	3 CR
AQUA 170	Freshwater Ecology	3 CR
AQUA 180	Oceanography	3 CR
AQUA 195	Fisheries Practicum	4 CR

Total Program Credits: 39

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION TECHNOLOGY (HVAC)

OVERVIEW

BTC's Heating, Ventilation, Air Conditioning and Refrigeration program will prepare you for a career as an HVAC & Refrigeration Technician. You'll learn new, higher-efficiency technologies and practices with the valuable hands-on training that employers are looking for.

In two years, you can be well-positioned for high-wage employment with heating and air conditioning contractors, refrigeration contractors, hotels, school systems, or industrial processing plants.

PROGRAM OUTCOMES

After successfully completing this program, students will be able to:

- Safely and properly install and service systems adhering to environmental laws and regulations as they apply to the HVAC/R industry.
- Demonstrate positive work traits and good customer service skills as a member of a technical team.
- Diagnose and repair common electrical and mechanical problems in HVAC/R residential, commercial, and industrial systems.
- Communicate effectively in writing and verbally with customers, managers, and co-workers.
- Identify and use appropriate technical literature to install, maintain, and service HVAC/R systems.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE REQUIREMENTS

Heating, Ventilation, Air Conditioning & Refrigeration AAS Degree completion requires a cumulative GPA of 2.0 or higher and a minimum grade of C-/1.7 for HVACR classes. AAS-T Degree requires a cumulative GPA of 2.0 or higher, minimum grade of C-/1.7 for all HVACR classes and a minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Heating, Ventilation, Air Conditioning & Refrigeration Technology (HVAC), AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

Please note that while students may choose to take their General Education courses during any quarter, it is strongly recommended they be taken in the sequence listed below to ensure full time status (12 or more credits) throughout enrollment in the program.

QUARTER 1

HVACR 101	Fundamentals of Refrigeration	8 CR
HVACR 102	Basic Electricity for HVACR	8 CR
AMATH 100	Applied Occupational Math	5 CR
Or higher		

QUARTER 2

HVACR 121	Commercial Self-Contained Systems	7 CR
HVACR 122	Commercial Ice Systems	7 CR
AENGL 100	Applied English	5 CR
Or higher		

QUARTER 3

HVACR 131	Furnace Technology	7 CR
HVACR 132	Boilers and Hydronic Heat	7 CR

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QUARTER 4

HVACR 201	A/C & Airflow	8 CR
HVACR 202	Applied Heat Pump Systems	5 CR

QUARTER 5

HVACR 221	Commercial Refrigeration	8 CR
HVACR 222	Industrial Refrigeration	7 CR

QUARTER 6

HVACR 231	Control Theory for HVAC/R	8 CR
HVACR 232	Commercial & Industrial Boilers	2 CR
HVACR 233	Employment Preparation	1 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100		
OR		
SOC& 101		

Total Program Credits: 98

QUARTER 6

HVACR 231	Control Theory for HVAC/R	8 CR
HVACR 232	Commercial & Industrial Boilers	2 CR
HVACR 233	Employment Preparation	1 CR
CMST& 210	Interpersonal Communication	5 CR
Or		
PSYC& 100		
Or		
SOC& 101		

Total Program Credits: 103

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Heating, Ventilation, Air Conditioning & Refrigeration Technology (HVAC), AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

Please note that while students may choose to take their General Education courses during any quarter, it is strongly recommended they be taken in the sequence listed below to ensure full time status (12 or more credits) throughout enrollment in the program.

QUARTER 1

HVACR 101	Fundamentals of Refrigeration	8 CR
HVACR 102	Basic Electricity for HVACR	8 CR
MATH& 107	Math in Society	5 CR
Or higher		

QUARTER 2

HVACR 121	Commercial Self-Contained Systems	7 CR
HVACR 122	Commercial Ice Systems	7 CR
ENGL& 101	English Composition I	5 CR
Or higher		

QUARTER 3

HVACR 131	Furnace Technology	7 CR
HVACR 132	Boilers and Hydronic Heat	7 CR

QUARTER 4

HVACR 201	A/C & Airflow	8 CR
HVACR 202	Applied Heat Pump Systems	5 CR
Choose five credits of Humanities, Social Science, or Natural Science from Approved Transfer Course List		

QUARTER 5

HVACR 221	Commercial Refrigeration	8 CR
HVACR 222	Industrial Refrigeration	7 CR

INDUSTRIAL MAINTENANCE & MECHATRONICS

OVERVIEW

BTC's Industrial Maintenance & Mechatronics program places graduates in solid careers as industrial electricians, millwrights, or instrument technicians. Demand for skilled workers is strong in high-growth industries such as refining, water treatment, petrochemical, pharmaceutical, and power generation.

As an Industrial Maintenance & Mechatronics graduate, you'll possess a broad range of highly-sought skills and knowledge. BTC's program will teach you to troubleshoot, maintain, repair, and analyze sophisticated equipment in advanced manufacturing operations. Electro-Mechanical is a great program choice if you want a high-wage career with local employers.

PROGRAM OUTCOMES

After successfully completing the AAS degree, students will be able to:

- Design, analyze, and diagnose basic electrical systems through the application of electrical theory fundamentals.
- Design, analyze, and diagnose basic industrial mechanical systems through the application of hydraulic, pneumatic, lever, and pulley theory fundamentals.
- Ensure safe work practices and installations through compliance with federal, state, and local regulations and industry standards including the National Electrical Code, WAC Chapter 296 and related RCW.
- Use proper tools and test equipment to construct and maintain power, lighting, signaling, and control systems in industrial settings.
- Use proper tools and test equipment to construct and maintain mechanical systems in industrial settings.
- Install new and modify existing process systems and components utilizing appropriate electrical and millwright/mechanical skills and materials
- Communicate clearly with team members, supervisor, and others in the workplace, effectively using oral communication as well as drawings, blueprints, and other documents.
- Exhibit professional personal conduct and appearance appropriate to the workplace.

After successfully completing the Industrial Maintenance and Mechatronics Fundamentals certificate, students will be able to:

- Analyze and construct basic electrical systems through the

- application of electrical theory fundamentals.
- Analyze and construct basic industrial mechanical systems through the application of hydraulic, pneumatic, lever and pulley theory fundamentals.
- Ensure safe work practices and installations through compliance with federal, state, and local regulations and industry standards Use basic tools and test equipment to construct and maintain power, lighting, signaling, and control systems in industrial settings.
- Use basic tools and test equipment to construct and maintain mechanical systems in industrial settings.
- Communicate clearly with team members, supervisor, and others in the workplace, effectively using oral communication as well as drawings, blueprints, and other documents.
- Exhibit professional personal conduct and appearance appropriate to the workplace.

EMTEC 123	Hydraulics & Pneumatics Circuits	5 CR
EMTEC 205	Programmable Logic Controllers	5 CR
EMTEC 231	Bearings & Drives	5 CR

QUARTER 5

EMTEC 200	Industrial Power Distribution	3 CR
EMTEC 207	Industrial Maintenance Management	5 CR
EMTEC 217	Instrumentation & Controls	4 CR
EMTEC 220	Micro-Controllers	5 CR
WLD 173	Basic Welding	2 CR

QUARTER 6

EMTEC 133	Introduction to Machinery Skills	4 CR
EMTEC 238	Drive Alignment and Rotary Machines	4 CR
EMTEC 260	Automated Manufacturing Systems and Robotics	4 CR
EMTEC 261	Introduction to Smart Sensors and Actuators	2 CR
EMTEC 262	Electrical and Mechanical Troubleshooting	6 CR

Total Program Credits: 113

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Industrial Maintenance & Mechatronics AAS Degree and Certificate completion require a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for all General Education courses and minimum grade of C-/1.7 for program courses.

ASSOCIATE OF APPLIED SCIENCE

Industrial Maintenance & Mechatronics, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
AM 105	Direct Current	4 CR
AM 110	Introduction to Computer Applications	2 CR
PTEC 102	Process Technology I (Equipment)	5 CR
AMATH 111	Applied Technical Math	5 CR

QUARTER 2

EMTEC 125	Applied Mechanics	5 CR
EMTEC 126	Engineering Graphics	4 CR
EMTEC 210	AC Circuits	4 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 3

EMTEC 121	Fundamentals of Hydraulic and Pneumatics	5 CR
EMTEC 211	Electrical Controls I	5 CR
EMTEC 225	Solid State Components	4 CR
AENGL 100	Applied English	5 CR

QUARTER 4

EMTEC 106	Computer Programming	3 CR
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CERTIFICATE

**Industrial Maintenance and Mechatronics
Fundamentals Certificate**

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
AM 105	Direct Current	4 CR
AM 110	Introduction to Computer Applications	2 CR
PTEC 102	Process Technology I (Equipment)	5 CR
AMATH 111	Applied Technical Math	5 CR

QUARTER 2

EMTEC 125	Applied Mechanics	5 CR
EMTEC 126	Engineering Graphics	4 CR
EMTEC 210	AC Circuits	4 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 3

EMTEC 121	Fundamentals of Hydraulic and Pneumatics	5 CR
EMTEC 211	Electrical Controls I	5 CR
EMTEC 225	Solid State Components	4 CR
AENGL 100	Applied English	5 CR

Total Program Credits: 56

INFORMATION TECHNOLOGY

OVERVIEW

The rapid expansion of the computer industry has generated a growing need for highly skilled workers to repair, network, and support these complex computer systems. Employment of computer networking engineers is expected to increase much faster than average as information technology becomes more sophisticated and organizations continue to adopt and integrate these technologies. The computer networking field requires specialists who continually learn new skills to keep pace with the rapidly changing IT industry.

BTC's degrees and certificates in the Information Technology Program are ideal for students with skill sets and interests in Computer Networking, working with and troubleshooting computers, assisting

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the public, customer service, and more. Your computer networking career training will help you learn in-demand skills for a rewarding career in the fast-paced world of modern business.

PROGRAM OUTCOMES

After successfully completing the AAS or AAS-T degree, students will be able to:

- Install, configure, and administer an advanced application server.
- Install, configure, and administer a Microsoft Windows Network.
- Design, develop, implement, and document a complex project.
- Design and implement a group project.
- Demonstrate industry competency in fundamental networking concepts used by computer networking professionals.
- Demonstrate the ability to apply technical and interpersonal knowledge and skills in a professional setting.

After successfully completing the Cloud Computing certificate, students will be able to:

- Apply concepts of XaaS (anything as a service) to meet appropriate business use cases.
- Deploy cloud-hosted services to meet industry standards.
- Perform system administration roles utilizing cloud service management interfaces.
- Troubleshoot cloud security controls in accordance with best practices.

After successfully completing the Computer Programming certificate, students will be able to:

- Design computer programs using industry standards.
- Construct programs using appropriate data types and data structures, conditional logic and iterative control structures.
- Construct object-oriented programs leveraging concepts including modularity, encapsulation, and inheritance.
- Test and debug programs using manual techniques and integrated development environments.

PLACEMENT REQUIREMENTS

ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher.

ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

ACCUPLACER Arithmetic (238) or higher OR MATH 090 with a C or higher.

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

DEGREE AND CERTIFICATE REQUIREMENTS

Computer Technology Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of D/1.0 in all courses and a minimum grade of C/2.0 in all General Education courses. Cloud Computing and Computer Programming Certificate completion requires a cumulative GPA of 2.0 or higher and minimum grade of D/1.0 in all courses.

ASSOCIATE OF APPLIED SCIENCE

Computer Networking, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 65 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
IT 101	Using Network Computer Systems	5 CR
IT 107	Using Cloud Services	3 CR
IT 112	A+ Hardware	5 CR
IT 120	Command Line Interface & Scripting	5 CR
IT 141	A+ Operating Systems	5 CR
IT 142	Windows Desktop I	5 CR
IT 160	Network Technology I	5 CR
IT 161	Network Technology II	5 CR
IT 210	Information Security	5 CR
IT 240	Linux Server Administration	5 CR
IT 242	Windows Server I	5 CR
IT 250	Cloud & IOT Fundamentals	5 CR
IT 270	Field-Based Experience	5 CR

SPECIALTY COURSES: 15 CREDITS

Choose one of four tracks: Cloud Computing, Network Management, Computer Programming, or Generalist.

CLOUD COMPUTING:

IT 252	Amazon Cloud	5 CR
IT 253	Microsoft Cloud	5 CR
IT 254	Web Applications	5 CR

NETWORK MANAGEMENT:

IT 241	Windows Desktop II	5 CR
IT 243	Windows Server II	5 CR
IT 260	Network Technology III	5 CR

COMPUTER PROGRAMMING:

IT 121	Introduction to Programming	5 CR
CS& 131	Computer Science I C++	5 CR
CS 132	Computer Science II C++	5 CR

GENERALIST:

Students may select any three classes from the Cloud Computing, Network Management, or Computer Programming tracks.

REQUIRED ELECTIVE CREDITS: 5 CREDITS

Computer Networking students may choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, ACCT&, BUS, CAP, CET, CS, CS&, ECON, ECON&, EMTEC, ENGR, ENGR&, ENGT, HT, INST, IT, PHIL, PTEC, or instructor permission. Courses

taken to meet the general education or program core requirements may not be used for electives.

GENERAL EDUCATION COURSES: 15 CREDITS

AENGL 100	Applied English	5 CR
OR		
BUS 191	Technical Communications	5 CR
OR		
ENGL& 101	English Composition I	5 CR
OR		
ENGL& 102	English Composition II	5 CR
AMATH 100	Applied Occupational Math	5 CR
OR		
BUS 150	Math for Business	5 CR
OR		
MATH& 107	Math in Society	5 CR
OR higher		
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

Total Program Credits: 100

Meet with your Program Advisor to establish an Academic Plan and ensure classes are taken in the correct order.

Computer Networking, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

CORE COURSES: 65 CREDITS

BIT 100	Survey of Business and Information Technology	2 CR
IT 101	Using Network Computer Systems	5 CR
IT 107	Using Cloud Services	3 CR
IT 112	A+ Hardware	5 CR
IT 120	Command Line Interface & Scripting	5 CR
IT 141	A+ Operating Systems	5 CR
IT 142	Windows Desktop I	5 CR
IT 160	Network Technology I	5 CR
IT 161	Network Technology II	5 CR
IT 210	Information Security	5 CR
IT 240	Linux Server Administration	5 CR
IT 242	Windows Server I	5 CR
IT 250	Cloud & IOT Fundamentals	5 CR
IT 270	Field-Based Experience	5 CR

SPECIALTY COURSES: 15 CREDITS

Choose one of four tracks: Cloud Computing, Network Management, Computer Programming, or Generalist.

CLOUD COMPUTING:

IT 252	Amazon Cloud	5 CR
IT 253	Microsoft Cloud	5 CR
IT 254	Web Applications	5 CR

NETWORK MANAGEMENT:

IT 241	Windows Desktop II	5 CR
IT 243	Windows Server II	5 CR
IT 260	Network Technology III	5 CR

COMPUTER PROGRAMMING:

IT 121	Introduction to Programming	5 CR
CS& 131	Computer Science I C++	5 CR
CS 132	Computer Science II C++	5 CR

GENERALIST:

Students may select any three classes from the Cloud Computing, Network Management, or Computer Programming tracks.

GENERAL EDUCATION COURSES: 20 CREDITS

ENGL& 101	English Composition I	5 CR
OR		
ENGL& 102	English Composition II	5 CR
MATH& 107	Math in Society	5 CR
OR higher		
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

Choose 5 credits of Humanities, Social Science and Natural Science from approved transfer course list.

Total Program Credits: 100

Meet with your Program Advisor to establish an Academic Plan and ensure classes are taken in the correct order.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Computer Networking Articulation to WWU Cybersecurity B.S.

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

BASIC REQUIREMENTS

To be eligible for a BTC transfer to Western Washington University's Bachelor of Science in Cybersecurity degree, students must:

1. Achieve a minimum grade of C (2.0) in all classes with the exception of B (3.0) or higher in IT 210 - Information Security.
2. Achieve a minimum college GPA of 2.5.

ACADEMIC CORE

IT 106	IT Support Skills	3 CR
IT 107	Using Cloud Services	3 CR
IT 112	A+ Hardware	5 CR
IT 120	Command Line Interface & Scripting	5 CR
IT 141	A+ Operating Systems	5 CR
IT 142	Windows Desktop I	5 CR

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IT 160	Network Technology I	5 CR
IT 161	Network Technology II	5 CR
IT 210	Information Security	5 CR
IT 240	Linux Server Administration	5 CR
IT 242	Windows Server I	5 CR
IT 250	Cloud & IOT Fundamentals	5 CR

PROGRAM SPECIALTY TRACK - COMPUTER PROGRAMMING (REQUIRED)

IT 121	Introduction to Programming	5 CR
CS& 131	Computer Science I C++	5 CR
CS 132	Computer Science II C++	5 CR

GENERAL EDUCATION COURSES

The following two general education courses are required courses:

ENGL& 101	English Composition I	5 CR
MATH& 151	Calculus I	5 CR

Choose two of the following general education courses:

CMST& 210	Interpersonal Communication	5 CR
CMST& 220	Public Speaking	5 CR
PSYC& 100	General Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR

ELECTIVES

Choose one of the following elective courses:

IT 241	Windows Desktop II	5 CR
IT 243	Windows Server II	5 CR
IT 252	Amazon Cloud	5 CR
IT 253	Microsoft Cloud	5 CR
IT 254	Web Applications	5 CR
IT 260	Network Technology III	5 CR

Total Program Credits: 99

CERTIFICATE

Cloud Computing Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 15 CREDITS

IT 252	Amazon Cloud	5 CR
IT 253	Microsoft Cloud	5 CR
IT 254	Web Applications	5 CR

Total Program Credits: 15

Computer Programming Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 15 CREDITS

IT 121	Introduction to Programming	5 CR
CS& 131	Computer Science I C++	5 CR
CS 132	Computer Science II C++	5 CR

Total Program Credits: 15

Network Management Certificate

PROGRAM REQUIREMENTS

CORE COURSES: 15 CREDITS

IT 241	Windows Desktop II	5 CR
IT 243	Windows Server II	5 CR
IT 260	Network Technology III	5 CR

Total Program Credits: 15

INSTRUMENTATION & CONTROL TECHNOLOGY

OVERVIEW

Instrumentation and process control technicians install, maintain, repair, and adjust the measuring and controlling instruments that make plants run safely. Bellingham Technical College's Instrumentation & Control program will give you training for a career as an instrumentation technician for high-tech industries such as power generation plants, water treatment facilities, chemical manufacturing plants, canneries, aerospace plants, bio-pharmaceutical plants, semiconductor manufacturing plants, and pulp and paper mills.

BTC's classes in the Instrumentation & Control program will train you to maintain, repair, and troubleshoot instruments and control systems in industries that increasingly rely on automation. Instrumentation & Control is a great program choice if you're looking for a high-wage career with employment potential across the nation and beyond.

PROGRAM OUTCOMES

- Communication - Communicates and expresses thoughts across a variety of mediums (verbal, written, visually) to effectively persuade, inform, and clarify ideas with colleagues.
- Time Management - Arrives on time and prepared to work; budgets time and meets deadlines when performing technical tasks and projects.
- Safety - Complies with national, state, and local safety regulations when repairing, calibrating, and installing instruments.
- Diagnose and Repair Existing Instruments - Assesses, diagnoses, and repairs faulty instruments in measurement and control systems using logical procedures and appropriate test equipment.
- Install and Configure New Instruments - Builds, configures, and installs new instrument systems according to plans, applying industry construction standards, and ensuring correct system operation when complete.
- Process Control Optimization - Improve system functions by evaluating control system performance; implements strategies to tune and stabilize control systems.
- Instrument Calibration - Assesses instrument accuracy and correct inaccuracies using appropriate calibration procedures.

dures and test equipment.

- Documents Instrument Systems - Interprets and creates technical documents (electronic schematics, loop diagrams, and P&IDs) according to industry (EIA, ISA) standards.
- Self-Directing Learning - Selects and researches relevant information sources to learn new principles, technologies, and techniques.
- Career Development - Researches and seeks opportunities for promotion and job advancements in work and career settings.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

ADDITIONAL REQUIREMENTS

Completion of Intermediate Algebra (MATH 099) or placement into Pre-Calculus (MATH& 141 Precalculus I) is a required prerequisite for enrollment in this program.

DEGREE REQUIREMENTS

Instrumentation & Control Technology AAS Degree requires a cumulative GPA of 2.0 or higher, a minimum grade of D/1.0 for all required program courses and minimum grade of C/2.0 for General Education courses. Instrumentation & Control Technology AAS-T Degree requires a cumulative GPA of 2.0 or higher, a minimum grade of D/1.0 for all required program courses and minimum grade of C/2.0 for General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Instrumentation & Control Technology, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
AM 105	Direct Current	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR
AMATH 111	Applied Technical Math	5 CR

QUARTER 2

INST 102	Advanced Electrical Fundamentals	10 CR
INST 103	Practical Advanced Electrical Fundamentals	6 CR
AENGL 100	Applied English	5 CR
OR higher		

QUARTER 3

INST 107	Digital Automation Fundamentals	8 CR
INST 108	Practical Digital Automation Fundamentals	8 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

INST 240	Pressure and Level Measurement	6 CR
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INST 250	Final Control Elements	5 CR
INST 251	PID Control	5 CR

QUARTER 5

INST 205	Job Preparation I	1 CR
INST 241	Temperature & Flow Measurement	6 CR
INST 260	Data Acquisition Systems	4 CR
INST 262	Digital Control Systems	5 CR

QUARTER 6

INST 206	Job Preparation II	1 CR
INST 242	Analytical Measurement	5 CR
INST 252	Loop Tuning	4 CR
INST 263	Control Strategies	5 CR

Total Program Credits: 106

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Instrumentation & Control Technology, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
AM 105	Direct Current	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR
MATH& 141	Precalculus I	5 CR
OR higher		

QUARTER 2

INST 102	Advanced Electrical Fundamentals	10 CR
INST 103	Practical Advanced Electrical Fundamentals	6 CR
ENGL& 101	English Composition I	5 CR
OR higher		

QUARTER 3

INST 107	Digital Automation Fundamentals	8 CR
INST 108	Practical Digital Automation Fundamentals	8 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

INST 240	Pressure and Level Measurement	6 CR
INST 250	Final Control Elements	5 CR
INST 251	PID Control	5 CR

QUARTER 5

INST 205	Job Preparation I	1 CR
INST 241	Temperature & Flow Measurement	6 CR
INST 260	Data Acquisition Systems	4 CR
INST 262	Digital Control Systems	5 CR
PSYC& 100	General Psychology	5 CR

QUARTER 6

INST 206	Job Preparation II	1 CR
INST 242	Analytical Measurement	5 CR
INST 252	Loop Tuning	4 CR
INST 263	Control Strategies	5 CR

Total Program Credits: 111

MACHINING

OVERVIEW

If you're interested in working with your hands to turn designs into the parts and products that make the world work, then a career in machining could be for you. Bellingham Technical College's Machining program will give you training for top jobs in aerospace, manufacturing, fabricating, and CNC custom shops. You'll be prepared to work right away as a machinist; with experience you can advance to journey-level machining, tool programming, CNC operating, or engineering.

Bellingham Technical College's labs will train you for your career with high-tech machining equipment. In your classes, you'll learn how to use machine tools such as lathes, drill presses, and milling machines, in addition to blueprint reading, basic CNC programming and machine processes. Employers who hire graduates from BTC's Machining program include aircraft, boat, and automobile manufacturers, industrial machinery firms, and machine shops.

PROGRAM OUTCOMES

After successful completion of the Machining AAS degree, students will be able to:

- Operate machine shop equipment such as manual lathes, manual mills, and band saws.
- Read and interpret blueprints per industry standards with an emphasis on GD&T.
- Develop and execute a plan to create parts to print specifications.
- Read, write, and edit G-code.
- Create CNC programs using conversational programming.
- Operate CNC mills and lathes while using a variety of machine controls.
- Demonstrate competency in CAD and CAM software, with an emphasis on CAM programming to create complex tool-paths for both CNC mills and lathes.
- Validate parts using measuring equipment like calipers, micrometers, bore gages, electronic height gages, and CMMs

CERTIFICATE OUTCOMES

After successfully completing the Principles of Machining & CNC Operations certificate, students will be able to:

- Operate machine shop equipment such as manual lathes, manual mills, and band saws.
- Read and interpret blueprints per industry standards with an emphasis on GD&T.
- Develop and execute a plan to create parts to print specifications.
- Read, write, and edit G-code.
- Perform basic CNC set-up and operations.

After successfully completing the Quality Assurance for Machining certificate, students will be able to:

- Read and interpret blueprints per industry standards with an emphasis on GD&T.
- Validate parts using measuring equipment like calipers, micrometers, bore gages, electronic height gages, and CMMs.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Machining Degree and Certificate completion requires a cumulative GPA of 2.0 or higher and a minimum grade of C/2.0 for all general education courses.

ASSOCIATE OF APPLIED SCIENCE

Machining, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

MACH 110	Machining 1 Lab Extension	2 CR
MACH 115	Blueprint Reading 1	5 CR
MACH 181	Manual Machining 1	5 CR
AMATH 100	Applied Occupational Math	5 CR
OR higher		

QUARTER 2

MACH 112	Machining 2 Lab Extension	2 CR
MACH 116	Blueprint Reading 2	5 CR
MACH 182	Manual Machining 2	5 CR
AENGL 100	Applied English	5 CR
OR higher		

QUARTER 3

ENGR 180	Parametric Modeling	5 CR
MACH 114	Machining 3 Lab Extension	4 CR
MACH 183	Introduction to CNC Machining and Programming	5 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

MACH 241	Introduction to CNC Lathe Operation	5 CR
MACH 251	Introduction to CNC Mill Operation	5 CR
MACH 261	Introduction to CAD/CAM for Machining	3 CR
QA 110	Introduction to Quality Assurance for Machining	3 CR

QUARTER 5

MACH 242	Advanced CNC Lathe Operation	5 CR
MACH 252	Advanced CNC Mill Operation	5 CR
MACH 263	Intermediate CAD/CAM for Machining	3 CR
QA 115	Intermediate Quality Assurance for Machining	3 CR

QUARTER 6

MACH 264	Advanced CAD/CAM for Machining	3 CR
MACH 274	CNC Machining for Production	6 CR
QA 120	Advanced Quality Assurance for Machining	3 CR

Total Program Credits: 97

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Machining, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

MACH 110	Machining 1 Lab Extension	2 CR
MACH 115	Blueprint Reading 1	5 CR
MACH 181	Manual Machining 1	5 CR
MATH& 141	Precalculus I	5 CR
OR higher		

QUARTER 2

MACH 112	Machining 2 Lab Extension	2 CR
MACH 116	Blueprint Reading 2	5 CR
MACH 182	Manual Machining 2	5 CR
ENGL& 101	English Composition I	5 CR
OR higher		

QUARTER 3

ENGR 180	Parametric Modeling	5 CR
MACH 114	Machining 3 Lab Extension	4 CR
MACH 183	Introduction to CNC Machining and Programming	5 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 4

ENGR& 104	Introduction to Engineering & Design	5 CR
MACH 241	Introduction to CNC Lathe Operation	5 CR
MACH 251	Introduction to CNC Mill Operation	5 CR
MACH 261	Introduction to CAD/CAM for Machining	3 CR
QA 110	Introduction to Quality Assurance for Machining	3 CR

QUARTER 5

MACH 242	Advanced CNC Lathe Operation	5 CR
MACH 252	Advanced CNC Mill Operation	5 CR
MACH 263	Intermediate CAD/CAM for Machining	3 CR
QA 115	Intermediate Quality Assurance for Machining	3 CR

QUARTER 6

MACH 264	Advanced CAD/CAM for Machining	3 CR
MACH 274	CNC Machining for Production	6 CR
QA 120	Advanced Quality Assurance for Machining	3 CR
MATH& 142	Precalculus II	5 CR
OR higher		

Total Program Credits: 107

CERTIFICATE

**Principles of Machining and
CNC Operation Certificate**

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

MACH 110	Machining 1 Lab Extension	2 CR
MACH 115	Blueprint Reading 1	5 CR
MACH 181	Manual Machining 1	5 CR
AMATH 100	Applied Occupational Math	5 CR
OR higher		

QUARTER 2

MACH 112	Machining 2 Lab Extension	2 CR
MACH 116	Blueprint Reading 2	5 CR
MACH 182	Manual Machining 2	5 CR
AENGL 100	Applied English	5 CR
OR higher		

QUARTER 3

ENGR 180	Parametric Modeling	5 CR
MACH 114	Machining 3 Lab Extension	4 CR
MACH 183	Introduction to CNC Machining and Programming	5 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 53

Quality Assurance for Machining Certificate

PROGRAM REQUIREMENTS

QA 110	Introduction to Quality Assurance for Machining	3 CR
QA 115	Intermediate Quality Assurance for Machining	3 CR
QA 120	Advanced Quality Assurance for Machining	3 CR
AENGL 100	Applied English	5 CR
AMATH 100	Applied Occupational Math	5 CR

Total Program Credits: 19

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

MEDICAL ADMINISTRATION

OVERVIEW

Train for a career as a medical records and health information technician, or a billing and posting clerk, through BTC's Medical Administration program. Students will gain a broad base of knowledge in general office skills, along with the required background in medical insurance billing and coding procedures. Program graduates typically work for hospitals, physician offices, insurance companies, extended care facilities, and home healthcare firms.

PROGRAM OUTCOMES

After successful completion of the Medical Administration program, students will be able to:

- Perform front office tasks using simulated electronic health records software including scheduling appointments, registering patients, and documenting patient health information using correct medical terminology and editing skills
- Identify and apply the concepts of medical insurance billing reimbursement policies, practices, and industry guidelines
- Perform medical coding using appropriate coding systems
- Identify the governing bodies at the federal, state, and local levels and apply their laws in a healthcare setting
- Analyze and identify industry changes to the standard of care, including nutrition, lifestyle, and pharmaceuticals
- Analyze strategies to improve the quality of patient services and quantitative analysis in medical office operations
- Analyze and explain the concepts of medical ethics and their impact on medical office operations
- Evaluate healthcare business structure, management, and the hiring processes.

CERTIFICATE OUTCOMES

After successfully completing the Medical Office Support certificate, students will be able to:

- Perform front office tasks using simulated electronic health records software including scheduling appointments, registering patients, and documenting patient health information using correct medical terminology and editing skills.
- Identify and apply the concepts of medical insurance billing reimbursement policies, practices and industry guidelines
- Identify and describe medical coding systems and structure
- Identify the governing bodies at the Federal, State and Local levels and analyze their impact on medical office operations.

PROGRAM ENTRY INFORMATION

This is an open enrollment program; students may start in any quarter; however, some courses are only offered once per year.

PLACEMENT REQUIREMENTS

Admissions application and assessment testing in Reading, Math, and Writing Skills are required. Your score on the test and/or your previous transcripts will determine where you begin

your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

A cumulative GPA of 2.0 or greater and minimum grade of C/2.0 for required courses.

ASSOCIATE OF APPLIED SCIENCE

Medical Administration, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

HT 100	Fundamentals of Medical Terminology	5 CR
HT 103	Diseases of the Human Body	5 CR
CAP 101	Microsoft Computer Applications	5 CR

QUARTER 2

HT 120	Introduction to Medical Insurance Billing	5 CR
HT 121	Essentials of Anatomy & Physiology	5 CR
HT 122	Medical Office Procedures	5 CR

QUARTER 3

HT 131	Introduction to Medical Coding	5 CR
HT 132	Medical Records Management	5 CR
HT 135	Pharmacology for the Medical Office	3 CR

QUARTER 4

HT 225	Nutrition & Health for Healthcare Professionals	4 CR
BUS 191	Technical Communications	5 CR
PSYC& 100	General Psychology	5 CR

QUARTER 5

HT 230	Medical Diagnostic Coding ICD	5 CR
HT 240	Medical Procedure Coding - CPT & HCPCS	5 CR
AMATH 100	Applied Occupational Math	5 CR
OR higher		
OR		
BUS 150	Math for Business	5 CR

QUARTER 6

HT 265	Medical Billing & Coding Practicum	8 CR
HT 275	Medical Ethics & Law	5 CR

REQUIRED ELECTIVE CREDITS: 5 CR

Medical Administration students may choose elective credits from any 100-level or higher courses with the following prefixes: ACCT, BIOL, BUS, CAP, CHEM, CMST, ECON, ENGL, HT, IT, LGL, MATH, MGMT, POLS, PSYC, or SOC.

Field Based Experience courses may not be used as electives. Courses taken to meet the general education or program core requirements may not be used for electives. Medical Administration students who transfer into this program, who are under 90 credits, may take additional courses to meet the 90-credit minimum requirement.

Total Program Credits: 90

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Medical Administration, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

HT 100	Fundamentals of Medical Terminology	5 CR
HT 103	Diseases of the Human Body	5 CR
CAP 101	Microsoft Computer Applications	5 CR

QUARTER 2

HT 120	Introduction to Medical Insurance Billing	5 CR
HT 121	Essentials of Anatomy & Physiology	5 CR
HT 122	Medical Office Procedures	5 CR

QUARTER 3

HT 131	Introduction to Medical Coding	5 CR
HT 132	Medical Records Management	5 CR
HT 135	Pharmacology for the Medical Office	3 CR

QUARTER 4

ENGL& 101 OR	English Composition I	5 CR
ENGL& 102	English Composition II	5 CR
HT 225	Nutrition & Health for Healthcare Professionals	4 CR
PSYC& 100	General Psychology	5 CR

QUARTER 5

MATH& 107 OR higher	Math in Society	5 CR
HT 230	Medical Diagnostic Coding ICD	5 CR
HT 240	Medical Procedure Coding - CPT & HCPCS	5 CR

QUARTER 6

CMST& 210 OR	Interpersonal Communication	5 CR
SOC& 101	Introduction to Sociology	5 CR
HT 265	Medical Billing & Coding Practicum	8 CR
HT 275	Medical Ethics & Law	5 CR

Total Program Credits: 90

CERTIFICATE

Medical Office Support Certificate

PROGRAM REQUIREMENTS

QUARTER 1

HT 100	Fundamentals of Medical Terminology	5 CR
HT 103	Diseases of the Human Body	5 CR
CAP 101	Microsoft Computer Applications	5 CR

QUARTER 2

HT 120	Introduction to Medical Insurance Billing	5 CR
HT 122	Medical Office Procedures	5 CR
HT 121	Essentials of Anatomy & Physiology	5 CR

QUARTER 3

HT 131	Introduction to Medical Coding	5 CR
HT 132	Medical Records Management	5 CR
HT 135	Pharmacology for the Medical Office	3 CR

Total Program Credits: 43

**NURSING: ASSOCIATE DEGREE
REGISTERED NURSING****OVERVIEW**

The BTC Registered Nursing Program is nationally accredited through the Accreditation Commission for Education in Nursing (ACEN) and is a concept-based Associate Degree in Nursing Direct Transfer Agreement/Major Ready pathway (DTA/MRP). The Nursing DTA/MRP degree is designed to create a streamlined pathway for students from an Associate Degree to a Bachelor's of Science in Nursing (BSN).

Students take one year or more of prerequisite general education courses then apply to the program and upon acceptance, complete six quarters of Nursing Program core courses. Graduates of the BTC Registered Nursing Program are eligible to sit for the National Council Licensure Examination-Registered Nurse (NCLEX-RN) and may apply for admission to RN-BSN programs at WA State colleges and universities.

There is one Nursing Program at BTC which has three program options, Registered Nursing (RN), LPN-RN, and Practical Nursing (PN). The Registered Nurse associate degree is intended for students new to the nursing field and has both a full-time and part-time options. Advanced placement students who are Licensed Practical Nurses (LPNs) are admitted into the part-time, evening LPN-RN option to complete the DTA/MRP associate degree. Students who graduate from the either RN pathway or the LPN-RN pathway are eligible to sit for the National Council Licensure Examination – Registered Nurse (NCLEX-RN). The third program option is the Practical Nursing Certificate. This pathway is designed for students interested in becoming a Licensed Practical Nurse (LPN) and looking for a part-time option that better meets their needs. Upon completion of the PN Certificate program graduates are eligible to sit for the National Council Licensure Examination – Practical Nurse (NCLEX-PN).

The Nursing Program has a separate admission process from admission to BTC. Students must be admitted into a cohort before beginning nursing coursework. See the Nursing Program website for more information about current admission requirements and process.

PROGRAM OUTCOMES

After successfully completing the Associate Degree in Nursing, students will be able to:

- Demonstrate safe nursing care.
- Identify culturally competent techniques to promote resilience in self and others.
- Utilize therapeutic communication across a variety of settings.
- Model integrity through ethical and professional behaviors.
- Effectively implement the nursing process.

PLACEMENT REQUIREMENTS

Healthcare Experience. Two-year applicants must submit a Healthcare Experience Verification Form for prior approval. Experience in healthcare may be demonstrated by certification or training in an allied healthcare field. Other experience will be evaluated on a case-by-case basis by program staff. LPN-RN applicants must have an active, unencumbered Washington State LPN license and submit the

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Verification of Work Experience Form documenting 1,000 hours of work as an LPN within the last five years. These two forms are located on the Nursing website.

CLINICAL PLACEMENT REQUIREMENTS

After acceptance into the Nursing Program but prior to beginning clinical rotations, students must complete the clinical placement process and be at least 18 years of age. Clinical requirements include:

- Criminal background check
- 10-Panel urine drug screen
- Physical examination
- Tuberculous screening
- Required immunizations
- Current American Heart Association BLS for Provider CPR certification
- Medical Insurance Coverage

More information about the clinical placement requirements process is on the Nursing Program website.

DEGREE REQUIREMENTS

Nursing DTA/MRP degree completion requires a cumulative GPA of 2.0 or higher, a minimum grade of B- (2.7) for all Program Core courses, and minimum grades for all Prerequisite Courses as described above. Students must also complete the minimum required clinical hours.

DIRECT TRANSFER AGREEMENT/ MAJOR RELATED PROGRAM

Associate in Nursing, DTA/MRP – Full-Time

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 60 CREDITS

The following courses must be completed with a 3.0 (B) or higher.

BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
MATH& 146	Introduction to Statistics	5 CR
PSYC& 200	Lifespan Psychology	5 CR

The following courses must be completed with a 2.0 (C) or higher.

BIOL& 160	General Biology with Lab	5 CR
PSYC& 100	General Psychology	5 CR
Communication (elective)		5 CR
Humanities (elective)		10 CR

CORE COURSES: 75 CREDITS

QUARTER 1

NURS 110	Introduction to Health Concepts	4 CR
NURS 115	Introduction to Health Concepts- Clinical Lab	6 CR
NUTR 115	Nutrition in Healthcare I	1 CR
PHIL 115	Ethics and Policy in Healthcare I	1 CR
PSYC 115	Psychosocial Issues in Healthcare I	1 CR

QUARTER 2

NURS 120	Health and Illness Concepts 1	5 CR
NURS 125	Health & Illness Concepts 1- Clinical Lab	6 CR
NUTR 116	Nutrition in Healthcare II	1 CR
PSYC 116	Psychosocial Issues in Healthcare II	1 CR

QUARTER 3

NURS 130	Health & Illness Concepts 2	3 CR
NURS 135	Health & Illness Concepts 2- Clinical Lab	6 CR
NUTR 117	Nutrition in Healthcare III	1 CR
PSYC 117	Psychosocial Issues in Healthcare III	2 CR

QUARTER 4

NURS 210	Acute Health Concepts	5 CR
NURS 215	Acute Health Concepts- Clinical Lab	6 CR
NUTR 215	Nutrition in Healthcare IV	1 CR
PHIL 215	Ethics & Policy in Healthcare II	1 CR

QUARTER 5

NURS 220	Complex Health Concepts	4 CR
NURS 225	Complex Health Concepts- Clinical Lab	6 CR
NUTR 216	Nutrition in Healthcare V	1 CR
PSYC 215	Psychosocial Issues in Healthcare IV	1 CR

QUARTER 6

NURS 230	Professional Nursing Concepts	3 CR
NURS 235	Professional Nursing Concepts- Clinical Lab	6 CR
PHIL 216	Ethics & Policy in Healthcare III	3 CR

Total Program Credits: 135

Associate in Nursing, DTA/MRP – Part-Time

Part-time students who have completed all prerequisite courses will be able to complete this program in 12 quarters of instruction. Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 60 CREDITS

The following courses must be completed with a 3.0 (B) or higher.

BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
MATH& 146	Introduction to Statistics	5 CR
PSYC& 200	Lifespan Psychology	5 CR

The following courses must be completed with a 2.0 (C) or higher.

BIOL& 160	General Biology with Lab	5 CR
PSYC& 100	General Psychology	5 CR
Communication (elective)		5 CR
Humanities (elective)		10 CR

CORE COURSES: 75 CREDITS**QUARTER 1**

NURS 110	Introduction to Health Concepts	4 CR
NUTR 115	Nutrition in Healthcare I	1 CR
PHIL 115	Ethics and Policy in Healthcare I	1 CR
PSYC 115	Psychosocial Issues in Healthcare I	1 CR

QUARTER 2

NURS 120	Health and Illness Concepts 1	5 CR
NUTR 116	Nutrition in Healthcare II	1 CR
PSYC 116	Psychosocial Issues in Healthcare II	1 CR

QUARTER 3

NURS 115	Introduction to Health Concepts- Clinical Lab	6 CR
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QUARTER 4

NURS 125	Health & Illness Concepts 1- Clinical Lab	6 CR
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QUARTER 5

NURS 130	Health & Illness Concepts 2	3 CR
NUTR 117	Nutrition in Healthcare III	1 CR
PSYC 117	Psychosocial Issues in Healthcare III	2 CR

QUARTER 6

NURS 210	Acute Health Concepts	5 CR
NUTR 215	Nutrition in Healthcare IV	1 CR
PHIL 215	Ethics & Policy in Healthcare II	1 CR

QUARTER 7

NURS 135	Health & Illness Concepts 2- Clinical Lab	6 CR
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QUARTER 8

NURS 215	Acute Health Concepts- Clinical Lab	6 CR
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QUARTER 9

NURS 220	Complex Health Concepts	4 CR
NUTR 216	Nutrition in Healthcare V	1 CR
PSYC 215	Psychosocial Issues in Healthcare IV	1 CR

QUARTER 10

NURS 230	Professional Nursing Concepts	3 CR
PHIL 216	Ethics & Policy in Healthcare III	3 CR

QUARTER 11

NURS 225	Complex Health Concepts- Clinical Lab	6 CR
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QUARTER 12

NURS 235	Professional Nursing Concepts- Clinical Lab	6 CR
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Total Program Credits: 135

Associate in Nursing, LPN to RN

Part-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 90 CREDITS

The following courses must be completed with a 3.0 (B) or higher.

MATH& 146	Introduction to Statistics	5 CR
BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
PSYC& 200	Lifespan Psychology	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR

The following courses must be completed with a 2.0 (C) or higher.

PSYC& 100	General Psychology	5 CR
BIOL& 160	General Biology with Lab	5 CR
Ten (10) credits of Humanities Electives (Only 5 credits of foreign language can be accepted)		
Five (5) credits of Communication Electives		
30 credits of Practical Nursing		

CORE COURSES: 45 CREDITS**QUARTER 1**

NURS 210	Acute Health Concepts	5 CR
NUTR 215	Nutrition in Healthcare IV	1 CR
PHIL 215	Ethics & Policy in Healthcare II	1 CR
NUTR 115	Nutrition in Healthcare I	1 CR
PHIL 115	Ethics and Policy in Healthcare I	1 CR

QUARTER 2

NURS 215	Acute Health Concepts- Clinical Lab	6 CR
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QUARTER 3

NURS 220	Complex Health Concepts	4 CR
NUTR 216	Nutrition in Healthcare V	1 CR
PSYC 215	Psychosocial Issues in Healthcare IV	1 CR
NUTR 116	Nutrition in Healthcare II	1 CR
NUTR 117	Nutrition in Healthcare III	1 CR

QUARTER 4

NURS 225	Complex Health Concepts- Clinical Lab	6 CR
PSYC 117	Psychosocial Issues in Healthcare III	2 CR

QUARTER 5

NURS 230	Professional Nursing Concepts	3 CR
PHIL 216	Ethics & Policy in Healthcare III	3 CR
PSYC 115	Psychosocial Issues in Healthcare I	1 CR
PSYC 116	Psychosocial Issues in Healthcare II	1 CR

QUARTER 6

NURS 235	Professional Nursing Concepts- Clinical Lab	6 CR
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Total Program Credits: 135

NURSING ASSISTANT

OVERVIEW

Nursing Assistants are in high demand by employers in Whatcom County! Choose BTC's Nursing Assistant program to train for nursing assistant jobs in a wide variety of medical settings. The knowledge and skills you'll gain are highly valued by healthcare industry employers such as hospitals, assisted living facilities, nursing homes, and home health agencies.

Nursing Assistant training meets the Healthcare Experience requirement for entry into the BTC Registered Nursing Program.

The Nursing Assistant Program at Bellingham Technical College is approved by the State of Washington, Department of Health, Nursing Care Quality Assurance Commission.

Students who complete the Nursing Assistant program will be eligible to take their state certification exams.

PROGRAM OUTCOMES

- Demonstrate clinical competencies as defined in WAC 246-841.
- Identify and apply nursing knowledge necessary in the Nursing Assistant role.

PLACEMENT REQUIREMENTS

Admissions application and assessment testing in Reading, Math, and Writing Skills are required. Your score on the test and/or your previous transcripts will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

CLINICAL PLACEMENT REQUIREMENTS

After registering for Nursing Assistant program classes but prior to beginning clinical rotations, students must complete the clinical placement process. Clinical requirements include:

- Criminal background check
- Tuberculous screening
- Required immunizations
- Medical Insurance Coverage
- AHA BLS Provider CPR certification

More information about the clinical placement requirements process is available on the Nursing Assistant website.

CERTIFICATE REQUIREMENTS

Certificate completion requires a cumulative GPA of 2.0 or high, a minimum grade of C (2.0) for required courses, and minimum required attendance in classroom, lab, and clinical rotations.

CERTIFICATE

Nursing Assistant Certificate

PROGRAM REQUIREMENTS

QUARTER 1

NA 101	Nursing Assistant Essentials	6 CR
NA 102	Nursing Assistant Clinical	6 CR

Total Program Credits: 12

NURSING: PRACTICAL NURSING

OVERVIEW

The BTC Practical Nursing (PN) Certificate Program is a part-time, concept-based pathway designed for students interested in becoming a Licensed Practical Nurse (LPN) and who are looking for a part-time option that better meets their needs. The PN certificate uses the Nursing DTA/MRP curriculum scaled to the PN scope of practice.

Students take one year or more of prerequisite general education courses then apply to the program and upon acceptance complete six quarters part-time of nursing program core courses including summer quarter. After graduating from the PN Certificate students are eligible to sit for the National Council Licensure Examination – PN (NCLEX-PN). Once graduates of the PN Certificate Program become licensed LPN's and complete 1,000 hours of work as an LPN they may apply to the LPN-RN program option to complete the Associate Degree in Nursing Direct Transfer Agreement/Major Ready Pathway (DTA/MRP).

The PN Certificate Program has a separate admission process from admission to BTC. Students must be admitted into a cohort before beginning nursing coursework. See the PN Certificate Program website for more information about the current admission requirements and process.

PROGRAM OUTCOMES

After successfully completing the Practical Nursing Certificate, students will be able to:

- Demonstrate safe nursing care under the supervision of the registered nurse.
- Identify culturally competent techniques to promote resilience in self and others.
- Utilize therapeutic communication across a variety of settings.
- Model integrity through ethical and professional behaviors.
- Effectively implement the nursing process.

PLACEMENT REQUIREMENTS

Healthcare Experience. PN Certificate applicants must submit a Healthcare Experience Verification Form for prior approval. Experience in healthcare may be demonstrated by certification or training in an allied healthcare field. Other healthcare experience will be evaluated on a case-by-case basis by Nursing Program faculty and staff and either approved or denied. The form is available on the PN Certificate website.

CLINICAL PLACEMENT REQUIREMENTS

After acceptance into the Nursing Program but prior to beginning clinical rotations, students must complete the clinical placement process and be at least 18 years of age. Clinical requirements include:

- Criminal background check
- 10-Panel urine drug screen
- Physical examination
- Tuberculous screening
- Required immunizations
- Current American Heart Association BLS for Provider CPR certification
- Medical Insurance Coverage

More information about the clinical placement requirements process is on the Practical Nursing Program website.

CERTIFICATE REQUIREMENTS

Practical Nursing Certificate completion requires a cumulative GPA of 2.0 or higher, a minimum grade of B- (2.7) for all Program Core courses, and minimum grades for all Prerequisite Courses as described above. Students must also complete the minimum required clinical hours.

CERTIFICATE

Nursing: Practical Nursing

Part-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 35 CREDITS

The following courses must be completed with a 3.0 (B) or higher.

BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
MATH& 146	Introduction to Statistics	5 CR

The following courses must be completed with a 2.0 (C) or higher.

PSYC& 100	General Psychology	5 CR
BIOL& 160	General Biology with Lab	5 CR

CORE COURSES: 38 CREDITS**QUARTER 1**

NURS 113	PN Introduction to Health Concepts	4 CR
NUTR 113	PN Nutrition in Healthcare I	1 CR
PHIL 113	PN Ethics and Policy in Healthcare I	1 CR
PSYC 113	PN Psychosocial Issues in Healthcare I	1 CR

QUARTER 2

NURS 114	PN Introduction to Health Concepts-Clinical Lab	6 CR
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QUARTER 3

NURS 123	PN Health and Illness Concepts 1	5 CR
NUTR 123	PN Nutrition in Healthcare II	1 CR
PSYC 123	PN Psychosocial Issues in Healthcare II	1 CR

QUARTER 4

NURS 124	PN Health & Illness Concepts 1- Clinical Lab	6 CR
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QUARTER 5

NURS 133	PN Health and Illness Concepts 2	3 CR
NUTR 133	PN Nutrition in Healthcare III	1 CR
PSYC 133	PN Psychosocial Issues in Healthcare III	2 CR

QUARTER 6

NURS 134	PN Health & Illness Concepts 2- Clinical Lab	6 CR
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Total Program Credits:**73****PRE-NURSING (TRANSFER)****OVERVIEW**

The Associate in Pre-Nursing Direct Transfer Agreement/Major Related Program (DTA/MRP) degree is intended for students looking to directly transfer to WA State universities to complete their Bachelor of Science in Nursing (BSN) degree. Students enrolled in this 90-credit degree program receive instruction in English, psychology, mathematics, and science to prepare them to enter select Washington State four-year pre-licensure Nursing programs as a junior.

Upon completion of BTC's Associate in Pre-Nursing DTA/MRP degree, students are eligible to transfer to a number of Washington State institutions including University of Washington, Washington State University, Northwest University, Pacific Lutheran University, Seattle University, and Walla Walla University. Completing this degree does not guarantee admission to any baccalaureate university. Students should meet with a transfer advisor at the institution to which they intend to transfer. Please note that this degree alone will not make the BTC graduate eligible to sit for the Registered Nurse National Council Licensure Examination (NCLEX-RN). Graduates will need to complete their BSN degree at a university before they can become a Registered Nurse.

PLACEMENT REQUIREMENTS

Students seeking credit for completed coursework from other colleges or universities should submit sealed Official Transcript(s) from the prior institution(s) to the BTC Admissions Office for evaluation.

Placement testing in Reading, Math, and Writing may also be required. Test scores or transcripts from another college may also be accepted. For more information on transferring classes, please see the Transfer Student page.

DEGREE REQUIREMENTS

A cumulative GPA of 2.0 or higher must be earned in all BTC coursework, and in all coursework applied to the degree. A minimum of 50% of degree credits, including the last quarter, must be completed at BTC.

2023-2024 Programs of Study

DIRECT TRANSFER AGREEMENT/ MAJOR RELATED PROGRAM

Associate in Pre-Nursing, Direct Transfer Agreement/Major Related Program

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

COMMUNICATION SKILLS: 10 CREDITS

ENGL& 101	English Composition I	5 CR
ENGL& 102	English Composition II	5 CR

HUMANITIES: 15 CREDITS

CMST& 220	Public Speaking	5 CR
HIST& 146	United States History I	5 CR
SPAN& 121	Spanish I	5 CR

PHYSICAL AND NATURAL SCIENCES: 35 CREDITS

BIOL& 160	General Biology with Lab	5 CR
BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
CHEM& 121	Intro to Chemistry	5 CR
CHEM& 131	Introduction to Organic/Bio-Chemistry	5 CR
NUTR& 101	Nutrition	5 CR

QUANTITATIVE/SYMBOLIC REASONING SKILLS: 5 CREDITS

MATH& 146	Introduction to Statistics	5 CR
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SOCIAL SCIENCES: 15 CREDITS

PSYC& 100	General Psychology	5 CR
PSYC& 200	Lifespan Psychology	5 CR
SOC& 101	Introduction to Sociology	5 CR

ELECTIVES COURSES: 10 CREDITS

Elective	5 CR
Elective	5 CR

Total Program Credits: 90

OPERATIONS MANAGEMENT: BACHELOR OF APPLIED SCIENCE

OVERVIEW

BTC's Bachelor of Applied Science degree in Operations Management (BASOPS) is design to meet the needs of students who want to advance their careers into supervisory and management roles in industries such as manufacturing, IT, transportation, and retail/wholesale. During the BASOPS degree, students will learn about operations management tools and techniques, develop their business skills, and apply them to solve practical problems in their chosen industry.

The delivery model for this degree has been designed to meet the educational needs of working adults, providing a combination of asynchronous and synchronous web-based instruction with online

meetings scheduled to further support student learning. Mentored "focused study" courses and individual and group capstones will be used to develop students' independent thought and critical thinking skills to the level expected in a baccalaureate degree and as required for a successful career in an operations management role.

PROGRAM OUTCOMES

Graduates of the BASOPS program will be able to:

- Demonstrate a mastery of the mathematical tools required for operations management.
- Apply qualitative and quantitative forecasting techniques to the selection of processes and facility layouts that will optimize production and/or service delivery.
- Plan a comprehensive quality management program for use within an organization.
- Apply mathematical approaches to solve typical make/buy and outsourcing problems.
- Assess the value of Lean concepts, including Value Stream Mapping, Workplace Organization and Standardization, 5-S and Cellular Flow, Kan Ban and Total Production Maintenance to operations management.
- Demonstrate the application of project management techniques to develop realistic and comprehensive project plans; identify risk areas; monitor the plans; and deal with problems.
- Develop clear and coherent technical reports, proposals, memoranda, and e-mails; and deliver presentations to groups.
- Analyze projects, compare alternatives, and make business decisions based on economic principles such as time value of money, internal rate of return, and cost-benefit ratios.
- Demonstrate the ability to identify and then develop acceptable resolution of ethical dilemmas that might occur in the workplace.
- Analyze how leadership skills, recruitment and retention practices, motivation and team building, the management of change, and conflict resolution affect the behavior and interaction of people at work.
- Demonstrate a level of critical thinking, teamwork, communication, and technical and information literacy commensurate with an operations management position.

PROGRAM ADMISSION REQUIREMENT

Students must complete an accredited associate degree or higher, and if necessary take these additional courses before applying to the BASOPS program:

- ENGL& 101 English Composition I
- MATH 099 Intermediate Algebra
- Humanities or Social Science

Bridge Courses (up to 15 credits) are required for entry into the Core Courses. Students must complete these courses before being admitted to the 300-level courses.

- MATH& 146
- Natural Science with Lab
- Humanities

- Social Science
- Additional General Education Course

PROGRAM APPLICATION/FORMS

- Note: Earning an Associate degree does not mean that you will be automatically accepted into the BASOPS program. You will still need to go through a competitive application process.
- For more information please contact our Instruction Program Office Coordinator at bachelorprograms@btc.edu

DEGREE REQUIREMENTS

Operations Management BAS degree completion requires a minimum grade of C/2.0 for all General Education, Core, and Elective courses.

BACHELOR OF APPLIED SCIENCE

Operations Management: Bachelor of Applied Science

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS**GENERAL EDUCATION COURSES: 25 CREDITS**

BUS 310	Project Management	5 CR
ECON 310	Managerial Economics	5 CR
ENGL 310	Business Communications	5 CR
PHIL 310	Professional Ethics	5 CR
PSYC 310	Industrial Organizational Psychology	5 CR

CORE COURSES: 50 CREDITS

OPM 311	Mathematical Techniques for Operations Management	5 CR
OPM 312	Forecasting and System Design	5 CR
OPM 313	Quality Management	5 CR
OPM 314	Logistical Planning and Supply Chain Management	5 CR
OPM 315	Lean Concepts and Applications	5 CR
OPM 491	Focused Study I	5 CR
OPM 492	Focused Study II	5 CR
OPM 493	Focused Study III	5 CR
OPM 498	Individual Capstone Project	5 CR
OPM 499	Group Capstone Project	5 CR

Note: With faculty permission, the OPM 495 - Internship 5 CR course can be substituted for the OPM 498 - Individual Capstone Project 5 CR course.

SPECIALTY COURSES: 15 CREDITS**MANUFACTURING ELECTIVES**

OPM 411	Facility Layout and Materials Handling	5 CR
OPM 412	Workplace Health and Safety Management	5 CR
OPM 413	Measurement and Statistical Process Control	5 CR

Total Program Credits: 90

PARAMEDIC

OVERVIEW

The City of Bellingham operating as Bellingham Medic One (BMO) has been acting as a partner in the development and instructional support. While BTC operates the program, BMO and the Whatcom County Technical Advisory Board provide significant input.

This program is intended to train full-time firefighter/EMTs who are assigned to ALS ambulances within Whatcom County as well as members of other partnering agencies within the North Region counties meeting the entrance requirements. Students are sponsored in the program by their employer(s) and as such are subject to the rights and responsibilities of their employment. (See the Washington State Amended National Standard Curriculum Paramedic for a Functional Job Analysis in accord with ADA regulations).

PROGRAM OUTCOMES

To prepare competent entry-level Emergency Medical Technician-Paramedics in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.

In addition, the goal of the Bellingham Technical College Paramedic Training Program is to produce Washington State and Nationally certified paramedics who demonstrate expertise as ALS providers and are prepared to work independent of field supervision, provide excellent patient care and customer service.

PLACEMENT REQUIREMENTS

This is a private program and applications are submitted through the Whatcom County EMS and Bellingham Fire Department.

Completion of AAS General Education Courses are Prerequisites.

Note: State and NREMT requirements specify that the National Registry Exam is not considered classroom hours and is not included in the program credits.

DEGREE AND CERTIFICATE REQUIREMENTS

Paramedic AAS Degree requires completion of all Core Courses with a C (2.0) or higher.

ASSOCIATE OF APPLIED SCIENCE

Paramedic, AAS

Full time students who have completed all prerequisite courses will be able to complete this program in 4 quarters of instruction (some programs may not run in summer or other quarters). Prerequisites required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 20 CREDITS

MEDIC 100	Anatomy & Physiology for Paramedics	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR
AMATH 100	Applied Occupational Math	5 CR
OR higher		
AENGL 100	Applied English	5 CR
OR higher		

2023-2024 Programs of Study

CORE COURSES: 82 CREDITS

QUARTER 1

MEDIC 101	Paramedic Concepts I	12 CR
MEDIC 102	Paramedic Clinical Experience I	2 CR

QUARTER 2

MEDIC 121	Paramedic Concepts II	14 CR
MEDIC 122	Paramedic Clinical Experience II	2 CR

QUARTER 3

MEDIC 131	Paramedic Concepts III	16 CR
MEDIC 132	Paramedic Clinical Experience III	5 CR

QUARTER 4

MEDIC 141	Paramedic Concepts IV	16 CR
MEDIC 142	Paramedic Clinical Experience IV	2 CR

QUARTER 5

MEDIC 151	Paramedic Application and Capstone	13 CR
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Total Program Credits: 112

CERTIFICATE OUTCOMES

After successfully completing the Process Technology certificate, students will be able to:

- Appraise the typical hazards found in process plants, basic PPE, and know the requirements of regulating bodies regarding safety, health, and environmental issues (OSHA, DPT, EPA)
- Combine mathematics, chemistry, and physics theory to apply to process applications such as fluid flow, the nature of heat, chemical reaction, boiling points, vapor pressure, and electrical currents
- Appraise fundamentals of refining and power generation processes; identify core functions and principles of operation of typical process equipment such as pumps, compressors, filters and dryers, lubrication systems, valves, piping systems, and draw from memory process flow diagram

After successfully completing the Water and Wastewater Treatment certificate, students will be able to:

- Appraise the typical hazards found in water and wastewater treatment plants, basic PPE, and know the requirements of regulating bodies regarding safety, health, and environmental issues (OSHA, DOT, EPA).
- Apprise fundamentals of water and wastewater treatment processes; know core functions and principles of operation of typical process equipment such as pumps, compressors, filters and dryers, lubrication systems, valves, piping systems, and draw from memory Process Flow Diagrams.
- Integrate the principles of process automatic control and Data Control Systems (DCS) to manage simulated DCS scenarios.
- Graduates will have the ability to compare actual water and wastewater plant experience versus preconceived notions.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Process Technology AAS Degree and Certificate completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for AMATH 111 course. Process Technology AAS-T Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for all General Education courses.

PROCESS TECHNOLOGY

OVERVIEW

At Bellingham Technical College, the Process Technology Program will prepare you for a position as a process technician or operator for employers in power generation, refining, manufacturing, and many other industries. Process technicians work to ensure the safety standards of production and assembly lines, and oversee quality for an employer's processes. Currently, our primary employers in Washington State are the four refineries in Whatcom and Skagit counties. Graduates have also gone to work in other water treatment, power generation, and manufacturing facilities in our region, across Washington State, and beyond.

PROGRAM OUTCOMES

After successful completion of the Process Technology AAS degree, students will be able to:

- Appraise the typical hazards found in process plants, basic PPE, and know the requirements of regulating bodies regarding safety, health, and environmental issues (OSHA, DPT, EPA)
- Combine mathematics, chemistry, and physics theory to apply to process applications such as fluid flow, the nature of heat, chemical reaction, boiling points, vapor pressure, and electrical currents
- Recognize typical organizational structures, economics, and quality control systems of the process technology industry
- Appraise fundamentals of refining and power generation processes; identify core functions and principles of operation of typical process equipment such as pumps, compressors, filters and dryers, lubrication systems, valves, piping systems, and draw from memory process flow diagrams
- Integrate the principles of process automatic control and data control systems (DSC) to manage simulated DCS scenarios

ASSOCIATE OF APPLIED SCIENCE

Process Technology, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
PTEC 101	Introduction to Process Technology	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR
AMATH 111	Applied Technical Math	5 CR

QUARTER 2

CTE 108	Job Skills	1 CR
PTEC 103	Safety, Health & Environment I	5 CR
PTEC 104	Process Drawings	2 CR
PTEC 105	Process Technology II (Systems)	5 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 3

PTEC 110	Process Instrumentation	5 CR
AENGL 100	Applied English	5 CR
CHEM& 110	Chemical Concepts w/Lab	5 CR
PTEC 19_	Program Elective (PTEC 190 series, PTEC 109, or PTEC 224)	3 CR

QUARTER 4

PTEC 203	Safety, Health & Environment II	5 CR
PTEC 211	Troubleshooting	5 CR
PHYS& 110	Physics for Non-Science Majors w/Lab	5 CR
PTEC 19_	Program Elective (PTEC 190 series, PTEC 109, or PTEC 224)	3 CR

QUARTER 5

PTEC 205	Dynamic Process Control	5 CR
PTEC 212	Industrial Processes & Equipment	5 CR
PTEC 270	Process Technology Project I	5 CR
OR		
PTEC 290	Internship I in summer	5 CR

QUARTER 6

PTEC 207	Quality Control	5 CR
PTEC 215	Process Technology III (Operations)	5 CR
PTEC 272	Process Technology Project II	5 CR
OR		
PTEC 291	Internship II in summer	5 CR

ELECTIVE COURSES

Requires six credits of Program Electives in PTEC 109, PTEC 190-199 series, or PTEC 224

PTEC 109	Intro to WWT	5 CR
PTEC 190	Food Processing	3 CR
PTEC 191	Non-Refining Processes	3 CR
PTEC 192	Pulp & Paper Processing	3 CR
PTEC 193	Upstream Process	3 CR
PTEC 195	Biodiesel Fundamentals	3 CR
PTEC 196	Green Energy	3 CR
PTEC 197	Cooperative Education	3 CR
PTEC 198	Basic Mechanical Skills	3 CR
PTEC 199	Power Generation	3 CR
PTEC 224	WWT Test Preparation	3 CR

Total Program Credits: 101

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Process Technology, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing Pathways	3 CR
PTEC 101	Introduction to Process Technology	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR
MATH& 141	Precalculus I	5 CR

QUARTER 2

CTE 108	Job Skills	1 CR
PTEC 103	Safety, Health & Environment I	5 CR
PTEC 104	Process Drawings	2 CR
PTEC 105	Process Technology II (Systems)	5 CR
CMST& 210	Interpersonal Communication	5 CR

QUARTER 3

PTEC 110	Process Instrumentation	5 CR
CHEM& 110	Chemical Concepts w/Lab	5 CR
OR		
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR

QUARTER 4

PTEC 203	Safety, Health & Environment II	5 CR
PTEC 211	Troubleshooting	5 CR
ENGL& 235	Technical Writing	5 CR
MATH& 142	Precalculus II	5 CR

QUARTER 5

PTEC 205	Dynamic Process Control	5 CR
PTEC 212	Industrial Processes & Equipment	5 CR
PTEC 270	Process Technology Project I	5 CR
OR		
PTEC 290	Internship I in summer	5 CR
MATH& 151	Calculus I	5 CR

QUARTER 6

PTEC 207	Quality Control	5 CR
PTEC 215	Process Technology III (Operations)	5 CR
PHYS& 221	Engineering Physics I w/Lab	5 CR
OR		
PHYS& 114	General Physics I w/lab	5 CR

Total Program Credits: 105

CERTIFICATE

Process Technology Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

AM 100	Advanced Manufacturing	3 CR
AMATH 111	Applied Technical Math	5 CR
PTEC 101	Introduction to Process Technology	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR

QUARTER 2

CMST& 210	Interpersonal Communication	5 CR
CTE 108	Job Skills	1 CR
PTEC 103	Safety, Health & Environment I	5 CR
PTEC 104	Process Drawings	2 CR
PTEC 105	Process Technology II (Systems)	5 CR

QUARTER 3

CHEM& 110	Chemical Concepts w/Lab	5 CR
AENGL 100	Applied English	5 CR
PTEC 110	Process Instrumentation	5 CR

Total Program Credits: 50

CERTIFICATE

Water and Wastewater Treatment, Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

QUARTER 1

PTEC 101	Introduction to Process Technology	4 CR
PTEC 102	Process Technology I (Equipment)	5 CR
AMATH 111	Applied Technical Math	5 CR

QUARTER 2

PTEC 103	Safety, Health & Environment I	5 CR
PTEC 104	Process Drawings	2 CR
PTEC 109	Intro to WWT	5 CR
AENGL 100	Applied English	5 CR

QUARTER 3

PTEC 110	Process Instrumentation	5 CR
PTEC 224	WWT Test Preparation	3 CR
BIOL& 160	General Biology with Lab	5 CR
CMST& 210	Interpersonal Communication	5 CR

Total Program Credits: 49

RADIOLOGIC TECHNOLOGY

OVERVIEW

If you enjoy working with people in a medical setting, you should check out the Radiologic Technology program at BTC. BTC's programs in Allied Health are geared for students with an interest in health, wellness, and medical fields.

Choose this program to prepare for a rewarding career as a radiologic technologist. You'll learn the latest technologies used in the field and gain skills that are in demand by hospitals, imaging centers, and clinics.

This program is planned with a regional focus in collaboration with Edmonds Community College, Everett Community College, North Seattle Community College, Peninsula College, Skagit Valley College, and Whatcom Community College. As part of the admissions process, you will be asked to select and rank your preference for placement at the Bellingham or Everett cohort sites.

Bellingham cohort students attend classes at Bellingham Technical College.

Everett cohort students attend classes at the Everett Community College. Students will be assigned regional clinical experience, on a variety of shifts, in hospitals and clinics in Whatcom, Skagit, Island, Snohomish, and King Counties.

PROGRAM OUTCOMES

After successfully completing the Radiologic Technology program, students will be able to:

- Consistently and appropriately apply radiation protection practices and general safety guidelines when administering ionizing radiation techniques to fully protect the patient, occupational workers (self and other technologists) and non-occupational workers (other members of the health-care team). RADIATION SAFETY
- Competently and consistently perform clinical procedures and protocols of each radiographic position to produce an optimal diagnostic study. PROCEDURES
- Competently and consistently produce diagnostic radiographic images, with ability to accurately assess errors and make appropriate corrections according to standard image evaluation criteria. IMAGE PRODUCTION
- Interact in a compassionate, respectful manner assessing patient condition and concerns: provides for patient safety, comfort, confidentiality, modesty, and overall best interest of the patient. PATIENT CARE
- Conducts oneself in a professional manner according to ARRT and ASRT standards. Assess situations, exercise care, discretion and judgment; assume responsibility for professional decisions; and able to work in team relationships that support colleagues. PROFESSIONALISM AND ETHICS
- Successful completion of the program within a 24-month time period.

ADDITIONAL REQUIREMENTS

The Radiologic Technology Program has a separate admission process from admission to BTC. Students must be admitted into a cohort before beginning Radiologic Technology coursework. See the Radiologic Technology Program website for more information about current admission requirements and process.

After acceptance into the Radiologic Technology program but prior to beginning clinical rotations, admitted students must be eighteen (18) years of age and submit evidence of the following requirements: Clinical requirements include:

- Criminal background check
- 10-Panel urine drug screen
- Physical examination
- Tuberculous screening
- Required immunizations
- Current American Heart Association BLS for Provider CPR certification
- Medical Insurance Coverage

More information about the clinical placement requirements process is on the Radiologic Technology Program website.

DEGREE REQUIREMENTS

Radiologic Technology AAS-T Degree completion requires a cumulative GPA of 2.0 or higher, and minimum grade of C (2.0) for required courses.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Radiologic Technology, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 47

The following courses must be completed with a 3.0 (B) or higher

RT 100	Introduction to Radiologic Technology	2 CR
BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
ENGL& 101	English Composition I	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
MATH& 107	Math in Society	5 CR
OR higher		

The following courses must be completed with a 2.0 (C) or higher

PSYC& 100	General Psychology	5 CR
HT 100	Fundamentals of Medical Terminology	5 CR
BIOL& 160	General Biology with Lab	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 104 CREDITS

QUARTER 1

RT 101	Radiographic Positioning I	6 CR
RT 112	Patient Care in Radiology	4 CR
RT 120	Image Acquisition	4 CR

QUARTER 2

RT 102	Radiographic Positioning II	6 CR
RT 121	Radiographic Physics I	4 CR
RT 131	Radiographic Clinic I	7 CR

QUARTER 3

RT 103	Radiographic Positioning III	5 CR
RT 123	Radiographic Physics II	4 CR
RT 132	Radiographic Clinic II	7 CR

QUARTER 4

RT 133	Radiographic Clinic III	8 CR
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QUARTER 5

RT 201	Radiographic Pathology I	4 CR
RT 205	Pharmacology	3 CR
RT 231	Radiographic Clinic IV	10 CR

QUARTER 6

RT 202	Radiographic Pathology II	4 CR
RT 210	Radiation Biology	4 CR
RT 232	Radiographic Clinic V	10 CR

QUARTER 7

RT 230	Registry Review and Employment Readiness	4 CR
RT 233	Radiographic Clinic VI	10 CR

Total Program Credits: 151

RESIDENTIAL HOME INSPECTION

OVERVIEW

If you'd like a fast-track option to setting up your own professional home inspection business—or a career with a home inspection company—then you should consider this course.

As of September 1, 2009, Washington State requires all home inspectors in the state to be licensed. BTC's Fundamentals of Home Inspection Course was the first to receive approval from the Department of Licensing. This intensive, full-time course combines classroom instruction with hands-on lab and inspection work, including training on the topic of identifying wood destroying organisms.

Home inspectors examine and report on a home's systems and structure—from the roof to the substructure crawl space, basement or slab foundation. Typically, inspectors set up their own inspection business and work for real-estate purchasers or are hired by home inspection companies or firms specializing in architectural, engineering, and related services.

If you enjoy the challenge of working with homes of all ages, sizes, and conditions, this is the program for you!

This four-week course is offered several times during the year.

PROGRAM OUTCOMES

The goal of this program is to prepare entry-level home inspectors who are able to pass the state licensing exam and successfully work in the field of residential home inspection. Adhering to the core curriculum for residential home inspection, the student will gain expertise in the theory and application of professional methods of performing building inspections.

RHI 111: Students will be able to describe the systems and components found in homes and be prepared to carry out noninvasive home inspections per WA State laws at residential properties while employing special training and education.

RHI 112: Students will complete five thorough home inspection reports that meet state standards.

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ADDITIONAL REQUIREMENTS

A Bellingham Technical College Admission Application is required before a student can register for the Residential Home Inspection Certificate.

A personal laptop that is Windows compatible with Wi-Fi and Word processing capability is required for participants.

It is recommended that students have good basic academic skills.

For field training (RHI 112), students must have flashlight(s), protective coveralls, and basic respirators or face masks.

For questions, contact lead Instructor Steve Smith at ssmith@btc.edu or 360.752.8796.

PHYSICAL REQUIREMENTS

Anyone interested in becoming a home inspector should be aware that it is a very physical job that requires some amount of dexterity and strength, as well as a willingness/ability to get in tight spaces, such as crawl spaces and attics, within industry standards. Traversing roofs is expected of home inspectors when it is safe to do so and this sometimes requires moving cumbersome ladders around the home. Home inspectors must be able and willing to work in all kinds of weather conditions and be prepared to do so.

CERTIFICATE REQUIREMENTS

Certificate completion requires a cumulative GPA of 2.0 or higher and minimum grade of C/2.0 for required courses.

CERTIFICATE

Residential Home Inspection Certificate

PROGRAM REQUIREMENTS

QUARTER 1

RHI 111	Fundamentals of Home Inspection	12 CR
RHI 112	Home Inspection Field Training	3 CR

Total Program Credits: 15

SURGERY TECHNOLOGY

OVERVIEW

If you are interested in being a valuable part of surgery teams, working beside surgeons, nurses, and other medical professionals, you can train for an exciting career as a Surgery Technologist.

With BTC's high quality education and hands-on training, you'll gain the valuable skills needed now by hospitals, outpatient surgery centers, and dental surgery offices.

BTC's students graduate prepared for top jobs: 100% of program graduates passed the National Certification of Surgical Technology Exam in 2010, 2011, 2013, 2014, 2015, and 2016. 90% passed in 2018. 100% passed in 2019 and 2020.

This surgery technology education program is approved by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

PROGRAM OUTCOMES

After successfully completing the Surgery Technology program, students will be able to:

- Demonstrate proficiency in the care of the operative environment preoperatively, intraoperatively, and postoperatively.
- Provide safe patient care with strict adherence to sterile technique and asepsis.
- Demonstrate critical thinking relating to prioritization, anticipation, problem analysis, and evaluation of solutions.
- Apply the principles of effective verbal, non-verbal, and written communication.
- Compile completed Clinical Case Experience Log of surgical procedure assistance in accordance with the Core Curriculum for Surgery Technology, 6th ed.
- Demonstrate knowledge and experience by successful completion of the National Certification Examination for Surgical Technologists.

CLINICAL PLACEMENT REQUIREMENTS

After registration into the Surgery Technology program but prior to beginning clinical rotations, admitted students must be eighteen (18) years of age and submit proof of the following requirements:

1. Criminal History Background Check Notification Form
2. Physical exam and specified immunizations
3. 11-panel drug screen
4. Current American Heart Association BLS for Healthcare Provider CPR
5. Medical insurance coverage

More information about the clinical placement requirements process is on the Surgery Technology Program website.

DEGREE REQUIREMENTS

Surgery Technology AAS-T Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of B/3.0 for SURG 100 and minimum grade of C-/2.0 for all other Surgery courses.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Surgery Technology, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PREREQUISITE COURSES: 47 CREDITS

The following courses must be completed with a 3.0 (B) or higher in each course:

SURG 100	Intro to Surgery Technology	2 CR
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The following courses must be completed with a 2.7 (B-) or higher in each course:

BIOL& 241	Human A & P 1	5 CR
BIOL& 242	Human A & P 2	5 CR
BIOL& 260	Microbiology	5 CR
CHEM& 121	Intro to Chemistry	5 CR

OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
ENGL& 101	English Composition I	5 CR
MATH& 107	Math in Society	5 CR
or any MATH course from the AAS-T alternative course list will be accepted The following courses must be completed with a 2.0 (C) or higher.		
BIOL& 160	General Biology with Lab	5 CR
HT 100	Fundamentals of Medical Terminology	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
CMST& 220	Public Speaking	5 CR

CORE COURSES: 58 CREDITS**QUARTER 1**

SURG 120	Surgery Technology I	12 CR
SURG 125	Surgery Technology Lab I	10 CR

QUARTER 2

SURG 133	Surgery Technology II	10 CR
SURG 136	Surgery Technology Clinical Practice I	10 CR

QUARTER 3

SURG 143	Surgery Technology III	6 CR
SURG 145	Surgery Technology Clinical Practice II	10 CR

Total Program Credits:	105
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- Pursue lifelong learning to advance his/her knowledge of veterinary care;
- Take the Veterinary Technician National Examination (VTNE);
- Take the state exam and fulfill requirements for licensure as a veterinary technician;
- Understand normal anatomy, physiology and behavior of health for the species studied;
- Understand and participate in the process of diagnosis, therapy and prevention of animal disease;
- Understand the profession of veterinary technician including: occupational safety, public health, client and colleague communication, ethics of animal welfare, and the human-animal bond;
- Provide critical thinking skills to reason through clinical situations and take appropriate action;
- Provide social interactive skills to facilitate excellent communication with clients and colleagues;
- Provide psychomotor skills to facilitate quality, efficient diagnostic and therapeutic interventions;
- Provide learning skills and tools to promote learning throughout career and lifetime.

CERTIFICATE OUTCOMES

After successfully completing the Veterinary Assistant certificate, students will be able to:

- Graduates of this program will be prepared to:
- Care for animals in a manner that is safe for both animals and humans
- Promote public health
- Accept the responsibilities of his/her profession, to provide compassionate, competent, ethical care in a professional, conscientious manner
- Pursue lifelong learning to advance his/her knowledge of veterinary care
- Understand normal anatomy, physiology and behavior of health for the species studied
- Understand and participate in the process of diagnosis, therapy and prevention of animal disease

PLACEMENT REQUIREMENTS

ATI TEAS scores: Reading 47.6 or higher, Mathematics 46.7 or higher, Science 33.3 or higher, and English & Language Usage 40.0 or higher.

ADDITIONAL REQUIREMENTS

- Official transcripts documenting prerequisite completion (BTC transcripts can be unofficial)
- Evidence of high school graduation or equivalent (copy of high school diploma, high school transcript, GED certificate, or GED transcript)
- Entering students are expected to have basic computer skills necessary to use word processing, email, and the internet. Students who need to acquire these basic skills should enroll in CAP 101 prior to starting the program.

After registration into the Vet Tech Program but prior to beginning clinical rotations, students must be eighteen (18) years of age and

VETERINARY TECHNICIAN

OVERVIEW

Bellingham Technical College Veterinary Technician Program is nationally accredited through the American Veterinary Medical Association (AVMA)

1931 North Meacham Road, Suite 100
Schaumburg, IL 60173-4360
800.248.2862
<https://www.avma.org/>

Turn your love of animals into a satisfying career! BTC's Veterinary Technician program is ideal if you have an aptitude for math and science, and are interested in being a valuable part of the veterinary care team. You'll work with animals and people, in a job that is different every day.

With BTC's high quality education and hands-on training, you'll gain the valuable skills needed now by veterinary hospitals, surgery centers, specialty care providers, zoos, and wildlife facilities.

Students must be 18 years of age prior to the first day of class.

PROGRAM OUTCOMES

After successful completion of the Veterinary Technician program, students will be able to:

- Care for animals in a manner that is safe for both animals and humans;
- Promote public health;
- Accept the responsibilities of his/her profession, to provide compassionate, competent, ethical care in a professional, conscientious manner;

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submit proof of the following requirements:

1. Veterinary Technician Informed Acknowledgment and Consent to Hazards and Risks Form
2. Physical exam
3. 11-panel drug screen
4. Criminal background check
5. Medical insurance coverage
6. Two-dose rabies pre-exposure prophylaxis (PrEP)

More information about the clinical placement requirements process is on the Veterinary Technician Program website.

DEGREE AND CERTIFICATE REQUIREMENTS

Veterinary Technician AAS-T Degree completion requires a cumulative GPA of 2.0 or higher and minimum grade of C-/1.7 for Veterinary courses and minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Veterinary Technician, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

GENERAL EDUCATION COURSES: 27 CREDITS

Students must complete each General Education course requirement with a C grade (2.0 GPA) or higher.

ENGL& 101	English Composition I	5 CR
MATH& 107	Math in Society	5 CR
CHEM& 121	Intro to Chemistry	5 CR
OR		
CHEM& 161	General Chemistry w/ Lab I	5 CR
BIOL& 160	General Biology with Lab	5 CR
CMST& 210	Interpersonal Communication	5 CR
OR		
CMST& 220	Public Speaking	5 CR
OR		
PSYC& 100	General Psychology	5 CR
OR		
PSYC& 200	Lifespan Psychology	5 CR
OR		
SOC& 101	Introduction to Sociology	5 CR

VETT 100	Intro to Veterinary Technology	2 CR
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CORE COURSES: 119 CREDITS

QUARTER 1

VETT 101	Veterinary Nursing I	4 CR
VETT 102	Veterinary Anatomy & Physiology I	5 CR
VETT 103	Veterinary Medical Terminology	3 CR
VET 120	Medical Dosages and Calculations	3 CR
VETT 201	Mentorship Lab I	2 CR

QUARTER 2

VETT 104	Veterinary Nutrition I	3 CR
VETT 105	Learning for a Lifetime	2 CR
VETT 106	Microbiology, Virology, & Mycology	3 CR
VETT 107	Small Animal Parasitology	4 CR
VETT 108	Radiology I	4 CR
VETT 202	Mentorship Lab II	2 CR

QUARTER 3

VETT 109	Clinical Laboratory Sciences	4 CR
VETT 110	Veterinary Anatomy & Physiology II	3 CR
VETT 111	Small Animal Medicine I	3 CR
VETT 112	Veterinary Nursing II: Surgical	5 CR
VETT 203	Mentorship Lab III	2 CR

QUARTER 4

VETT 117	Veterinary Nursing III: Large Animal	4 CR
VETT 118	Small Animal Medicine II	3 CR
VETT 119	Advanced Clinical Lab Sciences	4 CR
VETT 120	Anesthesia	5 CR
VETT 204	Mentorship Lab IV	2 CR

QUARTER 5

VETT 113	Immunology & Pharmacology I	3 CR
VETT 114	Dentistry	4 CR
VETT 115	Radiology II	4 CR
VETT 116	Large Animal Medicine	3 CR
VETT 125	Humanity of Veterinary Medicine	3 CR
VETT 205	Mentorship Lab V	2 CR

QUARTER 6

VETT 121	Exotic Animal Medicine	3 CR
VETT 122	Veterinary Nutrition II	2 CR
VETT 123	Veterinary Nursing IV: Critical Care	5 CR
VETT 124	Specialty Medicine	3 CR
VETT 126	Pharmacology II	3 CR
VETT 206	Mentorship Lab VI	2 CR

QUARTER 7

VETT 130	Veterinary Clinical Work Experience	12 CR
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Total Program Credits: 146

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

CERTIFICATE

Veterinary Assistant Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 2 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

CORE COURSES: 35 CREDITS**QUARTER 1**

VETT 101	Veterinary Nursing I	4 CR
VETT 102	Veterinary Anatomy & Physiology I	5 CR
VETT 103	Veterinary Medical Terminology	3 CR
VET 120	Medical Dosages and Calculations	3 CR
VETT 201	Mentorship Lab I	2 CR

QUARTER 2

VETT 104	Veterinary Nutrition I	3 CR
VETT 105	Learning for a Lifetime	2 CR
VETT 106	Microbiology, Virology, & Mycology	3 CR
VETT 107	Small Animal Parasitology	4 CR
VETT 108	Radiology I	4 CR
VETT 202	Mentorship Lab II	2 CR

GENERAL EDUCATION COURSES: 27 CREDITS

Students must complete each General Education course requirement with a C grade (2.0 GPA) or higher.

ENGL& 101	English Composition I	5 CR
MATH& 107	Math in Society	5 CR
BIOL& 160	General Biology with Lab	5 CR
CHEM& 121	Intro to Chemistry	5 CR
PSYC& 100	General Psychology	5 CR
OR		
CMST& 210	Interpersonal Communication	5 CR
VETT 100	Intro to Veterinary Technology	2 CR

Total Program Credits: 62

WELDING & FABRICATING TECHNOLOGY

OVERVIEW

Any industry that creates goods and structures from metal will rely on skilled welders to create strong products, whether in aerospace, automotive, or construction fields. Turning ideas and materials into valuable products takes highly skilled employees who are trained in such specialized areas as welding technology. BTC's degrees and certificates in the Welding Technology Program are ideal for students with mechanical aptitude or a strong foundation in math, science, and technology.

Prepare for your welding career through BTC's Welding Technology program. You will get premier job training for skills in high demand by the metal and construction trades for work as a welder, cutter, or welding machine operator. Students choose to specialize in one of two areas: structural steel fabrication or pipe welding.

In our state-of-the-art welding and fabrication facility, you'll learn valuable skills that high-wage employers are looking for. From safe-

ty practices and blueprint reading to technical skills like metallurgy, MIG, and TIG welding, BTC's hands-on job training will prepare you for a career in boat manufacturing, steel manufacturing, refining, and transportation, or with federal, state, or local governments.

PROGRAM OUTCOMES

When you successfully complete the AAS degree, you will be fully prepared to:

- Exhibit & maintain essential employability behaviors.
- Observe and practice industry safety guidelines.
- Analyze and interpret prints, drawings, and symbols for welding and fabrication of parts and structures.
- Achieve competency in a variety of major manual and semi-automatic welding processes in all positions.
- Demonstrate proper set-up and use of welding and fabricating equipment.
- Troubleshoot and solve basic welding, fabricating and equipment problems.
- Pass at least one WABO certification or industry-accepted certification welding test (ASME, AWS, ABS, etc.).
- Exhibit knowledge of occupational environments, metallurgy, materials, tools, fabrication, layout, and mechanical and thermal cutting processes and techniques.
- Demonstrate appropriate oral and written communication with customers, co-workers, and supervisors.
- Analyze and interpret prints and drawings for welding and fabricating.
- Employ efficient organizational skills.
- Stay current with new and emerging technologies.

CERTIFICATE OUTCOMES

After successfully completing the Basic Welding Skills certificate, students will be able to:

- Exhibit & maintain essential employability behaviors.
- Observe and practice industry safety guidelines.
- Achieve competency in a variety of major manual and semi-automatic welding processes in all positions.
- Demonstrate proper set-up and use of welding and fabricating equipment.
- Troubleshoot and solve basic welding, fabricating and equipment problems.
- Exhibit knowledge of occupational environments, metallurgy, materials, tools, fabrication, layout, and mechanical and thermal cutting processes and techniques.
- Demonstrate appropriate oral and written communication with customers, co-workers, and supervisors.
- Analyze and interpret prints and drawings for welding and fabricating.
- Employ efficient organizational skills.

PLACEMENT REQUIREMENTS

Admissions application and assessment in Reading, Math, and Writing is required. Your placement will determine where you begin your

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course sequence. Contact Admissions at 360.752.8345 or at admissions@btc.edu for assistance with academic planning.

DEGREE AND CERTIFICATE REQUIREMENTS

Certificate Requirements for Basic Welding Skills

Welding Technology - Basic Welding Skills Certificate completion requires a cumulative GPA of 2.0 or higher, and a minimum grade of C-/1.7 for all required program courses.

Degree Requirements for Welding & Fabricating Technology: Pipe Specialization

Welding Technology - Pipe Welding & Fabricating AAS Degree completion requires a cumulative GPA of 2.0 or higher, and a minimum grade of C-/1.7 for all required program courses. AAS-T Degree requires a cumulative GPA of 2.0 or higher and minimum grade of C-/1.7 for all required program courses and minimum grade of C/2.0 for all General Education courses.

Degree Requirements for Welding & Fabricating Technology: General

Welding Technology - Welding & Fabricating AAS Degree completion requires a cumulative GPA of 2.0 or higher, and a minimum grade of C-/1.7 for all required program courses. AAS-T Degree requires a cumulative GPA of 2.0 or higher and minimum grade of C-/1.7 for all required program courses and minimum grade of C/2.0 for all General Education courses.

ASSOCIATE OF APPLIED SCIENCE

Welding & Fabricating Technology: General, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 15 CREDITS

AMATH 100	Applied Occupational Math	5 CR *
AENGL 100	Applied English	5 CR *
CMST& 210	Interpersonal Communication	5 CR *

CORE COURSES: 40 CREDITS

WLD 101	Welding Safety	2 CR
WLD 105	Thermal Cutting Processes	4 CR
WLD 106	Print Reading I	2 CR
WLD 110	SMAW I	4 CR
WLD 116	SMAW Practice	2 CR
WLD 120	GMAW I	4 CR

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

WLD 121	GMAW Aluminum I	4 CR
WLD 130	FCAW I	4 CR
WLD 131	FCAW Practice	2 CR
WLD 140	GTAW I	4 CR
WLD 141	GTAW Aluminum I	4 CR
WLD 150	Introduction to Metal Fabricating	4 CR

SPECIALTY COURSES: 37 CREDITS

WLD 206	Print Reading II - Welding & Fabrication	3 CR
WLD 213	Print Reading III	3 CR
WLD 220	SMAW Test Practice II	4 CR
WLD 232	FCAW Practices II	4 CR
WLD 242	GTAW & GMAW Alloy	6 CR
WLD 252	Alloy Fabrication	6 CR
WLD 254	Steel Fabrication	5 CR
WLD 271	Welder Testing	6 CR

ELECTIVE COURSES: 6 CREDITS

WLD 291	Capstone Project I	3 CR
WLD 292	Capstone Project II	3 CR
WLD 293	Welding Internship I	3 CR
WLD 294	Welding Internship II	6 CR

Total Program Credits: 98

* Minimum requirement.

Welding & Fabricating Technology: Pipe Specialization, AAS

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 15 CREDITS

AMATH 100	Applied Occupational Math	5 CR *
AENGL 100	Applied English	5 CR *
CMST& 210	Interpersonal Communication	5 CR *

CORE COURSES: 40 CREDITS

WLD 101	Welding Safety	2 CR
WLD 105	Thermal Cutting Processes	4 CR
WLD 106	Print Reading I	2 CR
WLD 110	SMAW I	4 CR
WLD 116	SMAW Practice	2 CR
WLD 120	GMAW I	4 CR
WLD 121	GMAW Aluminum I	4 CR
WLD 130	FCAW I	4 CR
WLD 131	FCAW Practice	2 CR
WLD 140	GTAW I	4 CR
WLD 141	GTAW Aluminum I	4 CR
WLD 150	Introduction to Metal Fabricating	4 CR

SPECIALTY COURSES: 48 CREDITS

WLD 205	Print Reading II - Pipe	3 CR
WLD 210	SMAW II	6 CR
WLD 211	SMAW III	6 CR
WLD 213	Print Reading III	3 CR
WLD 215	SMAW Pipe	6 CR
WLD 230	FCAW II	3 CR
WLD 256	Pipe Fabrication I	6 CR

WLD 257	Pipe Fabrication II	5 CR
WLD 262	GTAW Pipe Welding	4 CR
WLD 271	Welder Testing	6 CR

ELECTIVE COURSES: 6 CREDITS

WLD 291	Capstone Project I	3 CR
WLD 292	Capstone Project II	3 CR
WLD 293	Welding Internship I	3 CR
WLD 294	Welding Internship II	6 CR

Total Program Credits: 109
 * Minimum requirement.

ASSOCIATE OF APPLIED SCIENCE - TRANSFER

Welding & Fabricating Technology: General, AAS-T

Full-time students who have completed all prerequisite courses will be able to complete this program in 6 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 20 CREDITS

MATH& 107	Math in Society	5 CR
OR higher		
ENGL& 101	English Composition I	5 CR *
PSYC& 100	General Psychology	5 CR *
Additional AAS-T acceptable course in humanities, social science, or natural science		
		5 CR

CORE COURSES: 40 CREDITS

WLD 101	Welding Safety	2 CR
WLD 105	Thermal Cutting Processes	4 CR
WLD 106	Print Reading I	2 CR
WLD 110	SMAW I	4 CR
WLD 116	SMAW Practice	2 CR
WLD 120	GMAW I	4 CR
WLD 121	GMAW Aluminum I	4 CR
WLD 130	FCAW I	4 CR
WLD 131	FCAW Practice	2 CR
WLD 140	GTAW I	4 CR
WLD 141	GTAW Aluminum I	4 CR
WLD 150	Introduction to Metal Fabricating	4 CR

SPECIALTY COURSES: 37 CREDITS

WLD 206	Print Reading II - Welding & Fabrication	3 CR
WLD 213	Print Reading III	3 CR
WLD 220	SMAW Test Practice II	4 CR
WLD 232	FCAW Practices II	4 CR
WLD 242	GTAW & GMAW Alloy	6 CR
WLD 252	Alloy Fabrication	6 CR
WLD 254	Steel Fabrication	5 CR
WLD 271	Welder Testing	6 CR

ELECTIVE COURSES: 6 CREDITS

WLD 291	Capstone Project I	3 CR
WLD 292	Capstone Project II	3 CR
WLD 293	Welding Internship I	3 CR
WLD 294	Welding Internship II	6 CR

Total Program Credits: 103
 * Minimum requirement.

**Welding & Fabricating Technology:
 Pipe Specialization, AAS-T**

Full-time students who have completed all prerequisite courses will be able to complete this program in 7 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 20 CREDITS

MATH& 107	Math in Society	5 CR
OR higher		
ENGL& 101	English Composition I	5 CR *
PSYC& 100	General Psychology	5 CR *
Additional AAS-T acceptable course in humanities, social science or natural science		
		5 CR

CORE COURSES: 40 CREDITS

WLD 101	Welding Safety	2 CR
WLD 105	Thermal Cutting Processes	4 CR
WLD 106	Print Reading I	2 CR
WLD 110	SMAW I	4 CR
WLD 116	SMAW Practice	2 CR
WLD 120	GMAW I	4 CR
WLD 121	GMAW Aluminum I	4 CR
WLD 130	FCAW I	4 CR
WLD 131	FCAW Practice	2 CR
WLD 140	GTAW I	4 CR
WLD 141	GTAW Aluminum I	4 CR
WLD 150	Introduction to Metal Fabricating	4 CR

SPECIALTY COURSES: 48 CREDITS

WLD 205	Print Reading II - Pipe	3 CR
WLD 210	SMAW II	6 CR
WLD 211	SMAW III	6 CR
WLD 213	Print Reading III	3 CR
WLD 215	SMAW Pipe	6 CR
WLD 230	FCAW II	3 CR
WLD 256	Pipe Fabrication I	6 CR
WLD 257	Pipe Fabrication II	5 CR
WLD 262	GTAW Pipe Welding	4 CR
WLD 271	Welder Testing	6 CR

ELECTIVE COURSES: 6 CREDITS

WLD 291	Capstone Project I	3 CR
WLD 292	Capstone Project II	3 CR
WLD 293	Welding Internship I	3 CR
WLD 294	Welding Internship II	6 CR

Total Program Credits: 114

2023-2024 Programs of Study

* Minimum requirement.

CERTIFICATE

Basic Welding Skills Certificate

Full-time students who have completed all prerequisite courses will be able to complete this program in 3 quarters of instruction (some programs may not run in summer or other quarters). Prerequisite courses required will vary depending on individual educational history and placement.

PROGRAM REQUIREMENTS

GENERAL EDUCATION COURSES: 15 CREDITS

AMATH 100	Applied Occupational Math	5 CR *
AENGL 100	Applied English	5 CR *
CMST& 210	Interpersonal Communication	5 CR *

CORE COURSES: 40 CREDITS

WLD 101	Welding Safety	2 CR
WLD 105	Thermal Cutting Processes	4 CR
WLD 106	Print Reading I	2 CR
WLD 110	SMAW I	4 CR
WLD 116	SMAW Practice	2 CR
WLD 120	GMAW I	4 CR
WLD 121	GMAW Aluminum I	4 CR
WLD 130	FCAW I	4 CR
WLD 131	FCAW Practice	2 CR
WLD 140	GTAW I	4 CR
WLD 141	GTAW Aluminum I	4 CR
WLD 150	Introduction to Metal Fabricating	4 CR

Total Program Credits: 55

* Minimum requirement.

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.



COURSE DESCRIPTIONS

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

COURSE DESCRIPTIONS

ACCOUNTING

ACCT 141 PRACTICAL ACCOUNTING I 5 CR

This course covers the accounting cycle of a service business through a study of a sole proprietorship. Topics include general journal transactions, posting transactions to the ledgers, preparing adjusting and closing entries, preparing primary financial statements, and an introduction to payroll processing.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher or MATH 090 with a C or higher and ACCUPLACER Reading (247) or higher or RDG 085 with a C or higher.

ACCT& 201 PRINCIPLES OF ACCOUNTING I 5 CR

Introduction to the theory and principles of the accounting cycle and accounting concepts of a corporation. Includes general journal transactions, posting transactions to the ledgers, adjusting and closing entries, inventory valuation methods, and the process of preparing and interpreting financial statements.

Prerequisite(s): ACCUPLACER QAS (254) or higher or MATH 098 with a C or higher.

ACCT& 202 PRINCIPLES OF ACCOUNTING II 5 CR

This is the second of a series of three accounting courses and is a continuation of ACCT& 201. This course continues the use of generally accepted accounting principles in preparing financial statements for a corporation. The emphasis of this class is on fixed assets, intangibles, investments, financing, liabilities, stockholder's equity, cash flow analysis and financial statement analysis.

Prerequisite(s): ACCT& 201 with a C or higher.

ACCT& 203 PRINCIPLES OF ACCOUNTING III 5 CR

This is the third course of the series of three accounting courses and focuses on managerial accounting which provides information for internal decision makers. This course will show what kind of information is needed by managers for planning and controlling business activities and how decisions are made.

Prerequisite(s): ACCT& 202 with a C or higher.

ACCT 205 TAXATION-INDIVIDUALS 5 CR

A study of federal income tax for individuals. Topics include: filing statuses, dependents, income, deductions, investments, business-related activities, home ownership and computation of tax liabilities.

Prerequisite(s): ACCT 141 or ACCT& 201 with a C or higher.

ACCT 210 TAXATION - BUSINESS ENTITIES 5 CR

A comprehensive study of federal income tax for business entities including partnerships, S-corporations and C-corporations. Topics include corporate income tax formula, current and deferred income tax expense, as well as state and local taxes.

Prerequisite(s): ACCT& 202 and ACCT 205, both with a C or higher.

ACCT 245 PAYROLL PROCEDURES 5 CR

A comprehensive review of payroll records and procedures. Students will learn how to calculate net pay, prepare payroll registers, employee earnings records and post journal entries to the general ledger.

Prerequisite(s): ACCT 141 or ACCT& 201, with a C or higher.

ACCT 246 QUICKBOOKS 5 CR

A comprehensive study of computerized accounting systems in both service and merchandising environments. Uses the commercially popular QuickBooks software to demonstrate the use of fully integrated accounting systems. Topics include creating a chart of accounts, recording customer and vendor transactions, processing payroll, and printing reports. In addition, setting up a new company is covered as well as the advanced topic of exporting to Excel software.

Prerequisite(s): ACCT& 201 with a C or higher.

ACCT 275 FIELD-BASED EXPERIENCE 5-7 CR

Students will arrange to work in a college approved professional setting where they will apply business and accounting knowledge and skills in a variety of accounting related activities.

Prerequisite(s): Instructor permission.

AUTO COLLISION REPAIR

CRT 101 INTRODUCTION TO SHOP SAFETY 3 CR

Students will learn the essentials of shop safety and how to perform tasks in an auto collision repair facility safely without endangering themselves or others.

Prerequisite(s): ACCUPLACER Arithmetic score of 230 or higher or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading score

of 247 or higher or RDG 085 with a C or higher; and ACCUPLACER Writing score of 245 or higher or ENGL 092 with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 122 with a C- or higher or concurrent enrollment in CRT 122, and completion of CRT 203 with a C- or higher or concurrent enrollment CRT 203.

CRT 102 AUTOMOTIVE REFINISHING BASICS 10 CR

Learn the essentials of prepping, masking and refinishing with HVLP or compliant refinish equipment to return a surface to pre-accident appearance. Surfaces refinished consist of all materials used to build modern day vehicles including, and not limited to, ferrous and non-ferrous metals, as well as most types of composites and plastics. A strong emphasis on refinish equipment maintenance will also be covered in this course. Students will study the proper procedures of mixing undercoats and top coats to achieve the correct perceived color match.

Prerequisite(s): CRT 101 with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 223 with a C- or higher or concurrent enrollment in CRT 223.

CRT 103 NEW TECHNOLOGY AND EXTERIOR TRIM 3 CR

This course will provide instruction on how to properly remove and install various interior and exterior trim to industry standards, using specialty tools specifically designed for that task. Students will also use multiple computer-based programs to look-up procedures for removing and installing interior and exterior trim without causing damage to the surrounding area or part. This course will also introduce new technology used in the newly released vehicles from a variety of manufacturers.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 101 with a C- or higher and CRT 102 with a C- or higher; or concurrent enrollment in CRT 101 and CRT 102; or Instructor permission.

Note: This class must be taken concurrently with CRT 101 and CRT 102.

CRT 121 REMOVABLE PANELS & GLASS 3 CR

In this course, students will learn how to remove and install various types of automotive exterior bolt on panels and glass to industry standards. This course has a high emphasis on matching panel gaps and fitment to duplicate the appearance of pre-accident condition to complete a quality, undetectable repair.

Prerequisite(s): CRT 101 with a C- or higher, or

Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 122 with a C- or higher or concurrent enrollment in CRT 122; and CRT 123 with a C- or higher or concurrent enrollment in CRT 123; or Instructor permission.

CRT 122

NON-STRUCTURAL BODY REPAIR 8 CR

In this course students will learn how to assess and repair various types of non-structural damage to ferrous and non-ferrous vehicle exterior panels using a multitude of tools and techniques best suited for the repair needing to be performed.

Prerequisite(s): ACCUPLACER Arithmetic score of 230 or higher or MATH 090 with a C or higher or ABE 090 with a C or higher; AND ACCUPLACER Reading score of 247 or higher or RDG 085 with a C or higher; AND ACCUPLACER Writing score of 245 or higher or ENGL 092 with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 101 with a C- or higher or concurrent enrollment in CRT 101, and completion of CRT 203 with a C- or higher or concurrent enrollment CRT 203.

CRT 123

AUTO COLLISION EXTERIOR LIGHTING AND PLASTICS 4 CR

This course covers the repairs of plastics and compounds used in the collision repair field. Part of this course will also focus on the diagnosis and repair of lighting systems commonly damaged in a collision.

Prerequisite(s): CRT 101 with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 202 with a C- or higher or concurrent enrollment in CRT 202, and completion of CRT 222 with a C- or higher or concurrent enrollment in CRT 222.

CRT 131

FERROUS AUTO COLLISION WELDING 4 CR

This course covers Metal Inert Gas (MIG) welding of ferrous 10g to 22g metals for the auto collision industry, including assembly and disassembly of the major components of a GMAW welder. Students will also learn how to troubleshoot welder malfunctions and welding defects to produce a quality weld.

Prerequisite(s): CRT 101 with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 132 and CRT 133 with a C- or higher.

CRT 132

NON-FERROUS AUTO COLLISION WELDING 5 CR

This course covers Metal Inert gas (MIG) welding of non-ferrous 1mm to 2.5mm aluminum for the auto collision industry, including assembly and disassembly of the major components of a GMAW welder. Students will also learn how to troubleshoot welder malfunctions and welding defects to produce a quality weld.

Prerequisite(s): CRT 101 with a C- or better, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 131 and CRT 133 with a C- or better.

CRT 133

ALTERNATIVE EXTERIOR PANEL REPLACEMENT 4 CR

This course introduces the various types of exterior panel materials used in the automotive industry to improve vehicle strength while reducing weight. Students will learn multiple repair and attachment methods to maintain the integrity of the vehicle without compromising strength or increasing weight.

Prerequisite(s): CRT 101 with a C- or better or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 131 and CRT 132 with a C- or better.

CRT 201

ADVANCED COLLISION CONCEPTS I 5 CR

This course introduces the inspection and diagnosis process of the auto collision industry. Students will learn how to identify hidden damages to structural components of a vehicle involved in a major collision, identify prior damage and repairs, diagnose body control modules and repair the associated circuits.

Prerequisite(s): CRT 101, CRT 102, CRT 103, CRT 121, CRT 122, CRT 123, CRT 131, CRT 132 and CRT 133, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 202 and CRT 203 with a C- or higher.

CRT 202

ADMIN INDUSTRY SIMULATION 6 CR

This course will focus on the administrative workflow of the auto collision repair industry. Students will learn how to create accurate estimates, estimate supplements, parts lists, and develop customer service and communication skills.

Prerequisite(s): CRT 101 with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 123 with a C- or higher or concurrent enrollment in CRT 123, AND completion of CRT 222 with a C- or higher or concurrent enrollment in CRT 222.

CRT 203

NON-STRUCTURAL INDUSTRY SIMULATION 6 CR

This course simulates an auto collision shop environment. Students will apply the knowledge, skills and abilities acquired during the first year of the program to make non-structural repairs to a vehicle in the time allotted by an estimating program.

Prerequisite(s): ACCUPLACER Arithmetic score of 230 or higher or MATH 090 with a C or higher or ABE 050 with a C or higher; AND ACCUPLACER Reading score of 247 or higher or RDG 085 with a C or higher; AND ACCUPLACER Writing score of 245 or higher or ENGL

092 with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 101 with a C- or higher or concurrent enrollment in CRT 101, AND completion of CRT 122 with a C- or higher or concurrent enrollment in CRT 122.

CRT 221

ADVANCED COLLISION CONCEPTS II 5 CR

This course focuses on advanced safety related components ranging from the vehicle structure to the safety restraint system.

Prerequisite(s): CRT 101, CRT 102, CRT 103, CRT 121, CRT 122, CRT 123, CRT 131, CRT 132, and CRT 133, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 222 with a C- or higher or concurrent enrollment in CRT 222; and CRT 223 with a C- or higher or concurrent enrollment in CRT 223; or Instructor permission.

CRT 222

STRUCTURAL INDUSTRY SIMULATION 6 CR

This course simulates an auto collision shop environment. Students will apply the knowledge, skills and abilities acquired during the first year of the program to make structural adjustments to a vehicle that is not within its factory build tolerances. Students will repair the damaged components in the time allotted by an estimating program.

Prerequisite(s): CRT 101 with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 123 with a C- or higher or concurrent enrollment in CRT 123, and completion of CRT 202 with a C- or higher or concurrent enrollment in CRT 202.

CRT 223

REFINISH INDUSTRY SIMULATION 6 CR

This course focuses on advanced refinishing techniques including color tinting, color blends and increasing productivity in the refinishing process.

Prerequisite(s): CRT 101 with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of CRT 102 with a C- or higher or concurrent enrollment in CRT 102.

CRT 231

FINAL INDUSTRY CERTIFICATION 2 CR

This course is a final review of non-structural body and refinishing core program content. Students will achieve I-CAR Level One certification in non-structural body and refinish roles.

Prerequisite(s): All first-year program classes with a C- or higher, and CRT 201, CRT 202, CRT 203, CRT 221, CRT 222, and CRT 223, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 232, CRT 233 and CRT 234, all with a C- or higher, or concurrent enrollment in CRT 232, CRT 233 and CRT 234, or Instructor permission.

2023-2024 Course Descriptions

CRT 232

WELD CERTIFICATION ALUMINUM 3 CR

This course prepares students to obtain the I-CAR aluminum welding certification; this is a pass or fail course.

Prerequisite(s): All first-year program classes with a C- or higher and CRT 201, CRT 202, CRT 203, CRT 221, CRT 222, and CRT 223, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 231, CRT 233 and CRT 234, all with a C- or higher, or concurrent enrollment in CRT 231, CRT 233 and CRT 234, or Instructor permission.

CRT 233

WELD CERTIFICATION STEEL 3 CR

This course prepares students to obtain the I-CAR steel welding certification; this is a pass or fail course.

Prerequisite(s): All first-year program classes with a C- or higher and CRT 201, CRT 202, CRT 203, CRT 221, CRT 222, and CRT 223, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 231, CRT 232 and CRT 234, all with a C- or higher, or concurrent enrollment in CRT 231, CRT 232 and CRT 234, or Instructor permission.

CRT 234

FIELD-BASED EXPERIENCE 7 CR

This course provides industry training at a functioning repair facility approved by the instructor. Students will apply the skills learned in the program to a specific area of the industry.

Prerequisite(s): Instructor permission.

Completion Of or Concurrent Enrollment In: CRT 231, CRT 232 and CRT 233, all with a C- or higher, or concurrent enrollment in CRT 231, CRT 232 and CRT 233, or Instructor permission.

AUTOMOTIVE

AUTO 100

INTRODUCTION TO AUTOMOTIVE TECHNOLOGY 8 CR

This course will familiarize the student with the shop, tools, and equipment within the automotive repair industry. Students will learn safe work and tool practices, proper procedures for performing various service type repairs and inspections on various types of equipment, the basic operating principles of a four-cycle engine, and to use technology to access service information data.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): AUTO 102 and AUTO 113.

AUTO 102

INTRODUCTION TO AUTOMOTIVE LAB 4 CR

This course will familiarize the student with the shop, tools, and equipment within the Automotive Repair industry. Students will learn safe work and tool practices, thread repair techniques, and to demonstrate service repairs and inspections on various types of vehicles. Students will also perform hands-on tasks on various automotive components and systems, using technology on a regular basis to locate service information data, assignment results, and procedures.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): AUTO 100 and AUTO 113.

AUTO 103

INTRODUCTION TO AUTOMOTIVE LAB 4 CR

This course will familiarize the student with the shop, tools, and equipment within the Automotive Repair industry. Students will learn safe work and tool practices, thread repair techniques, and to demonstrate service repairs and inspections on various types of vehicles. Students will also perform hands-on tasks on various automotive components and systems, using technology on a regular basis to locate service information data, assignment results, and procedures.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): AUTO 100 and AUTO 113.

AUTO 104

ENGINES LIGHT MECHANICAL 7 CR

An introductory look at the 4-stroke gasoline engine followed by in depth study and practice of industry standard minor engine service procedures including gasketing and sealing. This course will also cover theory, diagnosis and repairs to the cooling and lubrication systems.

AUTO 105

ENGINES MAJOR MECHANICAL 5 CR

An in depth practice of diagnostic methods relating to mechanical component failures within the engine such as power balance testing, compression and leak down testing. This course will center on a thorough exploration of internal engine components, measurements and major repairs to those components.

AUTO 106

APPLIED ENGINES TECHNOLOGY 6 CR

This lab-based course will cover diagnosis and repairs to the cooling system, lubrication system and all major mechanical systems relating to the engine. This course will serve to apply theories learned in other engine related coursework.

AUTO 107

BRAKES 6 CR

Students will be introduced to the theory and operation of vehicle braking systems. Students will demonstrate the understanding of these systems. Students will then diagnose and perform the needed repairs to the brake and anti-lock brake system on customer vehicles.

AUTO 113

HVAC 4 CR

Students will be introduced to the operation of heating, circulation, and air conditioning systems. Students will demonstrate the understanding of these systems. Students will then diagnose and perform the needed repairs to the vehicle HVAC systems on customer vehicles.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): AUTO 100 and AUTO 102. DET 100 and DET 102 may substitute for AUTO 100 and AUTO 102.

AUTO 122

BASIC DRIVE TRAIN 4 CR

Students will be introduced to the operation of vehicle drive train systems. Students will demonstrate the understanding of these systems. Students will then diagnose and perform the needed repairs to the drive train system on customer vehicles.

AUTO 150

ENGINES 6 CR

This course provides a detailed study of modern internal combustion engines. Coursework includes fundamental engine design and operation, component identification and related mechanical systems such as cooling and lubrication. An emphasis will be placed on the diagnosis and repair of customer concerns related to engine mechanical failures.

Prerequisite(s): AUTO 100, AUTO 102, and AUTO 113, all with a D or higher. DET 100 and DET 102 may substitute for AUTO 100 and AUTO 102.

Corequisite(s): AUTO 152 and AUTO 151.

AUTO 151

ELECTRICITY/ELECTRONICS 1 2 CR

This course provides an introduction to electrical theory. An emphasis is placed on electrical behavior in automotive circuits, basic automotive wiring schematics and fundamental troubleshooting techniques.

Prerequisite(s): AUTO 100, AUTO 102, and AUTO 113, all with a D or higher. DET 100 and DET 102 may substitute for AUTO 100 and AUTO 102.

Corequisite(s): AUTO 150 and AUTO 152.

AUTO 152

ENGINES LAB**8 CR**

This course provides a thorough exploration into the repair of modern internal combustion engines. Practice includes on-vehicle and "on-bench" diagnosis and repairs of engine mechanical related components. An emphasis will be placed on professional documentation of customer concerns related to engine mechanical failures.

Prerequisite(s): AUTO 100, AUTO 102, and AUTO 113, all with a D or higher. DET 100 and DET 102 may substitute for AUTO 100 and AUTO 102.

Corequisite(s): AUTO 150 and AUTO 151.

AUTO 160

CHASSIS SYSTEMS**8 CR**

This course will introduce the theory and operation of chassis systems. Students will examine brakes, drivetrain, and steering & suspension systems. Braking systems examined include hydraulics and friction components. Drivetrain systems covered include axles, driveshafts, and associated bearings. Steering & suspension topics presented include steering gears, various suspension designs, and vehicle alignment.

Prerequisite(s): AUTO 150, AUTO 151, and AUTO 152, all with a D or higher.

Corequisite(s): AUTO 162.

AUTO 161

STEERING AND SUSPENSION**6 CR**

Students will be introduced to the operation of a vehicle's steering and suspension system. Students will demonstrate the understanding of these systems. Students will then diagnose and perform the needed repairs to the steering and suspension system on customer vehicles.

AUTO 162

CHASSIS SYSTEMS LAB**8 CR**

This course will provide the opportunity for the students to diagnose and repair automotive chassis systems. Students will be exposed to the operation and use of common industry service and repair tools used during the diagnosis, repair and replacement of failed steering & suspension components, drivetrain components and braking system components.

Prerequisite(s): AUTO 150, AUTO 151, and AUTO 152, all with a D or higher.

Corequisite(s): AUTO 160.

AUTO 219

FIELD BASED EXPERIENCE I**12 CR**

This is the first in a series of four internships for the program. Students interview for, obtain and maintain an internship experience at an automotive repair (or related industry) business. The student is normally working under the direct supervision of an experienced, journeyman-level technician. The student will report weekly via a blog post that includes personal reflection. The internship site is a real-world extension of the classroom and the student will be able to apply knowledge gained previously in the program to

an actual workplace environment. Student work will be monitored by an instructor from BTC who will visit the work site periodically.

Prerequisite(s): General Automotive Repair Certificate.

AUTO 220

ELECTRICITY/ELECTRONICS 2**6 CR**

This course provides a detailed study of electrical/electronic systems found in a modern vehicle. In depth use of wiring diagrams and a wide variety of diagnostic techniques and tools will be explored. Coursework includes low voltage battery/starting/charging including start-stop, lighting, comfort, convenience, access, safety systems, ADAS (advanced driver assistance systems) and communication networks.

Prerequisite(s): General Automotive Repair Certificate.

AUTO 222

ELECTRICITY/ELECTRONICS 2 LAB**6 CR**

This course provides for the application of a variety of diagnostic and troubleshooting techniques relating to electrical/electronic systems. Students will practice using wiring diagrams and/or component analysis to diagnose a variety of customer concerns relating to electrical and electronic systems. An emphasis will be placed on professional documentation of customer concerns related to electrical and electronic systems failures.

Corequisite(s): AUTO 220.

AUTO 229

FIELD BASED EXPERIENCE II**4 CR**

This is the second in a series of internships required by the program and builds on the industry skills and experiences acquired in the first internship (AUTO 219). Students interview for, obtain and maintain an internship experience at an automotive repair (or related industry) business. The student is normally working under the direct supervision of an experienced, journeyman-level technician. The student will report weekly via a blog post that includes personal reflection. The internship site is a real-world extension of the classroom and the student will be able to apply knowledge gained previously in the program to an actual workplace environment. Student work will be monitored by an instructor from BTC who will visit the work site periodically.

Corequisite(s): AUTO 220.

AUTO 230

TRANSMISSION SYSTEMS**8 CR**

This course will focus on the theory, description and operation of automatic and manual transmission drive systems. The course content will include gear basics, including the basics of spur and helical cut gears as well as the basics of the planetary gear system and how the necessary gear ratios are attained in order to keep the vehicle's engine in operating rpm range.

Prerequisite(s): AUTO 220 and AUTO 222, both with a D or higher.

Corequisite(s): AUTO 232 and AUTO 259.

AUTO 232

TRANSMISSION SYSTEMS LAB**4 CR**

This course will provide the opportunity to remove and replace a manual transmission, including the clutch, and an automatic transmission. Students will also completely disassemble and reassemble a manual and an automatic transmission. Power-flow through the gear-train of a manual and an automatic transmission, including the torque converter, will be covered. Students will diagnose and trouble-shoot dry and wet clutches, hydraulic systems, electrical/electronic controls and mechanical systems.

Prerequisite(s): AUTO 220 and AUTO 222, both with a D or higher.

Corequisite(s): AUTO 230 and AUTO 259.

AUTO 250

AUTOMATIC TRANSMISSIONS/**TRANSAXLES****7 CR**

This course will focus on theory, description and operation of automatic drive systems. This will include diagnosis and trouble shooting hydraulic, electrical/electronic controls and mechanical systems and practicing proper R&R techniques.

Prerequisite(s): AUTO 122, AUTO 265, AENGL 100, CMST& 210, and AMATH 100.

AUTO 255

ELECTRICITY/ELECTRONICS 2**7 CR**

An introduction to a variety of electronic systems found on a modern vehicle. AUTO 255 provides an in-depth study of starting & charging systems. This course will also cover body and chassis control systems such as ABS, body computers, low tire pressure warning and airbags. Extensive troubleshooting practice by the application of industry standard troubleshooting techniques will be provided in AUTO 255.

Prerequisite(s): AUTO 151, AENGL 100, CMST& 210, and AMATH 100.

AUTO 259

FIELD BASED EXPERIENCE III**4 CR**

This is the third in a series of internships required by the program and builds on the industry skills and experience acquired in the first two internships. Students also continue to expand their classroom experience by applying skills learned in previous quarters to this internship. Students interview for, obtain and maintain an internship experience at an automotive repair (or related industry) business. The student is normally working under the direct supervision of an experienced, journeyman-level technician. The student will report weekly via a blog post that includes personal reflection. The internship site is a real-world extension of the classroom and the student will be able to apply knowledge gained previously in the program to an actual workplace environment. Student work will be monitored by an instructor from BTC who will visit the work site periodically.

Prerequisite(s): AUTO 229 with a D or higher or instructor permission.

Corequisite(s): AUTO 230 and AUTO 232.

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AUTO 260

MANUAL TRANSMISSION/ TRANSAXLE 3 CR

This course will focus on theory, description and operation of manual drive train systems. This course will include clutches, transfer cases and differentials.

Prerequisite(s): AUTO 122, AENGL 100, CMST& 210, and AMATH 100.

AUTO 265

ENGINE PERFORMANCE 2 3 CR

AUTO 265 will cover computerized engine management systems including OBD2 and diagnostic trouble code interpretation. This course will also cover vehicle computer networks including typical topologies and troubleshooting techniques.

Prerequisite(s): AENGL 100, CMST& 210, and AMATH 100.

Corequisite(s): AUTO 255.

AUTO 275

ENGINE PERFORMANCE 3 11 CR

This course will offer instruction in the operation, diagnosis and repair of fuel systems, ignition systems and emission control systems. In addition there will be more in-depth study of the OBD2 system and how it relates to other systems on the vehicle. This course also includes an introduction to alternative fuel vehicles.

Prerequisite(s): AENGL 100, CMST& 210, and AMATH 100, all with a D or higher.

AUTO 279

FIELD BASED EXPERIENCE IV 4 CR

This is the fourth in a series of internships required by the program and builds on the industry skills and experience acquired in the other three internships. Students also continue to expand their classroom experience by applying skills learned in previous quarters to this internship. Students interview for, obtain and maintain an internship experience at an automotive repair (or related industry) business. The student is normally working under the direct supervision of an experienced, journeyman-level technician. The student will report weekly via a blog post that includes personal reflection. The internship site is a real-world extension of the classroom and the student will be able to apply knowledge gained previously in the program to an actual workplace environment. Student work will be monitored by an instructor from BTC who will visit the work site periodically.

Prerequisite(s): AUTO 259 with a D or higher or instructor permission.

Corequisite(s): AUTO 280, AUTO 282, and AUTO 290.

AUTO 280

ENGINE PERFORMANCE 4 CR

This course offers a comprehensive study of the operation and diagnosis of fuel systems, ignition systems and emission control systems found in modern gasoline and light duty diesel engines. Coursework includes an in-depth focus of on-board diagnostic systems and how they relate to

other systems on the vehicle.

Prerequisite(s): AUTO 230 and AUTO 232, both with a D or higher.

Corequisite(s): AUTO 279, AUTO 282, and AUTO 290.

AUTO 282

ENGINE PERFORMANCE LAB 6 CR

This course provides an opportunity for the application of a variety of diagnostic and troubleshooting techniques relating to engine performance and emission control systems. Students will practice the diagnosis and repair of modern fuel systems, ignition systems and emission control systems found in modern gasoline and light duty diesel engines. An emphasis will be placed on professional documentation of customer concerns related to the engine performance and emission control systems.

Prerequisite(s): AUTO 230 and AUTO 232, both with a D or higher.

Corequisite(s): AUTO 279, AUTO 280, and AUTO 290.

AUTO 290

ALTERNATIVE ENERGY AND EMERGING TECH 2 CR

This course explores a variety of modern alternative energy drivetrains. While instruction will focus primarily on current vehicle technologies, some discussion will look ahead to emerging technologies. Practical application will include a focus on high voltage safety in addition to identifying typical HEV/EV (hybrid electric vehicle/ electric vehicle) components and common system function. Students will also practice typical diagnostic scenarios on common HEV/EVs.

Prerequisite(s): AUTO 230 and AUTO 232, both with a D or higher.

Corequisite(s): AUTO 279, AUTO 280, and AUTO 282.

AUTO 291

SHOP PRACTICUM 1 8 CR

Students will work in the automotive lab on various projects as assigned, under the direct instruction of the instructor and shop manager. This is a self-paced course, allowing students to apply the fundamental principles and competencies in the coursework up to and including the current quarter of enrollment. The lab will attempt to duplicate a working shop environment including all aspects of industry employability. This course is taken in lieu of an off-campus internship.

Prerequisite(s): AENGL 100, CMST& 210, and AMATH 100.

AUTO 292

SHOP PRACTICUM 2 8 CR

Students will work in the automotive lab on various projects as assigned, under the direct instruction of the instructor and shop manager. This is a self-paced course, allowing students to apply the fundamental principles and competencies in the coursework up to and including the current quarter of enrollment. The lab will attempt to duplicate a working shop environment including all aspects of industry employability. This course is

taken in lieu of an off-campus internship.

Prerequisite(s): AENGL 100, CMST& 210, and AMATH 100.

AUTO 293

SHOP PRACTICUM 3 8 CR

Students will work in the automotive lab on various projects as assigned, under the direct instruction of the instructor and shop manager. This is a self-paced course, allowing students to apply the fundamental principles and competencies in the coursework up to and including the current quarter of enrollment. The lab will attempt to duplicate a working shop environment including all aspects of industry employability. This course is taken in lieu of an off-campus internship.

Prerequisite(s): AENGL 100, CMST& 210, and AMATH 100.

BIOLOGY

BIO 130

SECTIONAL ANATOMY 4 CR

Building on knowledge of anatomy and physiology, this course offers a unique perspective of anatomical relationships. This course promotes an understanding of the human body from sagittal, coronal and transverse cross sectional perspectives. With the extensive use of diagrams, MRI and CT images, this course will explore anatomical structure and physiology.

Prerequisite(s): RT 103 for BTC Radiologic Technology Program Students. ARRT Registered Radiographers may also take this class with permission from the Radiologic Technology Coordinator.

BIOL& 160

GENERAL BIOLOGY WITH LAB 5 CR

This course provides introduction to basic concepts of biology, with an emphasis on the cells as the fundamental unit of life. Topics include cell structure, basic chemical and biochemical concepts, metabolism, cell division, principles of genetics, biological diversity, and methods of scientific inquiry and critical thinking. This course establishes the foundation necessary for continued biology study, especially in human anatomy and physiology. Lab included.

Prerequisite(s): Accuplacer Reading Comprehension score of 85 or RDG 085 with a B or higher, and Accuplacer Sentence Skills score of 86 or ENGL 092 with a B or higher or AENGL 100 with a C or higher, and Accuplacer Algebra score of 75 or MATH 098 with a C or higher.

BIOL& 241

HUMAN A & P 1 5 CR

This course emphasizes understanding of the normal human, which will serve as a foundation of general understanding as well as a foundation for future study in allied health fields. Lecture, group discussion, literature and internet research, and laboratory exercises are included. Acquisition of basic knowledge, application and integration of concepts is emphasized. BIOL& 241 includes

anatomy survey; tissues; and integumentary, skeletal, muscular, nervous, and endocrine systems.

Prerequisite(s): BIOL& 160 and CHEM& 121, both with a C or higher.

**BIOL& 242
HUMAN A & P 2 5 CR**

This course emphasizes understanding of the normal human, which will serve as a foundation of general understanding as well as a foundation for future study in allied health fields. Lecture, group discussion, literature and internet research, and laboratory exercises are included. Acquisition of basic knowledge, application and integration of concepts is emphasized. BIOL& 242 includes circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems.

Prerequisite(s): BIOL& 241 with a C or higher.

**BIOL& 260
MICROBIOLOGY 5 CR**

Exploration of microbial world with a focus on medical microbiology for students in the health field. Areas of study include classification of microbes, life cycle, metabolism, control, and common infectious diseases of the human body. Laboratory component will demonstrate procedures to identify and control microbes.

Prerequisite(s): BIOL& 160 and CHEM& 121, both with a C or higher.

BUSINESS

**BIT 100
SURVEY OF BUSINESS AND
INFORMATION TECHNOLOGY 2 CR**

Students will study career and networking opportunities in business and information technology, develop an academic plan, and prepare for the job search and job application process.

**BUS& 101
INTRODUCTION TO BUSINESS 5 CR**

Students are introduced to the broad field of business and its organization, operation and management. Business opportunities, ownership, marketing, physical factors, human resource, finance, regulations and decision-making processes are emphasized. Other topics include problems of organization, strategic management and controls. Fulfills the social science requirements at Bellingham Technical College.

Prerequisite(s): Recommended experience in Word processing, spreadsheets, and presentation software.

**BUS 120
PRINCIPLES OF MARKETING 5 CR**

This course explores the basic principles of marketing and its role in business. Topics include marketing plans and strategies, marketing research, target market segments and promotional strategies.

Prerequisite(s): BUS& 101 with a C or higher or Instructor permission.

**BUS 123
RECORDS MANAGEMENT 3 CR**

Managing records efficiently is an essential business function. Students will learn how to organize records according to alphabetic, numeric, subject and geographic filing rules and analyze the life cycle of records.

Prerequisite(s): CAP 101 with a C or higher AND ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher.

**BUS 127
SOCIAL MEDIA MARKETING 5 CR**

This course provides an introduction to social media marketing (SMM). Special emphasis is placed on creating a social media marketing plan which uses social media platforms to positively influence consumers toward a brand, product, or service. Explore and practice managing social networks like Facebook, Twitter, LinkedIn, Tumblr as well as emerging platforms. Basic understanding of web technologies and marketing concepts is expected.

**BUS 128
SEARCH ENGINE MARKETING 5 CR**

Search Engine Marketing is the process of promoting a web site, product or company through both search engine optimization and search advertising. This course examines ways to improve traffic to the web site by improving the ranking in search engine results and paid advertising. Become familiar with different types of marketing data and learn to combine them to answer business questions. Develop a measurement plan for a marketing campaign, and learn to set up the plan so it generates actionable data.

Prerequisite(s): Basic understanding of web technologies and marketing concepts is expected.

**BUS 129
SOCIAL MEDIA MARKETING
CAMPAIGN 5 CR**

Students will complete a social media marketing campaign for an organization. By identifying the organization's target market and the social media portals where the organization participates. Students will learn to set measurable goals; design innovative strategies and select appropriate social media portals, craft compelling content to attract and influence the intended audience, monitor and measure progress on a regular basis, and tune the social media marketing campaign to account for the ever changing nature of consumer tastes and the social web.

Prerequisite(s): Basic understanding of web technologies and marketing concepts is expected.

**BUS 132
LEGAL TERMINOLOGY & DOCUMENT
PROCESSING 5 CR**

This course introduces legal terminology and the processing of various legal documents used in the legal field.

Prerequisite(s): CAP 101 with a C or higher or Instructor permission.

**BUS 137
INTRODUCTION TO HUMAN
RESOURCES 5 CR**

Students will be introduced to the field of Human Resources, the roles and impact of Human Resources in the organization, and the principles underlying effective Human Resources. The class will provide an overview of the major functions of the HR field, common acronyms, HR professional certifications and the competencies required of HR professionals to be successful.

**BUS 138
INTRODUCTION TO COMPENSATION
AND BENEFITS 5 CR**

This course introduces the total rewards system and describes common employment compensation practices. Students will explore the primary forms of cash and non-cash compensation, the development of compensation strategy and evaluate the use of compensation and benefits in supporting the organization's goals and objectives.

**BUS 139
INTRODUCTION TO EMPLOYMENT LAW
AND LABOR RELATIONS 5 CR**

This course examines the major federal and Washington state employment laws. Students will learn the fundamentals of federal employment laws, including FMLA, FLSA, OSHA, WARN Act, and Title VII of the Civil Rights Act of 1964. This course will also provide an overview of Washington state employment laws and regulations, such as unlawful discrimination, wage and hour regulations, and workplace safety. An overview of employee and labor relations, including the rights and responsibilities of employees, employers, and the collective bargaining process will also be discussed.

**BUS 150
MATH FOR BUSINESS 5 CR**

Financial management is an important aspect of any organization. Students will apply math concepts to business applications as they study financial institutions, statistics, pricing and sales, payroll, debt, investing, and insurance. These topics are useful in both career and personal life.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher, and ACCUPLACER Arithmetic (254) or higher; or completion of MATH 090 with a C or higher.

**BUS 152
INTRODUCTION TO OPERATIONS
MANAGEMENT 5 CR**

This course provides students with concepts, techniques and tools to design, analyze, and improve core operational capabilities, and apply them to a broad range of application domains and industries. It emphasizes the effect of uncertainty in decision-making, as well as the interplay between high-level financial objectives and operational capabilities. Topics covered include production control, risk pooling, quality management, process design, and revenue management.

Prerequisite(s): ACCUPLACER Reading (247) OR RDG

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085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

BUS 153

INTRODUCTION TO LEAN MANAGEMENT 5 CR

This course offers a practical introduction to lean management principles and techniques. Students will learn how to implement lean management techniques in a business environment to improve productivity, business resilience and to reduce waste.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

BUS 188

BUSINESS ENGLISH 5 CR

Communication skills in any organization are essential. Applying standard English rules and making sure that information is clearly communicated will help students be a valuable asset for any employer. Business English focuses on the improvement of basic grammar and proofreading skills needed to effectively compose and edit written business documents. Specific areas include proofreading, parts of speech, sentence structure, capitalization, abbreviation, number usage, punctuation, writing style, and vocabulary.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher; and ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher.

BUS 191

TECHNICAL COMMUNICATIONS 5 CR

Good communication skills in the business world are essential. Organizations suffer when employees, supervisors, and customers do not understand each other. Throughout this course, students will analyze various forms of written, verbal, and non-verbal communication including correspondence, technical descriptions, and presentation skills.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher; and ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher, or BUS 188 with a C or higher.

BUS& 201

BUSINESS LAW 5 CR

This course introduces students to legal principles in the business world. Students will study law as it relates to contracts, torts, sales, business formation and dissolution, property, insurance, employment, and bankruptcy.

Prerequisite(s): ACCUPLACER Reading (247) or higher or RDG 085 with a C or higher; and ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher.

BUS 210

ORGANIZATIONAL LEADERSHIP 5 CR

Provides knowledge of appropriate leadership and supervisory skills. Introduces students to the fundamentals of supervisory management. Through lectures, text, case studies, and projects students will develop an understanding of principles to be used as guides for supervision in an organization.

BUS 276

FIELD-BASED EXPERIENCE 5-7 CR

Students will arrange to work in a college-approved office setting where they will apply business skills and knowledge in an administrative support capacity.

Prerequisite(s): Instructor permission required.

BUS 310

PROJECT MANAGEMENT 5 CR

Coordination of projects involving multiple tasks and resources, and the resolution of the conflicts that arise is a critical skill in business. This course teaches students some of the techniques necessary to develop realistic and comprehensive project plans; identify risk areas; monitor the plans; and deal with problems. The course will also cover management of the procurement process, and communication with project stakeholders. The course includes the use of Microsoft Project to develop and manage project plans.

Prerequisite(s): Admission to the BASOPS program.

CHEMISTRY

CHEM& 110

CHEMICAL CONCEPTS W/LAB 5 CR

This course is a broad overview of chemistry concepts useful to technical program education. Topics include basic atomic theory, chemical bonding, solutions, organic chemistry, hydrocarbon reactions, analytical separations, gasses, thermodynamics, and intermolecular forces.

Prerequisite(s): Accuplacer College Level Math score of 75, or MATH 099 or AMATH 111 with a C or higher.

CHEM& 121

INTRO TO CHEMISTRY 5 CR

Introductory course for non-science majors, nursing, and environmental science students. Includes basic concepts of inorganic and organic chemistry, the nature of atoms, molecules and chemical bonds, chemical notation, chemistry of solutions, scientific reasoning, and problem-solving in the study of the theory and application of chemistry. Lab work is included.

Prerequisite(s): Accuplacer Reading Comprehension score of 85 or RDG 085 with a B or higher, and Accuplacer Sentence Skills score of 86 or ENGL 092 with a B or higher or AENGL 100 with a C or higher, and Accuplacer College Math score of 75 or MATH 099 with a C or higher.

CHEM& 131

INTRODUCTION TO ORGANIC/BIO-CHEMISTRY 5 CR

This course is a continuation of CHEM& 121 and uses those concepts learned to understand the molecular nature of organic molecules. Topics to be covered include the structure, nomenclature, properties and reactions of hydrocarbons, alcohol, ethers, aldehydes, ketones, carboxylic acids, amines and amides with significant emphasis on the biochemical context of these organic molecules. The structure and function of carbohydrates, lipids, proteins, and nucleic acids including the major catabolic and anabolic pathways of carbohydrate, lipid, and protein metabolism is also covered. Lab activities complement theoretical concepts.

Prerequisite(s): CHEM& 121 with a C or higher.

CHEM& 161

GENERAL CHEMISTRY W/ LAB I 5 CR

An introductory chemistry course for students in programs requiring one or two quarters of general chemistry. Course covers basic principles of modern chemistry, the structure of atoms and molecules, ions, chemical bonding and molecular geometry, the periodic table, chemical formulas and equations, and stoichiometry of reactions and solutions. Lab work included.

Prerequisite(s): MATH& 141 with a C or higher and ACCUPLACER Reading (85) or ACCUPLACER NextGen Reading (256) or RDG 085 with a B or higher and ACCUPLACER Sentence Skills (86) or ACCUPLACER NextGen Writing (255) or ENGL 092 with a B or higher OR AENGL 100 with a C or higher. Recommend completion of CHEM& 121 or one year of high school chemistry.

COLLEGE READINESS AND SUCCESS

ABE 050

ESSENTIAL MATH 5 CR

A math course designed for students who need better math skills to pass the GED math test or Accuplacer arithmetic test or to progress to Pre-Algebra. This course is intended to reinforce and extend students' knowledge of basic mathematics and to build the foundation for success in beginning algebra. Topics covered include basic operations with whole numbers, decimals and fractions; understanding and application of ratio, proportion and percent; elements of geometry, problem solving, and signed numbers; and solving simple equations. The course is designed to use interactive software and a variety of classroom strategies.

Prerequisite(s): CASAS Math score (204) or higher OR Instructor permission.

ABE 052

ESSENTIAL WRITING 5 CR

This course helps students develop basic English writing skills such as organization of ideas, conventions of English language usage (grammar, spelling, sentence structure, and punctuation), and feedback and revision. Students will apply critical thinking skills such as analyzing and synthesizing ideas from authentic readings. Basic computer use is required. This course prepares students for entry into ENGL 092.

Prerequisite(s): CASAS Reading score (228) or higher or Instructor permission.

ABE 054

ESSENTIAL READING 5 CR

In this course, students will explore, identify and apply reading strategies to various technical and literary text. Students will practice monitoring and articulating reading comprehension and critical thinking. Weekly routines include practice in establishing the main idea and supporting ideas; identifying facts, opinions and inferences; as well as defining new vocabulary. Reading themes in this class are within the broad areas of career exploration and contemporary world issues. Basic computer use is required. This course prepares students for entry into RDG 085.

Prerequisite(s): CASAS Reading score (228) or higher or Instructor permission.

ABE 055

ESSENTIAL RDG/WR 5 CR

This intensive course helps students develop English reading and writing skills including comprehension, vocabulary, study skills, organization of ideas and conventions of English language usage (grammar, spelling, sentence structure, and punctuation). Students will apply critical thinking skills such as analyzing and synthesizing ideas from authentic reading, as well as the development of central themes and main ideas in writing. Basic computer use is required.

Prerequisite(s): CASAS Reading score of 221 or higher.

ELA 001

ENGLISH LANGUAGE ACQUISITION: BEGINNING 1 18 CR

This course is designed to improve the communication skills for the Limited English Proficient adult who functions with difficulty in situations related to immediate needs such as providing personal information on simple forms. Emphasis is on reading simple material on familiar subjects; interpreting simple directions, schedules, signs, and maps; and conveying ideas in simple notes and messages using present tense "be" verb tenses and present continuous verb tenses. In oral communication, students learn to convey immediate needs in limited social situations using simple learned and often repeated phrases. Emphasis is on listening actively to understand and respond to verbal and non-verbal communication, expressing basic survival needs, and participating in some routine social conversations.

ELA 002

ENGLISH LANGUAGE ACQUISITION: BEGINNING 2 18 CR

This course is designed to improve the communication skills for the Limited English Proficient adult who functions with difficulty in situations related to immediate needs such as providing personal information on simple forms. Emphasis is on reading simple material on familiar subjects; interpreting simple directions, schedules, signs, and maps; and conveying ideas in simple notes and messages using present tense "be" verb tenses and present continuous verb tenses. In oral communication, students learn to convey immediate needs in limited social situations using simple learned and often repeated phrases. Emphasis is on listening actively to understand and respond to verbal and non-verbal communication, expressing basic survival needs, and participating in some routine social conversations.

ELA 003

ENGLISH LANGUAGE ACQUISITION: BEGINNING 3 18 CR

This course is designed to improve the communication skills for the Limited English Proficient adult who functions with difficulty in situations related to immediate needs such as providing personal information on simple forms. Emphasis is on reading simple material on familiar subjects; interpreting simple directions, schedules, signs, and maps; and conveying ideas in simple notes and messages using present tense "be" verb tenses and present continuous verb tenses. In oral communication, students learn to convey immediate needs in limited social situations using simple learned and often repeated phrases. Emphasis is on listening actively to understand and respond to verbal and non-verbal communication, expressing basic survival needs, and participating in some routine social conversations.

ELA 004

ENGLISH LANGUAGE ACQUISITION: BEGINNING 4 18 CR

This course is designed to improve the communication skills for the Limited English Proficient adult who functions with difficulty in situations related to immediate needs such as providing personal information on simple forms. Emphasis is on reading simple material on familiar subjects; interpreting simple directions, schedules, signs, and maps; and conveying ideas in simple notes and messages using present tense "be" verb tenses and present continuous verb tenses. In oral communication, students learn to convey immediate needs in limited social situations using simple learned and often repeated phrases. Emphasis is on listening actively to understand and respond to verbal and non-verbal communication, expressing basic survival needs, and participating in some routine social conversations.

ELA 011

ENGLISH LANGUAGE ACQUISITION: INTERMEDIATE 1 18 CR

This course is designed to improve the English skills of adults who can meet basic survival and

social needs, follow simple oral and written instructions and have some ability to write related to basic needs. Emphasis in reading is on understanding descriptive narratives and learning basic reading strategies, such as rereading, restating, rephrasing, word decoding, and identifying main ideas. In writing, the emphasis is on creating paragraphs using prewriting and revision strategies. This includes learning appropriate grammar and vocabulary in order to write and edit. In speaking and listening, the emphasis is on understanding and responding to familiar topics, requesting and clarifying, following oral directions, and speaking so others can understand. Critical thinking and basic math is embedded and contextualized for everyday life and work purposes.

ELA 012

ENGLISH LANGUAGE ACQUISITION: INTERMEDIATE 2 18 CR

This course is designed to improve the English skills of adults who can meet basic survival and social needs, follow simple oral and written instructions and have some ability to write related to basic needs. Emphasis in reading is on understanding descriptive narratives and learning basic reading strategies, such as rereading, restating, rephrasing, word decoding, and identifying main ideas. In writing, the emphasis is on creating paragraphs using prewriting and revision strategies. This includes learning appropriate grammar and vocabulary in order to write and edit. In speaking and listening, the emphasis is on understanding and responding to familiar topics, requesting and clarifying, following oral directions, and speaking so others can understand. Critical thinking and basic math is embedded and contextualized for everyday life and work purposes.

ELA 013

ENGLISH LANGUAGE ACQUISITION: INTERMEDIATE 3 18 CR

This course is designed to improve the English skills of adults who can meet basic survival and social needs, follow simple oral and written instructions and have some ability to write related to basic needs. Emphasis in reading is on understanding descriptive narratives and learning basic reading strategies, such as rereading, restating, rephrasing, word decoding, and identifying main ideas. In writing, the emphasis is on creating paragraphs using prewriting and revision strategies. This includes learning appropriate grammar and vocabulary in order to write and edit. In speaking and listening, the emphasis is on understanding and responding to familiar topics, requesting and

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.

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clarifying, following oral directions, and speaking so others can understand. Critical thinking and basic math is embedded and contextualized for everyday life and work purposes.

ELA 014

ENGLISH LANGUAGE ACQUISITION: INTERMEDIATE 4 18 CR

This course is designed to improve the English skills of adults who can meet basic survival and social needs, follow simple oral and written instructions and have some ability to write related to basic needs. Emphasis in reading is on understanding descriptive narratives and learning basic reading strategies, such as rereading, restating, rephrasing, word decoding, and identifying main ideas. In writing, the emphasis is on creating paragraphs using prewriting and revision strategies. This includes learning appropriate grammar and vocabulary in order to write and edit. In speaking and listening, the emphasis is on understanding and responding to familiar topics, requesting and clarifying, following oral directions, and speaking so others can understand. Critical thinking and basic math is embedded and contextualized for everyday life and work purposes.

ELA 021

ENGLISH LANGUAGE ACQUISITION: ADVANCED 1 18 CR

This course is designed to improve the reading, writing, listening and speaking skills of adults who have a goal to improve their English language skills for college and career purposes. Emphasis is on reading real-life, academic, and workplace materials; using meaning-making strategies with unfamiliar reading materials; and writing and editing multi-paragraph documents for college and workplace. In oral communication, emphasis is on communicating effectively for various purposes while applying critical thinking skills and making effective choices for those settings. Students will use a range of conventions in speaking for distinct audiences and contexts. Basic math is contextualized for everyday life and work purposes, and progress in appropriate technology is expected.

ELA 022

ENGLISH LANGUAGE ACQUISITION: ADVANCED 2 18 CR

This course is designed to improve the reading, writing, listening and speaking skills of adults who have a goal to improve their English language skills for college and career purposes. Emphasis is on reading real-life, academic, and workplace materials; using meaning-making strategies with unfamiliar reading materials; and writing and editing multi-paragraph documents for college and workplace. In oral communication, emphasis is on communicating effectively for various purposes while applying critical thinking skills and making effective choices for those settings. Students will use a range of conventions in speaking for distinct audiences and contexts. Basic math is contextualized for everyday life and work purposes, and progress in appropriate technology is expected.

ELA 023

ENGLISH LANGUAGE ACQUISITION: ADVANCED 3 18 CR

This course is designed to improve the reading, writing, listening and speaking skills of adults who have a goal to improve their English language skills for college and career purposes. Emphasis is on reading real-life, academic, and workplace materials; using meaning-making strategies with unfamiliar reading materials; and writing and editing multi-paragraph documents for college and workplace. In oral communication, emphasis is on communicating effectively for various purposes while applying critical thinking skills and making effective choices for those settings. Students will use a range of conventions in speaking for distinct audiences and contexts. Basic math is contextualized for everyday life and work purposes, and progress in appropriate technology is expected.

ELA 024

ENGLISH LANGUAGE ACQUISITION: ADVANCED 4 18 CR

This course is designed to improve the reading, writing, listening and speaking skills of adults who have a goal to improve their English language skills for college and career purposes. Emphasis is on reading real-life, academic, and workplace materials; using meaning-making strategies with unfamiliar reading materials; and writing and editing multi-paragraph documents for college and workplace. In oral communication, emphasis is on communicating effectively for various purposes while applying critical thinking skills and making effective choices for those settings. Students will use a range of conventions in speaking for distinct audiences and contexts. Basic math is contextualized for everyday life and work purposes, and progress in appropriate technology is expected.

GED 050

GED PREPARATION: IMPACT 18 CR

This GED preparation course includes instruction in reading, writing and math as well as the content areas of social studies, science, arts and literature. Emphasis is placed on GED® test-taking skills, reasoning skills and critical thinking skills.

GED 056

GED PREP 15 CR

This GED® preparation course includes instruction in reading, writing and math as well as the content areas of social studies, science, arts, and literature. Emphasis is placed on GED® test-taking skills, reasoning skills, and critical thinking skills.

HSC 010

HIGH SCHOOL COMPLETION ACADEMIC PLANNING 2 CR

This course is for students at any competency level who are interested in completing the requirements for a Washington State High School Diploma. Course includes orientation, career planning, goal setting, skills identification, barrier mitigation, and resource navigation.

HSC 020

US GOVERNMENT 3 CR

This is a survey course that satisfies the Washington State Board of Education's requirements for competency in US Government. This course focuses on important themes in American social and political history from Early America to the 21st Century with an emphasis on the United States Constitution and its amendments.

Prerequisite(s): CASAS Reading (239) or higher OR Instructor permission.

HSC 022

US HISTORY & ENGLISH 5 CR

This is a survey course which satisfies the Washington State Board of Education's requirements for competency in both US History, Government, and English. This course focuses on important themes in American social and political history from Early America to the Civil War with an emphasis on the United States Constitution and its amendments. In addition, students will analyze and critique American social and political history and develop academic literacy, including evaluation of content, points of view, and text analysis.

Prerequisite(s): CASAS Reading score (228) or higher OR Instructor permission.

HSC 024

WASHINGTON STATE HISTORY 3 CR

This course will explore Washington State History including the Washington State Constitution, its people (including the Native American peoples), governments, geography, and industries. It will also develop reading strategies for improved comprehension and writing skills for standard academic English in preparation for career and college readiness.

Prerequisite(s): CASAS Reading score (239) or higher OR Instructor permission.

HSC 029

ENVIRONMENTAL SCIENCE, CONTEMPORARY WORLD PROBLEMS & ENGLISH 6 CR

This course integrates reading, writing, listening, speaking, and critical thinking skills around learning focused on Environmental Science and Contemporary World Problems. Topics include population, ecology, climate change, pollution, food systems, environmental racism and sustainability. Students will specifically focus on environmental issues related to the Pacific Northwest. Laboratories and field trips are included.

Prerequisite(s): CASAS Reading score (239) or higher OR Instructor permission.

HSC 035

LIFE SCIENCE & ENGLISH 6 CR

This course is composed of multiple modules designed to introduce students to life science. The class begins with scientific thinking and the scientific method and then moves to define characteristics of life and an in-depth look at cell structures and functions. Next, diversity within the living world is analyzed and genetics are ex-

pored. Finally, large-scale biological processes are introduced by looking at how energy and matter enter and move through the living world. Helpful videos, pictures, lab, models, and other visual strategies are used as learning tools with an expanded emphasis on writing and math to bring meaning to the content being addressed.

Prerequisite(s): CASAS Reading score (228) or higher OR Instructor permission.

HSC 036 SCIENCE LAB 5 CR

This course is designed to refine students' understanding of the nature of scientific inquiry and develop the ability to formulate questions, propose hypotheses, and design, conduct, and report on investigations. Additionally, this course will increase their understanding of the kinds of questions that scientists ask and how the results reflect the research methods and the criteria by which scientific arguments are judged.

Prerequisite(s): CASAS Reading score (239) or higher OR Instructor permission.

HSC 060 HS 21+ PORTFOLIO 10 CR

HSC 060 is designed to teach students how to demonstrate high school competencies in fulfillment of HS 21+ diploma requirements through completion of individual portfolio assignments. It guides adult high school students through the process of developing a plan for completing the requirements for their adult high school diploma.

Prerequisite(s): CASAS Reading Score of 236 or higher, or by permission.

HSC 066 HEALTH & FITNESS 10 CR

This course introduces the emotional, physical, and mental components of health. Topics covered include goal setting, stress management, nutrition principles, relationships, substance use and abuse, and fitness which incorporates various forms of physical activity. Techniques are presented to help the student incorporate a total health and fitness program into their lifestyle.

Prerequisite(s): CASAS Reading score (239) or higher OR Instructor permission.

HSC 070 APPLIED MATHEMATICS I 3 CR

This course presents the first part of mathematics used in the professional/technical occupations. This course is intended to reinforce and extend students' knowledge of basic mathematics skills in operations with whole numbers, decimals and fractions; application of ratio, proportion and percent.

Prerequisite(s): CASAS Math score (204) or higher OR ABE 050 with a C or higher OR HSC 073 with a C or higher OR Instructor permission.

HSC 072 APPLIED MATHEMATICS II 3 CR

This course presents the second part of mathematics used in the professional/technical occupations. This course is intended to reinforce and extend students' knowledge of basic mathematics skills in U.S Customary Units and metric measurement systems, basic geometry and elementary algebra.

Prerequisite(s): CASAS Math score (215) or higher OR ABE 050 with a C or higher OR HSC 070 with a C or higher OR HSC 073 with a C or higher OR Instructor permission.

HSC 073 MATHEMATICAL CONCEPTS 5 CR

This course provides basic math foundations for all future mathematical studies in pre-college and college math courses and to pass standardized tests such as the GED math test and ACCUPLACER arithmetic test. This course is intended to reinforce and extend students' knowledge of basic mathematics and to build the foundation for success in beginning algebra. Topics covered include basic operations with whole numbers, decimals and fractions; understanding and application of ratio, proportion and percent; elements of geometry, problem solving; and solving simple equations.

Prerequisite(s): CASAS Math score (204) or higher OR Instructor permission.

HSC 074 APPLIED MATHEMATICS I & II 5 CR

This course presents the first part of mathematics used in the professional/technical occupations. This course is intended to reinforce and extend students' knowledge of basic mathematics skills in operations with whole numbers, decimals and fractions; application of ratio, proportion and percent; U.S Customary Units and metric measurement systems; basic geometry and elementary algebra.

Prerequisite(s): CASAS Math score (204) or higher OR ABE 050 with a C or higher OR HSC 073 with a C or higher OR Instructor permission.

HSC 075 PRE-ALGEBRA 5 CR

A developmental math course to help students make the transition from Arithmetic to Algebra. Students will increase their math skills and gain the foundation for algebraic concepts and problem-solving. Students should have a working knowledge of Arithmetic. Included are topics on fractions, sets of numbers, applied problem solving, use of variables, simplifying expressions, and setting up equations to solve.

Prerequisite(s): CASAS Math score (215) or higher OR ABE 050 with a C or higher OR HSC 073 with a C or higher OR Instructor permission.

HSC 077 ALGEBRA I 5 CR

This course will cover solving different forms of equations; manipulation of exponents and radicals as needed on the job; as well as factoring and graphing. This course is targeted for those students whose programs involve more algebra than included in BTC's occupational and technical math courses. This course will also serve as a prerequisite to any intermediate algebra course or as a refresher for those students who have had algebra in the past.

Prerequisite(s): CASAS Math score (226) or higher OR HSC 075 with a C or higher OR Instructor permission.

HSC 078 GEOMETRY 5 CR

In this class students will gain proficiency in basic geometric concepts; properties of triangles, circles, and polygons; transformations including translations, rotations, reflections, and dilations; and working with solids including surface area and volume.

Prerequisite(s): CASAS Math score (226) or higher OR ABE 050 with a C or higher OR HSC 073 with a C or higher OR Instructor permission.

COLLEGE SUCCESS

CDEV 100 COLLEGE FOUNDATIONS I 3 CR

This course introduces students to academic culture. We explore and use the 3 R's for college success: relationships, resources, and routines. Instruction develops reflective thinking, study habits, and problem solving skills. Diverse approaches include hands-on practice, technology navigation, and individual and team projects.

Prerequisite(s): ACCUPLACER Classic Reading (50) or higher OR ACCUPLACER NextGen Reading (233) or higher OR ABE 054 with a C or higher OR ABE 055 with a C or higher. ACCUPLACER Classic Sentence Skills (50) OR ACCUPLACER NextGen Writing (230) or higher OR ABE 052 with a C or higher OR ABE 055 with a C or higher. ACCUPLACER Classic Arithmetic (38) or higher OR ACCUPLACER NextGen Arithmetic (230) or higher.

COMMUNICATION STUDIES

CMST& 210 INTERPERSONAL COMMUNICATION 5 CR

Designed to introduce students to the application of basic interpersonal communication theory, with a focus on achieving success in the workplace. Topics explored include self-awareness, self-disclosure, conversation skills, relationship development and maintenance, assertiveness, teamwork and group dynamics, conflict manage-

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ment strategies, and communicating in a diverse world.

Prerequisite(s): Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher, and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

CMST& 220

PUBLIC SPEAKING

5 CR

Introduction to communication theory and public speaking emphasizing organization, audience analysis, oral styles, and use of visual aids. Includes presentation of various types of public speeches and analyses of contemporary speeches.

Prerequisite(s): Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher, and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

COMPUTER SCIENCES

CS& 131

COMPUTER SCIENCE I C++

5 CR

This course equips students with fundamental programming skills such as effective use of data types, variables, assignment statements, control structures, modular design using procedures, pointers and array data structures in the construction of C++ programs. This course also introduces students to Object Oriented Programming concepts and prepares students for the C++ Institute Certified Associate Programmer exam.

Prerequisite(s): MATH 099 or IT 121 with a C or higher, or Instructor permission.

CS 132

COMPUTER SCIENCE II C++

5 CR

Advanced software development using the C++ programming language, emphasizing object-oriented concepts and fundamental data structures techniques. Introduces concepts of recursion, modularity, encapsulation, inheritance, templates, polymorphic class design, and self-referential data structures; focuses on fundamental abstract data types (stacks, queues, linked lists, binary trees) and their use.

Prerequisite(s): CS& 131 with a C or higher.

COMPUTERS

CAP 101

MICROSOFT COMPUTER APPLICATIONS

5 CR

General computer skills are important for students and employees. In this course, students will use a personal computer to demonstrate basic skills in Windows and Microsoft Word, Excel, Access, PowerPoint, and Outlook. Students will describe safe technology practices, use the tools within the BTC learning management system, demonstrate file management techniques, and

demonstrate proper keyboarding techniques.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher.

CAP 111

SKILLBUILDING AND DOCUMENT FORMATTING

5 CR

In this course students will learn how to format reports, letters, memos, and tables with speed and accuracy. Students will also analyze keyboarding techniques, analyze the elements of an ergonomic workstation, and demonstrate speed and accuracy on the alpha-numeric keyboard and the ten-key pad.

Prerequisite(s): CAP 101 with a C or higher.

CAP 114

MICROSOFT OUTLOOK

3 CR

One of the most common forms of communication in business is email, and Microsoft Outlook is one of the leading email software applications. Students will use Microsoft Outlook to learn how to effectively manage settings, incoming and outgoing messages, schedules, and contacts. Students will research email etiquette and email policies and apply email writing techniques to business scenarios. Students will also learn how to collaborate in Microsoft Teams. This course prepares students for the Microsoft Office Specialist Outlook certification exam.

Prerequisite(s): CAP 101 with a C or higher.

CAP 138

MICROSOFT WORD

5 CR

Microsoft Word is the industry leader in word processing and is used to create, format, and manage business documents. Students will work with mail merge, graphics, and reference elements, and use accessibility and collaboration tools. Students will also create OneNote notebooks. This course prepares students for the Microsoft Office Specialist Word certification exam.

Prerequisite(s): CAP 101 with a C or higher.

CAP 142

MICROSOFT EXCEL

5 CR

Microsoft Excel is the industry leading spreadsheet application and is used to create spreadsheets, organize and analyze data, write formulas, create charts, and has security and collaboration features. This course prepares students for the Microsoft Office Specialist Excel certification exam.

Prerequisite(s): CAP 101 with a C or higher.

CAP 143

ADOBE FILE MANAGEMENT

3 CR

Adobe Acrobat is used in many organizations to create, view, and edit PDF documents. Students will add headers and footers, render text searchable and editable, utilize security functions to protect documents, create and edit forms, create folders and subfolders, convert electronic and paper documents into PDF files, and utilize available legal tools.

Prerequisite(s): CAP 101 with a C or higher.

CAP 146

MICROSOFT ACCESS

3 CR

Organize data with Microsoft Access. Students will learn to apply rules for table design, establish relationships between tables, create queries to analyze data, create forms for data entry and data search, and create reports that present information in professional format. This course prepares students for the Microsoft Office Specialist Access certification exam.

Prerequisite(s): CAP 101 with a C or higher.

CAP 148

MICROSOFT POWERPOINT

3 CR

Create professional presentations with Microsoft PowerPoint. Students will learn to format slides, text, and graphics while applying accessibility and collaboration features. This course prepares students for the Microsoft Office Specialist PowerPoint certification exam.

Prerequisite(s): CAP 101 with a C or higher.

IT 101

USING NETWORK COMPUTER SYSTEMS

5 CR

This course provides an introduction to the use of networked computer systems. Topics include the implementation and use of campus and departmental learning resources, basic operating system use including file system navigation and command line interfaces, basic keyboarding skills, network authentication and networked resource access.

Prerequisite(s): ACCUPLACER Reading (247) or higher or RDG 085 with a C or higher. ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher. ACCUPLACER Arithmetic (230) or higher, or MATH 090 with a C or higher or ABE 050 with a C or higher.

IT 107

USING CLOUD SERVICES

3 CR

This course provides an introduction to Cloud Services. Topics include cloud-based storage, virtualization, security, mobile device management, and software as service applications. Students will use cloud services to design documents, forms, and spreadsheets.

Prerequisite(s): IT 101 with a D or higher or concurrent enrollment in IT 101; or IT 105 with a D or higher or concurrent enrollment in IT 105; or CAP 101 with a C or higher or concurrent enrollment in CAP 101; or instructor permission.

IT 112

A+ HARDWARE

5 CR

This course provides an introduction to PC Hardware in coordination with the CompTIA A+ Hardware high-level exam objectives. Topics include computer hardware systems, basic networking, mobile devices and troubleshooting.

Prerequisite(s): IT 101 with a D or higher or concurrent enrollment in IT 101; or IT 105 with a D or higher or concurrent enrollment in IT 105; or CAP 101 with a C or higher or concurrent enrollment in CAP 101; or instructor permission.

IT 120

COMMAND LINE INTERFACE & SCRIPTING 5 CR

This course introduces students to scripting using command line interfaces. Industry standard scripting languages in Linux and Microsoft operating systems will provide the platforms on which to learn syntax, flow control, variables, arrays, basic parsing and text manipulation.

Prerequisite(s): IT 101 with a D or higher or concurrent enrollment in IT 101; or IT 105 with a D or higher or concurrent enrollment in IT 105; or CAP 101 with C or concurrent enrollment in CAP 101; or instructor permission.

IT 121

INTRODUCTION TO PROGRAMMING 5 CR

This course introduces students to the fundamentals of good program design, coding, testing, and documentation. Students will learn to employ good user interface design, standardization and variable naming, decision operators, looping mechanisms, subroutines and error handling as they build their own programs.

Prerequisite(s): IT 141 and IT 161, both with a D or higher.

IT 141

A+ OPERATING SYSTEMS 5 CR

This course provides an introduction to PC Software in coordination with the CompTIA A+ Software high-level exam objectives. Topics include computer operating systems, basic networking utilities, computer security and application troubleshooting.

Prerequisite(s): IT 101 with a D or higher or concurrent enrollment in IT 101; or IT 105 with a D or higher or concurrent enrollment in IT 105; or CAP 101 with a C or higher or concurrent enrollment in CAP 101; or instructor permission.

IT 142

WINDOWS DESKTOP I 5 CR

An introduction to the Windows desktop operating system that includes operating system configuration, installation, device and application management, maintenance, and file and folder controls.

Prerequisite(s): IT 120 and IT 141, both with a D or higher, and completion of or concurrent enrollment in IT 160.

IT 160

NETWORK TECHNOLOGY I 5 CR

This course provides an introduction to the configuration, management and troubleshooting of common wired and wireless network devices. Topics include TCP/IP, DNS, DHCP, OSI Reference Model, cabling fundamentals, network topologies, and network diagramming.

Prerequisite(s): IT 141 with a D or higher.

IT 161

NETWORK TECHNOLOGY II 5 CR

This course builds upon the content knowledge gained in IT 160 regarding the configuration, management, and troubleshooting of common wired and wireless network devices. Topics include, switching, VLANs, wireless networking, firewalls, and basic routing.

Prerequisite(s): IT 160 with a D or higher.

IT 210

INFORMATION SECURITY 5 CR

This course provides an overview of network security. Topics covered include general security concepts, threat analysis, types of attacks, vulnerabilities, risk management, cryptography, PKI, and legal and ethical issues associated with information security.

Prerequisite(s): IT 141 and IT 160, both with a D or higher.

IT 240

LINUX SERVER ADMINISTRATION 5 CR

This course introduces students to the administration fundamentals of Linux Servers. Using Linux, students will configure SSH, configure networking, administer user accounts and permissions, secure Linux systems, and monitor system resources, processes and usage.

Prerequisite(s): IT 120, IT 141, and IT 160, all with a D or higher.

IT 241

WINDOWS DESKTOP II 5 CR

This course facilitates an in-depth study of the Windows desktop operating system found commonly in the business environment. Areas of study include enterprise deployment, centralized configuration, and advanced management and support tools.

Prerequisite(s): IT 120 and IT 142, both with a D or higher.

IT 242

WINDOWS SERVER I 5 CR

This course focuses on the fundamentals of Windows Server administration. Topics include installation and configuration of Windows Server and server roles, Active Directory Domain Services, storage, server performance management, and server maintenance.

Prerequisite(s): IT 142 and IT 160, both with a D or higher.

IT 243

WINDOWS SERVER II 5 CR

This is an advanced course focusing on Windows Server and building upon concepts explored in previous IT courses. Students will develop knowledge and skills deploying and configuring core infrastructure services in the Microsoft Windows Server ecosystems. Topics may include services such as group policy, active directory, network

management, virtualization, cloud deployment or other advanced server topics.

Prerequisite(s): IT 242 with a D or higher.

IT 250

CLOUD & IOT FUNDAMENTALS 5 CR

An introduction to cloud models, virtualization, infrastructure, security, resource management and business continuity. Students will also gain experience deploying Internet and cloud connected sensors and effectors.

Prerequisite(s): IT 240 or IT 242 with a D or higher.

IT 252

AMAZON CLOUD 5 CR

This class covers design, implementation, and use of AWS cloud services. Topics include Simple Storage Service (S3), Elastic Compute Cloud (EC2), Virtual Private Cloud, Relational Database Service, and Identity and Access Management.

Prerequisite(s): IT 250 and IT 240, both with a D or higher; or IT 250 and IT 242, both with a D or higher; or Instructor permission.

IT 253

MICROSOFT CLOUD 5 CR

This class covers design, implementation and use of Azure cloud services. Topics include Azure Storage, Azure Virtual Machines, Virtual Network, Azure DNS, and Azure Active Directory.

Prerequisite(s): IT 250 and IT 240, both with a D or higher; or IT 250 and IT 242, both with a D or higher; or Instructor permission.

IT 254

WEB APPLICATIONS 5 CR

This course utilizes cloud technologies to deploy modern web applications in a fault tolerant way. Topics include System Monitoring, Dynamic Deployment of Services, APIs, and Containerization Software.

Prerequisite(s): IT 240 and IT 252, both with a D or higher; or IT 240 and IT 253, both with a D or higher; or Instructor permission.

IT 260

NETWORK TECHNOLOGY III 5 CR

This course continues the development of skills and knowledge in network communications management into OSI layer 3-5 devices and services including Routers, Advanced Switching, Network Management and Monitoring, and Security Appliances.

Prerequisite(s): IT 161 with a D or higher.

IT 270

FIELD-BASED EXPERIENCE 5 CR

Students will arrange to work in a college approved, information technology related, work environment. The field-based experience provides exposure to a typical work environment, opportunities for customer service and technical

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skill development, and mentorship by industry professionals.

Prerequisite(s): IT 240 or IT 242 with a D or higher.

CULINARY ARTS

CUL 101

BASIC CUISINE FOUNDATION 4 CR

This course focuses on basic foundation cooking techniques utilized in the culinary industry. Study topics include basic mise en place skills; vegetable cutting and preparation techniques; basic stocks, sauces, and starches; fabrication of chicken, and classic cooking methods. Students will create healthy, organic thirty-minute meals utilizing local products. Students will use the Internet to conduct research, use Microsoft Word and PowerPoint to create assignments/presentations and are required to submit work electronically.

Prerequisite(s): Program admission or instructor permission.

CUL 110

SANITATION AND SAFETY 2 CR

This course provides students with an understanding of the principles and practices of sanitation in order to maintain a safe and healthy environment for the consumer in the food service industry. Laws and regulations related to current FDA food code and adherence to them in the food service operation are addressed. Successful completion of online Managerial Certification testing is required for this program. Students will use the internet to research, use Microsoft Word to create assignments, and are required to submit work electronically.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher OR completion of ABE 050 with a C or higher, AND ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher, AND ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

CUL 112

INTRODUCTION TO HOSPITALITY 2 CR

This course provides the background and history of the hospitality industry and introduces students to the broad spectrum of hospitality/food service organizations. The course will also explore the wide variety of career opportunities and job requirements needed for the professional chef in today's job market. Students will be introduced to weights and measures, ingredient yield analysis, recipe reading and writing and various menu forms used in restaurants. Recipe conversions and pre-costing are covered as well.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher OR completion of ABE 050 with a C or higher, AND ACCUPLACER Reading (247) OR RDG 085 with a C or higher, AND ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

Completion Of or Concurrent Enrollment In: CUL 110, CUL 114 and CUL 118 all with a C- or higher or concurrent enrollment in CUL 110, CUL 114 and CUL 118.

CUL 114

CULINARY SKILL DEVELOPMENT I 6 CR

This course focuses on the foundational cooking techniques utilized in the culinary industry. Topics of study include basic mise en place skill development, foundational cooking methods, related terminology and additional cooking preparations. Theory and lab topics include focus on meat cookery, the preparation of stocks, classical and contemporary mother sauces and derivative sauces, eggs and breakfast cookery and the application of herb, spices and flavorings used in the professional kitchen today. Weekly labs provide students time to practice these foundational skills.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher OR completion of ABE 050 with a C or higher, AND ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher, AND ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher or instructor permission.

Completion Of or Concurrent Enrollment In: CUL 110, CUL 112 and CUL 118 all with a C- or higher or concurrent enrollment in CUL 110, CUL 112 and CUL 118.

CUL 118

COMMERCIAL KITCHEN EQUIPMENT 2 CR

This course provides comprehensive information about common kitchen equipment used in hotels, restaurants, resorts, and other food service establishments. Emphasis is placed on safety measures used in commercial kitchens, identification of a wide variety of commercial kitchen equipment, the common use in professional kitchens and the correct operation, safety, breakdown and cleaning procedures.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher OR completion of ABE 050 with a C or higher, AND ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher, AND ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

Completion Of or Concurrent Enrollment In: CUL 110, CUL 112 and CUL 114 all with a C- or higher, or concurrent enrollment in CUL 110, CUL 112 and CUL 114.

CUL 122

CULINARY SKILL DEVELOPMENT II 6 CR

This course is a continuation of Culinary Skill Development I, with study and practice focused on soups, salads, salad dressings, nuts, fruits, potatoes, grains, dry legumes and pasta preparations, sandwiches, cheese and dairy products, vegetables and vegetarian cookery. Theory topics include common market forms, yield study and costing analysis, purchasing, receiving, handling and storage of these foundational food products. Through weekly labs, students will practice applying foundational cooking methods to these food products.

Prerequisite(s): CUL 110, CUL 112, CUL 114, CUL 118, CUL 142 all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 126 with a C- or higher or concurrent enrollment in CUL 126.

CUL 126

PASTRY SKILL DEVELOPMENT I 6 CR

This course covers mixing and production methods for Cookies, Quick Breads, Short Doughs, Tart doughs, Éclair Paste, Strudel and Phyllo Doughs and Baked Meringues. Students will study ingredients and their functions, learn correct baking methods, exercise accurate assessment of products, and practice safety and sanitation procedures. In addition, this course provides the students with the principles and preparation of pies, custards, puddings, mousses, soufflés, frozen and fruit desserts, and an introduction of baking for special diets. Students will use the internet to conduct research, use Microsoft Word to create assignments and are required to submit work electronically.

Prerequisite(s): CUL 110, CUL 112, CUL 114, CUL 118, CUL 142 all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 122 with a C- or higher or concurrent enrollment in CUL 122.

CUL 142

NUTRITION 2 CR

This course provides students with an introduction to nutrition, cultural food pyramids, nutritive value of foods, factors influencing body food requirements, their importance in promoting health and preventing disease, and the body processes and their relation to total nutrition. We will examine nutritional requirements throughout the human life cycle with attention to retaining nutritive values through the cooking process.

Prerequisite(s): ACCUPLACER Arithmetic (230) or higher OR completion of ABE 050 with a C or higher, AND ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher, AND ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

CUL 144

AMERICAN REGIONAL À LA CARTE COOKERY 7 CR

This course is an introduction to regional American cuisine. Students will identify 15 distinct regional American cuisines. The history, techniques, indigenous foods and recipes from the regions will be explored and prepared in lecture and labs. Students will study the cuisine of Chesapeake Bay shore, Louisiana; Mid-Atlantic states; Appalachian South, Western Ranchlands, Plantation South; South Florida and the Caribbean; the Central Plains, Rocky Mountains and Great Basin, Mexican Border, California, Hawaii, and the Pacific Northwest. Lab practice topics include station set-up and organization, food preparation, planning sheets, portion control, timing, temperature control, teamwork, communication, productivity skills, and sanitary/safety production skills. Weekly participation in à la carte production provides students with opportunity to refine fundamental culinary skills and develop à la minute production skills. Upon completion of this course, the student

should be able to effectively set up and operate an à la carte station.

Prerequisite(s): CUL 122 and CUL 126 both with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 146 with a C- or higher or concurrent enrollment in CUL 146.

CUL 146

PASTRY SKILL DEVELOPMENT II 7 CR

This course covers beginning and intermediate bread baking. Students will be introduced to the terms and techniques of bread production by making direct and indirect bread dough. Proper mixing, fermentation, shaping, proofing and baking of assorted breads will be the focus of this course. Basic bread production, laminated and rich yeast dough will be studied and prepared. Students will study bread ingredients and their function; learn correct baking methods and lamination procedures; exercise accurate assessment of dough; and practice safety and sanitation procedures. This course also provides a study in the elements of mixing, baking, assembling and decorating simple cakes; introduction to specialty cakes; simple to complex dessert presentation; introduction to chocolate and sugar techniques; and classic and molded chocolate truffles.

Prerequisite(s): CUL 122 and CUL 126, both with a C- or higher.

Corequisite(s): CUL 144 with a C- or higher or concurrent enrollment in CUL 144.

CUL 150

FIELD-BASED EXPERIENCE 6 CR

This course provides students with industry job experience in a college approved professional kitchen, allowing students to apply first year curriculum cooking skills and culinary knowledge to professional restaurants, hotels, clubs, caterers and other hospitality organizations.

Prerequisite(s): Instructor permission.

CUL 211

MEAT IDENTIFICATION AND FABRICATION 4 CR

This course provides an introduction into basic identification and use of hand tools and equipment in meat and fish fabrication. Activities include composition, skeletal structures, muscle types and fabrication of meats, poultry and seafood. Students will apply basic yield analysis, portion cost calculations, purchasing and receiving, basic cooking methods, inspection and USDA regulations, sanitation and hygiene.

Prerequisite(s): CUL 144, CUL 146, CUL 150, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 218 and CUL 222, both with a C- or higher or concurrent enrollment in CUL 218 and CUL 222.

CUL 218

GARDE MANGER 6 CR

This course introduces students to the proper techniques, procedures and implementation of

the Garde Manger chef. Students will create and prepare various hot and cold foods common in the professional Garde Manger kitchen. Sausage making, cheese making, fermentation, food preservation, curing, cold and hot smoking, preparation of pates, terrines, galantines, hot and cold hors d'oeuvres, canapés, mousses and modernist cooking techniques are included in the course. Also covered are cold food decoration techniques, cold platter and appetizer buffet design and presentation.

Prerequisite(s): CUL 144, CUL 146, and CUL 150 all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 211 and CUL 222, both with a C- or higher or concurrent enrollment in CUL 211 and CUL 222.

CUL 220

RESTAURANT MANAGEMENT 5 CR

In this course, students apply advanced concepts related to business and operations management in the culinary industry. Students will plan and develop menus, create a kitchen design and dining room layout, analyze point of sale operations and create business projections.

Prerequisite(s): CUL 211, CUL 218, and CUL 222, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 224, CUL 226 and CUL 228 all with a C- or higher or concurrent enrollment in CUL 224, CUL 226 and CUL 228.

CUL 222

SUPERVISOR DEVELOPMENT 3 CR

In this course students gain an overview of specific concepts necessary to successfully utilize human resources in a food service environment. Lectures on selected topics, student projects and assignments related to workplace activities form the majority of the material presented.

Prerequisite(s): CUL 144, CUL 146, and CUL 150, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 211 and CUL 218, both with a C- or higher or concurrent enrollment in CUL 211 and CUL 218.

CUL 224

FOOD AND BEVERAGE SERVICE 3 CR

This course assists students in developing food and beverage service skills based on dining room operations in a wide variety of service styles. The students are instructed in principles of front of the house operations, point of sale systems and guest relations. Students will learn the fundamentals of non-alcoholic and alcoholic beverages, appropriate beverage laws, and service for a variety of food and beverage establishments.

Prerequisite(s): CUL 211, CUL 218, and CUL 222, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 220, CUL 226 and CUL 228 all with a C- or higher or concurrent enrollment in CUL 220, CUL 226 and CUL 228.

CUL 226

INTERNATIONAL CUISINE 6 CR

This course provides students with practical experience in the preparation and service of foods from international countries. Emphasis is placed on eating habits, ethnic influences, indigenous foods and customs, cooking methods used, traditional equipment and each region's overall influence on today's restaurant market. Weekly participation in theme buffet productions enhances student's technical skills.

Prerequisite(s): CUL 211, CUL 218, and CUL 222, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 220, CUL 224 and CUL 228 all with a C- or higher or concurrent enrollment in CUL 220, CUL 224 and CUL 228.

CUL 228

BANQUET AND CATERING MANAGEMENT 3 CR

In Banquet and Catering Management, students will learn the fundamental skills and knowledge needed to set up and run banquet and catering events. Theory subjects include plated and buffet banquet menus, buffet layout and design, catering contracts, event planning, organization, staffing, home meal replacement, private and personal chef industry, optional services, and pricing formats. Weekly buffets provide hands-on experience in setting up and managing a full-service buffet event.

Prerequisite(s): CUL 211, CUL 218, and CUL 222, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 220, CUL 224 and CUL 226 all with a C- or higher or concurrent enrollment in CUL 220, CUL 224 and CUL 226.

CUL 230

A' LA CARTE COOKERY 8 CR

This course provides students with an opportunity to apply the vast majority of the Culinary Arts curriculum as students rotate through several stations creating Northwest cuisine in the à la carte restaurant kitchen. Students are expected to manage the responsibilities in setting up and running an à la carte restaurant station including food preparation, planning sheets, organization, portion control, timing, temperature control, teamwork, communication, productivity and sanitary production skills. In addition, students will practice expeditor skills including coordinating and controlling the flow of finished menu items from the station chefs and working closely with student service staff and maître d' positions. Students will study a variety of modern food sourcing topics including buying local, sustainability topics, organic food production, GMO's, irradiation and other staple food production methods. Practical final test is designed to assess the student's overall knowledge and skill level at the completion of all curriculum requirements. Students will research, plan, and prepare a three-course gastronomique menu (prix fixe) for guests using diverse techniques, ingredients and flavors. The menu should show a common theme throughout the course work. Students will pre-

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pare a formal menu using assigned optional proteins and common market list of food products, while employing yield analysis, planning and leadership throughout the examination process.

Prerequisite(s): CUL 220, CUL 224, CUL 226, and CUL 228, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 232 and CUL 236 with a C- or higher or concurrent enrollment in CUL 232 and CUL 236.

CUL 232

FOOD AND BEVERAGE SERVICE LAB

2 CR

In this course students apply service skills, knowledge, guest relations, tableside cookery, point-of-sale operations, cash handling, reservations, seating, and greeting, in Café Culinaire. The students are responsible for excellent customer service under all conditions. Students work in various dining room positions at Bellingham Technical College's Café Culinaire such as; maitre d', front server and back server.

Prerequisite(s): CUL 220, CUL 224, CUL 226, and CUL 228, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 230 and CUL 236 with a C- or higher or concurrent enrollment in CUL 230 and CUL 236.

CUL 236

WINE APPRECIATION

2 CR

This course provides comprehensive information about wine from all the major wine producing countries in the world. Emphasis is placed on the history of wine, production characteristics and laws, food and wine pairing, cooking with wine, wine menus, purchasing, formal wine service and storage requirements. Upon completion, students should be able to determine what wines complement various cuisines and particular tastes.

Prerequisite(s): CUL 220, CUL 224, CUL 226, and CUL 228, all with a C- or higher.

Completion Of or Concurrent Enrollment In: CUL 230 and CUL 232 with a C- or higher or concurrent enrollment in CUL 230 and CUL 232.

DENTAL

DEN 101

INTRODUCTION TO DENTAL ASSISTING

3 CR

This course provides information relating to the role of the Dental Assistant within the dental team. An introduction to the dental profession including dental ethics and law will be addressed. Course content will include the related biomedical sciences that are the foundation for dental assisting: human anatomy with an emphasis on the oral cavity, plus structures of the head and neck to ascertain their positions, relations, structures, and functions. Concepts of oral pathology and oral inspection will be introduced.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher. ACCUPLACER Writ-

ing (245) or higher OR ENGL 092 with a C or higher. ACCUPLACER Arithmetic (238) or MATH 090 with a grade of C or higher.

DEN 106

FUNDAMENTALS OF DENTAL SAFETY

4 CR

The student will gain the knowledge required to maintain a safe dental environment. The course covers the impact of blood borne pathogens and how they relate to the field of dentistry. Also included are federal and state regulations regarding chemical safety, infection control, and medical emergencies in the dental office. This course provides the student with the knowledge needed to operate and maintain typical equipment found in a dental clinic. The student will gain an understanding of the design, function, and maintenance of sterilization equipment, the dental unit, dental instruments and handpieces. This course will also focus on the theory of basic dental assisting principles such as: dental ergonomics, team positioning, instrument transfer and oral evacuation.

Prerequisite(s): AMATH 100, AENGL 100 and CMST& 210 all with a C or higher, and DEN 101 OR (DEN 100 and DEN 105) all with a C or higher.

DEN 107

DENTAL ASSISTING RADIOLOGY

3 CR

This course introduces basic concepts of radiography. The course emphasizes the fundamentals of oral radiography, including techniques, interpretation, quality assurance, ethics and safety in preparation for exposure of images on a radiographic manikin during the lab component of the program.

Prerequisite(s): AMATH 100, AENGL 100, CMST& 210, DEN 101 or (DEN 100 AND DEN 105) all with a C or higher.

Corequisites: DEN 106, DEN 108, and DEN 109.

DEN 108

FOUNDATIONS OF CLINICAL PROCEDURES

4 CR

This course introduces the students to various dental terminologies and responsibilities as a dental assistant in the dental operator. The student will learn about patient preparation, record keeping, delivery of pre and post-op instructions, with the sequence of amalgam and composite procedures, coronal polishing techniques, the sequence of placing dental sealants and an overview of dental specialties. A final unit will help the student to develop a job search plan.

Prerequisite(s): AMATH 100, AENGL 100, CMST& 210, DEN 101 or (DEN 100 AND DEN 105) all with a C or higher.

Corequisites: DEN 106, DEN 107, and DEN 109.

DEN 109

DENTAL ASSISTING LAB PRACTICUM

6 CR

This course provides hands-on instruction while working with dental manikins. While maintaining a safe dental environment, the student will apply

knowledge and skills in: sterilization/disinfection techniques, radiology, patient management, coronal polish and sealant technique, basic lab procedures and chairside assisting in restorative procedures.

Prerequisite(s): AMATH 100, AENGL 100, CMST& 210, DEN 101 or (DEN 100 AND DEN 105) all with a C or higher.

Corequisites: DEN 106, DEN 107, and DEN 108.

DHYG 112

DENTAL HYGIENE CLINICAL PRACTICE I

5 CR

First of six (6) sequential courses designed to provide clinical skills essential for the practice of dental hygiene. Skill development of patient appraisal, basic instrumentation, infection control and individualized preventive care is emphasized.

Prerequisite(s): Acceptance into the Dental Hygiene program. MATH& 107 or higher, BIOL& 160, BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121 or CHEM& 161, CHEM& 131, ENGL& 101, ENGL& 102, and PSYC& 100, CMST& 210 or CMST& 220, SOC& 101, NUTR& 101, all with a B or higher.

Healthcare Experience verification.

Corequisites: DHYG 114, DHYG 115, DHYG 116 and DHYG 128.

DHYG 113

DENTAL MATERIALS

4 CR

A study of materials used in dentistry including practical applications and chairside assisting. Study includes general properties, composition, and manipulation of common dental materials. Ethical situations pertaining to treatment planning and the use of dental materials by dental hygienists.

Prerequisite(s): DHYG 112 with a C or higher.

DHYG 114

PRINCIPLES OF DENTAL HYGIENE I

3 CR

First of seven (7) sequential courses providing theoretical background and skill development for the clinical practice of dental hygiene. Problem solving and critical thinking related to patient assessment and management. Communication skills and professionalism are emphasized.

Prerequisite(s): Acceptance into the Dental Hygiene program. MATH& 107 or higher, BIOL& 160, BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121 or CHEM& 161, CHEM& 131, ENGL& 101, ENGL& 102, and PSYC& 100, CMST& 210 or CMST& 220, SOC& 101, NUTR& 101, all with a B or higher.

Healthcare Experience verification.

Corequisites: DHYG 112, DHYG 115, DHYG 116 and DHYG 128.

DHYG 115

ORAL & DENTAL ANATOMY

2 CR

Integrated anatomy, histology, and physiology of the head and neck region. Crown anatomy, root morphology and tooth development as applied to clinical situations.

Prerequisite(s): Acceptance into the Dental Hygiene program. MATH& 107 or higher, BIOL& 160, BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121 or CHEM& 161, CHEM& 131, ENGL& 101, ENGL& 102, and PSYC& 100, CMST& 210 or CMST& 220, SOC& 101, NUTR& 101, all with a B or higher.

Healthcare Experience verification.

Corequisites: DHYG 112, DHYG 114, DHYG 116 and DHYG 128.

**DHYG 116
ORAL RADIOLOGY I 4 CR**

Theoretical background and practical application of dental radiography. Exposure techniques, processing, mounting, and evaluation of dental radiographs; principles of production, use of X-radiation, radiation safety procedures and patient education.

Prerequisite(s): Acceptance into the Dental Hygiene program. MATH& 107 or higher, BIOL& 160, BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121 or CHEM& 161, CHEM& 131, ENGL& 101, ENGL& 102, and PSYC& 100, CMST& 210 or CMST& 220, SOC& 101, NUTR& 101, all with a B or higher.

Healthcare Experience verification.

Corequisites: DHYG 112, DHYG 114, DHYG 115 and DHYG 128.

**DHYG 118
HISTOLOGY & EMBRYOLOGY 2 CR**

The study of oral histology including developmental origins and microscopic organization of selected oral and facial structures. The embryonic development of the face and palate will be described and correlated with more common craniofacial malformations. The formation, eruption and histological organization of the teeth and their supporting tissues will be examined in considerable detail, as well as the oral mucosa and salivary glands.

Prerequisite(s): DHYG 125 with a C or higher.

**DHYG 122
DENTAL HYGIENE CLINICAL PRACTICE II 5 CR**

Theoretical background and practical application of dental radiography. Exposure techniques, processing, mounting, and evaluation of dental radiographs; principles of production, use of X-radiation, radiation safety procedure and patient education.

Prerequisite(s): DHYG 112 with a C or higher.

**DHYG 124
PRINCIPLES OF DENTAL HYGIENE II 3 CR**

Sequential course providing theoretical background for the practice of dental hygiene. Problem solving and critical thinking related to patient assessment and management.

Prerequisite(s): DHYG 114 with a C or higher.

**DHYG 125
MEDICAL EMERGENCIES 3 CR**

Equipment, drugs, signs and symptoms of medical emergencies that may occur in dental offices. Individual and team practice in carrying out emergency procedures in timed simulations: pulse, respiration, blood pressure, emergency drug setup, and oxygen.

Prerequisite(s): DHYG 112 with a C or higher.

**DHYG 126
ORAL RADIOLOGY II 2 CR**

Oral radiographic techniques for patients with special needs; extraoral and occlusal projections. Interpretation of potential pathology and recognition of common dental restorative materials. Refinement of exposure techniques and evaluation. Coordinates with DHYG 122.

Prerequisite(s): DHYG 116 with a C or higher.

**DHYG 128
GENERAL PATHOLOGY 4 CR**

Reaction of the human body to injury from physical, chemical, and biological agents. Inflammation, necrosis, cellular degeneration, disturbances of growth, circulation, and neoplasia. Selected diseases manifesting typical symptomology.

Prerequisite(s): Acceptance into the Dental Hygiene program. MATH& 107 or higher, BIOL& 160, BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121 or CHEM& 161, CHEM& 131, ENGL& 101, ENGL& 102, and PSYC& 100, CMST& 210 or CMST& 220, SOC& 101, NUTR& 101, all with a B or higher.

Healthcare Experience verification.

Corequisites: DHYG 112, DHYG 114, DHYG 115 and DHYG 116.

**DHYG 131
RESTORATIVE DENTISTRY I 4 CR**

Principles of direct restorative techniques including cavity preparation terminology, outline form, cavosurface margin, and advanced dental anatomy of the tooth crown. Laboratory experience with direct restorative dental materials. Placement, carving, finishing, and polishing of amalgam and composite restorations on dentofoms. Alginate impressions and model trimming for working and study models. Rubber dam, matrix and wedge application. Case studies for clinic preparation.

Prerequisite(s): DHYG 113 with a C or higher.

**DHYG 132
DENTAL HYGIENE CLINICAL PRACTICE III 5 CR**

Sequential course providing practice of dental hygiene skills. Problem solving and critical thinking related to patient assessment and management. Communication skills and professionalism emphasized.

Prerequisite(s): DHYG 122 with a C or higher.

**DHYG 134
PRINCIPLES OF DENTAL HYGIENE III 3 CR**

Sequential course providing theoretical background for the clinical practice of dental hygiene. Emphasis on patient education and treatment planning related to patients' age and stage. Nutrition and relationship to oral diseases.

Prerequisite(s): DHYG 124 with a C or higher.

**DHYG 137
PHARMACOLOGY 3 CR**

The action of selected pharmaceutical agents. Emphasis on drug interactions, routes of administration, and effects on body systems. Recognition of potential impact on dental hygiene practice.

Prerequisite(s): DHYG 128 with a C or higher.

**DHYG 138
PERIODONTOLOGY 3 CR**

Study of the periodontium emphasizing periodontal diseases, their classifications, and the etiological factors involved. Preventive measures within the scope and responsibility of the dental hygienist are correlated with basic sciences and clinical aspects of periodontal diseases.

Prerequisite(s): DHYG 125 with a C or higher.

**DHYG 141
RESTORATIVE DENTISTRY II 1 CR**

Properties of restorative materials and case studies for student clinic preparation. Practical experience using restorative dental materials. Placement experience and finishing of composite and amalgam restorations on typodonts and clinic patients.

Prerequisite(s): DHYG 131 with a C or higher.

**DHYG 142
HYGIENE CLINICAL PRACTICE IV 5 CR**

Sequential course providing practice of dental hygiene skills. Problem solving and critical thinking related to patient assessment and management. Demonstration of professional growth and self-assessment.

Prerequisite(s): DHYG 132 with a C or higher.

**DHYG 144
PRINCIPLES OF DENTAL HYGIENE IV 3 CR**

Develop age-appropriate education plans for school children focusing on caries prevention. Educate patients about relationship between diet and oral health. Critically evaluate current scientific literature

Prerequisite(s): DHYG 134 with a C or higher.

**DHYG 149
PAIN MANAGEMENT 4 CR**

Exploration of pain control methods including local anesthesia and nitrous oxygen analgesia. Health history evaluation, local and systemic complications, anesthetic solutions, vasoconstrictors and drug interactions. Techniques of

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local anesthesia, including block and infiltration techniques are practiced. Administration of nitrous oxide is also practiced.

Prerequisite(s): DHYG 137 with a C or higher.

DHYG 211 RESTORATIVE DENTISTRY III 2 CR

Practical experience using restorative dental materials. Placement experience and finishing of composite and amalgam restorations on typodonts and clinic patients.

Prerequisite(s): DHYG 141 with a C or higher.

DHYG 212 DENTAL HYGIENE CLINICAL PRACTICE V 8 CR

Sequential course providing practice of dental hygiene skills. Problem solving and critical thinking related to patient assessment and management. Demonstration of professional growth and self-assessment.

Prerequisite(s): DHYG 142 with a C or higher.

DHYG 214 PRINCIPLES OF DENTAL HYGIENE V 3 CR

Sequential course providing theoretical background of dental hygiene skills. Quality assurance, advanced instrumentation theory, periodontal files, planning dental hygiene treatment for special needs patients. Research paper, case studies.

Prerequisite(s): DHYG 144 with a C or higher.

DHYG 216 COMMUNITY ORAL HEALTH I 4 CR

A systematic approach to developing community oral health programs. Surveillance systems, epidemiology charts, Healthy People 2010. Teamwork activities. Water fluoridation, sealants, fluoride rinse programs, varnish, mouth guards. Lesson plans. Steps in program planning. Health Education theories.

Prerequisite(s): DHYG 144 with a C or higher.

DHYG 219 ORAL PATHOLOGY 3 CR

A study of oral diseases and manifestations of systemic diseases. Utilizes independent learning and internet resources.

Prerequisite(s): DHYG 128 with a C or higher.

DHYG 221 RESTORATIVE DENTISTRY IV 2 CR

Laboratory experience with direct restorative dental materials. Placement, carving, finishing, and polishing of amalgam and composite restorations on dentofoms.

Prerequisite(s): DHYG 211 with a C or higher.

DHYG 222 DENTAL HYGIENE CLINICAL PRACTICE VI 8 CR

Sequential course providing practice of dental hygiene skills. Problem solving and critical thinking related to patient assessment and management. Demonstration of professional growth and self-assessment.

Prerequisite(s): DHYG 212 with a C or higher.

DHYG 224 PRINCIPLES OF DENTAL HYGIENE VI 3 CR

Sequential course providing theoretical background of dental hygiene skills. Ethics and jurisprudence, current therapeutic trends, insurance coding, scheduling and patient recall, hygiene assisting and record keeping.

Prerequisite(s): DHYG 214 with a C or higher.

DHYG 226 COMMUNITY ORAL HEALTH II 4 CR

Assessment indices, dental hygiene diagnosis. Program planning, funding and budgets; legislation. Cultural issues in public health. Implementation of a team community oral health project. Epidemiology and biostatistics related to community oral health.

Prerequisite(s): DHYG 216 with a C or higher.

DHYG 228 ORAL THERAPY 3 CR

Philosophy and theoretical background of advanced periodontal therapy. Soft tissue management planning. Periodontal surgery techniques. Management of other oral conditions: implants, supportive perio therapy.

Prerequisite(s): DHYG 219 with a C or higher.

DHYG 229 DENTAL HYGIENE SEMINAR 1 CR

Review and practice for the National Dental Hygiene Board Examination.

Corequisite(s): DHYG 221, DHYG 222, DHYG 224, DHYG 226 and DHYG 228.

DHYG 231 RESTORATIVE DENTISTRY V 1 CR

Case studies and special project designed to enhance student understanding of clinical restorative practice. Application of research in dental materials.

Prerequisite(s): DHYG 221 with a C or higher.

DHYG 232 DENTAL HYGIENE CLINICAL PRACTICE VII 8 CR

Sequential course providing practice of dental hygiene skills. Problem solving and critical thinking related to patient assessment and management. Demonstration of professional growth and self-assessment.

Prerequisite(s): DHYG 222 with a C or higher.

DHYG 234 PRINCIPLES OF DENTAL HYGIENE VII 3 CR

Sequential course providing theoretical background of dental hygiene skills. Focus is to meet needs of graduating dental hygiene students: current therapeutic trends, research, career opportunities and job search strategies. Financial planning, guest speakers. Dental practice act and licensure requirements. Application for board examinations. Specialized clinical skills.

Prerequisite(s): DHYG 224 with a C or higher.

DHYG 236 COMMUNITY ORAL HEALTH III 2 CR

Careers in Public Health, table clinics or poster presentations. Involvement in local projects; community health program completion and evaluation. Leadership for community projects. Research.

Prerequisite(s): DHYG 226 with a C or higher.

DIESEL TECHNOLOGY

DET 100 INTRODUCTION TO DIESEL TECHNOLOGY 8 CR

This course will familiarize the student with the shop, tools, and equipment within the Medium and Heavy Duty Diesel Technology industries. Students will learn safe work and tool practices, proper procedures for performing various service type repairs and inspections on various types of equipment, the basic operating principles of a four-cycle engine, and to use technology to access and publish service information data.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): DET 102, AUTO 113.

DET 102 INTRODUCTION TO DIESEL TECHNOLOGY LAB 4 CR

This course provides an opportunity to apply safe work and tool practices, fabrication and metal repair techniques, and to demonstrate service repairs and inspections on various types of equipment. Students will also perform hands-on tasks with various major components on diesel-powered equipment, using technology on a regular basis to locate and publish service information data, assignment results, and procedures.

Prerequisite(s): ACCUPLACER Reading (247) or higher or RDG 085 with a C or higher; and ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher; and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher

Corequisite(s): DET 100, AUTO 113.

DET 104

HYDRAULIC BRAKES 2 CR

This course will address the basic operation of mobile hydraulic braking systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 106

ELECTRICAL/ELECTRONICS I 6 CR

This course will address the basic operation of electrical/electronic systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 116

ELECTRICAL/ELECTRONICS II 6 CR

This course will address specific components and operational theory of batteries, including starting and charging, as utilized in modern medium/heavy duty vehicles. It will also address comprehension and use of wiring schematics and diagrams for the previously mentioned components, as well as removal and installation of maintenance items for starters and alternators.

DET 125

SERVICE INDUSTRY SUPPORT 4 CR

This course examines a variety of career paths (other than technician) within the Diesel industry. Service Advising, Parts, and Warranty roles are explored while comparing different shop environments.

Prerequisite(s): DET 100, DET 102 and AUTO 113, all with a D or higher. AUTO 100 and AUTO 102 may substitute for DET 100 and DET 102.

Corequisite(s): DET 130, DET 132.

DET 126

ELECTRICAL/ELECTRONICS III 6 CR

This course will address lighting and instrumentation on systems used on medium/heavy duty vehicles including wiring diagrams and schematics. Component location, testing and diagnostic procedures will be practiced and implemented.

DET 129

SHOP SIMULATION 15 CR

This course simulates a diesel technology maintenance/repair shop environment under the supervision of the instructor. Students will learn: safety, rigging, drilling, threading, thread repair, strengths of materials, materials identification, metalworking, cutting and welding and the documentation of these skills with a student created learning portfolio, documenting their work experience with narratives and photos and providing an in-depth self-reflection. Students from TRANS 101, TRANS 102, TRANS 103 must meet with the instructor to discuss DET 129 requirements.

DET 130

CHASSIS ELECTRICAL SYSTEMS 8 CR

This course will examine chassis electrical systems such as lighting and starting/charging systems using Ohm's law and electrical schematics.

Students will apply their knowledge to analyze proper system operation and evaluate repair strategies.

Prerequisite(s): DET 100, DET 102 and AUTO 113, all with a D or higher. AUTO 100 and AUTO 102 may substitute for DET 100 and DET 102.

Corequisite(s): DET 132, DET 125.

DET 132

CHASSIS ELECTRICAL SYSTEMS LAB 4 CR

This course provides an opportunity to apply a variety of diagnostic and troubleshooting techniques relating to systems such as lighting and starting/charging systems using Ohm's law and electrical schematics in a shop environment. Students will analyze proper system operation and evaluate repair strategies on vehicles/machinery and/or training systems.

Prerequisite(s): DET 100, DET 102 and AUTO 113, all with a D or higher. AUTO 100 and AUTO 102 may substitute for DET 100 and DET 102.

Corequisite(s): DET 130, DET 125.

DET 134

HEAVY DUTY CHASSIS SYSTEMS 9 CR

This course will examine steering and suspension, drivelines, braking systems, and various drive axles found on heavy duty vehicles. Students will build understanding and then apply their knowledge to analyze proper system operation and evaluate repair strategies.

Prerequisite(s): DET 125, DET 130, and DET 132, all with a D or higher.

Corequisite(s): DET 136.

DET 136

HEAVY DUTY CHASSIS SYSTEMS LAB 6 CR

This course provides an opportunity to apply a variety of repair, diagnostic, and troubleshooting techniques, relating to systems such as steering and suspension, drivelines, braking systems, and various drive axles found on heavy duty vehicles in a shop environment. Students will apply their knowledge to analyze proper system operation and evaluate repair strategies on vehicles/machinery and/or training systems.

Prerequisite(s): DET 125, DET 130, and DET 132, all with a D or higher.

Corequisite(s): DET 134.

DET 139

FIELD-BASED EXPERIENCE I 12 CR

The student will complete an unpaid or paid internship or job shadow at a maintenance/repair facility in the industry. It is recommended that the student's experience focus on the subject areas completed the previous three quarters on campus, if practical or possible, thereby making the internship site a real world extension of the classroom. Student work will be monitored by an instructor from BTC who will visit the work site periodically. Students will create and maintain a

field-based learning portfolio, documenting their work experience with narratives and photos and providing an in-depth self-reflection.

Prerequisite(s): DET 134 and DET 136, both with a D or higher.

DET 201

HYDRAULICS 9 CR

This course will address the basic operation of hydraulic/pneumatic systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 202

DIESEL ENGINES 13 CR

This course will address the basic operation of diesel engines and their systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 203

DRIVE TRAIN 5 CR

This course will address the basic operation of drive train systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 204

AIR BRAKES 5 CR

This course will address the basic operation of mobile air braking systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 205

SUSPENSION/STEERING 5 CR

This course will address the basic operation of suspension and steering systems, with the emphasis on preventive maintenance and logical troubleshooting.

DET 208

PREVENTIVE MAINTENANCE 6 CR

This course covers how to set up a PM program, arrange PM scheduling, keep vital records, and winterize heavy duty vehicles. It also discusses when to place a vehicle out of service or deadline it.

DET 210

ELECTRONIC ENGINES & EMISSIONS 9 CR

This course will examine diesel engine architecture, operating theory, rebuild procedures, electronic controls including multiplexing, and the emissions technology relevant to modern standards.

Prerequisite(s): Heavy Duty Chassis Maintenance & Repair Certificate.

DET 212

ELECTRONIC ENGINES & EMISSIONS LAB 6 CR

This course provides an opportunity to apply a variety of maintenance, diagnostic, and troubleshooting techniques, such as the rebuilding and inspecting of engines, analyzing and evaluating

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engine performance, determining proper electronic system operation and/or failures, and testing emission system performance.

Corequisite(s): DET 210.

DET 219 MARINE SYSTEMS 3 CR

This course will explore some of the specialized tasks within the maritime industry including, but not limited to, bilge systems and maritime steering with a focus on electronics.

Corequisite(s): DET 220, DET 222.

DET 220 DRIVE TRAIN 7 CR

This course demonstrates the operation of manual and automatic on-highway transmissions in addition to common off-highway units. The operation of clutches, planetary gears, and torque converters will be illustrated.

Prerequisite(s): DET 210 and DET 212, both with a D or higher.

Corequisite(s): DET 222, DET 219.

DET 222 DRIVE TRAIN LAB 5 CR

This course provides an opportunity to apply a variety of maintenance, diagnostic, and troubleshooting techniques relating to manual and automatic on-highway transmissions and common off-highway units. The operation of clutches, planetary gears, and torque converters will be examined using equipment and/or training systems.

Prerequisite(s): DET 210 and DET 212, both with a D or higher.

Corequisite(s): DET 220, DET 219.

DET 224 FLUID POWER 8 CR

This course will explore the operating fundamentals and controls related to typical mobile hydraulic systems. Students will explore the different components necessary for complete system operation and learn maintenance and diagnostic strategies found within maritime, agricultural, and construction industries.

Prerequisite(s): DET 220, DET 222 and DET 219, all with a D or higher.

Corequisite(s): DET 226, DET 241.

DET 226 FLUID POWER LAB 4 CR

This course will provide an opportunity to apply a variety of maintenance, diagnostic, and troubleshooting techniques relating to the operating fundamentals and controls of a typical mobile hydraulic system in a shop environment. Students will explore the different components necessary for complete system operation and practice maintenance and diagnostic strategies using equipment and/or training systems.

Prerequisite(s): DET 220, DET 222 and DET 219, all with a D or higher.

Corequisite(s): DET 224, DET 241.

DET 239 FIELD-BASED EXPERIENCE II 12 CR

The student will complete an unpaid or paid internship or job shadow at a maintenance/repair facility in the industry. This is the second in a series of two internships within the program. It is recommended that the student's experience focus on the subject areas completed in the most recent quarters on campus. The maintenance/repair facility becomes a real world extension of the classroom. Student work will be monitored by an instructor from BTC who will visit the work site periodically. Students will create and maintain a field-based learning portfolio, documenting their work experience with narratives and photos and providing an in-depth self-reflection.

Prerequisite(s): DET 139 with a C or higher; and all General Education (Related Instruction) courses required by degree; or Instructor permission.

DET 240 CURRENT DIESEL INDUSTRY TOPICS I 7 CR

The student is required to volunteer to work at improving their skills related to the diesel industry. This may include, but not be limited to, a museum of marine, agricultural equipment, logging equipment, restoration projects of heavy equipment or trucks/busses, participation in heavy construction projects involving the operation of heavy equipment, etc. It is recommended that the student's experience focus on the subject areas that interest the student to better further their career choice. The volunteer experience then becomes a real world extension of the classroom. An instructor from BTC, who will visit the volunteer site periodically, will monitor student work.

Prerequisite(s): AENGL 100, AMATH 100, CMST& 210, and DET 129, all with a grade of C or higher, or Instructor permission.

DET 241 ADVANCED DIAGNOSTICS 3 CR

This course will be a detailed study of diagnostic strategies on a variety of industry specific systems including, but not limited to, engines, electrical/electronics, and emissions systems.

Prerequisite(s): DET 220, DET 222 and DET 219, all with a D or higher.

Corequisite(s): DET 224, DET 226.

DET 242 CURRENT DIESEL INDUSTRY TOPICS II 8 CR

The student is required to volunteer to work at improving their skills related to the diesel industry. This may include, but not be limited to, a museum of marine, agricultural equipment, logging equipment, restoration projects of heavy equipment or trucks/busses, participation in heavy construction projects involving the operation of heavy equipment, etc. It is recommended that the stu-

dent's experience focus on the subject areas that interest the student to better further their career choice. The volunteer experience then becomes a real world extension of the classroom. An instructor from BTC, who will visit the volunteer site periodically, will monitor student work.

Prerequisite(s): AENGL 100, AMATH 100, CMST& 210, and DET 129, all with a grade of C or higher, or Instructor permission.

ECONOMICS

ECON& 201 MICRO ECONOMICS 5 CR

Introduction to microeconomics. Presents supply and demand models, consumers and producers choice in the competitive and non-competitive market. Examines the various economic decisions made by firms relating to price, demand, factors or production, and cost.

Prerequisite(s): ACCUPLACER Classic College Math (75) or higher OR ACCUPLACER NextGen AAF (240) or higher OR MATH 099 with a C or higher OR AMATH 111 with a C or higher.

ECON& 202 MACRO ECONOMICS 5 CR

Introduction to macroeconomics; elementary analysis of the determination of income through national income accounting. Covers macroeconomic issues including inflation, unemployment, economic growth, recessions, monetary/fiscal policy, and international trade and finance.

Prerequisite(s): ACCUPLACER NextGen QAS (254) OR MATH 098 with a C or higher OR AMATH 111 with a C or higher.

ECON 310 MANAGERIAL ECONOMICS 5 CR

This course focuses on forecasting and estimating techniques; and on tools used to analyze projects, compare alternatives, and make sound business decisions based on economic principles such as time value of money, internal rate of return, and cost-benefit ratios. The course includes the use of Excel as a tool for analysis and decision making.

Prerequisite(s): ENGL& 101 and 5 credits of Humanities, both with a C or higher and (BASOPS program admission or BAS-ENGT program admission or Instructor permission).

ELECTRICIAN

ELCN 100 TRADE SAFETY 2 CR

Course topics will include health and safety core rules, personal protective equipment, material safety data sheets, confined spaces, lock-out tag-out requirements, ladder safety, and portable power tools. Navigating the Washington State Labor and Industries website will also be covered in the course. Students will identify and demon-

strate essential safety habits as they relate to the electrical industry.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: ELCN 101, ELCN 103, ELCN 125, ELCN 131 and AMATH 100, all with a D or higher; or concurrent enrollment in ELCN 101, ELCN 103, ELCN 125, ELCN 131 and AMATH 100; or Instructor permission.

Note: This class must be taken concurrently with ELCN 101, ELCN 103, ELCN 125, ELCN 131 and AMATH 100.

ELCN 101 DC CIRCUITS 4 CR

Will prepare the student with the knowledge and skills to diagnose and repair electrical circuits. Instruction emphasizes DC electrical theory, structure of matter, electron theory and Ohm's law using interactive software, dynamic lecture and discussion. Students will apply basic algebra skills during this course.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: ELCN 100, ELCN 103, ELCN 125, ELCN 131 and AMATH 100, all with a D or higher; or concurrent enrollment in ELCN 100, ELCN 103, ELCN 125, ELCN 131 and AMATH 100; or Instructor permission.

Note: This class must be taken concurrently with ELCN 100, ELCN 103, ELCN 125, ELCN 131 and AMATH 100.

ELCN 102 AC CIRCUITS 3 CR

Prepares the electrician to diagnose and repair AC electrical circuits. Instruction emphasizes AC electrical theory, phase relationships with inductance, capacitance and resistance.

Prerequisite(s): ELCN 101 and AMATH 100.

ELCN 103 ELECTRICAL DRAWINGS & BLUEPRINTS 2 CR

This course will introduce students to the various types of electrical drawings including wiring, schematic, line, and specifications. A general overview of the construction sequence as it relates to other applicable trades, documents and schedules is also included in the course. Students will use computer based tutorial programs to generate scaled drawings and diagrams.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: ELCN

100, ELCN 101, ELCN 125, ELCN 131 and AMATH 100, all with a D or higher; or concurrent enrollment in ELCN 100, ELCN 101, ELCN 125, ELCN 131 and AMATH 100; or Instructor permission.

Note: This class must be taken concurrently with ELCN 100, ELCN 101, ELCN 125, ELCN 131 and AMATH 100.

ELCN 104 GROUNDING & BONDING 2 CR

Standards, theory and application of grounding and bonding applied to electrical systems.

Prerequisite(s): ELCN 102 and ELCN 112.

Completion Of or Concurrent Enrollment In: ELCN 105 with a D or higher or concurrent enrollment in ELCN 105, or Instructor permission.

Note: This class must be taken concurrently with ELCN 105.

ELCN 105 TRANSFORMERS, MOTORS & GENERATORS 4 CR

Theory and operation of rotating electrical machines and transformers.

Prerequisite(s): ELCN 102 with a D or higher.

Completion Of or Concurrent Enrollment In: ELCN 104 with a D or higher or concurrent enrollment in ELCN 104, or Instructor permission.

Note: This class must be taken concurrently with ELCN 104.

ELCN 112 INTRODUCTION TO NATIONAL ELECTRICAL CODE 4 CR

Wire, conduit, and box size requirements of the National Electrical Code. Beginning branch circuit calculations.

Prerequisite(s): ELCN 101.

ELCN 113 ADVANCED NEC CALCULATIONS 3 CR

National Electrical Code required calculations for occupancy loads, transformer and motor circuits, services, feeders and equipment rooms.

Prerequisite(s): ELCN 112.

ELCN 125 ELECTRICAL APPLIED MECHANICS 4 CR

This course introduces students to a variety of hand and power tools, fasteners, and other essential components an Electrician uses in the field on a daily basis. Students will utilize practical math skills to calculate the mechanical advantage when using simple and complex machines. Students will also utilize geometry and trigonometry to solve construction related scenarios.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: ELCN

100, ELCN 101, ELCN 103, ELCN 131 and AMATH 100, all with a D or higher; or concurrent enrollment in ELCN 100, ELCN 101, ELCN 103, ELCN 131 and AMATH 100; or Instructor permission.

Note: This class must be taken concurrently with ELCN 100, ELCN 101, ELCN 103, ELCN 131 and AMATH 100.

ELCN 131 DC CIRCUIT LAB 4 CR

Emphasizing DC Electrical theory and Ohm's law, series and parallel circuits are analyzed with hands-on experiments and commonly used test equipment.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: ELCN 100, ELCN 101, ELCN 103, ELCN 125 and AMATH 100, all with a D or higher; or concurrent enrollment in ELCN 100, ELCN 101, ELCN 103, ELCN 125 and AMATH 100; or Instructor permission.

Note: This class must be taken concurrently with ELCN 100, ELCN 101, ELCN 103, ELCN 125 and AMATH 100.

ELCN 132 AC CIRCUIT LAB 3 CR

AC electrical theory is examined and verified with hands-on experiments utilizing standard test equipment.

Completion Of or Concurrent Enrollment In: ELCN 100, ELCN 101, and ELCN 103, all with a D or higher; or concurrent enrollment in ELCN 100, ELCN 101, and ELCN 103.

Note: This class must be taken concurrently with ELCN 100, ELCN 101, and ELCN 103.

ELCN 142 RESIDENTIAL WIRING PROJECTS 6 CR

Project based lab. Student crews complete electrical construction projects including a model house wiring installation.

Prerequisite(s): ELCN 101, ELCN 103, ELCN 125 or concurrent.

ELCN 143 ELECTRICAL DISTRIBUTION 3 CR

Electrical lab installation of services, panelboards, switches, and feeders.

Prerequisite(s): ELCN 104, ELCN 105, ELCN 113 or concurrent.

ELCN 151 COMMERCIAL WIRING METHODS & MATERIALS 5 CR

Installation of basic commercial electrical components and systems to meet recognized industry

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standards utilizing appropriate tools, wiring methods and materials.

Prerequisite(s): ELCN 103 and ELCN 142.

ELCN 201 **ELECTRONICS FOR ELECTRICIANS 2 CR**

Diagnose and repair of industrial control devices emphasizing electronic theory and industrial solid state devices.

Prerequisite(s): ELCN 102 and ELCN 103.

ELCN 202 **MACHINE CONTROL FUNDAMENTALS 5 CR**

Preparing for fabrication, diagnose and repair of industrial control devices emphasizing motor control theory, system wiring and diagrams.

Prerequisite(s): ELCN 104 and ELCN 105.

ELCN 203 **PLCS & VFDS 5 CR**

This course is an in depth study of programmable logic controllers including configuring hardware and software for controlling devices that drive industrial machinery.

Prerequisite(s): ELCN 201, ELCN 202.

ELCN 214 **SPECIAL OCCUPANCIES, EQUIPMENT & CONDITIONS 3 CR**

Examine and locate the National Electrical Code requirements and limitations for specialized circumstances such as hazardous areas, health care, industrial locations, assembly areas, alternate energy sources, elevators and commercial specialty equipment.

Prerequisite(s): ELCN 112.

ELCN 251 **COMMERCIAL & RENEWABLE ENERGY PROJECTS 5 CR**

Students will build projects utilizing a variety of standard commercial and institutional techniques.

ELCN 261 **INDUSTRIAL CONTROL WIRING METHODS & MATERIALS 6 CR**

This course is a hands-on lab exploring the design and construction of motor control systems. Control circuits are fabricated in industrial enclosures using control relays, timers, sensors, push-buttons, and motor starters.

Prerequisite(s): ELCN 202 with a D or higher.

Completion Of or Concurrent Enrollment In: ELCN 202 with a D or higher or concurrent enrollment in ELCN 202, or Instructor permission.

Note: This class must be taken concurrently with ELCN 202.

ELCN 262 **SPECIALTY INDUSTRIAL WIRING PROJECTS 5 CR**

This is an electrical construction lab class. Students will build projects utilizing a variety of standard industrial techniques.

Prerequisite(s): ELCN 261.

ELCN 263 **AUTOMATED CONTROL PROJECTS 6 CR**

This is a hands-on lab, integrating motor controls, programmable logic controllers, variable frequency drives and industrial wiring distribution.

Prerequisite(s): ELCN 203 & ELCN 261 or concurrent.

ELCN 280 **RENEWABLE ELECTRICAL SOURCES 4 CR**

Explores new alternative electrical power sources from a design and build point of view with an emphasis on the NEC requirements.

ELCN 281 **ELECTRICAL ESTIMATING & DESIGN 3 CR**

Designing and estimating material and labor costs for a variety of electrical projects using catalogs, the internet and estimating software.

Prerequisite(s): ELCN 103.

EMERGENCY MEDICAL SERVICES

EMS 125 **EMERGENCY MEDICAL TECHNICIAN-BASIC 12 CR**

This course covers the basic structure of EMS, and the fundamentals of emergency patient care. Topics include EMS systems, workplace safety and wellness, anatomy and physiology, medical terminology, vital signs, airway management and patient assessment. It also covers the common medical conditions, emergencies, and field treatment for acutely ill patients by EMS responders. Topics include cardiovascular, respiratory, neurologic, psychiatric, endocrine and other non-traumatic medical emergencies. The student will learn how to deal with injuries caused in traumatic accidents, emergencies in special patient populations, such as pregnancy, neonates and pediatrics, and geriatrics. Students will also learn about other specialized EMS Operations, to include emergency vehicle safe driving practices, incident management, interfacing with Advanced Life Support, and disaster response. A cumulative capstone written and practical skills exam will be given at course/series completion.

Prerequisite(s): ACCUPLACER Reading 247 or higher OR RDG 085 with a C or higher. ACCUPLACER Writing 245 or higher OR ENGL 092 with a C or higher

ENGINEERING TECHNOLOGY

AMAT 312 **APPLIED LINEAR ALGEBRA 3-5 CR**

This is an introductory course emphasizing techniques of linear algebra with applications to engineering. Topics for this course include matrix operations, determinants, linear equations, vector spaces, linear transformations, eigenvalues and eigenvectors, inner products and norms, orthogonality, equilibrium, and linear dynamical systems

Prerequisite(s): PHYS& 114 OR PHYS& 221 with a C+ or higher; and MATH& 151 or AMAT 313 with a C or higher; and BAS-ENGT program admission or Instructor permission.

AMAT 313 **APPLIED CALCULUS 3-5 CR**

This course provides an overview of the differential calculus for single and multivariable functions and an introduction to integral calculus and differential equations, with an emphasis on engineering related applications. Particular topics covered in the course include limits, ordinary and partial derivatives, applications of derivatives, definite integrals, the fundamental theorem of calculus, applications of definite integrals, models involving differential equations, Euler's method, and equilibrium solutions.

Prerequisite(s): MATH& 142; and PHYS& 114 or PHYS& 221, both with a C+ or higher; and BAS-ENGT program admission or Instructor permission.

AMAT 314 **APPLIED DIFFERENTIAL EQUATIONS 3-5 CR**

Introduction to ordinary differential equations. Topics include first order equations (separable, linear, homogeneous, exact); mathematical modeling (e.g., population growth, terminal velocity); qualitative methods (slope fields, phase plots, equilibria, and stability); numerical methods; second order equations (method of undetermined coefficients, application to oscillations and resonance, boundary-value problems and eigenvalues); and Fourier series.

Prerequisite(s): PHYS& 114 or PHYS& 221 with a C+ or higher; and MATH& 152 or AMAT 313 with a C or higher; and BAS-ENGT program admission or Instructor permission.

AMAT 316 **NUMERICAL METHODS FOR TECHNOLOGISTS 3-5 CR**

This course provides an introduction to numerical and computational methods for solving engineering and scientific problems. Topics will include methods for solving linear and nonlinear equations, polynomial interpolation and extrapolation, evaluating integrals, and solving ordinary differential equations. Students will be required to write and run code using a relevant engineering software package.

Prerequisite(s): PHYS& 114 & or PHYS& 221 with a C+ or higher; and MATH& 152& or AMAT 313 with a C or higher; and BAS-ENGT program admission or Instructor permission.

**AMAT 490
STATISTICAL METHODS FOR
TECHNOLOGISTS 3-5 CR**

This course covers the role of statistics in engineering and emphasizes the application of statistical techniques and concepts to maximize the amount and quality of information resulting from analysis of process data. Course topics include descriptive statistics, probability theory, probability distributions, confidence intervals, hypothesis testing, linear regression, ANOVA, design of experiments, and collection and handling of data. Students will be required to write and run code using a relevant engineering software package.

Prerequisite(s): MATH& 151 or AMAT 313 with a C+ or higher; and BAS-ENGT program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGT 350 with a C or higher, or concurrent enrollment in ENGT 350, or Instructor permission.

**CET 102
FUNDAMENTALS OF SURVEYING I 5 CR**

Emphasis is placed on familiarization with the different types of surveys and their purpose and teaches the student to be able to differentiate between "accuracy" and "precision." It teaches the student to measure distances in a vertical direction and relate these measurements to a datum plane or elevation from sea level. Course also teaches the student how to calculate directions from known points to find or establish other points and will enable the student to gain necessary skills in operating surveying instruments.

Prerequisite(s): MATH 098 with a C or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CET 141 with a C or higher, or concurrent enrollment in CET 141, or Instructor permission.

**CET 103
FUNDAMENTALS OF SURVEYING II 5 CR**

Emphasis on field work with the Total Station and Digital Level. A traverse will be run and adjusted and a topo made of the enclosed ground.

Prerequisite(s): CET 102 and ENGT 134, both with a C or higher, or Instructor permission.

**CET 110
CONSTRUCTION AND HIGHWAY
SURVEYS 5 CR**

Calculations for horizontal and vertical alignments will be emphasized. Determining cut and fill values for establishing final elevations for construction projects, as well as marking of survey stakes to communicate location and elevation information to construction workers will be covered. Students will learn stakeout procedures for a variety of construction projects. In addition, the students will develop techniques to help the stu-

dent learn to use horizontal and vertical curves in the field and office to join tangent lines.

Prerequisite(s): ENGT 134 and CET 102, both with a C or higher, or Instructor permission.

**CET 141
FUNDAMENTALS OF GIS & GPS 5 CR**

Students will be introduced to the Global Navigation Satellite System (GNSS) for navigation and surveying purposes. The course will begin to cover desktop mapping, focusing on the use of ArcView software in Geographic Information Systems applications. The basics of map creation and presentation will be covered.

Prerequisite(s): MATH 098 with a C or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: CET 102 with a C or higher, or concurrent enrollment in CET 102, or Instructor permission.

**CET 142
INTERMEDIATE GIS 5 CR**

Students will continue working with ArcGIS software, focusing on map creation, data display, data editing, and use of attribute information contained within the data to symbolize and extract specific information from a data set. Data analysis will be covered, with emphasis on using spatial relationships between different data sets, as well as performing overlay functions to analyze data interactions.

Prerequisite(s): ENGT 134 and CET 141, both with a C or higher.

**CET 143
ADVANCED GIS APPLICATIONS 5 CR**

An advanced course in desktop mapping focusing on the use of the extensions in Geographic Information Systems applications. Data analysis will be emphasized in this course.

Prerequisite(s): CET 142 with a C or higher.

**CET 205
SURVEY OF PUBLIC LANDS 5 CR**

This course will cover the basics of the Public Land Survey System (PLSS), when to use different reconstruction methods, and the correct techniques to determine information described on original survey data for the Public Lands.

Prerequisite(s): CET 102 with a C or higher.

**CET 210
BOUNDARY LAW & LAND
DESCRIPTION 5 CR**

Explores the importance of various laws dealing with the survey of land boundaries, and the State and Federal laws about ownership and title.

Prerequisite(s): CET 103 with a C or higher.

**CET 215
ENVIRONMENTAL MAPPING 5 CR**

Coursework includes current industry mapping techniques and equipment as it relates to environmental issues such as wetlands mapping and

habitat restoration.

Prerequisite(s): CET 103 and CET 251, both with a C or higher.

**CET 220
GPS SYSTEMS 5 CR**

Students will collect static GPS data with the available GPS receivers, and process those data using the National Geodetic Survey's Online Positioning Users' Service. Students will collect, download, and create maps using available GPS receivers and data collectors.

Prerequisite(s): CET 141 and ENGT 134, both with a C or higher or instructor permission.

**CET 225
ADVANCED SURVEY SEMINAR 5 CR**

Offers opportunities for the second year student to study advanced techniques in GPS, GIS, data collection, research, and surveying/mapping software. The structure is self-motivated and supports transition from college structure to jobs in the surveying and mapping profession.

Prerequisite(s): CET 215 with a C or higher.

**CET 230
ESTIMATING AND SCHEDULING 5 CR**

An introduction to the construction process, project scheduling, and estimation of concrete, rebar, and earthwork quantities.

Prerequisite(s): AMATH 111 or MATH& 141 or MATH& 142 or MATH& 151 or MATH& 152 with a C or higher.

**CET 235
CONSTRUCTION MATERIALS 5 CR**

An introduction to the practices and procedures for the testing and placement of construction materials. This course covers basic steel stress, strain and thermal expansion. In depth coverage for testing and placing: soil, aggregate, asphalt and concrete. Also, included are standard inspection practices and construction documentation during and after the construction of sewer, water, storm, and roadway civil improvements.

Prerequisite(s): AMATH 111 or MATH& 141 or MATH& 142 or MATH& 151 or MATH& 152 with a C or higher.

**CET 240
EARTHMOVING FUNDAMENTALS 5 CR**

An introduction to earthmoving production fundamentals of construction equipment. The production of heavy equipment, including excavators, scrapers, trucks, bulldozers, and front end loaders is examined from a production perspective. In addition, earthwork conversions to and from loose cubic yards, bank cubic yards, and compacted cubic yards is introduced.

Prerequisite(s): AMATH 111 or MATH& 141 or MATH& 142 or MATH& 151 or MATH& 152 with a C or higher.

**CET 251
AUTOCAD CIVIL 3D I 5 CR**

Study and use of the Civil Engineering and Survey industry-specific CAD software for computer

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aided drafting. Focuses on land development and survey applications with AutoCAD on Civil/Survey specific software applications.

Prerequisite(s): ENGT 134 with a C or higher or Instructor permission.

CET 252

AUTOCAD CIVIL 3D II **5 CR**

Study and use of the Civil Engineering and Survey Industry specific CAD software for computer aided drafting. Focuses on roadway and infrastructure design with AutoCAD on Civil/Survey specific software applications.

Prerequisite(s): CET 251 with a C or higher.

COMP 101

SURVEY OF COMPOSITES **2 CR**

This course provides an introduction to the field of Composite Engineering Technology and aerospace manufacturing. This course is designed to build a foundation in technical terminology including material science, fabrication methods, and inspection techniques. This course provides an overview of career opportunities and workplace readiness skills.

COMP 121

COMPOSITES DESIGN & FABRICATION I: SKI BUILDING **5 CR**

This course is designed to provide hands-on experience designing and fabricating composite ski and snowboards. Ski building ties together techniques of composite manufacturing, woodworking, and CNC technology. Students will utilize CAD/CAM technology to create CNC programs and perform machining operations. Experience gained in this ski building course directly translates to aerospace manufacturing applications.

Prerequisite(s): COMP 101 with a C or higher.

COMP 222

COMPOSITES DESIGN & FABRICATION II: AEROSPACE APPLICATIONS **5 CR**

This course is designed to expand on experience in parametric modeling and composite fabrication methods. Students will design and perform complex layouts utilizing pre-impregnated material per detailed engineering drawings. Students will demonstrate vacuum bag pleating, process control, and cure management techniques for out-of-autoclave layouts and infusions.

Prerequisite(s): COMP 121 and ENGT 233, both with a C or higher.

COMP 235

MATERIALS TESTING **5 CR**

This course is designed to expand on knowledge of material science and composite fabrication. Students will learn to perform analysis with methods including: Ultra-Sound Non-Destructive Testing (NDT), Tensile Testing, Finite Element Analysis (FEA), ASTM standards, and metrology. Students will also gain experience with 6-Sigma statistical analysis, lean, and quality assurance methodology.

Prerequisite(s): COMP 121 and ENGT 233, both with a C or higher.

COMP 290

TOOLING FOR COMPOSITES **5 CR**

This course is designed to expand on experience with parametric modeling and composite fabrication methods. Within this course, students will develop tooling for composite model glider. Fabrication topics include: tooling for composites and injection molding, CNC programming, and machining. Design topics include: surface design, aerodynamics, and wing design.

Prerequisite(s): COMP 121 and ENGT 233, both with a C or higher.

ENET 100

DIRECT CURRENT **5 CR**

An introduction to the fundamental properties and applications of electricity. This course covers the basic principles of DC electronics such as; voltage, current and resistance, Ohm's law, Joule's law, Kirchhoff's voltage and current laws, passive devices included resistors, capacitors, and inductors, circuit applications included maximum power transfer, superposition, Thevenin and Norton theorems. An introduction to magnetism which covers magnetic fields, flux, density, permeability, retentivity, reluctance, and hysteresis. Students also learn how to solder and understand the lab safety protocol.

Completion Of or Concurrent Enrollment In: MATH& 141 with a C or higher.

ENET 120

ALTERNATING CURRENT **5 CR**

An introduction and examination of the principles and applications of alternating current. Topics include period, frequency, phase angle, reactance, impedance, resonance, peak and rms values, resistive, apparent, reactance power, and power factor. Students continue their exploration of AC with transformers and filter circuits (low-pass, high-pass, band-stop and band-pass). Practical labs and projects help the students understand circuit constructions and troubleshooting techniques.

Prerequisite(s): ENET 100 with C or higher.

ENET 130

SEMI-CONDUCTORS **5 CR**

This course introduces semiconductor discrete components such as; diodes, bipolar transistors, FETS, MOSFET, SCR, diacs, triacs, and UJT. Circuit applications include; switching, amplifiers, oscillators, and power supply circuits. Practical labs and projects help the students understand circuit constructions and troubleshooting techniques.

Prerequisite(s): ENET 120 with a C or higher.

ENET 140

OPERATIONAL AMPLIFIER **5 CR**

This course introduces the basic concepts of operational amplifiers. Topics include different configurations such as; comparator, differential amplifier, open and close loop feedback, CMR

and CMRR, inverting and non-inverting, voltage/current converter, summer circuit, instrumentation amplifier, precision rectifier, and active filters. Practical labs and projects help the students understand circuit constructions and troubleshooting techniques.

Prerequisite(s): ENET 130 with a C or higher.

ENET 150

DIGITAL **5 CR**

This course introduces basic concepts of logic operations, circuit and functions. Topics include; number systems, digital codes and parity, logic gates, Boolean algebra, Karnaugh map, function of combinational logic, flip-flop, counters, adders, and memory devices. Practical labs and projects help the students understand digital circuits and troubleshooting techniques.

Prerequisite(s): ENET 140 with a C or higher.

ENET 160

ELECTRONIC COMMUNICATION **5 CR**

This course introduces the fundamentals and applications of AM/FM modulation and transmitters/ Receiver circuits. Digital communication techniques, transmission of binary data, and transmission lines. Also introduce Networking and Local-Area networks, and internet technologies. Practical labs and projects help the students understand communication circuits and troubleshooting techniques.

Prerequisite(s): ENET 150 and MATH& 141 with a C or higher, or Instructor permission.

ENET 264

EMERGING TECHNOLOGY **5 CR**

This course is designed to keep students current with technology. Currently this course is an introduction to solar technology, nano-technology, and fuel cell (PEM) technologies. Students will learn the characteristics and the efficiency of the solar and PME fuel cell. Emphasis on clean energies and application. This course will change as new emerging technologies move to the forefront. Practical labs and projects help the students to put theories into action and learn troubleshooting techniques.

Prerequisite(s): ENET 150 and MATH& 142 with a C or higher, or Instructor permission.

ENET 282

CERTIFIED ELECTRONICS TECHNICIAN TEST PREP **3 CR**

This course prepares students for the nationally recognized Certified Electronics Technician (CET) test.

ENGR 100

ENGINEERING ORIENTATION **2 CR**

This course explores engineering and technology through class discussion, hands-on activities, and presentations by guest speakers. Topics include engineering disciplines, degree and transfer options, career opportunities, academic success strategies, and planning your program of study.

ENGR& 104

INTRODUCTION TO ENGINEERING & DESIGN 5 CR

Course explores the role of teamwork, creativity, and communication in innovative engineering design. Topics include engineering design process, collaborative problem-solving techniques, and computer applications. Students will develop their knowledge and skills in these areas through a series of hands-on design projects.

Prerequisite(s): Accuplacer Algebra score of 75 or MATH 098 with a C or higher; and Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher; and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

ENGR& 114

FUNDAMENTALS OF ENGINEERING GRAPHICS & CAD 5 CR

Methods of depicting three-dimensional objects and communicating design information. Emphasis is on using parametric solid modeling software as a design tool and using freehand sketching to develop visualization skills.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with C or higher.

ENGR 115

GRAPHICS 5 CR

This course is an introduction to the use of graphical techniques and standard practices used to communicate engineering design information. Students will learn graphics techniques, visualization skills, standards for object views and drawing sizes, orthographic projection, section views, proper dimensioning techniques, and tolerances. Freehand sketching is used to develop visualization skills and as an instrument for design conceptualization and communication.

Prerequisite(s): Accuplacer Arithmetic score of 50 or MATH 090 with a C or higher or ABE 050 with a C or higher; and Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher; and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

ENGR 171

INNOVATION LAB I 2 CR

This is the first course in a year-long Innovation Lab sequence. In this course, students engage as members of an interdisciplinary project team exploring a novel problem for which an innovation in science, technology, design, business, artistic expression, etc., could be significant for working toward a resolution of the problem. Problems may be proposed by students or by faculty mentors, or derived from external sources.

Prerequisite(s): Instructor permission.

ENGR 172

INNOVATION LAB II 2 CR

This is the second course in a year-long Innovation Lab sequence. In this course, students engage as members of an interdisciplinary project team exploring a novel problem for which an innovation in science, technology, design, business, artistic expression, etc., could be significant for working toward a resolution of the problem. Problems may be proposed by students or by faculty mentors, or derived from external sources.

Prerequisite(s): Instructor permission.

ENGR 173

INNOVATION LAB III 2 CR

This is the third course in a year-long Innovation Lab sequence. In this course, students engage as members of an interdisciplinary project team exploring a novel problem for which an innovation in science, technology, design, business, artistic expression, etc., could be significant for working toward a resolution of the problem. Problems may be proposed by students or by faculty mentors, or derived from external sources.

Prerequisite(s): Instructor permission.

ENGR 180

PARAMETRIC MODELING 5 CR

This course is an introduction to 3D CAD (computer aided design) with an emphasis on parametric solid modeling applications and usage. Topics include methods for creating solid model components, joining components to form assemblies, and generation of 2D manufacturing drawings from 3D solid models.

Prerequisite(s): ENGR 115 or MACH 102 with a C or higher.

ENGR& 214

ENGINEERING STATICS 5 CR

Engineering Statics introduces students to the mechanics of rigid bodies in static equilibrium. Students will solve practical engineering problems involving the loads carried by structural components using vector analysis (both 2D and 3D) applied to rigid body systems and subsystems. Content includes static equilibrium, force and moment resultants, free body diagrams, distributed loads, trusses, frames and machines, internal forces, shear and moment diagrams, and friction.

Prerequisite(s): MATH& 151 and PHYS& 221, both with a C or higher.

ENGR 270

INTRODUCTION TO MATERIALS SCIENCE 5 CR

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.

Prerequisite(s): MATH& 151 and CHEM& 161, both with a C or higher.

ENGT 116

ADVANCED GRAPHICS 5 CR

This course is a continuation of the mechanical engineering graphic technology foundation. It utilizes CAD to develop advanced drawing techniques in accordance with industry standards. Instruction includes projection techniques for points, lines, and planes; the purpose and application of auxiliary views; methods for developing more advanced principal views; dimensioning and tolerancing of parts for manufacture according to ASME/ANSI standards; and methods for representing threads and fasteners.

Prerequisite(s): ENGR 115 with a C or higher, and completion of or concurrent enrollment in ENGT 135 with a C or higher.

ENGT 132

ENGINEERING APPLICATIONS USING MS OFFICE 5 CR

The course focuses on applied projects to exercise higher-level spreadsheet and word processing skills. Projects include utilization of mathematical and logical functions on multiple linked sheets, document formatting and headers/footers, charting and drawing tools, and toolbar customization and custom button macros. A basic understanding of computer use is recommended.

Prerequisite(s): AMATH 111 with a C or higher.

ENGT 134

AUTOCAD I 5 CR

This course is an introduction to CAD (Computer Aided Drafting), utilizing a "cookbook" approach to instruction. Students have immediate hands-on computer usage while applying basic command concepts and terminology. Basic drawing and editing techniques are reinforced with exercises designed to help the student reach an in-depth understanding.

ENGT 135

AUTOCAD II 5 CR

This course is a continuation of AutoCAD I and utilizes intermediate drawing and editing tools. Coursework includes generating and editing dimensions and tolerances in CAD, methods for creating isometric drawings, paperspace techniques for printing/plotting to scale, applications and procedures for creating attributed blocks, creation of table, and the applications and procedures for using external references.

Prerequisite(s): ENGR 115 and ENGT 134, both with a C or higher.

ENGT 208

CAD PROJECT 3D 5 CR

This is a project-oriented design course in which students create a 3D solid model of an existing assembly or one of their own design. Each student will generate a complete working drawing set for their assembly including engineering details and assembly drawings in accordance with industry standards. A portfolio including preliminary

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sketches, detail drawings, and assembly drawings will be submitted.

Prerequisite(s): ENGR 180 with a C or higher, and completion of or concurrent enrollment in ENGT 116 with a C or higher.

ENGT 215

APPLIED STATICS 5 CR

This course is an introduction to engineering mechanics, focusing on the analysis of "static" (non-moving) structures. Students will use statics concepts to determine the external reaction loads and internal member forces for trusses, frames, and machines.

Prerequisite(s): MATH& 142 with a C or higher (Acceptable substitute: AMATH 111 and CET 102, both with a C or higher).

ENGT 216

APPLIED MECHANICS OF MATERIALS 5 CR

This course explores the effect of forces on engineering structures and the resulting internal stresses and deformations that develop. Students will apply statics and strength of materials concepts to determine size, shape, and material requirements for engineering components. Topics include an introduction to stress and strain, physical characteristics of components (size and shape), mechanical properties of engineering materials (strength, stiffness, etc.), and materials testing and composition.

Prerequisite(s): ENGT 215 with a C or higher.

ENGT 222

ADVANCED PARAMETRIC MODELING 5 CR

This course is a continuation of Parametric Modeling. Topics include more advanced methods for the creation of parts, assemblies, and 2D manufacturing drawings.

Prerequisite(s): ENGR 180 with a C or higher.

ENGT 224

PROCESS PIPING DESIGN 5 CR

This course provides an introductory overview of process pipe drafting and design. It covers various topics including: piping concepts/terminology, pipe and fitting specifications, piping symbol representation, valves and instrumentation, process piping equipment. Students will utilize AutoCAD Plant 3D software to create flow diagrams and 3D design models from piping specifications according to industry standards. The 3D design models will be used to generate a variety of standard pipe drawings including plans/elevations, isometrics, spool drawings.

Prerequisite(s): ENGT 116 and ENGT 135, both with a C or higher.

ENGT 233

INTRO TO CATIA 5 CR

This course is an introduction to solid modeling using CATIA V5 CAD (computer aided design) software. Topics include methods for creating solid model components, joining components to form assemblies, and generating 2D manufacturing drawings from 3D solid models.

Prerequisite(s): ENGR 115 with a C or higher.

ENGT 250

CAPSTONE PROJECT 5 CR

This is a project-oriented design course in which students draw on skills developed throughout the program to complete an instructor selected project. Topics are chosen based on real world significance, relevance and breadth of the skill set required, and available on-campus project opportunities. Projects may be individual or group based and typically involve several or all of the following completion tasks; 2D CAD drafting, 3D solid modeling, statics analysis of structural loads, sizing of members based on strength of materials, geometric and trigonometric calculations, data exchange, etc.

Prerequisite(s): ENGR 180 and ENGT 116, both with a C or higher.

ENGT 295

FIELD-BASED EXPERIENCE 3-6 CR

This course provides students with industry job experience in a college approved professional setting, allowing students to apply first year curriculum skills and engineering knowledge to engineering and design activities in a variety of organizations. May be repeated for credit.

Prerequisite(s): Instructor permission.

ENGT 301

APPLIED ENGINEERING LAB I 3 CR

This year-long course sequence (ENGT 301, ENGT 302, and ENGT 303) introduces applied engineering students to the tools needed for advanced project development courses through experiential learning and hands-on opportunities to conduct experiments, take relevant measurements, analyze real-world data, design systems, and to make and test prototypes of their designs. An introduction to engineering disciplines, problem solving, teamwork and communication, and safety will be emphasized.

Prerequisite(s): MATH& 142; PHYS& 114 or PHYS& 221; CHEM& 161; and ENGR& 114 or ENGR 180 or Instructor permission, all with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 and ENGT 311, both with a C or higher OR concurrent enrollment in both ENGL 310 and ENGT 311.

ENGT 302

APPLIED ENGINEERING LAB II 3 CR

This year-long course sequence (ENGT 301, ENGT 302, and ENGT 303) introduces applied engineering students to the tools needed for advanced project development courses through experiential

learning and hands-on opportunities to conduct experiments, take relevant measurements, analyze real-world data, design systems, and to make and test prototypes of their designs. An introduction to the engineering design process, teamwork development, ethics, professionalism, and reporting will be emphasized.

Prerequisite(s): MATH& 151 or AMAT 313, and ENGT 301, both with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of ENGT 321 with a C or higher or concurrent enrollment in ENGT 321.

ENGT 303

APPLIED ENGINEERING LAB III 3 CR

This year-long course sequence (ENGT 301, ENGT 302, and ENGT 303) introduces applied engineering students to the tools needed for advanced project development courses through experiential learning and hands-on opportunities to conduct experiments, take relevant measurements, analyze real-world data, design systems, and to make and test prototypes of their designs. An introduction to management aspects of the engineering profession, project management, prioritization of resource allocation, and management of technical design projects will be emphasized.

Prerequisite(s): MATH& 152 OR AMAT 313, and ENGT 302, both with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of ENGT 350 with a C or higher or concurrent enrollment in ENGT 350.

ENGT 311

MANUFACTURING PROCESSES AND SYSTEMS 3 CR

This course provides an introduction to modern industrial manufacturing equipment, processes and systems used for converting raw materials to finished products, including casting, extruding, forging, molding, forming, heat treating, joining, machining, assembly, and more. The emphasis of the course is on the four core metrics of manufacturing processes, which are rate, cost, quality, and flexibility. Together these metrics allow for the analysis and justification of manufacturing process selection and implementation.

Prerequisite(s): MATH& 142, PHYS& 114 & or PHYS& 221, and CHEM& 161, all with a C+ or higher, and BASET program admission or Instructor permission.

ENGT 312

APPLIED ELECTRICITY AND ELECTRONICS 5 CR

This course introduces the fundamental principles of electrical and electronic engineering including the nature of electricity, electric circuit theory, electronic instrumentation and measurement systems, signals, sensors, and mathematical transformations. Topics include basic electrical quantities, circuit elements, alternating current (AC) and direct current (DC) circuit analysis techniques, circuit simulation, and microcontrollers. Hands on learning activities may include investigation of the use of measuring instruments such as digital multimeters, oscilloscopes, function

generators, counters, and current meters and proper use of soldering equipment.

Prerequisite(s): PHYS& 114 or PHYS& 221, with a C+ or higher, and MATH& 152 OR AMAT 313 with a C or higher, and BASET program admission or Instructor permission.

ENGT 313

APPLIED STATICS

3-5 CR

This is a foundation course in engineering mechanics. Students will learn the principles of static equilibrium by applying Newton's laws of motion to solve engineering problems with vector notation and calculus. Emphasis is placed on drawing free body diagrams and self-checking strategies. Topics include introduction to forces; 2D equilibrium of particles and rigid bodies; center of gravity and centroids; distributed loading and hydrostatics; friction; analysis of truss structures; and shear force and bending moment diagrams.

Prerequisite(s): PHYS&114 OR PHYS& 221, with a C+ or higher, and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of MATH& 151 or AMAT 313, with a C or higher, or concurrent enrollment in MATH& 151 or AMAT 313.

ENGT 314

APPLIED STATICS AND STRENGTH OF MATERIALS

5 CR

This course will develop an understanding of the basic principles of two categories of mechanics: Statics and Strength of Materials and will include strategies to analyze and solve problems related to Engineering Design. The two categories are broken out as follows: Statics: The study and analysis of forces and loading conditions applied to structures and mechanical devices. Strength of Materials: An introduction to methods used to determine internal stresses present in engineering components when subjected to various loading conditions. Topics include: simple stresses, centroids, moments of inertia, torsion, shear, bending stresses, stress concentration factors, equilibrium and energy methods, global and local buckling, introduction to finite element methods, and an introduction to composites.

Prerequisite(s): PHYS& 114 OR PHYS& 221, with a C+ or higher; and MATH& 152 OR AMAT 313, with a C or higher; and BASET program admission or permission.

Completion Of or Concurrent Enrollment In: Completion of ENGT 311 with a C or higher or concurrent enrollment in ENGT 311 or Instructor permission.

ENGT 316

APPLIED FLUID MECHANICS AND HEAT TRANSFER

3-5 CR

This course explores the fundamental concepts of fluid mechanics and heat transfer applied to engineering systems. Students are introduced to the fundamental physical and analytical principles through the understanding of: conservation of mass, conservation of energy, and the conserva-

tion of momentum equations. The student will demonstrate an understanding of these fundamentals by solving problems dealing with: fluid properties, fluid statics, control volumes, conservation principles, ideal incompressible flow, flow of a real fluid, and conduction, convection, and radiation of heat.

Prerequisite(s): MATH& 152 or AMAT 313 with a C or higher; and PHYS& 114 or PHYS& 221; and CHEM& 161, both with a C+ or higher; and BASET program admission or Instructor permission.

ENGT 319

PROGRAMMING FOR TECHNOLOGISTS

3-5 CR

This course introduces concepts and techniques for creating computational solutions to problems in engineering and science. The essentials of computer programming are developed using relevant engineering software packages, with the goal of enabling students to use the computer effectively in subsequent courses. Programming topics include problem decomposition, control structures, recursion, arrays and other data structures, file I/O, graphics, and code libraries. Examples will be drawn from relevant engineering fields and may include, root finding, matrix operations, searching and sorting, simulation, and data analysis. "Best practices" programming style and computational efficiency are emphasized.

Prerequisite(s): PHYS& 114 or PHYS& 221, with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of MATH& 151& or AMAT 313, with a C or higher; or concurrent enrollment in MATH& 151 or AMAT 313.

ENGT 321

APPLIED SYSTEMS ENGINEERING

3 CR

This course provides an introduction to systems engineering fundamentals, establishing a robust framework for designing complex engineered systems in response to customer needs and expectations. The emphasis of the course is on the three core activities of systems engineering, which are requirements analysis; functional analysis and allocation; and design synthesis. Together, these activities form what is called the systems engineering process, which provides a comprehensive, life-cycle balanced approach to the design of complex systems that satisfy customer expectations and public acceptability.

Prerequisite(s): PHYS& 114 or PHYS& 221, with a C+ or higher; and MATH& 151 OR AMAT 313, with a C or higher; and BASET program admission OR Instructor permission.

ENGT 350

APPLIED CHEMICAL ENGINEERING

3 CR

This course provides an introduction to chemical engineering fundamentals, establishing a robust framework for developing the engineering approach to problem solving; breaking a process down into its components, establishing the relations between known and unknown process variables, assembling the information needed to solve for the unknowns, and finally obtaining the

solution using appropriate computational methods. The emphasis of the course is on formulating and solving material and energy balances on chemical process systems which is the basis for topics including thermodynamics, unit operations, kinetics, and process dynamics and control.

Prerequisite(s): PHYS& 114 or PHYS& 221, and CHEM& 161, both with a C+ or higher; and MATH& 152 or AMAT 313, with a C or higher; and BASET program admission or Instructor permission.

ENGT 352

INDUSTRIAL SAFETY ENGINEERING

3-5 CR

This course emphasizes the various safety related issues that arise in industrial settings, including health, security, and environmental factors. A broad array of topics will be addressed including performance measurement and regulatory requirements, as well as the handling of toxic/flammable/explosive materials, fire protection, personal protective equipment, emergency response, and accident investigations. Design aspects are included to reduce hazards, and resolve noise and ventilation issues. While the material emphasizes industrial settings, construction and office environments are also considered.

Prerequisite(s): MATH& 142, PHYS& 114 or PHYS& 221, and CHEM& 161, all with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 with a C or higher or concurrent enrollment in ENGL 310.

ENGT 395

FIELD-BASED EXPERIENCE/ INTERNSHIP

2-5 CR

Engineering internships are not required but serve as a critical experience for students to apply classroom learning to real world experiences and potentially help them to secure full-time positions upon graduation. The aim of this course is to enable students to gain skills needed to negotiate, plan, undertake and communicate the results of an engineering project while working in an industry placement. The project topic will be based on the needs of the industry. The project will be completed under the supervision of an industry professional (preferably with a degree in Engineering, Engineering Technology, or closely related field). The course requires placement of the student in an industry or research internship. Variable credit can be earned for periods of 3-12 weeks of full-time equivalence.

A maximum of five (5) credits total from a combination of ENGT 395 and ENGT 495 can be applied toward satisfying program elective requirements.

Prerequisite(s): MATH& 142, PHYS& 114 or PHYS& 221, and CHEM& 161, all with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 with a C or higher or concurrent enrollment in ENGL 310.

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ENGT 399

SPECIAL PROBLEMS 2-5 CR

This course is designed as an individual research or design project directly related to applied engineering and carried out under the supervision of a member of the Bellingham Technical College faculty. Students electing this course will be assigned a project and required to complete a scope of work during the first two weeks of the quarter. Students are expected to manage all aspects of their project and produce both a written report and oral presentation.

A maximum of five (5) credits total from ENGT 399 can be applied toward satisfying program elective requirements.

Prerequisite(s): MATH& 142, and PHYS& 114 OR PHYS& 221, both with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 with a C or higher or concurrent enrollment in ENGL 310.

ENGT 415

TECHNICAL DYNAMICS 3-5 CR

This is an advanced course in engineering dynamics, which is the study of motion. In this course we will develop the ability to analyze engineering problems concerning the motion of objects and the system of forces acting on them. The solution of these problems requires the use of engineering principles. We will develop and/or improve our engineering problem solving skills (think before beginning the solution, ask what principles apply, and critically judge our results), our visualization skills (e.g., free body diagrams), and our understanding of physical principles of dynamics.

Prerequisite(s): ENGT 313 OR ENGT 314, with a C or higher; and BASET program admission or Instructor permission.

ENGT 441

APPLIED PROCESS CONTROL 3-5 CR

This course introduces dynamic processes and the engineering tasks of process operations and control. Subject covers modeling the static and dynamic behavior of processes; control strategies; design of feedback, feedforward, and other control structures; and applications to process equipment.

Prerequisite(s): MATH& 152 or AMAT 313, and ENGT 350, both with a C or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 with a C or higher or concurrent enrollment in ENGL 310.

ENGT 465

APPLIED ENVIRONMENTAL ENGINEERING PROCESSES 3-5 CR

This course develops and utilizes analytic solutions for environmental process models that can be used in a) reactor design for processes used in the treatment of water, wastewater and hazardous waste and b) process analysis of natural systems, such as streams and groundwater flow. Models facilitate the tracking of contaminants in

engineered and natural systems.

Prerequisite(s): MATH& 152 or AMAT 313, and ENGT 350, both with a C or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310 with a C or higher or concurrent enrollment in ENGL 310.

ENGT 481

SPECIAL TOPICS IN ENGINEERING TECHNOLOGY I 2-5 CR

This course will introduce students to a special topic in Engineering Technology that is outside of the regular curriculum. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. Such courses will be advertised to relevant students if they are available and a course profile will be published. There is no guarantee that any such course will be available in the following year or quarter.

No more than 10 credits total (5 credits in ENGT 481 and 5 credits in ENGT 482) may be used in satisfaction of requirements of the program electives.

Prerequisite(s): PHYS& 114 or PHYS&221, CHEM& 161, and ENGR 180 or ENGR& 114 or Instructor permission, all with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310, and MATH& 151 or AMAT 313, both with a C or higher; or concurrent enrollment in both ENGL 310, and MATH& 151 or AMAT 313.

ENGT 482

SPECIAL TOPICS IN ENGINEERING TECHNOLOGY II 2-5 CR

This course will introduce students to a special topic in Engineering Technology that is outside of the regular curriculum. The course enables external or internal lecturers with specialist knowledge to offer a special elective course in their area of expertise. Such courses will be advertised to relevant students if they are available and a course profile will be published. There is no guarantee that any such course will be available in the following year or quarter. Topics in this course will not be repeated from ENGT 481.

No more than 10 credits total (5 credits in ENGT 481 and 5 credits in ENGT 482) may be used in satisfaction of requirements of the program electives.

Prerequisite(s): PHYS& 114 or PHYS& 221, CHEM& 161, and ENGR 180 or ENGR& 114 or Instructor permission, all with a C+ or higher; and BASET program admission or Instructor permission.

Completion Of or Concurrent Enrollment In: Completion of ENGL 310, and MATH& 151 or AMAT 313, both with a C or higher; or concurrent enrollment in both ENGL 310, and MATH& 151 OR AMAT 313.

ENGT 490

ENGINEERING TECHNOLOGY CAPSTONE I 5 CR

The year-long capstone course sequence (ENGT 490, ENGT 491, ENGT 492) provides the culminating experience in the Bachelor of Applied Science in Engineering Technology Program. In these three courses, students draw upon previous coursework to solve real world industrial based engineering problems. Projects include the challenges of project management, optimizing limited resources, and meeting strict schedules--all while dealing with interdisciplinary engineering systems, designs, and components representative of those encountered in industrial or research environments. This first quarter course focuses on implementing the engineering design process, working through system & component analysis, and developing and documenting a project management plan.

Prerequisite(s): ENGT 303 and ENGT 350, both with a C or higher.

Completion Of or Concurrent Enrollment In: Completion of MATH& 146 and OPM 412, both with a C or higher, or concurrent enrollment in both MATH& 146 and OPM 412.

ENGT 491

ENGINEERING TECHNOLOGY CAPSTONE II 5 CR

The year-long capstone course sequence (ENGT 490, ENGT 491, ENGT 492) provides the culminating experience in the Bachelor of Applied Science in Engineering Technology Program. In these three courses, students draw upon previous coursework to solve real world industrial based engineering problems. Projects include the challenges of project management, optimizing limited resources, and meeting strict schedules--all while dealing with interdisciplinary engineering systems, designs, and components representative of those encountered in industrial or research environments. This second quarter course focuses on developing a high quality engineering prototype or model, while improving professional communication skills and continuing to manage the project using industry-standard methodologies.

Prerequisite(s): ENGT 490 with a C or higher.

ENGT 492

ENGINEERING TECHNOLOGY CAPSTONE III 5 CR

The year-long capstone course sequence (ENGT 490, ENGT 491, ENGT 492) provides the culminating experience in the Bachelor of Applied Science in Engineering Technology Program. In these three courses, students draw upon previous coursework to solve real world industrial based engineering problems. Projects include the challenges of project management, optimizing limited resources, and meeting strict schedules--all while dealing with interdisciplinary engineering systems, designs, and components representative of those encountered in industrial or research environments. This third quarter course focuses on finalizing an engineering prototype or model and completing meaningful, well-documented

testing--while preparing a final project presentation and formal report using industry-standard methodologies.

Prerequisite(s): ENGT 491 with a C or higher.

ENGT 495

FIELD-BASED EXPERIENCE/ INTERNSHIP

2-5 CR

Engineering internships are not required but serve as a critical experience for students to apply classroom learning to real world experiences and potentially help them to secure full-time positions upon graduation. The aim of this course is to enable students to gain skills needed to negotiate, plan, undertake and communicate the results of an engineering project while working in an industry placement. The project topic will be based on the needs of the industry. The project will be completed under the supervision of an industry professional (preferably with a degree in Engineering, Engineering Technology, or closely related field). The course requires placement of the student in an industry or research internship. Variable credit can be earned for periods of 3-12 weeks of full-time equivalence.

A maximum of five (5) credits total from a combination of ENGT 395 and ENGT 495 can be applied toward satisfying program elective requirements.

Prerequisite(s): ENGT 303 and ENGT 350, both with a C or higher.

ENGT 499

SPECIAL PROBLEMS

2-5 CR

This course is designed as an individual research or design project directly related to engineering technology and carried out under the supervision of a member of the Bellingham Technical College faculty. Students electing this course will be required to carry out preliminary reading and complete a scope of work that includes deliverables during the preceding quarter. Students are expected to manage all aspects of their individual project from conceptualization through the planning phase and to the ultimate achievement of the deliverables. A major written report and oral presentation will be submitted for review at the completion of the project.

A maximum of five (5) credits total from ENGT 499 can be applied toward satisfying program elective requirements.

Prerequisite(s): ENGT 303 and ENGT 350, both with a C or higher; and BASET program admission or Instructor permission.

ENGLISH

AENGL 100

APPLIED ENGLISH

5 CR

This applied English course focuses on the workplace communication skills needed to send, receive, and process oral and written information. Along with a review of writing fundamentals, learners will use principles of clear communication, professionalism, and cultural awareness in occupational contexts. Learners will sharpen

their reading, writing, and presentation skills.

Prerequisite(s): Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher, and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

ENGL 092

FUNDAMENTALS OF STANDARD

WRITTEN ENGLISH

5 CR

This course focuses on the fundamentals of college-level standard written English. Students are introduced to research skills. Course work includes a study of the conventional grammatical rules of English in the construction of effective sentences, paragraphs, and essays.

Prerequisite(s): ACCUPLACER Classic Reading (50) or higher OR ACCUPLACER NextGen Reading (233) or higher or ABE 054 with a C or higher OR ABE 055 with a C or higher. ACCUPLACER Classic Sentence Skills (50) or ACCUPLACER NextGen Writing (230) or ABE 052 with a C or higher OR ABE 055 with a C or higher.

Completion Of or Concurrent Enrollment In: CDEV 100 with a C or higher.

ENGL& 101

ENGLISH COMPOSITION I

5 CR

A composition course in which students read, analyze, and write essays using a variety of rhetorical strategies, as well as develop and verbally express ideas clearly and effectively. The critical reading of essays will provide a basis for the student's own critical writing, which will reflect a command of college-level literacy standards. Attention to writing fundamentals and stylistic techniques will also be included. Word processing, email and internet knowledge required.

Prerequisite(s): Accuplacer Reading Comprehension score of 85 or RDG 085 with a C or higher, and Accuplacer Sentence Skills score of 86 or ENGL 092 with a B or higher or AENGL 100 with a C or higher.

ENGL& 102

ENGLISH COMPOSITION II

5 CR

Intermediate academic essay writing. Emphasis on critical reading and writing, synthesis of cross-disciplinary texts, documentation of sources and argumentation.

Prerequisite(s): ENGL& 101 with a C or higher.

ENGL& 235

TECHNICAL WRITING

5 CR

This course is designed to help students report technical information clearly, completely, and persuasively. Technical writing shares many of the same concerns of other kinds of writing, such as attention to Purpose, Readability, and most significantly, Audience. This course is designed to provide instruction and practice in creating practical and effective documents for students in medical, scientific, technical, and other professional fields.

Prerequisite(s): ENGL& 101 with a C or higher.

ENGL 310

BUSINESS COMMUNICATIONS

5 CR

This course focuses on audience-oriented communication in the business environment. Course content includes writing reports, proposals, memoranda, and emails; graphical presentation of data using Excel; and developing and delivering presentations using PowerPoint and other visual aids. Students will develop and demonstrate these communication skills individually, in smaller groups, and in presentations to larger audiences.

Prerequisite(s): ENGL& 101 with a C or higher; and BASOPS program admission or BAS-ENGT program admission or Instructor permission.

ENVIRONMENTAL SCIENCES

ENVS 151

BASIC CSTOP COURSE

0 CR

Developed by Construction Safety Professionals to provide superior Safety Training, CSTOP is an industrial and heavy construction safety training and orientation program designed to provide contractor employees with a better than basic understanding of hazards and safety procedures associated with work in highly hazardous work areas.

FISHERIES

AQUA 100

INTRODUCTION TO FISHERIES AND AQUACULTURE

2 CR

This course covers the fundamental concepts of fisheries and aquaculture, including an introduction to the fisheries and aquaculture industries, basic finfish and shellfish culturing, essential water quality parameters, the life cycles of common Pacific Northwest finfish and shellfish species, and industry safety practices.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or ENGL 092 with a C or higher, and ACCUPLACER Classic Reading (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher or Instructor permission.

AQUA 110

WATER QUALITY

3 CR

An introduction to water quality principles with an emphasis on aquaculture production systems and environmental habitats. Students will learn standard methods of measuring water quality and managing water quality data. This course also covers common issues with water quality and practical approaches to solving them.

Prerequisite(s): ACCUPLACER Classic Arithmetic score

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of (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills score of (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension score of (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher or concurrent enrollment in AQUA 100 or Instructor permission.

AQUA 120

AQUATIC BIODIVERSITY 3 CR

An introduction to the taxonomy, anatomy, and life cycles of aquatic plants and animals, with an emphasis on Pacific Northwest algae, shellfish, and finfish. This course will also cover evolutionary adaptations to aquatic environments.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or ENGL 092 with a C or higher, and ACCUPLACER Classic Reading (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher or Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher or concurrent enrollment in AQUA 100 or Instructor permission.

AQUA 130

REPRODUCTION 2 CR

An introduction to reproductive biology with a focus on crustaceans, shellfish, and fish. This course covers the anatomy and physiology of reproductive systems, life history strategies, and spawning techniques for aquaculture.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher OR concurrent enrollment in AQUA 100 OR Instructor permission.

AQUA 135

HATCHERY PRACTICUM I 4 CR

This lab course provides hands on training to reinforce the learning objectives in AQUA 100, AQUA 110, and AQUA 130. Students will practice spawning techniques, proper gamete handling, and calculations of reproductive metrics. Students will also apply water quality theory to lab and field projects and taxonomic tools for site surveys, hatchery operations, and aquaculture husbandry.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or ENGL 092 with a C or higher, and ACCUPLACER Classic Reading (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher or Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100, AQUA 110 and AQUA 130 all with a C- or higher or concurrent enrollment in AQUA 100, AQUA 110 and AQUA 130 or Instructor permission.

AQUA 140

GROWTH AND NUTRITION 3 CR

This course will provide an overview on the nutrition and feeding of aquatic species to promote healthy and sustainable growth. There will be a focus on crustaceans, shellfish, and finfish from an aquaculture perspective.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, and AQUA 130 all with a C- or higher.

Completion Of or Concurrent Enrollment In: AQUA 190 with a C- or higher or concurrent enrollment in AQUA 190.

AQUA 150

FUNDAMENTALS OF AQUACULTURE 3 CR

An introduction to culturing aquatic biota for commercial production and fisheries stock enhancement, with an emphasis on commonly used culturing systems, shellfish and finfish husbandry, and hatchery operations.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, and AQUA 130 all with a C- or higher.

AQUA 160

FUNDAMENTALS OF FISHERIES BIOLOGY 3 CR

An introduction to the principles of fisheries biology and the population dynamics of crustacean, shellfish, and fish species, with an emphasis on Pacific Northwest stocks. The course will include an overview of fisheries gear, technology, sampling techniques, and data collection for stock assessments.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher or concurrent enrollment in AQUA 100 or Instructor permission.

AQUA 165

AQUACULTURE PRACTICUM 3 CR

This lab course provides hands on training to reinforce the learning objectives in AQUA 140,

AQUA 150, and AQUA 190. Students will practice culturing techniques for algae, shellfish, and finfish species, including: stocking systems based on condition factors, recording growth and mortality metrics, monitoring embryonic and juvenile development, creating feeding schedules, and monitoring aquatic animal health.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 130, and AQUA 135 all with a C- or higher.

Completion Of or Concurrent Enrollment In: Completion of AQUA 140, AQUA 150, and AQUA 190 all with a C- or higher; or concurrent enrollment in AQUA 140, AQUA 150, and AQUA 190.

AQUA 170

FRESHWATER ECOLOGY 3 CR

An introduction to the ecology of rivers, lakes, and other freshwater systems with an emphasis on physical and chemical interactions with biotic communities. This course covers the effects of land use practices on freshwater habitats and techniques for mitigating habitat degradation. Students also will examine the habitat, ecology, and management of invertebrate and vertebrate species in freshwater environments.

Prerequisite(s): ACCUPLACER Classic Arithmetic score of (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills score of (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension score of (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher or concurrent enrollment in AQUA 100 or Instructor permission.

AQUA 180

OCEANOGRAPHY 3 CR

An introduction to the principles of oceanography, with an overview of the physical, geological, chemical, and biological components of marine environments. This course will cover plate tectonics, circulation and currents, weather events, and coastal and pelagic ecosystems. Students will also learn about issues affecting the Pacific Ocean, such as polar ice cap melting, offshore drilling, and ocean acidification.

Prerequisite(s): ACCUPLACER Classic Arithmetic score of (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills score of (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension score of (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100 with a C- or higher or concurrent enrollment in AQUA 100 or Instructor permission.

AQUA 190

TOXICOLOGY AND DISEASES 3 CR

An introduction to shellfish and finfish diseases and environmental toxicology. This course will cover the biology and ecology of pathogens, including bacteria, fungi, parasites, and viruses. Students will also learn the sources and exposure routes of pollutants and pathogens, lymphatic and behavioral responses, and commonly used diagnostics and treatments.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, and AQUA 130 all with a C- or higher.

Completion Of or Concurrent Enrollment In: AQUA 140 with a C- or higher or concurrent enrollment in AQUA 140.

AQUA 195

FISHERIES PRACTICUM 4 CR

This lab course provides hands on training to reinforce the learning objectives in AQUA 160, AQUA 170, and AQUA 180. Students will practice assessing sites for habitat quality, sampling aquatic invertebrate and vertebrate populations in freshwater and marine environments, and stock enhancement strategies for fisheries management.

Prerequisite(s): ACCUPLACER Classic Arithmetic (75) OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills (71) or higher OR ACCUPLACER NextGen Writing (245) or ENGL 092 with a C or higher, and ACCUPLACER Classic Reading (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher or Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 100, AQUA 160, AQUA 170, and AQUA 180 all with a C- or higher or concurrent enrollment in AQUA 100, AQUA 160, AQUA 170, and AQUA 180 or Instructor permission.

AQUA 200

GENETICS IN FISHERIES AND AQUACULTURE 4 CR

An introduction to the basics of population genetics and the evolutionary principles that determine genetic variation in both natural and artificial environments. This course will highlight current aquaculture techniques in broodstock management, improvements in breeding practices, increasing genetic diversity and sustainability, and addressing environmental considerations.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 210 with a C- or higher or concurrent enrollment in AQUA 210 or Instructor permission.

AQUA 210

HATCHERY PRACTICUM II 3 CR

This lab course provides hands on training to reinforce the learning objectives in AQUA 200 and promote enhanced mastery of skills demonstrated in AQUA 135. Students will implement brood-

stock management techniques, explore hatchery operations improvement projects, and practice project management skills during the spawning season.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

Completion Of or Concurrent Enrollment In: AQUA 200 with a C- or higher or concurrent enrollment in AQUA 200 or Instructor permission.

AQUA 220

PROFESSIONAL DEVELOPMENT 2 CR

This course covers the fundamentals of planning and organizing job search strategies for the fisheries and aquaculture fields. Focus is placed on identifying career goals, assessing skills and accomplishments, the use of employment search tools, and creating effective application materials.

Prerequisite(s): ACCUPLACER Classic Arithmetic score of (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills score of (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension score of (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

AQUA 230

CURRENT TOPICS 2 CR

A seminar-based course that explores recent developments in technology, research, and management for the fisheries and aquaculture fields. Students will review prepared material, attend invited speaker seminars, engage in critical discussions, and prepare written evaluations of the topic. Topics will include presentations from government, tribal, non-profit, academic, and private industries for finfish and shellfish aquaculture, fisheries biology and management, and habitat restoration.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

AQUA 240

INDEPENDENT PROJECT 2 CR

Students will design and implement independent research and/or engineering projects in identified areas of interest. Projects may include developing new husbandry techniques, conducting lab and field experiments, or designing and building equipment and technology. There will be an emphasis on developing project management skills, including: writing project proposals, setting deadlines, and creating budgets.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, and AQUA 130 all with a C- or higher.

AQUA 250

ADVANCED SAMPLING TECHNIQUES 4 CR

This workshop-based course focuses on developing advanced sampling and analysis skills commonly used in fisheries and aquaculture sciences. Students will collect and analyze sampling data from field and lab projects, including fisheries surveys, hatchery operations, and habitat assessments.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

AQUA 260

NATURAL RESOURCE MANAGEMENT 4 CR

In this course, students explore how to balance the ecology and economics of limited natural resources through the management of diverse stakeholder needs and evaluation of ecosystem services. These concepts will be explored through a variety of case studies focused on current natural resource management issues, with a focus on the Pacific Northwest.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

AQUA 270

INTRODUCTION TO GIS FOR FISHERIES & AQUACULTURE 4 CR

An introduction to geographic information sciences with a focus on spatial data management, manipulation, and display in geographic information systems (GIS). This course covers basic cartographic principles and map creation with a special emphasis on geographic information systems in fisheries and aquaculture.

Prerequisite(s): ACCUPLACER Classic Arithmetic score of (75) or higher OR ACCUPLACER NextGen Arithmetic (254) or higher OR MATH 090 with a C or higher, and ACCUPLACER Classic Sentence Skills score of (71) or higher OR ACCUPLACER NextGen Writing (245) or higher OR ENGL 092 with a C or higher, and ACCUPLACER Classic Reading Comprehension score of (71) or higher OR ACCUPLACER NextGen Reading (247) or higher OR RDG 085 with a C or higher OR Instructor permission.

AQUA 280

FIELD-BASED EXPERIENCE 4 CR

In this course, students will experience supervised work and hands-on training in a professional setting. Internships will focus on fisheries and/or aquaculture fields. Sponsoring organizations may include government, private industry, non-profit, or other relevant sectors

Prerequisite(s): Instructor permission.

2023-2024 Course Descriptions

AQUA 290

AQUACULTURE MANAGEMENT 2 CR

In this course, students will learn aquaculture operations from a management perspective. This course focuses on culturing data collection and reporting as required under federal and state regulations, monitoring losses for early warning indicators, and exploring innovative approaches for improving aquaculture production and efficiency.

Prerequisite(s): AQUA 100, AQUA 110, AQUA 120, AQUA 130, AQUA 135, AQUA 140, AQUA 150, AQUA 160, AQUA 165, AQUA 170, AQUA 180, AQUA 190, and AQUA 195 all with a C- or higher or Instructor permission.

HEALTH

AHA 101

CPR: ADULT HEARTSAVER 0 CR

This course includes one-person CPR, obstructed airway techniques, and risk factors of heart disease. Skills completion and written exam are required for card, which is good for two years

AHA 102

CPR: PEDIATRIC HEARTSAVER 0 CR

This three-hour course teaches infant and child CPR and obstructed airway techniques as well as discussing home safety. Skills completion and written exam are required for card, which is good for two years.

AHA 103

FIRST AID FUNDAMENTALS 0 CR

This eight-hour first aid course is in compliance with WAC 296-24 of the State of Washington and meets OSHA/WISHA requirements for first aid training. This course teaches the fundamentals of first aid in order to gain access to the EMS system, render emergency care in a low-risk occupational environment, and teaches adult CPR and obstructed airway techniques. First aid cards are good for two years. Attendance at all sessions and demonstration of competency is required for certification.

AHA 104

CPR: INSTRUCTOR COURSE AHA 0 CR

This 8-hour course prepares the student to teach CPR as an American Heart Association instructor. This course will cover adult, child and infant basic life support skills using the newly established 2005 CPR guidelines. Previous training in CPR is preferred but not required. Students are required to purchase the instructor guides and the CORE Instructor materials prior to class. Must show proof of completing, through independent study, the CORE Instructor Program prior to class.

AHA 105

PEDIATRIC: CPR FOR FAMILY & FRIENDS 0 CR

A course designed to assist anyone desiring to learn CPR for personal reasons, but not needing

a completion card for employment. This pediatric course covers CPR for infants and children, and relief of foreign body airway obstruction. A participation card is not issued for this course.

AHA 201

HEALTHCARE PROVIDER CPR 0 CR

This basic life-support course is designed for healthcare providers and includes adult one- and two-rescuer CPR, pediatric one-rescuer CPR, and barrier devices. Successful written and mannequin skill evaluation and attendance at all sessions is required to receive a card. BLS Provider CPR card is good for two years.

AHA 202

BLS HEALTHCARE PROVIDER REFRESHER 0 CR

This course is designed to update those who hold a current AHA CPR BLS for Healthcare Providers card. Topics will include adult, child, and infant CPR, relief of foreign body airway obstruction, ventilation techniques using pocket masks and bag-valve masks, and use of the automatic external defibrillator. BLS Provider CPR card is good for two years.

AHA 203

HEALTHCARE PROVIDER FIRST AID & CPR 0 CR

This course will teach both professional level CPR and first aid. CPR will cover adult, child and infant skills, barrier devices and use of the AED (automated external defibrillator). The first aid component will cover all requirements per OSHA and WISHA and will discuss some advanced first aid skills. The CPR portion does require a written exam to be passed with 84% as well as skills evaluation prior to card issuance. Both CPR and first aid cards are good for two years.

AHA 204

PEDIATRIC FIRST AID & CPR 0 CR

New from the American Heart Association, this course, specifically for those who work in a child-care setting, covers materials not traditionally taught (splinting, eye infections, immunizations, emergency plans) in standard first aid classes. Those who are recommended to attend are: school teachers, coaches, camp and troop leaders, counselors, foster parents, babysitters, etc. A combined First Aid and CPR (infant and child) card will be issued and good for two years.

HLTH 154

HEALTHCARE PROVIDER FIRST AID & CPR 1 CR

This course will teach both professional level CPR and first aid. CPR will cover adult, child and infant skills, barrier devices and use of the AED (automated external defibrillator). The first aid component will cover all requirements per OSHA and WISHA and will discuss some advanced first aid skills. The CPR portion does require a written exam to be passed with 84% as well as skills evaluation prior to card issuance. Text required.

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION

HVACR 101

FUNDAMENTALS OF REFRIGERATION 8 CR

This course presents safety in the workplace, the fundamentals of vapor compression refrigeration, HVAC/R tools, equipment and refrigerants. Students will build a working refrigeration system in the lab portion of this course. Instructors will have the students pressure test, evacuate, and charge their systems with industry standard equipment.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 102 with a C- or higher or concurrent enrollment in HVACR 102, or Instructor permission.

HVACR 102

BASIC ELECTRICITY FOR HVACR 8 CR

This course presents the fundamentals of electrical theory, controls, motors, and applications. Emphasis is placed on proper diagnostic and troubleshooting procedures. Lectures and assigned readings are supplemented by the student's individual work on projects in the lab on an electrical circuitry trainer. Proper electrical safety and codes are observed in the coursework.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 101 with a C- or higher or concurrent enrollment in HVACR 101, or Instructor permission.

HVACR 121

COMMERCIAL SELF-CONTAINED SYSTEMS 7 CR

This course analyzes medium and low temperature refrigeration systems and components used in commercial applications. Emphasis is placed on safe trouble-shooting techniques on live equipment as installed in industry.

Prerequisite(s): HVACR 101 and HVACR 102, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 122.

HVACR 122

COMMERCIAL ICE SYSTEMS 7 CR

This course introduces the various types and makes of commercial ice production systems used in restaurants, institutions, and process

applications. Wiring diagrams and sequence of operations are emphasized. Proper installation, maintenance, cleaning, sanitizing and troubleshooting techniques are emphasized. The student will verify proper production, learn how to build a wiring schematic, identify faults inserted by instructor and repair the inserted faults. Students must test for EPA section 608 certification and pass with a minimum of Type 2 certification in order to pass this course.

Prerequisite(s): HVACR 101 with a C- or higher and HVACR 102 with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 121.

HVACR 131 FURNACE TECHNOLOGY 7 CR

This course introduces gas piping, venting and control systems for several different types of furnaces in residential and commercial applications. Emphasis is placed on electrical safety, BTU calculations, and airflow calculations, cost analysis, wiring diagrams, and troubleshooting techniques. Classroom discussion and hands on lab activities are designed to enable students to quickly identify system problems and propose solutions.

Prerequisite(s): HVACR 121 and HVACR 122, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 132.

HVACR 132 BOILERS AND HYDRONIC HEAT 7 CR

This course explores the use of boilers and hydronics to heat residential and commercial buildings. Students will apply proper tools and techniques to identify components, design, install, maintain and troubleshoot problems in hydronic heating systems. Systems used in the lab will use natural gas, propane, or fuel oil for residential and commercial boilers.

Prerequisite(s): HVACR 121 and HVACR 122, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 131.

HVACR 201 A/C & AIRFLOW 8 CR

This course prepares the student to install, start-up, troubleshoot and diagnose problems in comfort cooling air conditioning systems. Emphasis is given to wiring techniques, proper refrigeration piping, controls, start-up and maintenance.

Prerequisite(s): HVACR 131 and HVACR 132, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 202 with a C- or higher or concurrent enrollment in HVACR 202, or Instructor permission.

HVACR 202 APPLIED HEAT PUMP SYSTEMS 5 CR

This course prepares the student to install, start-up, troubleshoot and diagnose problems in residential and commercial heat pump systems. Emphasis is given to wiring techniques, proper refrigeration piping, controls, start-up and maintenance. Integration of auxiliary heat components, balance point identification, cost analysis to other fuels, and geothermal systems are all introduced and applied in the lab. Students must pass the Light Commercial Air Conditioning and Heating Industry Competency Exam (ICE) in order to pass this course.

Prerequisite(s): HVACR 131 and HVACR 132, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 201 with a C- or higher or concurrent enrollment in HVACR 201, or Instructor permission.

HVACR 221 COMMERCIAL REFRIGERATION 8 CR

This course expands on commercial refrigeration systems presented in HVACR 121 and HVACR 122. Five different commercial systems will be utilized in the lab area in conjunction with the lecture portion of this course. Each ancillary component is analyzed for compatibility, proper selection, operation, need, energy savings and equipment reliability. Wiring diagrams are emphasized and diagnosis of failed components is also addressed. How the system operates as a whole is critical and students are encouraged to research new and innovative applications for these systems.

Prerequisite(s): HVACR 201 and HVACR 202, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 222.

HVACR 222 INDUSTRIAL REFRIGERATION 7 CR

This course will provide an in depth study of industrial applications of chilled water-cooling systems. Classroom activities are supplemented by students individual and group work on five lab projects including screw compressors and a cooling tower. Analyzing various systems for cost benefits, installation, service and proper annual maintenance procedures are emphasized. Transcritical and ammonia systems and all the related safety implications are included in this course. Students must pass the Commercial Refrigeration Industry Competency Exam (ICE) in order to pass this course.

Prerequisite(s): HVACR 201 and HVACR 202, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 221 with a C- or higher or concurrent enrollment in HVACR 221, or Instructor permission.

HVACR 231 CONTROL THEORY FOR HVAC/R 8 CR

This course presents basic control theory for energy management and control systems. Systems covered in-depth include electric, electronic, dis-

tributed digital control, pneumatic, VAV and VVT.

Prerequisite(s): HVACR 221 and HVACR 222, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 232 with a C- or higher or concurrent enrollment in HVACR 232, or Instructor permission.

HVACR 232 COMMERCIAL & INDUSTRIAL BOILERS 2 CR

This course presents commercial and industrial boilers and combustion controls, advanced flame safeguards, safety, code compliance and efficiency testing of gas and oil fired systems. Classroom activities are supplemented by the student's individual and group work on mocked-up and actual operating systems.

Prerequisite(s): HVACR 221 and HVACR 222, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: HVACR 231 with a C- or higher or concurrent enrollment in HVACR 231, or Instructor permission.

HVACR 233 EMPLOYMENT PREPARATION 1 CR

This course prepares students with the necessary skills to research companies in the HVAC/R industry, successfully create a professional resume and cover letter, and practice articulating their HVAC/R skills and experience in mock interviews.

Prerequisite(s): HVACR 221 and HVACR 222, both with a C- or higher, or Instructor permission.

HISTORY

HIST& 146 UNITED STATES HISTORY I 5 CR

Survey of Native American societies, European explorers, and the lifestyles of the new continent, the independence movement, and the problems of a new nation.

HIST& 147 UNITED STATES HISTORY II 5 CR

Survey course covering the rise of nationalism, evolution of American lifestyles, Civil War, westward movement, and the American industrial revolution.

HIST& 148 UNITED STATES HISTORY III 5 CR

Survey course exploring the social, political, and economic history of the United States from 1900 to the present.

HUMANITIES

HUM& 101

INTRODUCTION TO HUMANITIES 5 CR

Students explore the works in the literary, performing, and visual arts. Students identify common themes in the arts, analyze works representing diverse perspectives, and investigate the political, social, technological and historical contexts of works. A broader understanding is encouraged through the exploration and synthesis of outside sources using research methods.

Prerequisite(s): Accuplacer Reading Comprehension score of 71 or RDG 085 with a C or higher, and Accuplacer Sentence Skills score of 71 or ENGL 092 with a C or higher.

INDUSTRIAL MAINTENANCE AND MECHATRONICS

AM 100

ADVANCED MANUFACTURING PATHWAYS 3 CR

Students will learn about the career and networking options in Industrial Maintenance & Mechatronics, Instrumentation & Control Technology and Process Technology industries. They will explore the roles and responsibilities of plant operators and maintenance technicians. Team work and team dynamics will also be covered. This course will introduce basic concepts in industrial safety and industrial terminology including OSHA 10 Training. Students will also develop a course work plan for their chosen field of study.

AM 105

DIRECT CURRENT 4 CR

A thorough introduction for the new student to the fundamental properties and applications of electricity. In addition, safety procedures are emphasized. Students learn how to make good solder connections and recognize and repair bad solder connections. Students learn how to select and clean soldering tools. This course continues with the basics of current, voltage and resistance. The application of Ohm's Law and the construction of circuits to verify electronic theory provide the knowledge necessary to build the foundation for a thorough understanding of electronics. This course teaches the student to use a logical course of correction to an electronic problem in a minimum amount of time. Student will learn generic troubleshooting technique procedures and tricks of the trade from analog to digital circuits.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER QAS (254) or higher OR MATH 098 with a C or higher.

AM 110

INTRODUCTION TO COMPUTER APPLICATIONS 2 CR

In this course, students will learn to identify and utilize computer resources to the Industrial Maintenance and Mechatronics program. Industrial application programs will be introduced, and students will learn to select and apply the programs. The principles of this course will be used throughout program courses of study.

Corequisite(s): AM 100, AM 105, and PTEC 102.

EMTEC 105

TRADE SAFETY 3 CR

The topics will be on health and safety core rules, material safety data sheets, fall protection, confined spaces, Lock out/Tag out requirements, ladder, scaffolding and portable power tools as well as navigating the Washington State Labor and Industries website. Utilizing dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry.

Prerequisite(s): ACCUPLACER Algebra score of 75 or MATH 098 with a C or higher; ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher.

EMTEC 106

COMPUTER PROGRAMMING 3 CR

This course introduces students to the fundamentals of good program design, coding, testing, and documentation. Students will learn to employ good user interface design, standardization and variable naming, decision operators, looping mechanisms, subroutines and error handling as they build their own programs.

Prerequisite(s): EMTEC 225, EMTEC 121, and EMTEC 211, all with a C- or higher.

Corequisite(s): EMTEC 205, EMTEC 123, and EMTEC 231.

EMTEC 110

DC CIRCUITS 6 CR

The purpose of this course is to give students a firm foundation in electrical theory. The course covers DC circuit theory with an emphasis on circuit analysis, practical application, and troubleshooting. The course requires an understanding of simple mathematics.

Completion Of or Concurrent Enrollment In: EMTEC 105 with a C- or higher or concurrent enrollment in EMTEC 105.

EMTEC 121

FUNDAMENTALS OF HYDRAULIC AND PNEUMATICS 5 CR

This is the first course in a series designed to prepare the industrial millwright, electrician and maintenance technician with the knowledge and skills necessary to maintain, diagnose, and repair hydraulic and pneumatic systems. Instructional material is computer "on-line" with selected modules emphasizing hydraulic pumps, safety,

compressed air basics and types of gauges.

Prerequisite(s): EMTEC 210, EMTEC 125, and EMTEC 126, all with a C- or higher.

Corequisite(s): EMTEC 225, and EMTEC 211.

EMTEC 123

HYDRAULICS & PNEUMATICS CIRCUITS 5 CR

This course covers principles and operating characteristics of hydraulic and pneumatic systems, and components. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for the fluid power industry. Text and basic tools required.

Prerequisite(s): EMTEC 121 with a C- or higher.

EMTEC 125

APPLIED MECHANICS 5 CR

This course introduces the student to fundamental mechanical concepts necessary for the installation, operation, and maintenance of industrial machinery. The student will study and apply industry standard principals to safely plan and facilitate controlled lifting of equipment.

Prerequisite(s): AM 100, AM 105, PTEC 102, and AM 110, all with a C- or higher.

Corequisite(s): EMTEC 210, and EMTEC 126.

EMTEC 126

ENGINEERING GRAPHICS 4 CR

The student will discover print reading format and dimension with types and symbols. A study of thread specifications and building drawings will be presented. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): AM 100, AM 105, AM 110, and PTEC 102, all with a C- or higher.

Corequisite(s): EMTEC 125, EMTEC 210.

EMTEC 131

RIGGING 4 CR

The student will study and apply industry standard principals to safely plan and facilitate controlled lifting of equipment. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 125 with a C- or higher.

EMTEC 133

INTRODUCTION TO MACHINERY SKILLS 4 CR

Studies introduce shop safety and guidelines, the use of measuring tools, basic shop equipment and a study of vertical milling machines and lathes. Supervised hands on project will be produced by the student. Utilizing dynamic lecture and discussion, and hands-on practice, students

develop knowledge and skills for careers in industry.

Prerequisite(s): EMTEC 200, EMTEC 207, EMTEC 220, EMTEC 217 and WLD 173, all with a C- or higher.

Corequisite(s): EMTEC 262, EMTEC 261, EMTEC 238, and EMTEC 260.

EMTEC 180

MANUFACTURING COMPUTER APPLICATIONS 4 CR

In this course students are introduced to Microsoft applications such as Access, PowerPoint, Word, and Excel. Students will learn how to use these programs in an industrial setting.

Prerequisite(s): EMTEC 126 with a C- or higher.

EMTEC 200

INDUSTRIAL POWER DISTRIBUTION 3 CR

Student will develop an understanding of the electrical distribution system by learning the basic concepts for DC and AC power system and extending this knowledge to single-phase and 3-phase AC circuits, industrial wiring, panel boards, electrical equipment and protection.

Prerequisite(s): EMTEC 205, EMTEC 123, EMTEC 106, and EMTEC 231, all with a C- or higher.

Corequisite(s): EMTEC 207, EMTEC 220, WLD 173, and EMTEC 217.

EMTEC 205

PROGRAMMABLE LOGIC CONTROLLERS 5 CR

This course is an introductory study of Programmable Logic Controllers, including configuring hardware and software, general construction and operation as well as programming.

Prerequisite(s): EMTEC 211, EMTEC 225, and EMTEC 121, all with a C- or higher.

Corequisite(s): EMTEC 123, EMTEC 106, and EMTEC 231.

EMTEC 207

INDUSTRIAL MAINTENANCE MANAGEMENT 5 CR

In this course, the student will examine the components and functions of Industrial maintenance management. Maintenance methods, problem solving methods, work orders, scheduling, spares and stores controls, equipment histories, back logs, asset management practices, lean management will be covered. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry.

Prerequisite(s): EMTEC 205, EMTEC 123, EMTEC 106, and EMTEC 231, all with a C- or higher.

Corequisite(s): EMTEC 200, EMTEC 220, WLD 173, and EMTEC 217.

EMTEC 210

AC CIRCUITS 4 CR

The AC Circuits class builds on the concepts that are covered in AM 105. The course covers AC circuit theory with an emphasis on circuit analysis, practical application, and troubleshooting. The course requires an understanding of simple mathematics.

Prerequisite(s): AM 105 with a C- or higher.

Corequisite(s): EMTEC 125, EMTEC 126.

EMTEC 211

ELECTRICAL CONTROLS I 5 CR

This course introduces the student to the components used in today's control systems. Control schematics are introduced with hands-on use of various multi meters in troubleshooting relay logic circuits. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 210 with a C- or higher.

EMTEC 215

PROGRAMMABLE LOGIC CONTROLLERS II 5 CR

In this course, students build on the foundation set in EMTEC 205. This course addresses advanced PLC topics including math and logic functions.

Prerequisite(s): EMTEC 205 with a C- or higher.

EMTEC 217

INSTRUMENTATION & CONTROLS 4 CR

This course introduces the student to sensor indicators and transmitters. Measurement, gages, flow sensors and other industrial sensing devices will be studied in this class. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 205 with a C- or higher.

EMTEC 218

INTRODUCTION TO NATIONAL ELECTRICAL CODE 2 CR

The student is introduced to some of the common industrial applications of the National Electrical Codes such as grounding, bonding, wire sizing, conduit selection, junction box selection, motor overload protection and current protection selection. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 225 with a C- or higher.

EMTEC 220

MICRO-CONTROLLERS 5 CR

This course focuses on the application of microprocessors in industry, with emphasis on understanding basic operation, interfacing, and programming. Study includes basic architecture,

memory structure, programming language, interfacing with peripheral devices, input/output devices, and diagnostics.

Prerequisite(s): EMTEC 205, EMTEC 123, EMTEC 106, and EMTEC 231, all with a C- or higher.

Corequisite(s): EMTEC 200, EMTEC 207, EMTEC 217, and WLD 173.

EMTEC 225

SOLID STATE COMPONENTS 4 CR

This course builds on EMTEC 110 and EMTEC 210, introducing the student to circuits involving diodes, transistors, SCRs, and other solid state devices.

Prerequisite(s): EMTEC 210 with a C- or higher.

EMTEC 230

PROBLEM SOLVING FOR MANUFACTURING & THE TRADES 3 CR

This class addresses technical problem-solving skills including reading and interpreting technical documents and instructions

Prerequisite(s): EMTEC 180 with a C- or higher.

EMTEC 231

BEARINGS & DRIVES 5 CR

The student will learn the application and theory of bearing technology with emphasis on storing, installing, and maintenance. The course will include an examination of different drive types with emphasis on theory, maintenance and repair. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 125 with a C- or higher.

EMTEC 232

DRIVE ALIGNMENT-CONVEYORS & MACHINING SYSTEMS 4 CR

Principals and devices used for joining and aligning shafts are presented in this course. Conveying equipment and other automatic transfer machinery will be discussed. Troubleshooting and repair of drives and conveyors will be covered. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 231 with a C- or higher.

EMTEC 234

VALVES, PUMPS & TRAPS 5 CR

The student will examine the principles of pumps, valves, and steam traps. Students will apply mechanical skills in the rebuilding of basic pump types along with diagnosing problems. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 125 with a C- or higher.

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EMTEC 237

COMPUTERIZED MAINTENANCE & MANAGEMENT SYSTEMS 3 CR

In this course, the student will examine the components and functions of a CMMS. Work orders, scheduling, spares and stores controls, equipment histories, back logs, asset management practices will be covered. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry. Text and basic tools required.

Prerequisite(s): EMTEC 180 with a C- or higher.

EMTEC 238

DRIVE ALIGNMENT AND ROTARY MACHINES 4 CR

Principals and devices used for joining and aligning shafts are presented in this course. Troubleshooting and repair of misalignment will be covered. The student will examine the principals of pumps, compressors, turbines, and related industrial rotary machines. Utilizing state-of-the-art computer interactive software, dynamic lecture and discussion, and hands-on practice, students develop knowledge and skills for careers in industry.

Prerequisite(s): EMTEC 200, EMTEC 207, EMTEC 220 and EMTEC 217, all with a C- or higher.

Corequisite(s): EMTEC 261, EMTEC 262, EMTEC 133, and EMTEC 260.

EMTEC 260

AUTOMATED MANUFACTURING SYSTEMS AND ROBOTICS 4 CR

The purpose of this course is to provide an overview of robotics and automation technology. Students will explore the basic principles of manipulator, actuator, and control systems. The course requires an understanding of simple mathematics and the basic use of computers. The laboratory will be used to perform real-time exercises in programming applications and techniques through the use of various training robots and systems.

Prerequisite(s): EMTEC 210 and EMTEC 220, both with a C- or higher.

Corequisite(s): EMTEC 262, EMTEC 261, EMTEC 133, and EMTEC 238.

EMTEC 261

INTRODUCTION TO SMART SENSORS AND ACTUATORS 2 CR

This course will provide students with theoretical and practical knowledge on Artificial Intelligence (AI) sensor systems including sensor selection, calibration, control, digital signal processing, AI algorithm and Internet of Things (IoT). Students will be introduced to theory and operation of various smart sensor technologies and their applications in an AI system.

Prerequisite(s): EMTEC 200, EMTEC 207, EMTEC 220, EMTEC 217, and WLD 173, all with a C- or higher.

Corequisite(s): EMTEC 262, EMTEC 133, EMTEC 238, and EMTEC 260.

EMTEC 262

ELECTRICAL AND MECHANICAL TROUBLESHOOTING 6 CR

In this course students will learn troubleshooting methods for electrical and mechanical systems. Students will learn to apply emergency maintenance, preventive maintenance and repair methods for relays, contactors, starters, electrical motors, motor drives, electrical elements such as resistors, capacitors, inductors, transformers, diodes, transistors, thyristors, and mechanical elements such as bearings, drives, pumps, compressors, fluidic systems, mechanical vibrations, and material handling systems.

Prerequisite(s): EMTEC 231, EMTEC 225, and EMTEC 211, all with a C- or higher.

Corequisite(s): EMTEC 261, EMTEC 133, EMTEC 238, and EMTEC 260.

PTEC 102

PROCESS TECHNOLOGY I (EQUIPMENT) 5 CR

The purpose of this course is to provide an overview of the equipment and tools used in the industrial maintenance, process technology and instrumentation industries including piping, tubing, hoses and fittings; valves; pumps. Also, including compressors; turbines; motors and engines; power transmission and lubrication; heat exchangers; cooling towers; furnaces and boilers; filters and dryers; vessels; and their associated instrumentation. Students will be introduced to many process related equipment concepts, such as purpose, components, operation, and the Process and Maintenance Technician's roles for operating and troubleshooting the equipment.

INSTRUMENTATION & CONTROL

AM 100

ADVANCED MANUFACTURING PATHWAYS 3 CR

Students will learn about the career and networking options in Industrial Maintenance & Mechatronics, Instrumentation & Control Technology and Process Technology industries. They will explore the roles and responsibilities of plant operators and maintenance technicians. Team work and team dynamics will also be covered. This course will introduce basic concepts in industrial safety and industrial terminology including OSHA 10 Training. Students will also develop a course work plan for their chosen field of study.

AM 105

DIRECT CURRENT 4 CR

A thorough introduction for the new student to the fundamental properties and applications of electricity. In addition, safety procedures are emphasized. Students learn how to make good solder connections and recognize and repair bad solder connections. Students learn how to select and clean soldering tools. This course continues

with the basics of current, voltage and resistance. The application of Ohm's Law and the construction of circuits to verify electronic theory provide the knowledge necessary to build the foundation for a thorough understanding of electronics. This course teaches the student to use a logical course of correction to an electronic problem in a minimum amount of time. Student will learn generic troubleshooting technique procedures and tricks of the trade from analog to digital circuits.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER QAS (254) or higher OR MATH 098 with a C or higher.

INST 102

ADVANCED ELECTRICAL FUNDAMENTALS 10 CR

Students will learn and explore the fundamental properties and applications of electricity, electromagnetism, semiconductors, amplifiers, operational amplifiers, and digital technologies. The course will expand upon both AC & DC circuits, as well as semi-conducting components, amplifier circuits, and be introduced to digital communications & programming. This course continues with and builds upon the basics of current, voltage, resistance, inductance, capacitance, reactance, impedance, and more through the application of Ohm's law and many others. Next, students will learn the operational theory of semiconductors and work to gain a strong foundational knowledge of those devices, how amplifiers are constructed and function, and then finally end with a robust introduction to the world of digital technology. This course teaches students to use a logical course of correction to an electronic problem in a minimum amount of time. Students will learn generic troubleshooting technique procedures and tricks of the trade from analog to digital as well.

Prerequisite(s): AM 105 with a D or higher.

INST 103

PRACTICAL ADVANCED ELECTRICAL FUNDAMENTALS 6 CR

This class builds upon the skills in Advanced Electrical Fundamentals through practical application. Students will explore the fundamental properties and applications of electricity, electromagnetism, semiconductors, amplifiers, operational amplifiers, and digital technologies through hands on projects & experimentation. The course will expand upon both AC & DC circuits and cover semi-conducting components, amplifier circuits, and an introduction to digital communications & programming. This course continues with and builds upon the basics of current, voltage, resistance, inductance, capacitance, reactance, impedance, and so much more through the hands-on application of Ohm's law and many others. Next, students will learn the practical operation of semiconductors and work to gain a strong foundational knowledge of those devices, and how amplifiers are constructed and function, and then finally end with a robust intro-

duction to the world of digital technology. This course teaches students to use a logical course of correction to an electronic problem in a minimum amount of time, as well as the application of Ohm's Law and the construction of circuits to verify electronic theory, and provide the knowledge necessary to build the foundation for a thorough understanding of electronics. Students will learn generic troubleshooting technique, tricks of the trade from analog to digital, effective communication reporting, proper panelboard and terminations assembly, how to field construct power supplies, use semiconducting devices in circuits, and interpret digital signals and logic gates.

Prerequisite(s): AM 105 with a D or higher.

Completion Of or Concurrent Enrollment In: Completion of INST 102 with a D or higher or concurrent enrollment in INST 102.

INST 107

DIGITAL AUTOMATION FUNDAMENTALS

8 CR

This course will focus on the concepts, terminology, components, and circuits that combine to form basic digital motor control systems, human machine interfaces (HMIs), and programmable logic controllers (PLCs). Students will learn the concepts, skills, and theories needed to wire, configure, and use electromechanical relays to control electric motors and other discrete (on/off) control elements for real processes. Students will also learn how to wire, configure, and use variable-frequency motor controls to use with three-phase AC motors as final control elements. After covering digital and motor controls, the course will then proceed to PLCs and HMIs. While covering PLCs and HMIs, the course will discuss how to wire, program, and configure PLCs to perform discrete control functions including combinational logic, counters, and timers. Additionally, students will learn how to program data-handling functions in PLCs including comparison, arithmetic, and data transfer instructions. Students will also learn to connect and program HMI panels to PLCs. Students will learn generic troubleshooting techniques & procedures and tricks of the trade from analog to digital as well.

Prerequisite(s): INST 102 with a D or higher.

INST 108

PRACTICAL DIGITAL AUTOMATION FUNDAMENTALS

8 CR

This course will focus on the practical applications of circuits and science that combine to form basic digital motor control systems, human machine interfaces (HMIs), and programmable logic controllers (PLCs). Through hands on construction and experimentation, students will gain the skills needed to wire, configure, and use electromechanical relays to control electric motors and other discrete (on/off) control elements for real processes. Students will also learn how to wire, configure, and use variable-frequency motor controls to use with three-phase AC motors as final control elements. After covering digital and motor controls, this course will then proceed to PLCs and HMIs. While covering PLCs and HMIs, students will program and configure PLCs to per-

form discrete control functions including combinational logic, counters, and timers. Additionally, students will learn how to program data-handling functions in PLCs including comparison, arithmetic, and data transfer instructions. Students will also learn to connect and program HMI panels to PLCs. The course culminates with a group project constructing a fully automated system using both a PLC & HMI. Students will learn generic troubleshooting techniques & procedures and tricks of the trade from analog to digital as well.

Prerequisite(s): INST 103 with a D or higher.

Completion Of or Concurrent Enrollment In: Completion of INST 107 with a D or higher or concurrent enrollment in INST 107.

INST 205

JOB PREPARATION I

1 CR

Preparation for employment including resume preparation, cover letter writing, job search engine use, and interviewing skills.

Prerequisite(s): INST 200 and MATH& 141 with a C or higher.

INST 206

JOB PREPARATION II

1 CR

This course teaches you how to get the jobs that are not listed in classified ads or job search engines. You will learn how to professionally network, research employers for job potential, conduct informational interviews, and otherwise take an active approach in securing employment within your professional field.

Prerequisite(s): INST 205 and MATH& 141 with a C or higher.

INST 233

PROTECTIVE RELAYS

4 CR

In this course you will learn how to commission, test, and analyze basic protective relays and instrument transformers used to protect equipment in electrical power systems. This course also reviews phasor mathematics for three-phase electrical circuits.

Prerequisite(s): MATH& 141 with a C or higher and INST 141 with a C- or higher.

INST 240

PRESSURE AND LEVEL MEASUREMENT

6 CR

In this course you will learn how to precisely measure both fluid pressure and fluid/solids level in a variety of applications, as well as accurately calibrate and efficiently troubleshoot pressure and level measurement systems.

Prerequisite(s): MATH& 141 with a C or higher and completion of or concurrent enrollment in INST 200.

INST 241

TEMPERATURE & FLOW MEASUREMENT

6 CR

In this course you will learn how to precisely measure both temperature and fluid flow in a variety of applications, as well as accurately calibrate and

efficiently troubleshoot temperature and flow measurement systems.

Prerequisite(s): MATH& 141 with a C or higher and completion of or concurrent enrollment in INST 240.

INST 242

ANALYTICAL MEASUREMENT

5 CR

This course teaches the basic principles of process analysis including pH, electrical conductivity, turbidity, and chemical constituency.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 241.

INST 250

FINAL CONTROL ELEMENTS

5 CR

In this course you will learn how to precisely control energy in process systems using fluid valves and motors. You will also learn how fluid power systems work, and how to efficiently troubleshoot final control elements.

Prerequisite(s): MATH& 141 with a C grade, and completion of or concurrent enrollment in INST 200.

INST 251

PID CONTROL

5 CR

This course teaches you how the most basic and widely-used control algorithm works: proportional-integral-derivative (PID). In this course you will see how the PID algorithm is implemented in pneumatic, analog electronic, and digital control systems.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 250.

INST 252

LOOP TUNING

4 CR

This course teaches the art and science of tuning PID controllers for robust loop control, including Ziegler-Nichols closed-loop and open-loop methods in addition to heuristic methods.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 251.

INST 260

DATA ACQUISITION SYSTEMS

4 CR

This course reviews digital theory learned in the first year (Core Electronics) courses, building upon that foundation to explore industrial data buses (including Ethernet) and indicating, data-logging, and SCADA systems.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 200.

INST 262

DIGITAL CONTROL SYSTEMS

5 CR

This course teaches the basic principles of distributed instrumentation, including distributed control systems (DCS), FOUNDATION Fieldbus instruments, and wireless field instruments.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 260.

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INST 263

CONTROL STRATEGIES 5 CR

This course teaches the theory and practical application of process control strategies including cascade, feed forward, selector, and override controls. Safety instrumented systems (SIS) concepts are also covered in this course.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 262.

INST 290

INTERNSHIP 5 CR

An internship exists to give students the opportunity to learn instrumentation in a real-world setting. In this course, you will work under the direction of a supervisor at a real job site, performing work directly related to instrumentation and control. Specific objectives will vary with the job and with the supervision.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 200.

INST 292

INTERNSHIP 10 CR

An internship exists to give students the opportunity to learn instrumentation in a real-world setting. In this course, you will work under the direction of a supervisor at a real job site, performing work directly related to instrumentation and control. Specific objectives will vary with the job and with the supervision.

Prerequisite(s): MATH& 141 with a C or higher, and completion of or concurrent enrollment in INST 200.

PTEC 102

PROCESS TECHNOLOGY I (EQUIPMENT) 5 CR

The purpose of this course is to provide an overview of the equipment and tools used in the industrial maintenance, process technology and instrumentation industries including piping, tubing, hoses and fittings; valves; pumps. Also, including compressors; turbines; motors and engines; power transmission and lubrication; heat exchangers; cooling towers; furnaces and boilers; filters and dryers; vessels; and their associated instrumentation. Students will be introduced to many process related equipment concepts, such as purpose, components, operation, and the Process and Maintenance Technician's roles for operating and troubleshooting the equipment.

JOB SKILLS

CTE 108

JOB SKILLS 1 CR

This course provides students with the foundation for job preparation and job searching. Students will identify their qualifications for their chosen career; identify what employers look for in strong candidates; build resumes and cover letters; gain tips on completing applications; job and

informational interviewing; as well as job searching, professional networking, and tips for setting up a successful career. This is a hybrid course that includes a combination of face-to-face and online instruction. It is important that students should have skills in Microsoft Word before enrolling in this course.

Prerequisite(s): Students should have skills in Microsoft Office before enrolling in this course.

CTE 109

JOB SKILLS II 1 CR

This course teaches the students how to find employment that are not listed in classified advertisements or job search engines. Students will apply for positions in their field of interest, and provide feedback from their experiences.

LEGAL

LGL 225

FIELD-BASED EXPERIENCE 5-7 CR

Students will arrange to work in a college-approved professional setting where they will apply business and legal administrative support skills and knowledge in a variety of related activities.

Prerequisite(s): Instructor permission.

LGL 226

FIELD-BASED EXPERIENCE 6 CR

Students will work in a legal office-related job receiving pay or volunteering.

Prerequisite(s): Instructor permission.

MACHINING

MACH 110

MACHINING 1 LAB EXTENSION 2 CR

In this lab course students use manual knee mills and engine lathes to practice producing parts to print specifications. Skills practiced on a lathe are facing, O.D. turning, grooving, parting-off, drilling reaming. Skills practiced on a mill are squaring a vise, tool setting, edge finding, facing, end mill use, drilling, tapping, and tramming of the table. Students practice the use of micrometers, calipers, indicators, and various other measuring tools to verify parts and aid in set-ups.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): MACH 181 and MACH 115.

MACH 112

MACHINING 2 LAB EXTENSION 2 CR

In this lab course students use manual knee mills and engine lathes to practice producing complex parts to print specifications. Students practice

mill and lathe operations to improve their proficiency in part creation, using their order of operations. Students practice producing parts while under time requirements. Students practice complex measuring techniques to complete their First Articles of Inspections.

Prerequisite(s): MACH 181 and MACH 110 with a C or higher.

Corequisite(s): MACH 182.

MACH 114

MACHINING 3 LAB EXTENSION 4 CR

In this lab students practice setting up CNC milling machines. Operations practiced include tool building and establishing tool off-sets, part holding and setting origins. Skills practiced are machine crash mitigation and CNC part production. During this lab students use G-Code to interpret CNC mill actions and correct them. Students produce parts to print specifications.

Prerequisite(s): MACH 112, MACH 116, and MACH 182 all with a C or higher.

Corequisite(s): MACH 183.

MACH 115

BLUEPRINT READING 1 5 CR

This course is an introduction to blueprint reading, the standard practice used to communicate engineered design information. Students learn current and past terms, abbreviations, symbols, dimensioning systems, and information relayed in the title block. Dimensioning methods, tolerances, accumulating tolerances and calculating unknown dimensions is a point of emphasis. Sketching is used to develop visualization skills to explain and demonstrate orthographic projection, multi view drawings, and section views.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): MACH 110 and MACH 181.

MACH 116

BLUEPRINT READING 2 5 CR

This course builds on the curriculum delivered in MACH 115. While still focused on the blueprint reading, many of the terms discussed relate directly to Machining, and how machinists need to interpret them. To include thread specifications, tappers, right triangles, metric conversions, and coordinate dimensioning. Terms and symbols related to Geometric Dimensioning and Tolerancing are points of emphasis. Students are exposed to the application of GDT and its benefits when verifying machined parts.

Prerequisite(s): MACH 115 with a C or higher.

MACH 181

MANUAL MACHINING 1 5 CR

In this introductory machining course students learn terms and names associated with both the manual knee mill and manual engine lathe. Students operate both machines. Operations on

the lathe include gear setting speeds and feeds, use of the carriage, cross-slide, compoundrest, tailstock and 3-jaw chuck. Skills introduced are facing, O.D. turning, grooving, parting-off, drilling reaming. Mill operations include speed and feed adjustments, operation of the knee, saddle, and table, use of a mill vise and the 3-axis coordinate system. Skills performed are squaring a vise, tool setting, edge finding, facing, end mill use, profiling, drilling, and tapping. All skills are used to produce parts to print specifications. Students use micrometers, calipers, indicators, and various other measuring tools to verify parts and aid in set-ups.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher and ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher and ACCUPLACER Arithmetic (230) or higher OR ABE 050 with a C or higher.

Corequisite(s): MACH 110 and MACH 115.

MACH 182 MANUAL MACHINING 2 5 CR

A continuation of the skills achieved in MACH 181. Students perform more advanced lathe and mill operations. Complex parts with tighter tolerance will be produced. Time management is a point of emphasis. Students use height gages, pins and other measuring equipment to verify that parts meet print specifications. Students develop part plans, to include order of operations and First Articles of Inspection.

Prerequisite(s): MACH 181 and MACH 110 with a C or higher.

Corequisite(s): MACH 112.

MACH 183 INTRODUCTION TO CNC MACHINING AND PROGRAMMING 5 CR

This introductory course covers the principles of CNC machining. Students set up a CNC mill, including work holding, tools, tool offsets and program origins. Students follow correct procedures in crash mitigation and part production on a CNC mill. Students create programs writing G-Code. Students read G-Code, interpreting the CNC machine's actions. Students trouble-shoot programs written in G-code, locating the errors and correcting them.

Prerequisite(s): MACH 112, MACH 116, and MACH 182, all with a C or higher.

Corequisite(s): MACH 114.

MACH 191 MANUAL MACHINING FOR NON-MAJORS 5 CR

Proper setup of manual lathes and mills will be emphasized in this Introductory machining course for non-program students. Student will be able to identify all parts of an engine lathe and calculate settings to achieve desired speeds and feeds on a variety of different lathes. Work holding, the use of the 3 jaw chuck, facing, O.D. turning, grooving, parting-off and drilling will be covered. Students will hand grind their own tools from HSS lathe tool blanks. The proper use of a

mill will be covered including: speed and feed adjustment, work holding and coordinate systems. The operations to be performed will be: tramping in a table, squaring a vise, tool setting, edge finding, facing, end mill use, drilling, and tapping.

Prerequisite(s): ENGR 115 with a C or higher.

MACH 193 CNC MACHINING FOR NON-MAJORS 5 CR

This introductory course covers the principles of CNC machining. The advantages of the CNC machine in production and the process differences between manual and CNC operations will be discussed. Students will read, write, and trouble-shoot G-Code programs, setup CNC lathes and mills, and use CAM software to program a part to run on a CNC machine.

Prerequisite(s): ENGR 180 or ENGT 233, and MACH 191 with a C or higher.

MACH 241 INTRODUCTION TO CNC LATHE OPERATION 5 CR

Operation and setup of CNC lathes will be the focus of this course. Students will run CAM generated toolpaths. Skills acquired in this course include loading CAM programs, setting origins, loading tools, and setting and altering tool offsets. Students will demonstrate proficiencies in CNC lathe operations by producing multiple parts to print specifications.

Prerequisite(s): MACH 103 and MACH 142 with a C or higher.

MACH 242 ADVANCED CNC LATHE OPERATION 5 CR

Students will operate the Mazatrol to program parts for the Mazak lathe. Students will load and edit tools, set work offsets, and execute programs. Competencies will be demonstrated with the completion of projects to print specifications.

Prerequisite(s): MACH 241 with a C or higher.

MACH 251 INTRODUCTION TO CNC MILL OPERATION 5 CR

This course covers the setup and operation of Centroid bed mills and HAAS vertical milling centers. Students will run CAM generated toolpaths. Skills acquired in this course include conversational Centroid programming, loading CAM programs, setting origins with edge-finders and probes, selecting and loading tools, and setting and altering tool offsets. Students will demonstrate proficiencies in CNC mill operations by producing multiple parts to print specifications.

Prerequisite(s): MACH 103 and MACH 152 with a C or higher.

**MACH 252
ADVANCED CNC MILL OPERATION 5 CR**
Students will build on skills obtained in MACH 251. The focus will be placed on the setup and

operation of HAAS mills as well as the 5-axis DMS router. Tasks will include tool loading and clearance checks, work holding, program loading, and program alterations. Projects for this course will include complex geometry and contours. Proficiencies will be demonstrated with the production of parts to print specifications.

Prerequisite(s): MACH 251 with a C or higher.

MACH 261 INTRODUCTION TO CAD/CAM FOR MACHINING 3 CR

An introduction to Computer Aided Manufacturing. This course will combine the CAD skills gained in ENGR 180 with MasterCam CAD/CAM software. Students use CAD/CAM geometry to create geometry and produce toolpaths for CNC lathes.

Prerequisite(s): ENGR 180 with a C or higher.

MACH 263 INTERMEDIATE CAD/CAM FOR MACHINING 3 CR

Students will use Mastercam to create geometry and 2.5D toolpaths to run on CNC Mills. High Speed Toolpaths, Work Coordinate Systems, and Feature Based Machining will be explored.

Prerequisite(s): MACH 261 and MACH 171 with a C or higher.

MACH 264 ADVANCED CAD/CAM FOR MACHINING 3 CR

A continuation of MACH 263, students will use a variety of 3D surfacing strategies in Mastercam to create programs for more complex part shapes. The 4th and 5th axis programming will also be introduced.

Prerequisite(s): MACH 263 with a C or higher.

MACH 274 CNC MACHINING FOR PRODUCTION 6 CR

In this course students will use provided CNC programs and work instructions to set up and complete production runs on CNC lathes and mills. Students will set up work cells, utilize an ERP system, monitor tool life and replace tools, and perform in-process inspections.

Prerequisite(s): MACH 183 with a C or higher.

MANAGEMENT

MGMT 100 BUSINESS AND PROFESSIONAL ETHICS 3 CR

Current events have brought the concepts of ethics, both in the individual person as well as company practices, to the foreground. This course will discuss and examine, through critical analysis, the concept of ethics in the workplace. Some concepts that will be covered are conflict of interest, secrecy and confidentiality, honesty,

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interpretation of ethics policies and rules, as well as the differences. This is a very interactive course. Text required.

MGMT 101

CONFLICT MANAGEMENT 1 CR

Conflict is described as a disagreement among two or more individuals. Managing the periodic incidence can prove to be challenging, as well as stressful. This course will give the student the tools to understand the reasons that conflict exists, how to stimulate conflict in a healthy and competitive way in order to increase performance, control conflict, and resolve and eliminate unnecessary conflict. Text required.

MGMT 102

THE LEADERSHIP PROCESS 3 CR

What makes a good "leader?" Leadership in individuals, whether they seem to have been born with certain "traits," or have developed various leadership behaviors, is an area that has been studied for a long time. This course will examine the attributes of leadership, how it develops, the behaviors that need to be encouraged, those that need to be modified, as well as how to manage the leadership process. Text required.

MARKETING

MKT 100

MARKETING FUNDAMENTALS 5 CR

This course will provide a comprehensive survey of fundamental marketing principles and skills. Students will learn how marketing professionals develop strategy, research consumer needs, and identify target markets. In addition to covering the importance of global marketing and e-commerce, students will learn how to satisfy market opportunities with the 4 P's of product, pricing, promotion, and placement.

MATHEMATICS

AMATH 100

APPLIED OCCUPATIONAL MATH 5 CR

This course emphasizes mathematics used in the professional technical occupations. Student will learn mathematical skills in the following: fractions, decimals, percents, ratios & proportions, U.S. Customary Units and metric measurement systems, basic geometry and elementary algebra. The course will include relevant technical applications and the use of a calculator.

Prerequisite(s): Accuplacer Arithmetic score of 38 or ABE 050 with a C or higher or approved alternative placement criteria.

AMATH 111

APPLIED TECHNICAL MATH 5 CR

This course introduces concepts of plane geometry, right triangle trigonometry, and vectors. The elements of algebra are extended into applications for technical professions using approximate numbers in measurement and emphasizing the rules of accuracy and precision. Included are the topics: unit conversions in metric and English systems, scientific notation, fractions, decimals, percents, ratios, and proportions. Textbook and scientific or graphing calculator required.

Prerequisite(s): Accuplacer Algebra score of 75 or MATH 098 with a C or higher.

MATH 090

PRE-ALGEBRA 5 CR

A developmental math course to help students make the transition from Arithmetic to Algebra. Students will increase their math skills and gain the foundation for algebraic concepts and problem-solving. Topics include fractions, sets of numbers, applied problem solving, use of variables, simplifying expressions, and setting up equations to solve.

Prerequisite(s): ACCUPLACER Classic Arithmetic (38) or ACCUPLACER NextGen Arithmetic (230) OR ABE 050 with a C or higher.

Completion Of or Concurrent Enrollment In: CDEV 100 with a C or higher.

MATH 098

ELEMENTARY ALGEBRA 5 CR

This course will cover solving different forms of equations and inequalities, manipulating exponents, factoring and graphing. Problem-solving strategies will be utilized to perform application problems.

Prerequisite(s): ACCUPLACER Arithmetic score of 75 or MATH 090 with a C or higher.

MATH 099

INTERMEDIATE ALGEBRA 5 CR

This course prepares students for entry into college level math courses. Topics include second degree equations, relations and their graphs, exponential and logarithmic functions, and rational expressions. A graphing calculator may be required.

Prerequisite(s): ACCUPLACER Algebra score of 75 or MATH 098 with a C or higher.

MATH& 107

MATH IN SOCIETY 5 CR

This course exposes students to mathematical thought and quantitative thinking to solve problems in the context of real-world scenarios. It introduces topics such as consumer problem solving, voting/decision theory, graph theory, growth and decay models, finance, statistics, probability, and counting systems in the context of their applications.

Prerequisite(s): Accuplacer College Level Math score of 75 or MATH 099 with a C or higher.

MATH& 141

PRECALCULUS I 5 CR

The focus of this course will be functions. Students manipulate and graph linear, polynomial, rational, exponential, logarithmic and quadratic functions. The course will also cover systems of equations, matrices and determinants, and their applications.

Prerequisite(s): Accuplacer College Level Math score of 75 or MATH 099 with a C or higher.

MATH& 142

PRECALCULUS II 5 CR

The majority of this course will cover trigonometry. Students will explore trigonometry functions, right and oblique triangle trigonometry, graphing, trigonometry identities, laws of Sine and Cosine as well as trigonometric application problems. This course will also cover vectors in the plane and in space, along with parametric equations. Polar coordinates and graphs of polar equations will also be included.

Prerequisite(s): MATH& 141 with a C or higher.

MATH& 146

INTRODUCTION TO STATISTICS 5 CR

Fundamental concepts and basic tools of descriptive and inferential statistics. How to describe data and make reasonable conjectures about the populations from which the samples were taken. Topics include: sampling distribution patterns, organization of data, sampling methods and experimental design, probability and simulation of random events, estimation of population parameters, confidence intervals, correlation, linear regression and basic hypothesis testing. Internet/computer access and graphing calculator required.

Prerequisite(s): Accuplacer College Level Math score of 75 or MATH 099 with a C or higher.

MATH& 151

CALCULUS I 5 CR

Study of functions, limits, continuity, limits at infinity, differentiation of algebraic, exponential, logarithmic, and trigonometric functions and their inverses.

Prerequisite(s): MATH& 142 with a C or higher.

MATH& 152

CALCULUS II 5 CR

The study of Riemann Sums, methods of integration, numerical methods, polar and rectangular forms, fundamental theorem of Calculus, areas of regions, volumes of solids, centroids, length of curves, surface area, and an introduction to differential equations.

Prerequisite(s): MATH& 151 with a C or higher.

MEDICAL ADMINISTRATION

HT 100

FUNDAMENTALS OF MEDICAL TERMINOLOGY 5 CR

The student will gain a basic knowledge of medical word building. The course will address root words, prefixes and suffixes and terms which are used in diagnostic, operative, and symptoms relating to the various systems of the body. Emphasis on correct spelling and pronunciation of selected common eponyms.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher. ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

HT 103

DISEASES OF THE HUMAN BODY 5 CR

Introduction to the effects of system diseases on the human body. Course includes discussions of selected diseases, including causes and treatments. Course also includes an overview of principles of pharmacology and description/purposes of selected laboratory tests.

Corequisite(s): HT 100 and HT 121.

HT 120

INTRODUCTION TO MEDICAL INSURANCE BILLING 5 CR

This course focuses on insurance billing procedures; billing requirements in relation to insurance companies, clinics and hospitals; and insurance billing compliance standards and mandates. Students will learn skills that will enable them to create, process and correct insurance claims. Other subjects include billing office topics related to medical insurance, accounts receivable, and collection techniques.

Prerequisite(s): HT 100, HT 103, and HT 121 all with a C or higher.

HT 121

ESSENTIALS OF ANATOMY & PHYSIOLOGY 5 CR

The student will develop a basic knowledge of the structure and function of the various body systems. The course emphasizes the essential structure and function of the normal human body, which will serve as a foundation of general understanding for future study in health occupations. Integration of each system to other systems and the whole organism as well as application of key concepts to health and disease are emphasized.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher. ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

HT 122

MEDICAL OFFICE PROCEDURES 5 CR

Medical Office Procedures is an introduction to healthcare administration. This course gives students transferable skills that will aid them in attaining employment within healthcare, as well as

a global understanding of the differences within the various healthcare systems. A strong emphasis will be placed on customer service skills when working in a diverse office team environment. The student will learn the duties in the medical office, computerized medical office procedures as well as exercises in judgment, independent action, and coping with interruptions. In addition to computerized appointment scheduling and billing, students learn about the major insurances with ICD and CPT coding. This course is designed to give an overview of the various areas within healthcare administration that most healthcare professionals will be expected to understand and know when seeking a job. Although healthcare operations may vary, a basic level of understanding in administration is vital for all healthcare professionals.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 085 with a C or higher. ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher.

HT 131

INTRODUCTION TO MEDICAL CODING 5 CR

This course introduces students to medical coding in an outpatient clinical setting. The course focuses on a comprehensive overview of current CPT, ICD and HCPCS code sets and provides an introduction to new industry changes with ICD codes. This course also includes an introduction to coding compliance and industry guidelines for clinical application.

Prerequisite(s): HT 100, HT 103, HT 120, HT 121, HT 122 all with a C or higher.

HT 132

MEDICAL RECORDS MANAGEMENT 5 CR

This course instructs students in the application of medical records management. Medical records management includes, but is not limited to: electronic medical records, health care policy & procedure records, patient documentation & forms, Washington state and federal record retention timelines and appropriate clinical documentation improvement strategies. This course also includes an overview of compliance, guidelines and medical record auditing in a clinical practice.

Prerequisite(s): HT 100, HT 103, HT 120, HT 121, HT 122 all with a C or higher.

HT 135

PHARMACOLOGY FOR THE MEDICAL OFFICE 3 CR

This course will introduce students to the various forms of medications, drug classifications, administration routes and how they work. Students will also learn the terminology associated with each, for those medications commonly prescribed in the medical office setting.

Prerequisite(s): HT 100 and HT 121, both with a C or higher.

HT 225

NUTRITION & HEALTH FOR HEALTHCARE PROFESSIONALS 4 CR

Through this course, students will gain applicable knowledge of nutrition and health as it relates to patient services. Students will demonstrate and apply concepts of day-to-day healthy living and stress management techniques which improve patient services, human resource management and aid in the prevention of health care professional burn out. This course also includes an overview of reimbursement practices for nutrition and health improvement strategies in a clinical setting.

Prerequisite(s): HT 100, HT 103, HT 121 all with a C or higher.

HT 230

MEDICAL DIAGNOSTIC CODING ICD 5 CR

Learn to assign codes in medical/health records to ensure accurate and complete reimbursement documentation. The focus will be on ICD-10 codes with some discussion of CPT codes.

Prerequisite(s): HT 100, HT 103, and HT 121 all with a C or higher.

HT 240

MEDICAL PROCEDURE CODING - CPT & HCPCS 5 CR

Course trains students to assign physician's Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) codes in medical/health records to ensure accurate and complete reimbursement documentation.

Prerequisite(s): HT 100, HT 103, and HT 121 all with a C or higher.

HT 265

MEDICAL BILLING & CODING PRACTICUM 8 CR

Students use the information learned in medical insurance billing and coding to demonstrate proficiency in coding procedures. Students, using simulated patient records and various insurance forms, will analyze patient account statements and records. Medical documentation guidelines, ethics and laws as they pertain to patient information will also be addressed.

Prerequisite(s): HT 120, HT 230, and HT 240 all with a C or higher.

HT 275

MEDICAL ETHICS & LAW 5 CR

Medical Ethics and Law is a student-centered course that is designed to help students understand the relevance of current ethical and legal trends in the health care industry. This course prepares students not only for healthcare ethics on a national level, but also an international level that relates to working with today's diverse population. Through this course, students will gain an understanding of the challenges providers and healthcare workers face when treating patients who may be culturally diverse, have varying reli-

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gious beliefs, or different in lifestyle choices, and the various psycho-social aspects of each as it relates to healthcare. Students will also attain an understanding of the complex legal issues medical providers face and how changing state and federal laws directly impact health care business operations.

Prerequisite(s): HT 120 and HT 122, both with a C or higher.

NURSING

NURS 110 INTRODUCTION TO HEALTH CONCEPTS 4 CR

This integrated course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including: comfort, elimination, health, wellness and illness, mobility, tissue integrity, cognition, assessment, clinical decision making, communication, professional behaviors, teaching and learning, accountability, legal issues, safety, basic principles of pharmacology, and foundational nursing skills. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): Acceptance into the Nursing Program. MATH& 146, BIOL& 241, BIOL& 242, BIOL& 260, ENGL& 101, and PSYC& 200 all with a B or higher. CHEM& 121 with a B or higher or CHEM& 161 with a B or higher. PSYC& 100 and BIOL& 160 all with a C or higher. 5 credits of Communications all with a grade of C or higher. 10 credits of Humanities all with a grade of C or higher. Completion of NA 101 with a grade of C or higher and NA 102 with a grade of C or higher or Healthcare Experience verification.

NURS 113 PN INTRODUCTION TO HEALTH CONCEPTS 4 CR

This integrated course introduces the practical nursing concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including: comfort, elimination, health, wellness and illness, mobility, tissue integrity, cognition, assessment, clinical decision making, communication, professional behaviors, teaching and learning, accountability, legal issues, safety, basic principles of pharmacology, and foundational nursing skills within the practical nursing scope of practice. This course will include integrated General University Requirements (GURs) content applicable to the Nursing DTA.

Prerequisite(s): Acceptance into the Practical Nursing program. MATH& 146, BIOL& 241, BIOL& 242, ENGL& 101 all with a B or higher. CHEM& 121 or CHEM& 161 with a B or higher. PSYC& 100 and BIOL& 160 all with a C or higher. NA 101 and NA 102 all with a C or higher or Healthcare Experience verification.

Completion Of or Concurrent Enrollment In: NUTR 113, PHIL 113 & PSYC 113.

NURS 114 PN INTRODUCTION TO HEALTH CONCEPTS-CLINICAL LAB 6 CR

Applies competencies within the practical nursing scope of practice necessary to meet the needs of individuals, families, and groups in a safe, legal, and ethical manner using the nursing process related to selected alterations discussed in PN Introduction to Health Concepts. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local elder care agencies, assisted living and long-term care facilities.

Prerequisite(s): NURS 113, NUTR 113, PSYC 113 and PHIL 113 all with a B- or higher.

NURS 115 INTRODUCTION TO HEALTH CONCEPTS-CLINICAL LAB 6 CR

This integrated course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including: comfort, elimination, health, wellness and illness, mobility, tissue integrity, cognition, assessment, clinical decision making, communication, professional behaviors, teaching and learning, accountability, legal issues, safety, basic principles of pharmacology, and foundational nursing skills. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local elder care agencies, assisted living and long-term care facilities.

Prerequisite(s): Acceptance into the Nursing Program.

NURS 120 HEALTH AND ILLNESS CONCEPTS 1 5 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid base balance, fluids and electrolytes, inflammation, metabolism, mobility, oxygenation, perfusion, thermoregulation, culture and diversity, development, spirituality, assessment (pediatric variations), caring interventions and self-care, clinical decision making, and documentation. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): NURS 110, NURS 115, NUTR 115, PHIL 115 and PSYC 115 with a B- or higher.

NURS 123 PN HEALTH AND ILLNESS CONCEPTS 1 5 CR

This course is designed to further develop the practical nursing concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid base balance, fluids and electrolytes, inflammation, metabolism, mobility, oxygenation, perfusion, thermoregulation, culture and diversity, development, spirituality, assessment (pediatric variations), caring interventions and self-care, clinical decision making, and documentation within the practical nursing scope of practice. This course

will include integrated General university requirements (GURs) content applicable to the Nursing DTA.

Prerequisite(s): NURS 114 with a B- or higher.

Completion Of or Concurrent Enrollment In: NUTR 123 and PSYC 123.

NURS 124 PN HEALTH & ILLNESS CONCEPTS 1- CLINICAL LAB 6 CR

Applies competencies within the practical nursing scope of practice necessary to meet the needs of individuals, families, and groups in a safe, legal, and ethical manner using the nursing process related to selected alterations discussed in PN Health and Illness Concepts 1. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local community clinic agencies.

Prerequisite(s): NURS 123, NUTR 123 and PSYC 123 all with a B- or higher.

NURS 125 HEALTH & ILLNESS CONCEPTS 1- CLINICAL LAB 6 CR

Applies competencies necessary to meet the needs of individuals, families, and groups in a safe, legal, and ethical manner using the nursing process related to selected alterations discussed in Health and Illness Concepts 1. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local community agencies and acute care facilities.

Prerequisite(s): NURS 115 with a B- or higher.

NURS 130 HEALTH & ILLNESS CONCEPTS 2 3 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of comfort, immunity, oxygenation, perioperative care, sensory perception, sexuality, addiction, family, stress and coping, teaching and learning, advocacy, ethics, informatics, safety, and care of the family are introduced. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): NURS 120, NURS 125, NUTR 116 and PSYC 116 with a B- or higher.

NURS 133 PN HEALTH AND ILLNESS CONCEPTS 2 3 CR

This course is designed to further develop the practical nursing concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of comfort, immunity, oxygenation, perioperative care, sensory perception, sexuality, addiction, family, stress and coping, teaching and learning, advocacy, ethics, informatics, safety, and care of the family within the practical nursing scope of practice.

This course will include integrated General University Requirements (GURs) content applicable to the Nursing DTA.

Prerequisite(s): NURS 124 with a B- or higher.

Completion Of or Concurrent Enrollment In: NUTR 133 and PSYC 133.

NURS 134 PN

HEALTH & ILLNESS

CONCEPTS 2- CLINICAL LAB 6 CR

Applies competencies within the practical nursing scope of practice necessary to meet the needs of individuals, families, and groups in a safe, legal, and ethical manner using the nursing process related to selected alterations discussed in PN Health and Illness Concepts 2. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local community agencies and long-term care facilities.

Prerequisite(s): NURS 133, NUTR 133 and PSYC 133 all with a B- or higher.

NURS 135

HEALTH & ILLNESS

CONCEPTS 2- CLINICAL LAB 6 CR

Applies competencies necessary to meet the needs of individuals, families, and groups in a safe, legal, and ethical manner using the nursing process related to selected alterations discussed in Health and Illness Concepts 2. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at local community agencies and acute care facilities.

Prerequisite(s): NURS 125 with a B- or higher.

NURS 210

ACUTE HEALTH CONCEPTS 5 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the analysis of the concepts of cellular regulation, digestion, fluids and electrolytes, immunity, infection, intracranial regulation, metabolism, perfusion, clinical decision making, collaboration, managing care, teaching and learning, informatics, quality improvement, hospitalized individual and advanced clinical skills. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): NURS 130, NURS 135, NUTR 117 and PSYC 117 with a B- or higher or acceptance into LPN to RN Program.

NURS 215

ACUTE HEALTH CONCEPTS- CLINICAL LAB 6 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid and electrolyte, acid base balance, elimination, oxygenation, metabolism, intracranial regulation, thermoregulation, perfusion, inflammation, tissue integrity, mobility,

infection control, stress/coping, family, health/wellness/illness, hospitalized individual, communication, clinical decision making, advanced clinical skills, patient educator, collaboration, managing care, safety, advocacy, informatics, point of care documentation, clinical decision and support systems. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at inpatient regional facilities with focus on adult medical surgical acute care, and assisted living.

Prerequisite(s): NURS 135 with a B- or higher.

NURS 220

COMPLEX HEALTH CONCEPTS 4 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare and nursing. Emphasis is placed on the concepts of acid base balance, perfusion, cognition, mood and affect, self, violence, reproduction, antepartum care, intrapartum care, postpartum care, newborn care, collaboration, and managing care. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): NURS 210, NURS 215, NUTR 215 and PHIL 215 with a B- or higher.

NURS 225

COMPLEX HEALTH CONCEPTS- CLINICAL LAB 6 CR

This course is designed to further develop the concepts within the three domains of the individual, healthcare and nursing. Emphasis is placed on the concepts of acid base balance, newborn thermoregulation, perfusion, reproduction, development, cellular regulation and cancer, comfort, violence, communication, collaboration, managing care, ethics and mastering previously learned concepts. These concepts are applied through on-campus theory, skills and simulation labs and off-campus clinical experiences at inpatient regional facilities with focus on specialty nursing areas and assisted living.

Prerequisite(s): NURS 215 with a B- or higher.

NURS 230

PROFESSIONAL NURSING CONCEPTS 3 CR

This course is designed to assimilate the concepts within the three domains of individual, nursing and healthcare. Emphasis is placed on cellular regulation, comfort, infection, oxygenation, perfusion, tissue integrity, grief and loss, managing care, professional behaviors, teaching and learning, ethics, evidenced-based practice, healthcare systems, health policy, legal issues, and mastering previously learned concepts. This course will include integrated General University Requirements (GURs) applicable to the Nursing DTA.

Prerequisite(s): NURS 220, NURS 225, NUTR 216 and PSYC 215 with a B- or higher.

NURS 235

PROFESSIONAL NURSING CONCEPTS- CLINICAL LAB 6 CR

This course is designed to assimilate the concepts within the three domains of individual, nursing and healthcare. Emphasis is placed on cellular regulation, comfort, infection, oxygenation, perfusion, tissue integrity, grief and loss, managing care, professional behaviors, teaching and learning, ethics, evidenced-based practice, healthcare systems, health policy, legal issues, and mastering previously learned concepts. These concepts are applied through on-campus theory, skills/simulation labs and off-campus clinical experiences. The opportunity to be mentored in professional nursing practice is provided through preceptor-guided experiences in a variety of community based and inpatient regional facilities as assigned.

Prerequisite(s): NURS 225 with a B- or higher.

NUTR 113 PN

NUTRITION IN HEALTHCARE I 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with NURS 113 practical nursing theory course.

Prerequisite(s): Acceptance into the Practical Nursing program. MATH& 146, BIOL& 241, BIOL& 242, ENGL& 101 all with a B or higher. CHEM& 121 or CHEM& 161 with a B or higher. PSYC& 100 and BIOL& 160 all with a C or higher. NA 101 and NA 102 all with a C or higher or Healthcare Experience verification.

NUTR 115

NUTRITION IN HEALTHCARE I 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with theory NURS 110.

Prerequisite(s): Acceptance into the Nursing program.

NUTR 116

NUTRITION IN HEALTHCARE II 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with theory NURS 120.

Prerequisite(s): NUTR 115 with a B- or higher.

NUTR 117

NUTRITION IN HEALTHCARE III 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with theory NURS 130.

Prerequisite(s): NUTR 116 with a B- or higher.

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NUTR 123 PN

NUTRITION IN HEALTHCARE II 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with NURS 123 practical nursing theory course.

Prerequisite(s): NURS 113 and NUTR 113 all with a B- or higher.

NUTR 133 PN

NUTRITION IN HEALTHCARE III 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with NURS 133 practical nursing theory course.

Prerequisite(s): NURS 123 and NUTR 123 all with a B- or higher.

NUTR 215

NUTRITION IN HEALTHCARE IV 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with theory NURS 210.

Prerequisite(s): NUTR 117 with a B- or higher.

NUTR 216

NUTRITION IN HEALTHCARE V 1 CR

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions through an integrated format with theory NURS 220.

Prerequisite(s): NUTR 215 with a B- or higher.

PHIL 113 PN

ETHICS AND POLICY IN HEALTHCARE I 1 CR

Explores 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 through an integrated format with NURS 113 practical nursing theory course.

Prerequisite(s): Acceptance into the Practical Nursing program.

MATH& 146, BIOL& 241, BIOL& 242, ENGL& 101 all with a B or higher.

CHEM& 121 or CHEM& 161 with a B or higher.

PSYC& 100 and BIOL& 160 all with a C or higher.

NA 101 and NA 102 all with a C or higher or Healthcare Experience verification.

PHIL 115

ETHICS AND POLICY IN HEALTHCARE I 1 CR

Explores 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 through an integrated format with theory NURS 110.

Prerequisite(s): Acceptance into the Nursing program.

PHIL 215

ETHICS & POLICY IN HEALTHCARE II 1 CR

Explores 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 through an integrated format with theory NURS 210.

Prerequisite(s): PHIL 115 with a B- or higher.

PHIL 216

ETHICS & POLICY IN HEALTHCARE III 3 CR

Explores 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 through an integrated format with theory NURS 230.

Prerequisite(s): PHIL 215 with a B- or higher.

PSYC 113

PN PSYCHOSOCIAL ISSUES IN HEALTHCARE I 1 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with NURS 113 practical nursing theory course.

Prerequisite(s): Acceptance into the Practical Nursing program.

MATH& 146, BIOL& 241, BIOL& 242, ENGL& 101 all with a B or higher.

CHEM& 121 or CHEM& 161 with a B or higher.

PSYC& 100 and BIOL& 160 all with a C or higher.

NA 101 and NA 102 all with a C or higher or Healthcare Experience verification.

PSYC 115

PSYCHOSOCIAL ISSUES IN HEALTHCARE I 1 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with theory NURS 110.

Prerequisite(s): Acceptance into the Nursing program.

PSYC 116

PSYCHOSOCIAL ISSUES IN HEALTHCARE II 1 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with theory NURS 120.

Prerequisite(s): PSYC 115 with a B- or higher.

PSYC 117

PSYCHOSOCIAL ISSUES IN HEALTHCARE III 2 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with theory NURS 130.

Prerequisite(s): PSYC 116 with a B- or higher.

PSYC 123 PN

PSYCHOSOCIAL ISSUES IN HEALTHCARE II 1 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with NURS 123 practical nursing theory course.

Prerequisite(s): NURS 113 and PSYC 113 all with a B- or higher.

PSYC 133 PN

PSYCHOSOCIAL ISSUES IN HEALTHCARE III 2 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with NURS 133 practical nursing theory course.

Prerequisite(s): NURS 123 and PSYC 123 all with a B- or higher.

PSYC 215

PSYCHOSOCIAL ISSUES IN HEALTHCARE IV 1 CR

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care through an integrated format with theory NURS 220.

Prerequisite(s): PSYC 117 with a B- or higher.

NURSING ASSISTANT

NA 101

NURSING ASSISTANT ESSENTIALS 6 CR

Provide the student an opportunity to study the essential theoretical content necessary to meet the OBRA nursing assistant objectives. Fundamental caregiving skills are taught with an emphasis on safety and activities of daily living. While studying the care necessary for an individual of any age, a primary focus is placed on the care of the elderly, including rehabilitation and death and dying.

Prerequisite(s): ACCUPLACER Classic (valid for 5 years from testing date) Reading Comprehension score of 50 or ABE 054 with a grade of C or higher; Arithmetic score of 38 or MATH 090 or ABE 050 with a grade of C or higher. ACCUPLACER Next-Generation (starting January 23, 2019) Reading score of 232 or ABE 054 with a grade of C or higher; Arithmetic score of 230 or MATH 090 or ABE 050 with a grade of C or higher.

Corequisite(s): NA 102.

NA 102

NURSING ASSISTANT CLINICAL 6 CR

During the clinical practicum the student is given the opportunity to put into practice those skills learned in the classroom and lab settings. The clinical experiences include orientation to the extended care facility and a clinical final exam which is conducted in the college lab.

Prerequisite(s): ACCUPLACER Classic (valid for 5 years from testing date) Reading Comprehension score of 50 or ABE 054 with a grade of C or higher; Arithmetic score of 38 or MATH 090 or ABE 050 with a grade of C or higher. ACCUPLACER Next-Generation (starting January 23, 2019) Reading score of 232 or ABE 054 with a grade of C or higher; Arithmetic score of 230 or MATH 090 or ABE 050 with a grade of C or higher.

Corequisite(s): NA 101.

NUTRITION

NUTR& 101

NUTRITION 5 CR

This course provides information pertaining to human nutrition and the function of nutrients in the body. Topics covered include anatomy and physiology of digestion and absorption; specific utilization of carbohydrates, protein, and fats; vitamin and mineral supplements. Other topics include food safety and the impact of diet on health and disease. Basic principles of chemistry, biology, and physiology are applied to the study of nutrition.

OPERATIONS MANAGEMENT

OPM 311

MATHEMATICAL TECHNIQUES FOR OPERATIONS MANAGEMENT 5 CR

This course provides students with the foundational mathematical tools required for operations management including acceptance sampling; decision theory including its application under uncertain conditions; the application of probability theory to determine the reliability of systems; solution of linear programming problems using graphical and computational methods; and the application of learning curves for planning and scheduling. These techniques are introduced in this course and then exercised and practiced through repeated application to real problems in other courses.

Prerequisite(s): Admission to the BASOPS program.

OPM 312

FORECASTING AND SYSTEM DESIGN 5 CR

This course introduces students to forecasting and capacity planning tools for manufacturing and service organizations. Qualitative and quantitative techniques are discussed, and the pros and cons of each are identified. The selection of appropriate processes and facility layouts, and the design of work systems to optimize production are discussed; and the impact of good product design on production operations is highlighted. Maintenance planning is discussed including the differences between breakdown (reactive) and preventative (planned) maintenance. Techniques for job design such as methods analysis and time study methods are demonstrated. Both graphical and computational (spreadsheet) techniques are used throughout the course to solve a range of typical problems.

Prerequisite(s): Admission to the BASOPS program.

OPM 313

QUALITY MANAGEMENT 5 CR

This course is designed to equip students with the managerial concepts and quantitative tools used in effective and efficient management of quality in manufacturing and service organizations. The course begins with the quality management concepts espoused by Deming and discusses some of the resulting approaches such as Total Quality Management (TQM), Six Sigma, ISO 9000 and AS 9100. Quality requirements specific to regulated industries such as biomedical devices and aerospace will also be surveyed. Students will learn how to plan, implement and manage a comprehensive quality management program within an organization with special emphasis on process documentation, staff training, and communication of results to management and auditors.

Prerequisite(s): OPM 311 with a C or higher.

OPM 314

LOGISTICAL PLANNING AND SUPPLY CHAIN MANAGEMENT 5 CR

A supply chain is a sequence of organizations involved in the production and delivery of a product or service. Supply chain management is the coordination of those organizations, and logistics is the management of the flow of resources e.g. goods, materials, and information, between the organizations. This course will introduce students to the complexities of domestic and global supply chains including consideration of make/buy and outsourcing decisions. The importance of the procurement function is explored, and inventory management techniques are presented including the application of mathematical approaches to solve typical problems. Finally, the use of materials resource planning (MRP), manufacturing resource planning (MRPII) and enterprise resource planning (ERP) systems in operations management is examined.

Prerequisite(s): OPM 311 with a C or higher.

OPM 315

LEAN CONCEPTS AND APPLICATIONS 5 CR

Lean production is a modern management practice applicable to both manufacturing and service industries that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful and thus a target for elimination. This course introduces students to the theory behind Lean including concepts such as Value Stream Mapping, Workplace Organization and Standardization, 5-S and Cellular Flow. Terminology, including Kan Ban and Total Production Maintenance, and tools such as Gap Analysis, 5 Whys, root cause analysis, Pareto charts, and cause effect diagrams are covered. The importance of workforce development and ongoing training to Lean implementation is stressed, and students will learn how to apply Lean techniques to both industrial and service operations.

Prerequisite(s): OPM 311 with a C or higher or ENGT 321 with a C or higher.

OPM 411

FACILITY LAYOUT AND MATERIALS HANDLING 5 CR

This course covers the design and optimal layout of industrial facilities, materials handling systems, and warehousing for the most efficient flow of raw materials, work-in-process, and completed product. Students, working in groups, will be required to develop a written proposal for a newly designed or modified facility including a financial justification for the project, and carry out a verbal presentation of their results.

Prerequisite(s): OPM 311 with a C or higher or ENGT 321 with a C or higher.

2023-2024 Course Descriptions

OPM 412

WORKPLACE HEALTH AND SAFETY MANAGEMENT 5 CR

This course provides a foundation for students to take on responsibility for the management of health and safety in the workplace. Students will learn about OSHA and the inspection process, identification of safety hazards and implementation of preventative measures, and developing a formal health and safety training program. The course will also cover work design and ergonomics aimed at increasing operator effectiveness and reducing production costs.

Prerequisite(s): OPM 311 with a C or higher or ENGT 321 with a C or higher.

OPM 413

MEASUREMENT AND STATISTICAL PROCESS CONTROL 5 CR

Statistical process control (SPC) is a quality control technique which employs statistical methods to monitor and control a process to ensure that it operates at its full potential, and that the finished products meet specified criteria. In this course, students will be introduced to key tools used in SPC including control charts, continuous improvement, acceptance sampling, and the design of experiments. Students will also be taught about fundamental metrology principles including error measurement and analysis, the impact of temperature and pressure on precision measurement; equipment calibration; and advanced test and measurement techniques.

Prerequisite(s): OPM 311 with a C or higher.

OPM 421

IT STRATEGY, MANAGEMENT AND DELIVERY 5 CR

This course examines the strategic role of IT within an organization. Students will learn how to assess the impact of emerging technologies, and then design information infrastructure and systems to support organizational structures.

OPM 422

BUSINESS CONTINUITY AND DISASTER RECOVERY 5 CR

This course looks at how to identify business risk and impact; recognize mission-critical systems; and create, test and implement business continuity plans.

OPM 423

MANAGING VENDORS AND CONTRACTS 5 CR

This course covers strategies and methodologies for selecting and managing vendors including types of contracts, vendor selection processes, and contract management.

OPM 491

FOCUSED STUDY I 5 CR

Focused Study 1, 2 and 3: These courses provide students with opportunities to explore areas of professional interest and to develop a greater understanding of those areas through focused study and applied research under the direction of a faculty member and/or industry mentor. Topics to be studied will be agreed in conjunction with program faculty and approved by the program director; and each course will require both a written report and an oral presentation of the research findings.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

OPM 492

FOCUSED STUDY II 5 CR

Focused Study 1, 2 and 3: These courses provide students with opportunities to explore areas of professional interest and to develop a greater understanding of those areas through focused study and applied research under the direction of a faculty member and/or industry mentor. Topics to be studied will be agreed in conjunction with program faculty and approved by the program director; and each course will require both a written report and an oral presentation of the research findings.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

OPM 493

FOCUSED STUDY III 5 CR

Focused Study 1, 2 and 3: These courses provide students with opportunities to explore areas of professional interest and to develop a greater understanding of those areas through focused study and applied research under the direction of a faculty member and/or industry mentor. Topics to be studied will be agreed in conjunction with program faculty and approved by the program director; and each course will require both a written report and an oral presentation of the research findings.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

OPM 495

INTERNSHIP 5 CR

This course provides students with practical on-the-job experience and offers students a way to combine classroom study with related work experience under the supervision of an employer. Work experience must be related to the student's educational and career objectives in the field of Manufacturing Operations. Students must submit, at or before registration, a description of the proposed internship, signed by the employer, the instructor and the student. This course can be substituted for OPM 498 – Individual Capstone Project.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

OPM 498

INDIVIDUAL CAPSTONE PROJECT 5 CR

This course involves the self-directed execution of a project in the field of operations management employing elements from many of the courses the student has already taken linked together in a methodical, systematic way. The topic to be studied will be agreed in conjunction with program faculty and approved by the program director; and a faculty member or industry mentor will be available throughout the course to act as an advisor. However, it is expected that the student demonstrates independent thought and self-direction during the project. The project may be carried out with an industry partner/employer. The course requires both a written report and an oral presentation of the project results.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

OPM 499

GROUP CAPSTONE PROJECT 5 CR

This course involves working as a team on a project in the field of operations management. The topic to be studied will be chosen by the group, agreed in conjunction with program faculty, and approved by the program director. A faculty member or industry mentor will be available throughout the course to act as an advisor. However, it is expected that the group is self-directing, and that individuals in the group demonstrate the ability to work with other team members during the project. The project may be carried out with an industry partner/employer. The course requires both a written project report and an oral presentation of the project results by the group, and individual summary reports by each student.

Prerequisite(s): OPM 311, OPM 312, ENGL 310, all with a C or higher, and Instructor permission.

PARAMEDIC

MEDIC 100

ANATOMY & PHYSIOLOGY FOR PARAMEDICS 5 CR

The student will develop a basic knowledge and function of the various body systems. The course emphasizes the essential structure and function of the normal human body, which will serve as a foundation of general understanding for future study in health occupations. Integration of each system to other systems and the whole organism as well as application of key concepts to health and disease are emphasized in this course. This course gives a basic understanding of human anatomy and physiology. Students will learn the basic body components, systems, organs and functions as they pertain to the field paramedic.

Prerequisite: Acceptance into the program.

MEDIC 101

PARAMEDIC CONCEPTS I 12 CR

Introduce students to the fundamental lifesaving psychomotor skills of paramedic care. The course will cover basic life support resuscitation techniques, patient exams, medications and administration routes, and proper airway management at the advanced life support level. Skills practice shall include use of correct intervention equipment.

Prerequisites: Agency Selection and acceptance.

Corequisite(s): MEDIC 102.

MEDIC 102

PARAMEDIC CLINICAL EXPERIENCE I 2 CR

The focus of this clinical course is the development of advanced airway skills by intubation of patients in the OR, observations and participation in the care of patients in the Emergency Department, to include IV therapies. Students will also spend time observing and assisting with treatment of paramedic care in the field setting.

Prerequisite: MEDIC 100 with a C or higher.

Corequisite: MEDIC 101.

MEDIC 121

PARAMEDIC CONCEPTS II 14 CR

The Paramedic student will learn all skills necessary for an individual to provide emergency care for medical emergency patient at the paramedic level. Specifically, after successful completion of the course, the student will be capable of performing the following functions at the advanced entry level: Recognize the nature and seriousness of the patient's condition or extent of the medical condition to assess requirements for emergency medical care. Administer appropriate emergency medical care and interventions, based on assessment findings of the patient's condition. Lift, move, position and otherwise handle the patient to minimize discomfort and prevent further injury. Perform safely and effectively the expectation of the job description.

Prerequisites: MEDIC 101 and MEDIC 102 each with a C or higher.

Corequisite: MEDIC 122.

MEDIC 122

PARAMEDIC CLINICAL EXPERIENCE II 2 CR

Students will gain practical clinical knowledge through observation and assessment of cardiac patients in CCU, intubations in the operating room, mental health unit, intensive care unit and treatment of patients in the Emergency Department.

Prerequisites: MEDIC 101 and MEDIC 102 each with a C or higher.

Corequisite: MEDIC 121.

MEDIC 131

PARAMEDIC CONCEPTS III 16 CR

The foundation knowledge that students will learn will address assessment and treatment of the trauma patient and various traumatic injuries, assessment and treatment of general medical patients. Lab sessions will focus on development of the psychomotor skills necessary for the student to be successful in the field setting.

Prerequisites: MEDIC 121 and MEDIC 122 each with a C or higher.

Corequisite: MEDIC 132.

MEDIC 132

PARAMEDIC CLINICAL EXPERIENCE III 5 CR

Students will gain an understanding and skills of trauma and pediatric patients through various skills participation and observation at the Emergency Department or Medical Examiner/Morgue, Children's Hospital, Cordata Pediatrics, and Harborview Medical Center.

Prerequisites: MEDIC 121 and MEDIC 122 each with a C or higher.

Corequisite: MEDIC 131.

MEDIC 141

PARAMEDIC CONCEPTS IV 16 CR

This course will focus on gaining knowledge of special patients and situations, such as behavioral/altered mental status disorders, OB/GYN, Geriatrics, Crime Scenes, Abuse and Assault, Multi-cultural issues, and mass-casualty incidents. Lab sessions will focus on development of the psychomotor skills necessary for the student to be successful in the field setting.

Prerequisites: MEDIC 131 and MEDIC 132 each with a C or higher.

Corequisite: MEDIC 142.

MEDIC 142

PARAMEDIC CLINICAL EXPERIENCE IV 2 CR

Students will gain skills through participation and observation in a variety of clinical settings. These may include: labor and delivery, Geriatric Center, Community Paramedic and/or St. Joseph CQU Campus, and Bellingham Police Department.

Prerequisites: MEDIC 131 and MEDIC 132 each with a C or higher, preceptor observation, and clinical evaluation forms.

Corequisite: MEDIC 141.

MEDIC 151

PARAMEDIC APPLICATION AND CAPSTONE 13 CR

All students who have all course work in foundation knowledge and skill must complete a culminating exam. This exam will emulate the National Registry Exam, and is used to assess the student's overall learning in the program. The examination will be in three parts: two written and a practicum skill component. This course is graded based on passing all skills requirements and written exam

scores. The exam is three parts: examination preparation, practical skills examination, and written examination. Students will also be evaluated in extensive field experience while riding in a third person role, and acting as the lead medic.

Prerequisites: MEDIC 141 and MEDIC 142 each with a C or higher.

PHILOSOPHY

PHIL 310

PROFESSIONAL ETHICS 5 CR

This course aims to raise students' awareness of ethical dilemmas that might occur at work, to show how such ethical issues are subject to management analysis and decision-making action, and to provide students with the conceptual tools necessary to identify and then develop an acceptable resolution of these dilemmas. The course will include the presentation of ethical arguments to groups and debate on their merits.

Prerequisite(s): ENGL& 101 and 5 credits of Humanities, both with a C or higher and (BASOPS program admission or BAS-ENGT program admission or Instructor permission).

PHYSICS

PHYS& 110

PHYSICS FOR NON-SCIENCE MAJORS W/LAB 5 CR

A course for non-science majors exploring the central concepts of physics while focusing on applications. The principles and laws of physics are covered on a conceptual level and everyday examples are treated. Topics include Newton's laws of motion, fluids, energy and magnetism, and waves (sound and light). Laboratory work provides and introduction to the scientific method and role of measurement in science and serves to demonstrate the application of physics concepts.

Prerequisite(s): Accuplacer Algebra score of 75 or higher or MATH 098 or AMATH 111 (or higher) with a C or higher.

PHYS& 114

GENERAL PHYSICS I W/LAB 5 CR

An algebra-based introduction to classical mechanics and problem-solving in physics, designed for students majoring in technically oriented fields that do not require a calculus-oriented approach. Topics include kinematics description of motion, forces and Newton's Law, gravity, momentum and energy. Emphasis will be placed on problem solving, mathematical reasoning, computer-aided laboratory investigations, and the scientific method.

Prerequisite(s): MATH& 142 with a C or higher.

2023-2024 Course Descriptions

PHYS& 221

ENGINEERING PHYSICS I W/LAB 5 CR

PHYS& 221 is the first in a three-course calculus-based survey of physics for engineering pathways. The course introduces the fundamental principles of mechanics; kinematics, momentum and energy conservation laws, physical interactions, force, work, rotation, torque and gravity. Conceptual development and problem solving have equal emphasis. Laboratory work includes experimental methods, data analysis, and prepares students for coursework in engineering.

Prerequisite(s): ENGL& 101 with a C or higher.

Completion Of or Concurrent Enrollment In: MATH& 151 with a C or higher.

POLITICAL SCIENCES

POLS& 202

AMERICAN GOVERNMENT 5 CR

Focus is given to the system, process, and organizational functions of the American government. It also puts primary attention on the relationships between citizens and their national government by exploring the key theoretical precepts that shaped the Constitution and its federal structural arrangements. Close attention is paid to the policy making process and its key actors, as well as various public policies.

Prerequisite(s): Accuplacer Reading Comprehension score of 50 or ABE 054 or ABE 055 with a C or higher, and Accuplacer Sentence Skills score of 50 or ENGL 092 with a C or higher.

PROCESS TECHNOLOGY

AM 100

ADVANCED MANUFACTURING PATHWAYS 3 CR

Students will learn about the career and networking options in Industrial Maintenance & Mechatronics, Instrumentation & Control Technology and Process Technology industries. They will explore the roles and responsibilities of plant operators and maintenance technicians. Team work and team dynamics will also be covered. This course will introduce basic concepts in industrial safety and industrial terminology including OSHA 10 Training. Students will also develop a course work plan for their chosen field of study.

PTEC 101

INTRODUCTION TO PROCESS TECHNOLOGY 4 CR

In this course students will study various aspects of the Process Industry, including basic physics and chemistry associated with industrial processes; safety, and quality management. In addition, the course will cover basic components of the

Process Industry environment, such as piping and valves; tanks, drums, and vessels; pumps and compressors; steam turbines; electricity and motors; heat exchangers; cooling towers and fans; furnaces and boilers; distillation columns; process control instrumentation; process utilities and auxiliary systems; and process print reading.

Prerequisite(s): ACCUPLACER QAS (254) or higher or MATH 098 with a C or higher.

PTEC 102

PROCESS TECHNOLOGY I (EQUIPMENT) 5 CR

The purpose of this course is to provide an overview of the equipment and tools used in the industrial maintenance, process technology and instrumentation industries including piping, tubing, hoses and fittings; valves; pumps. Also, including compressors; turbines; motors and engines; power transmission and lubrication; heat exchangers; cooling towers; furnaces and boilers; filters and dryers; vessels; and their associated instrumentation. Students will be introduced to many process related equipment concepts, such as purpose, components, operation, and the Process and Maintenance Technician's roles for operating and troubleshooting the equipment.

PTEC 103

SAFETY, HEALTH & ENVIRONMENT I 5 CR

In this course, students will study industrial hazards types, including physical, chemical, ergonomic, and biological. Within these four general types, specific agents, causative factors, and effects will be identified along with controls, alarms, and detection systems. The course will focus on hazardous chemicals found in the process industry.

Prerequisite(s): PTEC 101 and PTEC 102.

PTEC 104

PROCESS DRAWINGS 2 CR

In this course, students will study various process drawings such as a Process Flow Diagram (PFD) and Piping and Instrumentation Diagram (P&ID). This course will cover how to read detailed diagrams in the process industry which shows the piping and vessels in the process flow, together with the instrumentation and control devices. Students will use these drawings to analyze process flows, equipment, isolation valves, instrumentation and process control loops. Additionally, students will use process diagrams for determining safe isolation procedures.

Prerequisite(s): PTEC 101 and PTEC 102.

PTEC 105

PROCESS TECHNOLOGY II (SYSTEMS) 5 CR

In this course, students will study the interrelation of process equipment and process systems. Specifically, students will be able to arrange process equipment into basic systems; describe the purpose and function of specific process systems; explain how factors affecting process systems are

controlled under normal conditions; and recognize abnormal process conditions. In addition, students are introduced to the concept of system and plant economics.

Prerequisite(s): PTEC 101 and PTEC 102.

PTEC 109

INTRO TO WWT 5 CR

In this course, students will be introduced to the various methods and processes for fresh water and wastewater treatment. These will include the steps of preliminary, primary, secondary and tertiary treatment which involve the operations of sedimentation, biological and chemical reacting, thickening, drying, filtration, mixing, and disinfection. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to water processing.

Completion Of or Concurrent Enrollment In: CAP 101 with a C or better or concurrent enrollment in CAP 101, or Instructor permission.

PTEC 110

PROCESS INSTRUMENTATION 5 CR

In this course, students will study process variables and the various instruments used to sense, measure, transmit, and control these variables. The course also introduces students to control loops and the elements that are found in different types of loops, such as controllers, regulators, and final control elements. The course concludes with a study of instrumentation drawings and diagrams along with a unit on troubleshooting instrumentation.

Prerequisite(s): PTEC 103 and PTEC 105 and AMATH 111, or Instructor permission.

PTEC 190

FOOD PROCESSING 3 CR

In this course, students will be introduced to the various methods and processes for producing foods. These will include the operations of heating, drying, reacting, mixing, separating, and granulating. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to food processing. This course may be either live, a hybrid or online.

Prerequisite(s): CAP 101.

PTEC 191

NON-REFINING PROCESSES 3 CR

In this course, students will be introduced to local and regional non-petroleum refining processes such as Food Processing, Dry Materials Processing, Pulp and Paper Mill Processing among others. Students will analyze and compare other industry processes. Topics range from industry specific safety and environmental concerns to exploring career opportunities. The students will have an opportunity to meet and tour local industries.

Prerequisite(s): CAP 101.

PTEC 192

PULP & PAPER PROCESSING 3 CR

In this course, students will be introduced to the various methods and processes for producing pulp and paper. These will include the operations of feedstock preparation, digestion, bleaching, drying, reacting, mixing, separating, and pressing. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to pulp and paper processing. This course may be either live, a hybrid, or online.

Prerequisite(s): CAP 101.

PTEC 193

UPSTREAM PROCESS 3 CR

In this course, students will be introduced to the various methods and processes for locating and producing oil. In addition, the geology of the formation of oil deposits will be covered as well as an overview of the regulations for oil exploration. The methods and operations include exploration, drilling, completion of the well. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to upstream processing. This course may be either live, a hybrid, or online.

Prerequisite(s): Completion of or concurrent enrollment in CAP 101.

PTEC 194

WASTEWATER TREATMENT 3 CR

In this course, students will be introduced to the various methods and processes for wastewater treatment. These will include the steps of preliminary, primary, secondary and tertiary treatment which involve the operations of sedimentation, biological and chemical reacting, thickening, drying, filtration, mixing, and disinfection. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to pulp and paper processing. This course may be either live, a hybrid, or online.

Prerequisite(s): Completion of or concurrent enrollment in CAP 101.

PTEC 195

BIODIESEL FUNDAMENTALS 3 CR

In this course, students will be introduced to the various methods and processes for producing biodiesel. These will include the operations of feedstock preparation, reaction, mixing, separating, and washing. The equipment necessary to provide and control these operations. Quality control, safety, and jobs available in this industry will also be covered. Students will also prepare biodiesel in the laboratory and in a pilot plant. A project related to biodiesel production will also be required. This course may be either live, a hybrid, or online with access to the laboratory and pilot plant.

Prerequisite(s): Completion of or concurrent enrollment in CAP 101.

PTEC 196

GREEN ENERGY 3 CR

In this course, students will be introduced to the various methods and processes for producing green energy. These will include the production of renewable energy by wind, solar, hydroelectric, wave, and biofuels. The equipment necessary to provide and control these operations; quality control, safety, and jobs available in this industry will also be covered. Students will also do a project related to green energy. This course may be either live, a hybrid or online.

Prerequisite(s): CAP 101.

PTEC 197

COOPERATIVE EDUCATION 3 CR

In this course, students will be given credit for courses or portions of courses taken at other educational institutions. Examples of these include trips to other PTEC schools to operate special pieces of equipment or learn specialized topics. Students will be required to perform the required portion of coursework and to prepare a written and oral report.

Prerequisite(s): PTEC 103, PTEC 105; open to currently enrolled PTEC students with instructor permission.

PTEC 198

BASIC MECHANICAL SKILLS 3 CR

In this course, students will learn and practice the use of basic hand tools and power tools to disassemble various pieces of industrial equipment, to include valve maintenance and valve repacking. Reading and interpreting manufacturers technical manuals and equipment drawings. Students will disassemble, inspect pipe flanges, install blinds, make up piping flanges and connections in accordance with applicable documentation.

Prerequisite(s): Completion of or concurrent enrollment in CAP 101.

PTEC 199

POWER GENERATION 3 CR

In this course, students will be introduced to multiple types of power generation such as Boilers, Co-Generation, Wind and Hydro Power. This will include the operations of boilers, steam turbines, gas turbines, wind and hydro turbines. The equipment necessary to provide and control these operations, quality control, safety, and jobs available in this industry will also be covered. Students will visit a power generation site and discuss with operators the unique industry requirements and job outlook. A project related to power generation will also be required. This course may be either live, a hybrid, or online with access to the laboratory and pilot plant.

Prerequisite(s): CAP 101.

PTEC 203

SAFETY, HEALTH & ENVIRONMENT II 5 CR

Continued instruction in the application of concepts presented in Safety, Health, & Environment I with an emphasis on emergency response concepts. The student will demonstrate appropriate

response to emergency situations; recognize hazardous situations for personnel, environment, and the community; and apply team skills in response to emergency situations.

Prerequisite(s): PTEC 110.

PTEC 205

DYNAMIC PROCESS CONTROL 5 CR

Multiple dynamic process simulators operating in a PC Lab environment will be utilized as the foundational elements of the course learning activities. Computer simulations of fired heaters and distillation systems will be operated in normal, off-normal, emergency, start-up and shutdown modes. The course will be conducted as a "hands on" operating experience using both small-group and individual simulation activities, assignments and scenarios.

Prerequisite(s): PTEC 110.

PTEC 207

QUALITY CONTROL 5 CR

The purpose of this course is to provide students with an overview of, or introduction to, the field of quality control within the process industry. In this course, students will be introduced to many process industry-related quality concepts, including operating consistency, continuous improvement, plant economics, team skills, and statistical process control (SPC). This course may be either live, a hybrid or online.

Prerequisite(s): PTEC 110.

PTEC 211

TROUBLESHOOTING 5 CR

In this course, students will be introduced to troubleshooting controllers, control schemes, and advanced control schemes at a level appropriate for the process technician. The student will learn about different types of Process Technology troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collections and analysis, cause-effect relationships, and reasoning.

Prerequisite(s): PTEC 110.

PTEC 212

INDUSTRIAL PROCESSES & EQUIPMENT 5 CR

The purpose of this course is to provide the student with an understanding of the typical process systems employed in process technology companies such as: petroleum refining, wastewater treatment, food processing, pulp and paper processing, and power generation. Special emphasis will be placed upon systems that are utilized by local area process technology companies. Lab assignments and activities will be conducted to illustrate and simulate typical industrial processes. The student will understand construction, theory of operation, and typical uses of process industry equipment.

Prerequisite(s): PTEC 110.

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PTEC 215

PROCESS TECHNOLOGY III (OPERATIONS) 5 CR

Provides an overview of the field of operations within the process industry. Students will use existing knowledge of equipment, system, and instrumentation to understand the operation of an entire unit. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations as well as the Process Technician's role in performing the tasks associated with these concepts within an operating unit.

Prerequisite(s): PTEC 110.

PTEC 221

PRELIM & SEC WWT STAGE 1 5 CR

Students will be introduced to the various methods and processes for preliminary and secondary treatment of wastewater. These will include the steps of preliminary, primary, and secondary treatment which involve the operations of contaminant removal equipment, sedimentation systems, biological and chemical reactors, thickeners, and mixing systems. The class will discuss the equipment necessary to provide and control these operations, quality control methods, and safe work practices. Students will also do a project related to waste water processing.

Prerequisite(s): PTEC 109 with a D or higher, or Instructor permission.

PTEC 222

SOLIDS & REGS WWT STAGE 2 5 CR

This course will cover methods and technology associated with solids treatment and regulatory issues associated with Water Treatment processes. Processes, equipment, operations and operator duties/responsibilities will be covered. Regulations related to permit compliance and standard record keeping will also be covered.

Prerequisite(s): PTEC 109 with a D or higher, or Instructor permission.

PTEC 223

WATER & ADV WWT STAGE 3 5 CR

This course will cover methods and technology associated with fresh water treatment, water disinfection and advanced treatment of wastewater. Processes, equipment, operations and operator duties/responsibilities will be covered. The class will discuss the equipment necessary to provide and control these operations, quality control methods, and safe work practices. Students will also do a project related to fresh water processing.

Prerequisite(s): PTEC 109 with a D or higher, or Instructor permission.

PTEC 224

WWT TEST PREPARATION 3 CR

This course will prepare the participant to successfully apply for and take the Operator in Training exam. Topics include managing the operational and maintenance needs of water and wastewater

treatment facilities; water quality concerns and disinfection; interpreting and applying Federal, State and Local rules and regulations; planning and record keeping requirements.

Prerequisite(s): PTEC 109 with a D or higher, or Instructor permission.

PTEC 270

PROCESS TECHNOLOGY PROJECT I 5 CR

This is a culminating project assignment for an individual or a group of students. The instructor may assign a specific topic for the project or work with a local industry/plant to define a particular project topic from a real-life situation. The student or the group of students will define the problem, resources needed, postulate the hypothesis/solution, research the problem and possible solutions, visit the plant, interview/consult with instructor/engineers technicians and other resources and internet to develop a solution. The student or the group will then write the technical report defining the complete process from defining the problem, methodology applied, and their conclusion. This may also require building a piece of equipment, writing a software program, or writing safety or operational procedures.

Prerequisite(s): PTEC 101.

PTEC 272

PROCESS TECHNOLOGY PROJECT II 5 CR

This may be a continuation of PTEC 270 or a separate assignment. For the degree student, this is a culminating project for an individual or group. The instructor may assign a topic for the project or work with a local industry to define a project topic from a real-life situation. The student or group of students will define the problem, resources needed, postulate the hypothesis/solution, research the problem and possible solutions, visit the plant, interview /consult with instructor/engineers/technicians and other resources, and develop a solution. The student or group will then write a technical report outlining the complete process from defining the problem, methodology applied and conclusion. This may also require building a piece of equipment, writing a software program, or writing safety or operational procedures.

Prerequisite(s): PTEC 101.

PTEC 290

PROCESS TECHNOLOGY PRACTICUM/

INTERNSHIP I 5 CR

This elective course provides work experience in a Process Technology related environment so that students may expand their technical knowledge and skills. Specific performance skills and customized objectives will be developed for each student. Clock hours are variable and may be repeated for clock hour credit.

Prerequisite(s): PTEC 101.

PTEC 291

PROCESS TECHNOLOGY PRACTICUM/

INTERNSHIP II 5 CR

This elective course provides work experience in a Process Technology related environment so that students may expand their technical knowledge and skills. Specific performance skills and customized objectives will be developed for each student. Clock hours are available and may be repeated for clock hour credit.

Prerequisite(s): PTEC 101.

PSYCHOLOGY

PSYC& 100

GENERAL PSYCHOLOGY 5 CR

An overview of the factors affecting behavior including topics related to theories of learning, the senses, perceptions, nervous system, emotions, personality theory, motivation, abnormal behavior and therapy, and social psychology.

Prerequisite(s): ACCUPLACER Classic Reading (85) or higher OR ACCUPLACER NextGen Reading (256) or RDG 085 with a B or higher and ACCUPLACER Classic Sentence Skills (86) or higher OR ACCUPLACER Next-Gen Writing (255) or higher OR AENGL 100 with a C or higher or BUS 191 with a C or higher.

PSYC& 200

LIFESPAN PSYCHOLOGY 5 CR

A systematic study of the developmental processes in humans from conception to late adulthood. Special emphasis will be given to the topics of physical development, cognitive development, and personality/social development.

Prerequisite(s): PSYC& 100 with a C or higher.

PSYC 310

INDUSTRIAL ORGANIZATIONAL PSYCHOLOGY 5 CR

This course examines how people behave and interact with each other at work with an emphasis on the way that this affects job performance. Topics covered in this course include the development of leadership skills; recruitment and retention; motivation and team building; managing change; and conflict resolution. Group work is used to build and practice the interpersonal skills critical for workplace management.

Prerequisite(s): ENGL& 101 and 5 credits of Humanities, both with a C or higher; and BASOPS program admission or BAS-ENGT program admission or Instructor permission.

QUALITY ASSURANCE

QA 110

INTRODUCTION TO QUALITY ASSURANCE FOR MACHINING 3 CR

An introduction to part inspection using Geometric Dimensioning and Tolerancing. GD&T symbols, feature control frames, datums, and Form, Orientation, Location, and Runout tolerances will be covered. Skills will be reinforced with project inspections. Students will demonstrate competencies by inspecting machined parts using granite surface plates, micrometers, height gages, indicators and leveling plates.

Prerequisite(s): MACH 103 with a C or higher.

QA 115

INTERMEDIATE QUALITY ASSURANCE FOR MACHINING 3 CR

Expands upon the processes and concepts learned in QA 110. Delves further into geometric dimensioning and tolerancing and introduces Verisurf inspection software. Part inspections utilizing the MicroScribe measuring arm in conjunction with Verisurf software will be introduced.

Prerequisite(s): QA 110 with a C or higher.

QA 120

ADVANCED QUALITY ASSURANCE FOR MACHINING 3 CR

A continuation of QA 115. Students will create First Article Inspection sheets and in process inspection plans for parts to be machined. Students will practice more complex part inspections utilizing the MicroScribe measuring arm and Verisurf software.

Prerequisite(s): QA 115 with a C or higher.

RADIOLOGIC TECHNOLOGY

RT 100

INTRODUCTION TO RADIOLOGIC TECHNOLOGY 2 CR

This course covers the role of the radiologic technologist within the healthcare team and the department of medical imaging with an emphasis on physical requirements, professional roles, inter-departmental/peer relationships and medical communication used in radiologic technology. An introduction to the profession will include: history of radiologic technology, medical law and ethics in healthcare, basic principles of radiation protection, the production of ionizing radiation, positioning examinations, leadership practices, critical thinking, learning styles, and conflict response and resolution. In addition, college and program policies will be introduced and students will be required to complete a job shadow experience in the hospital and clinic setting.

Note: The student is required to successfully pass

this course with a grade of B or higher to apply to the program.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 85 with a C or higher. ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher. ACCUPLACER Arithmetic (230) or higher OR MATH 098 with a C or higher.

RT 101

RADIOGRAPHIC POSITIONING I 6 CR

This course introduces general anatomy, radiographic anatomy, basic positioning techniques, image analysis, radiographic anatomy identification, and introduction to associated general disease processes used in the radiography of the respiratory system, gastrointestinal system, abdomen, and upper extremities. Lab sessions include peer positioning of introduced positioning procedures and techniques.

Prerequisite(s): RT 100, ENGL& 101, CHEM& 121, BIOL& 241, BIOL& 242, and MATH& 107 or MATH& 141 or MATH& 146 (or higher), all with a B or higher. BIOL& 160, PSYC& 100, HT 100, and CMST& 220, all with a C or higher.

RT 102

RADIOGRAPHIC POSITIONING II 6 CR

This course introduces general anatomy, radiographic anatomy, basic positioning techniques, image analysis, radiographic anatomy identification, and introduction to associated general disease processes used in the radiography of the bony thorax, spinal column, pelvic girdle and lower extremities. Lab sessions include peer positioning of introduced positioning procedures and techniques.

Prerequisite(s): RT 101, RT 112, and RT 120 with a C or higher.

RT 103

RADIOGRAPHIC POSITIONING III 5 CR

This course introduces general anatomy, radiographic anatomy, basic positioning techniques, image analysis, radiographic anatomy identification, and introduction to associated general disease processes used in the radiography of the urinary system, skull, facial bones, and special imaging procedures. Lab sections include peer positioning of introduced positioning procedures and techniques.

Prerequisite(s): RT 102 with a C or higher.

RT 112

PATIENT CARE IN RADIOLOGY 4 CR

This course provides the student with basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine patient care will be included, as well as infection control techniques, vital signs, safety and transfer positioning, medical emergencies, barium studies, oxygen therapy and catheters. Patient education and documentation will be addressed.

Prerequisites: RT 100, ENGL& 101, CHEM& 121, BIOL& 241, BIOL& 242, and MATH& 107 or MATH& 141 or MATH& 146 (or higher), all with a B or higher. BIOL&

160, PSYC& 100, HT 100, and CMST& 220, all with a C or higher.

RT 120

IMAGE ACQUISITION 4 CR

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiologic images. Emphasis will be on electronic imaging with related accessories. Topics to be included are basic radiographic production, imaging standards, radiographic density and contrast, recorded detail, distortion, exposure latitude, beam-limiting devices, beam filtration, technique formulation, exposure calculations, image acquisition. Lab exercises will provide application of theories using energized equipment and test tools.

Prerequisites: RT 100, ENGL& 101, CHEM& 121, BIOL& 241, BIOL& 242, and MATH& 107 or MATH& 141 or MATH& 146 (or higher), all with a B or higher. BIOL& 160, PSYC& 100, HT 100, and CMST& 220, all with a C or higher.

RT 121

RADIOGRAPHIC PHYSICS I 4 CR

This course is designed to establish a knowledge base in atomic structure and terminology. Included are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. An introduction to the principles of radiation protection is included. Lab activities will provide application for the course theories.

Prerequisite(s): RT 101, RT 112, and RT 120 with a C or higher in each course.

RT 123

RADIOGRAPHIC PHYSICS II 4 CR

This course is designed to establish a knowledge base in radiographic, fluoroscopic, mobile, tomography equipment requirements and design. Content includes manual versus automatic exposure control, equipment calibration, beam restriction, and recognition of malfunctions.

Prerequisite(s): RT 121 with a C or higher.

RT 131

RADIOGRAPHIC CLINIC I 7 CR

This course consists of two clinical assignments of eight-hour work shifts per week. Students are assigned clinical experience in a radiology department to complete clinical competencies correlating with academic coursework.

Prerequisite(s): RT 101, RT 112, and RT 120 with C or higher in each course.

RT 132

RADIOGRAPHIC CLINIC II 7 CR

This course consists of two clinical assignments of eight-hour work shifts per week. Students are assigned clinical experience in a radiology department to complete clinical competencies correlating with academic coursework.

Prerequisite(s): RT 131 with a C or higher.

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RT 133
RADIOGRAPHIC CLINIC III **8 CR**
This course consists of clinical assignments correlating with current academic course work. Assignments will include rotations at hospitals, clinics or doctors' offices in regional areas. Rotations may include day, evening or weekend schedules.

Prerequisite(s): RT 132 with a C or higher.

RT 201
RADIOGRAPHIC PATHOLOGY I **4 CR**
This course includes applications of patient care, procedures and pathology related to trauma, surgical, pediatric, digestive, respiratory, urinary and skeletal/muscular systems. Students will present case studies incorporating patient history, care considerations, procedures and pathology.

Prerequisite(s): RT 133 with a C or higher.

RT 202
RADIOGRAPHIC PATHOLOGY II **4 CR**
This course includes applications of patient care, procedures and pathology related to reproductive, circulatory, lymphatic, endocrine, nervous and sensory organs. Students will present case studies incorporating patient history, care considerations, procedures and pathology.

Prerequisite(s): RT 201, RT 205 & RT 231 with a C or higher in each course.

RT 205
PHARMACOLOGY **3 CR**
This course will provide basic concepts of pharmacology. Concepts included are pharmacokinetic and pharmacodynamic principles of drugs, categories specific to drugs, actions and side effects of select medications, and legal and ethical status of radiographer's role in drug administration.

Prerequisite(s): RT 133 with a C or higher.

RT 210
RADIATION BIOLOGY **4 CR**
This course provides an overview of the principles of the interaction of radiation with living systems. The factors that affect biological response to include acute and chronic effects of radiation. Includes examination of standards, measurements and requirements required by government guidelines.

Prerequisite(s): RT 201, RT 205, and RT 231 with a C or higher in each course.

RT 230
REGISTRY REVIEW AND EMPLOYMENT READINESS **4 CR**
This course is designed to provide students with opportunities to prepare for registry review and employment readiness. Registry review will be provided utilizing presentations and computer applications. Students will prepare a professional portfolio for employment and practice interview skills.

Prerequisite(s): RT 202, RT 210 and RT 232 with a C or higher in each course.

RT 231
RADIOGRAPHIC CLINIC IV **10 CR**
This course consists of clinical assignments correlating with current academic course work. Assignments will include rotations at hospitals, clinics or doctors' offices in regional areas. Rotations may include day, evening or weekend schedules.

Prerequisite(s): RT 133 with a C or higher.

RT 232
RADIOGRAPHIC CLINIC V **10 CR**
This course consists of three clinical assignments of eight-hour shifts per week. Students are assigned clinical experience in a radiology department to complete sixth quarter clinical competencies and select specialized rotations.

Prerequisite(s): RT 231 with a C or higher.

RT 233
RADIOGRAPHIC CLINIC VI **10 CR**
This course consists of clinical assignments correlating with current academic course work. Assignments will include rotations at hospitals, clinics or doctors' offices in regional areas. Rotations may include day, evening or weekend schedules.

Prerequisite(s): RT 232 with a C or higher.

READING

RDG 085
READING SKILLS **5 CR**
This course focuses on developing technical/college level reading. Emphasis is placed on locating main ideas, summarizing, critical thinking skills and digital literacy. Students will document reading strategies for a variety of reading material as well as map navigation process for on-screen readings. Activities include daily reading, group work, vocabulary expansion, critical thinking, and summary writing.

Prerequisite(s): ACCUPLACER Classic Reading (50) or higher OR ACCUPLACER NextGen Reading (233) or higher OR ABE 054 with a C or higher OR ABE 055 with a C or higher. ACCUPLACER Classic Sentence Skills (50) or ACCUPLACER NextGen Writing (230) OR ABE 052 with a C or higher OR ABE 055 with a C or higher.

Completion of or Concurrent Enrollment In: CDEV 100 with a C or higher.

RESIDENTIAL HOME INSPECTION

RHI 111
FUNDAMENTALS OF HOME INSPECTION **12 CR**
This course will teach students the fundamentals of residential home inspection. Students will receive classroom instruction in Washington State laws and rules; business practices; legal issues; communication; structural components; exter-

ors; roofing; plumbing; electrical systems; heating and cooling systems; interiors; insulation and ventilation; fireplaces, chimneys and solid fuel burning appliances; site and grading; attached garages and carports; wood destroying organisms, conducive conditions and pests; alternate construction methods; environmental conditions or hazardous materials; building codes; and product quality and safety issues. Students will gain the technical knowledge required to pursue a career in the field of home inspection. Fundamentals of Home Inspection will fulfill the education pre-licensing requirements of the state and will prepare students for a career in home inspection.

RHI 112
HOME INSPECTION FIELD TRAINING **3 CR**

This course will build on the information covered in the Fundamentals of Home Inspection course by providing an additional forty (40) hours of supervised field training. This field training will include supervised hands-on inspections at a minimum of five residences along with five completed student reports which are required to successfully meet Washington State standards. The report writing is in addition to the 40 hours of field training and will be completed off-site and out of class time by students.

Prerequisite(s): RHI 111.

SOCIOLOGY

SOC& 101
INTRODUCTION TO SOCIOLOGY **5 CR**
This course introduces the major concepts and definitions of the science of sociology. Basic sociological inquiry is covered, and how social forces shape communal and individual behaviors and attitudes. Topics include socialization, cultures, deviance, social control, inequality, power, social class, race, gender, and institutions. Students learn the basic theories and perspectives of sociology and how those theories apply to the social landscape.

Prerequisite(s): Accuplacer Reading Comprehension score of 85 or RDG 085 with a B or higher, and Accuplacer Sentence Skills score of 86 or ENGL 092 with a B or higher or AENGL 100 with a C or higher.

SPANISH

SPAN& 121
SPANISH I **5 CR**
This course covers basic communication for comprehension, speaking, reading, and writing in Spanish with a focus on interactions in business situations. Students will learn specific vocabulary and skills to communicate with Spanish-speaking clients in a professional setting. This course will also provide an introduction to Hispanic cultures.

SPAN& 122

SPANISH II**5 CR**

A continuation of Spanish I. The vocabulary and grammatical structures are more complicated, and the student begins to master a past tense. Oral comprehension and speaking skills are emphasized through daily practice, as well as the reading and writing exercises.

Prerequisite(s): SPAN& 121 with a C or higher.

SURGERY TECHNOLOGY

SURG 100

INTRO TO SURGERY TECHNOLOGY 2 CR

This course provides information related to the role of the surgical technologist within the surgical team, operative environment with an emphasis on physical requirements of the surgical technician, professional roles, inter-departmental/peer/relationships and medical communication used in surgical technology. An introduction to the profession will include: history of surgery, surgical ethics and law and principles of aseptic technique. In addition, college and program policies will be introduced. You are required to receive a B in this course to apply to the program.

Prerequisite(s): ACCUPLACER Reading (247) or higher or RDG 85 with a C or higher. ACCUPLACER Writing (245) or higher or ENGL 092 with a C or higher. ACCUPLACER Arithmetic (230) or higher or ABE 50 with a C or higher.

SURG 120

SURGERY TECHNOLOGY I 12 CR

The student will gain theoretical and practical knowledge of general equipment, instrumentation, surgical team member roles and health care facilities and their management. Includes physical, psychological, and ethical aspects of patient care in addition to principles of aseptic technique, sterilization and safety in the operating room. Students will participate in activities that help to identify, manage and apply general terminology to medications and solutions used in operating room settings. Student will apply the theories and principles of pharmacology for use in the operating room environment in order to provide safe and effective management of medications.

Prerequisite(s): MATH& 107 (or higher), BIOL& 241, BIOL& 242, BIOL& 260, ENGL& 101, and SURG 100 all with a B- or higher. CHEM& 121 with a B- or higher or CHEM& 161 with a B- or higher. PSYC& 100 (or CMST& 210 or CMST& 220), BIOL& 160, and HT 126 all with a C or higher.

Corequisite(s): SURG 125.

SURG 125

SURGERY TECHNOLOGY LAB I 10 CR

The student will participate in lab activities based on principles and techniques of operating room procedure. Students will develop skills necessary to plan, set-up and maintain sterile fields. In addition, the student will orient to health care facilities.

Prerequisite(s): MATH& 107 (or higher), BIOL& 241,

BIOL& 242, BIOL& 260, ENGL& 101, and SURG 100 all with a B- or higher. CHEM& 121 with a B- or higher or CHEM& 161 with a B- or higher. PSYC& 100 (or CMST& 210 or CMST& 220), BIOL& 160, and HT 126 all with a C or higher.

Corequisite(s): SURG 120.

SURG 133

SURGERY TECHNOLOGY II 10 CR

In this course the student will gain further theoretical and practical knowledge of specialty equipment, instrumentation, and surgical supplies. The student will detail intra operative care techniques and the surgical technologists' role in surgical case preparation and surgical procedures.

Prerequisite(s): SURG 120 and SURG 125 with a C+ or higher in each class.

Corequisite(s): SURG 136.

SURG 136

SURGERY TECHNOLOGY CLINICAL PRACTICE I 10 CR

The students will participate in activities that correlate the theories and principles of surgical procedure and technique in a mock operating room (lab) setting. In addition, students will assume the role of a student surgical technologist participating in surgical procedures in affiliated hospitals, surgery centers or clinics.

Prerequisite(s): SURG 120 and SURG 125 with a C+ or higher in each course.

Corequisite(s): SURG 133.

SURG 143

SURGERY TECHNOLOGY III 6 CR

In this course the student will gain further theoretical and practical knowledge of specialty equipment, instrumentation, and surgical supplies. The student will detail the surgical technologists' role in procedures and techniques used to achieve intraoperative hemostasis, proper patient documentation and patient care emergencies. The students will also describe the surgical technologists' professional and legal responsibilities.

Prerequisite(s): SURG 133 and SURG 136 with a C+ or higher in each course.

Corequisite(s): SURG 145.

SURG 145

SURGERY TECHNOLOGY CLINICAL PRACTICE II 10 CR

The students will participate in activities that correlate the theories and principles of surgical procedure and technique in a mock operating room (lab) setting. In addition, students will assume the role of a student surgical technologist with emphasis on independent scrubbing on surgical procedures in affiliated hospitals, surgery centers or clinics.

Prerequisite(s): SURG 133 and SURG 136 with a C+ or higher in each course.

Corequisite(s): SURG 143.

TRANSPORTATION

TRANS 101

BASIC TRANSPORTATION SERVICE & SYSTEMS 101 5 CR

Basic Transportation is a hybrid class. A portion of the lecture component will be delivered through an online "textbook." Students will be introduced to basic automotive and diesel repair practices. Proper interaction with customers, shop managers and fellow employees will be emphasized. NOTE: Diesel Technology students must complete all General Education requirements prior to entering DET 139, DET 240 and DET 242. Automotive Technology students must complete all General Education requirements prior to entering AUTO 219.

Prerequisite(s): Instructor permission.

Completion Of or Concurrent Enrollment In: This class must be taken concurrently with TRANS 102 and TRANS 103.

TRANS 102

BASIC TRANSPORTATION SERVICE & SYSTEMS 102 5 CR

Basic Transportation is a hybrid class. A portion of the lecture component will be delivered through an online textbook. Students will begin to apply tool use and shop practices that are introduced in Basic Transportation 102. These practices will be demonstrated on shop and customer vehicles. NOTE: Students are required to complete all General Education courses before entering DET 139, DET 240, DET 242.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; and a valid driver's license; or Instructor permission.

Completion Of or Concurrent Enrollment In: This class must be taken concurrently with TRANS 101 and TRANS 103.

TRANS 103

BASIC TRANSPORTATION SERVICE & SYSTEMS 103 5 CR

Basic Transportation is a hybrid class. A portion of the lecture component will be delivered through an online textbook. Student will continue to implement the knowledge they have gained in TRANS 101 and 102 to more advanced vehicle systems. Students at this point will have the basic knowledge of dealing with customer concerns, verifying their concerns and beginning to diagnose basic problems. NOTE: Students are required to complete all General Education courses before entering DET 139, DET 240, DET 242.

Prerequisite(s): ACCUPLACER Arithmetic score of 38 or MATH 090 with a C or higher or ABE 050 with a C or higher; and ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092

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with a C or higher; and a valid driver's license; or Instructor permission.

Completion Of or Concurrent Enrollment In: This class must be taken concurrently with TRANS 101 and TRANS 102.

VETERINARY TECHNICIAN

VET 120

MEDICAL DOSAGES AND CALCULATIONS

3 CR

This course will cover the necessary concepts involved in mathematics used in veterinary medicine. This will include: dosage calculations, English and metric conversions, per cents, ratios, and other technical applications. This course includes both lecture and lab learning formats.

Prerequisite(s): Admission to the Veterinary Technician program.

Corequisite(s): VETT 101.

VETT 100

INTRO TO VETERINARY TECHNOLOGY

2 CR

This course offers an exploration of the Veterinary Technician profession for individuals considering application to the Veterinary Technician Program. The course will explore employment options for Veterinary Technician graduates and the specific tasks, skills and aptitudes needed to successfully complete the Veterinary Technician Program. The student will be responsible for their own transportation to any fieldtrip assignments. Students are required to receive a C in this course in order to apply for the Veterinary Technician program.

Prerequisite(s): ACCUPLACER Reading (247) or higher OR RDG 85 with a C or higher. ACCUPLACER Writing (245) or higher OR ENGL 092 with a C or higher. ACCUPLACER Arithmetic (230) or higher OR ABE 50 with a C or higher.

VETT 101

VETERINARY NURSING I

4 CR

Upon completion of this module, the Veterinary Assistant and Veterinary Technician student will be able to safely and effectively obtain subjective and objective patient data that will allow accurate evaluation of the patient with minimum stress and maximum safety. Also, the Veterinary Assistant and Veterinary Technician student will be able to interpret animal body language and use restraint techniques appropriate to the patient and its care needs.

Prerequisite(s): MATH& 107 or higher, ENGL& 101, PSYC& 100 or CMST& 210, CHEM& 121 or CHEM& 161, BIOL& 160, and VETT 100, all with a C or higher.

ATI TEAS scores: Reading 47.6 or higher, Mathematics 46.7 or higher, Science 33.3 or higher, and English & Language Usage 40.0 or higher.

Corequisite(s): VET 120, VETT 102, VETT 103, and VETT 201.

VETT 102

VETERINARY ANATOMY & PHYSIOLOGY I

5 CR

Upon completion of this course, the Veterinary Assistant and Veterinary Technician student will be knowledgeable in the function of basic cell structure, skeletal anatomy & physiology, integument & muscular systems, the respiratory & cardiovascular systems, the hemolymphatic, gastrointestinal, endocrine, reproductive, urinary, & nervous systems in the canine and feline.

Prerequisite(s): MATH& 107 or higher, ENGL& 101, PSYC& 100 or CMST& 210, CHEM& 121 or CHEM& 161, BIOL& 160, and VETT 100, all with a C or higher. ATI TEAS scores: Reading 47.6 or higher, Mathematics 46.7 or higher, Science 33.3 or higher, and English & Language Usage 40.0 or higher.

Corequisite(s): VET 120, VETT 101, VETT 103, and VETT 201.

VETT 103

VETERINARY MEDICAL TERMINOLOGY

3 CR

Upon completion of this module, the Veterinary Assistant and Veterinary Technician student will: understand terms of anatomical topography, nursing records, and pharmaceutical, emergency and surgical, medicine, and patient description terms; students should also be comfortable and accurate with metric system conversion.

Prerequisite(s): MATH& 107 or higher, ENGL& 101, PSYC& 100 or CMST& 210 or CMST 220 or CMST 101 or SOC& 101 or CMST& 230 or PSYC& 200, CHEM& 121 or CHEM& 161, BIOL& 160, and VETT 100, all with a C or higher. ATI TEAS scores: Reading 47.6 or higher, Mathematics 46.7 or higher, Science 33.3 or higher, and English & Language Usage 40.0 or higher.

Corequisite(s): VET 120, VETT 101, VETT 102, and VETT 201.

VETT 104

VETERINARY NUTRITION I

3 CR

Given the characteristics of the patient, the Veterinary Assistant and Veterinary Technician student will understand appropriate and inappropriate dietary components for various life stages to promote optimal health. Also, the Veterinary Assistant and Veterinary Technician student will be able to explain nutritional recommendations to clients and reinforce owner compliance.

Prerequisite(s): VET 120, VETT 101, VETT 102, VETT 103, and VETT 201, all with a C- or higher.

VETT 105

LEARNING FOR A LIFETIME

2 CR

The goals of this module are to enable the student to learn the materials of Veterinary Technician medicine in a logical, goal-oriented manner. The Veterinary Technician student should be empowered with critical thinking and problem-solving skills. The Veterinary Technician student should be able to utilize a variety of reference media and assess that material for quality of content. Finally, the Veterinary Technician student should be able to tailor study skills to address their personal strengths and weaknesses with the goal of max-

imizing retention of material learned during the Veterinary Technician Program and in continuing education pursuits throughout his or her career.

Prerequisite(s): VET 120, VETT 101, VETT 102, VETT 103, and VETT 201, all with a C- or higher.

VETT 106

MICROBIOLOGY, VIROLOGY, & MYCOLOGY

3 CR

Upon completion of this module, the Veterinary Assistant and Veterinary Technician student will be able to classify, collect, & culture bacteria. The Veterinary Assistant or Veterinary Technician student will also be knowledgeable in mycology & virology.

Prerequisite(s): VET 120, VETT 101, VETT 102, VETT 103 and VETT 201, all with a C- or higher.

VETT 107

SMALL ANIMAL PARASITOLOGY

4 CR

Upon completion of this module, the Veterinary Assistant and Veterinary Technician student will be able to: 1) Identify & describe the life cycle of ecto- and endo- parasites; 2) Understand the importance of parasites in veterinary and zoonotic disease; 3) Understand the importance of, and demonstrate proper diagnostic fecal techniques; 4) Identify parasite ova, adults and non-parasite artifacts; 5) Review therapy and prevention of parasite diseases.

Prerequisite(s): VET 120, VETT 101, VETT 102, VETT 103, and VETT 201, all with a C- or higher.

VETT 108

RADIOLOGY I

4 CR

Given the characteristics of the patient and the radiographic study that has been requested, the Veterinary Assistant and Veterinary Technician student will be able to prepare the radiographic equipment, measure the animal using topographic landmarks and choose the appropriate radiographic technique to provide maximum diagnostic benefit in an appropriate and safe manner. The student will also be able to assess the image quality and offer options to correct deficiencies.

Prerequisite(s): VET 120, VETT 101, VETT 102, VETT 103, and VETT 201, all with a C- or higher.

VETT 109

CLINICAL LABORATORY SCIENCES

4 CR

Upon completion of this module, the Veterinary Assistant and Veterinary Technician student will be able to properly handle and submit appropriate samples for diagnostic analysis to ensure maximum accuracy of results. Also, give the characteristics of the laboratory equipment; the student will perform diagnostic tests and determine proper maintenance and quality control procedures necessary to ensure accurate results. Skills will be developed in performing basic hematology, urinalysis and cytology.

Prerequisite(s): VETT 104, VETT 105, VETT 106, VETT 107, VETT 108 and VETT 202, all with a C- or higher.

VETT 110
VETERINARY ANATOMY & PHYSIOLOGY II 3 CR

Upon completion of this module, the Veterinary Technician student will be knowledgeable in: 1) Unique equine features: head and gastrointestinal tract and reproductive tract; 2) Unique ruminant features: gastrointestinal tract and reproductive tract and foot; 3) Avian anatomy.

Prerequisite(s): VETT 104, VETT 105, VETT 106, VETT 107, VETT 108 and VETT 202, all with a C- or higher.

VETT 111
SMALL ANIMAL MEDICINE I 3 CR

Upon completion of this module, the Veterinary Technician student will be knowledgeable in: 1) The general approach to medical problems and become familiar with systemic diseases; 2) Respiratory & cardiac diseases; 3) Gastrointestinal diseases; 4) Urinary tract diseases; 5) Liver & pancreas diseases; 6) Endocrine diseases; 7) Neurologic diseases; 8) Erythrocytes, platelets, & coagulation.

Prerequisite(s): VETT 104, VETT 105, VETT 106, VETT 107, VETT 108 and VETT 202, all with a C- or higher.

VETT 112
VETERINARY NURSING II: SURGICAL 5 CR

Given the characteristics of the patient and the surgical procedure to be performed, the Veterinary Technician student will be able to: 1) Assess the patient's pre-surgical status and tests and report to the veterinarian; 2) Verify the owner consents to the procedure and its cost; 3) Identify and apply appropriate surgical site preparation of hair clipping and decontamination; 4) Position the patient appropriately for maximum surgical convenience and safety; 5) Maintain aseptic technique for surgical facility and equipment.

Prerequisite(s): VETT 104, VETT 105, VETT 106, VETT 107, VETT 108 and VETT 202, all with a C- or higher.

VETT 113
IMMUNOLOGY & PHARMACOLOGY I 3 CR

Upon completion of this module, the Veterinary Technician student will be able to calculate the correct amount of medication in the prescribed form and administer it by the prescribed route as directed by a veterinarian. The Veterinary Technician student shall also be able to differentiate between normal and abnormal responses to medications and communicate necessary information to clients in order to maximize safety and compliance for effective treatment. Finally, the Veterinary Technician student should be proficient at inventory control procedures, especially as applied to controlled substances.

Prerequisite(s): VETT 117, VETT 118, VETT 119, VETT 120 and VETT 204, all with a C- or higher.

VETT 114
DENTISTRY 4 CR

Upon completion of this module, the Veterinary Technician student will be knowledgeable of: 1) Dental anatomy & pathophysiology; 2) Dental radiographs; 3) Dental instruments & usage; 4) Large animal dentistry (equine & swine); 5) Small mammal dentistry & avian beaks.

Prerequisite(s): VETT 117, VETT 118, VETT 119, VETT 120 and VETT 204, all with a C- or higher.

VETT 115
RADIOLOGY II 4 CR

Given the characteristics of the patient and the radiographic study that has been requested, the Veterinary Assistant and Veterinary Technician student will be able to prepare the radiographic equipment, measure the animal using topographic landmarks and choose the appropriate radiographic technique to provide maximum diagnostic benefit in an appropriate and safe manner for specialty studies of the spine, pelvis and GI tract of the dog/cat. The Veterinary Technician student will be able to assess the image quality and offer options to correct deficiencies. Also given the characteristics of the patient and the non-radiographic imaging study requested, the Veterinary Technician student will properly prepare the imaging site and equipment and position the patient appropriately for the study of large animal (equine/bovine) leg/foot.

Prerequisite(s): VETT 117, VETT 118, VETT 119, VETT 120 and VETT 204, all with a C- or higher.

VETT 116
LARGE ANIMAL MEDICINE 3 CR

This is an introductory course to the topic of large animal medical diseases of the horse, cow, goat, sheep and camelids. Emphasis will be placed on pathophysiology and prevention of the discussed diseases under the topics of Equine Preventative Medicine; Equine Respiratory Diseases; Equine Musculoskeletal Diseases; Equine Gastrointestinal Diseases; Equine Reproductive and Neonatal Diseases; Common Small Ruminant Diseases; Bovine Gastrointestinal Diseases; Bovine Reproductive Diseases and Bovine Mastitis.

Prerequisite(s): VETT 110 with a C- or higher.

VETT 117
VETERINARY NURSING III: LARGE ANIMAL 4 CR

Upon completion of this module, the Veterinary Technician student will be able to safely and effectively obtain subjective and objective patient data that will allow accurate evaluation of the patient with minimum stress and maximum safety. In addition, the student will be able to carry out appropriate therapeutic techniques and diagnostics in order to achieve maximum health benefits for the large animal (equine/bovine/porcine) patient.

Prerequisite(s): VETT 110 with a C- or higher.

VETT 118
SMALL ANIMAL MEDICINE II 3 CR

This course introduces the veterinary technician student to common diseases of dogs and cats in the described body systems. (Neurological, including Behavior Disorders; and Musculoskeletal) Emphasis will be placed on the pathophysiology of each disease, with additional concepts of diagnosis and therapy for the disease as appropriate.

Prerequisite(s): VETT 109, VETT 110, VETT 111, VETT 112, and VETT 203, all with a C- or higher.

Corequisite(s): VETT 117, VETT 119, VETT 120 and VETT 204.

VETT 119
ADVANCED CLINICAL LAB SCIENCES 4 CR

This is an advanced course in clinical laboratory sciences for the veterinary technician, prerequisite is successful completion of Clinical Laboratory Sciences I (VETT 109). Evaluation methods are described by body system and include: hematology, cytology, clinical chemistries and urinalysis. Emphasis is placed on proper collection and handling of all samples. The proper use of common laboratory equipment is also practiced in the laboratory setting, this includes: microscopes, in-house analyzers for hematology and chemistries, refractometers and staining systems. Introduction into sampling, hematology and chemistries for exotic and laboratory species also occurs in this course. Introduction to EKG and Blood Pressure collection and the theory of serology.

Prerequisite(s): VETT 109, VETT 110, VETT 111, VETT 112, and VETT 203, all with a C- or higher.

VETT 120
ANESTHESIA 5 CR

This is an introductory course to veterinary anesthesia. The pharmacology of anesthetic agents; the equipment associated with anesthesia and the monitoring and care of the anesthetic patient will be emphasized. Recognizing the signs of pains, scoring of pain and interventional medications and techniques for alleviating pain will be taught. Post-operative care, including physical therapy and client education will be discussed and practiced.

Prerequisite(s): VETT 109, VETT 110, VETT 111, VETT 112 and VETT 203, all with a C- or higher.

VETT 121
EXOTIC ANIMAL MEDICINE 3 CR

This is an introductory course of the anatomy/handling and diseases common of "pocket pet" and laboratory animal species including: birds, reptiles, rabbits, ferrets, rodents and guinea pigs. Additionally, husbandry of salmon and orphaned wildlife will be discussed.

Prerequisite(s): VETT 113, VETT 114, VETT 115, VETT 116, VETT 125 and VETT 205, all with a C- or higher.

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VETT 122

VETERINARY NUTRITION II 2 CR

This course is an advanced veterinary nutrition online course. Veterinary Nutrition I (VETT 104) is prerequisite to this course. Veterinary Nutrition II explores therapeutic nutrition for the diseases of the gastrointestinal, cardiac, urinary, musculoskeletal, neurological systems in small animals. Special emphasis is placed on recovery care and nutritional enteral interventions such as esophageal and gastric tube feedings; and parenteral nutrition. Therapeutic Nutrition for specific conditions of the horse will also be explored.

Prerequisite(s): VETT 113, VETT 114, VETT 115, VETT 116, VETT 125 and VETT 205, all with a C- or higher.

VETT 123

VETERINARY NURSING IV: CRITICAL CARE 5 CR

This is an advanced course exploring the pathophysiology and interventions of common emergencies of small animal medicine. The laboratory exercise will emphasize the equipment and advanced veterinary nursing techniques required in emergency and critical care scenarios of respiratory, neurologic, cardiac, endocrine, and infectious diseases. Support for emergency surgery, blood transfusions and toxin exposure will also be emphasized.

Prerequisite(s): VETT 113, VETT 114, VETT 115, VETT 116, VETT 125, and VETT 205, all with a C- or higher.

VETT 124

SPECIALTY MEDICINE 3 CR

This is an advanced course in veterinary medicine. Small Animal Medicine I (VETT 111) and II (VETT 118) are prerequisite to this course. In this course, the student will explore the requirements to become a Veterinary Technician Specialist and some of the subdisciplines of veterinary medicine that have not been explored in previous medicine courses. Upon completion of this course, the student will be knowledgeable of the following veterinary medicine specialties: 1) Ophthalmology; 2) Research Medicine; 3) Oncology; 4) Endoscopy 5) Pediatrics 6) Geriatric & Hospice care.

Prerequisite(s): VETT 113, VETT 114, VETT 115, VETT 116, VETT 125 and VETT 205, all with a C- or higher.

VETT 125

HUMANITY OF VETERINARY MEDICINE 3 CR

Upon completion of this module, the Veterinary Technician student will be able to effectively contribute to the professional and efficient operation of the veterinary facility in order to provide maximum benefits to clients, patients, and the facility. Also, the Veterinary Technician student will be able to effectively and accurately acquire and convey information to the client and to the veterinary colleagues. Animal welfare and ethical issues are explored in this course. Veterinary Economics and Job Search Skills will be explored. At the completion of this course, the student will have a written Resume and complete a Mock Interview.

Prerequisite(s): VETT 117, VETT 118, VETT 119, VETT 120 and VETT 204, all with a C- or higher.

VETT 126

PHARMACOLOGY II 3 CR

This is the second veterinary technician pharmacy course in the program, successful completion of Pharmacology I is prerequisite to this course. Emphasis is placed on medical math for specific patient scenarios, common terms and abbreviations of pharmacology and the properties of the specific drug classes for therapy of the cardiovascular, respiratory, musculoskeletal and nervous systems. Correct documentation of controlled drugs for DEA compliance is emphasized.

Prerequisite(s): VETT 113, VETT 114, VETT 115, VETT 116, VETT 125 & VETT 205, all with a C- or higher.

VETT 130

VETERINARY CLINICAL WORK EXPERIENCE 12 CR

This is a laboratory/online course hybrid performed at veterinary clinical sites in the community. The student is assigned a clinical Mentor at the site to direct clinical experiences and the development of psychomotor technical skills. The student will also be evaluated on professionalism, communication, animal skills, interactions with clients and veterinary team. There will be online assignments related to the clinical work experience.

Prerequisite(s): VETT 121, VETT 122, VETT 123, VETT 124, VETT 126 & VETT 206, all with a C- or higher.

VETT 201

MENTORSHIP LAB I 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skill focus: animal restraint, physical exam, diagnostic sampling, and small animal patient care.

Prerequisite(s): MATH& 107 or higher, ENGL& 101, PSYC& 100 or CMST& 210 or CMST& 220 or SOC& 101 or CMST& 230 or PSYC& 200, CHEM& 121 or CHEM& 161, BIOL& 160, and VETT 100, all with a C or higher.

ATI TEAS scores: Reading 47.6 or higher, Mathematics 46.7 or higher, Science 33.3 or higher, and English & Language Usage 40.0 or higher.

Corequisite(s): VET 120, VETT 101, VETT 102, VETT 103.

VETT 202

MENTORSHIP LAB II 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skills focus: advanced sampling techniques and beginning radiology.

Prerequisite(s): VETT 201 with a C- or higher.

VETT 203

MENTORSHIP LAB III 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skills focus: surgical assisting and nursing, dressing and bandaging techniques.

Prerequisite(s): VETT 202 with a C- or higher.

VETT 204

MENTORSHIP LAB IV 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skills focus: anesthesia and advanced diagnostics.

Prerequisite(s): VETT 203 with a C- or higher.

VETT 205

MENTORSHIP LAB V 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skills focus: equine patient care, bovine patient care, and advanced radiology procedures.

Prerequisite(s): VETT 204 with a C- or higher.

VETT 206

MENTORSHIP LAB VI 2 CR

This lab requires students, under the supervision of a mentor or the faculty, to demonstrate competency in an escalating list of skills in the lab and the clinical sites. Each quarter builds upon that quarter's didactic material as well as previous skill sets. Primary skills focus: exotic animals, nutrition, specialized medicine and advanced nursing care.

Prerequisite(s): VETT 205 with a C- or higher.

WELDING

WLD 101

WELDING SAFETY 2 CR

Introduction to the general welding industry, shop safety and orientation to the metal shop environment. Also electrical and compressed gas cylinder safety, and safe applications with grinders, band saws, and ironworkers.

Prerequisite(s): ACCUPLACER Reading Comprehension score of 71 or RDG 085 with a C or higher; and ACCUPLACER Sentence Skills score of 71 or ENGL 092 with a C or higher; and ACCUPLACER Arithmetic score of 38 or MATH 090 or ABE 050 with a C or higher.

Corequisite(s): WLD 105, WLD 110, and WLD 120.

WLD 105

THERMAL CUTTING PROCESSES 4 CR

This course will introduce the student to the basics of plasma arc cutting and oxy-fuel cutting processes including cutting safety; theory of gases; and hands-on lab practice. Cylinder handling and equipment safety and orientation will be stressed.

Completion Of or Concurrent Enrollment In: WLD 101, WLD 110 and WLD 120, all with a C- or higher; or concurrent enrollment in WLD 101, WLD 110 and WLD 120; or Instructor permission.

WLD 106

PRINT READING I 2 CR

Students will learn to use prints and drawings used in the welding trade. Students will study interpretation of basic drawings and prints, dimensions, terminology, notes, applied mathematics and sketching and drawing techniques.

Prerequisite(s): WLD 101, WLD 105, WLD 110 and WLD 120, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 130, WLD 140 and WLD 150, all with a C- or higher; or concurrent enrollment in WLD 130, WLD 140 and WLD 150; or Instructor permission.

WLD 110

SMAW I 4 CR

Students will learn applications of power sources, electrode identification, and basic steel metallurgy, while practicing lab techniques in E6010 and E7018 SMAW Electrodes in the weld booth.

Completion Of or Concurrent Enrollment In: WLD 101, WLD 105 and WLD 120, all with a C- or higher; or concurrent enrollment in WLD 101, WLD 105 and WLD 120; or Instructor permission.

WLD 116

SMAW PRACTICE 2 CR

Students will demonstrate all position SMAW welding techniques using E6010 or E7018 electrodes.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 120, WLD 130, WLD 140 and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 121, WLD 131 and WLD 141, all with a C- or higher; or concurrent enrollment in WLD 121, WLD 131 and WLD 141; or Instructor permission.

WLD 120

GMAW I 4 CR

Introduction to the Gas Metal Arc Welding, welding process for mild steel. Power sources, techniques, shielding gases, metallurgy, and electrode identification will be covered. The student will learn the application of this process through lab practice in the weld booth.

Completion Of or Concurrent Enrollment In: WLD 101, WLD 105 and WLD 110, all with a C- or higher; or concurrent enrollment in WLD 101, WLD 105 and WLD 110; or Instructor permission.

WLD 121

GMAW ALUMINUM I 4 CR

This introduction to the gas metal arc welding process on aluminum covers safety, power sources, metallurgy, gases, filler metals, and lab practice.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 130, WLD 140 and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 116, WLD 131 and WLD 141, all with a C- or higher; or concurrent enrollment in WLD 116, WLD 131 and WLD 141; or Instructor permission.

WLD 130

FCAW I 4 CR

Course covers the flux core arc welding process, including dual shield and self-shielding processes. Classroom discussion includes process safety and applications, power sources, shielding gases, FCAW electrodes and metallurgy. Lab practice on mild steel in the weld booth.

Prerequisite(s): WLD 101, WLD 105, WLD 110 and WLD 120, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 106, WLD 140 and WLD 150, all with a C- or higher; or concurrent enrollment in WLD 106, WLD 140 and WLD 150; or Instructor permission.

WLD 131

FCAW PRACTICE 2 CR

Students will demonstrate all position FCAW welding techniques.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 120, WLD 130, WLD 140 and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 116, WLD 121 and WLD 141, all with a C- or higher; or concurrent enrollment in WLD 116, WLD 121 and WLD 141; or Instructor permission.

WLD 140

GTAW I 4 CR

This Introduction to Gas Tungsten Arc Welding process covers safety, power sources, metallurgy, gases, filler metals and welding lab practice on mild steel in the weld booth.

Prerequisite(s): WLD 101, WLD 105, WLD 110, and WLD 120, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 106, WLD 130 and WLD 150, all with a C- or higher; or concurrent enrollment in WLD 106, WLD 130 and WLD 150; or Instructor permission.

WLD 141

GTAW ALUMINUM I 4 CR

This introduction to gas tungsten arc welding process on aluminum covers safety, power sources, metallurgy, gases, filler metals, and lab practice.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 120, WLD 130, WLD 140, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 116, WLD 121 and WLD 131, all with a C- or higher; or concurrent enrollment in WLD 116, WLD 121 and WLD 131; or Instructor permission.

WLD 150

INTRODUCTION TO METAL FABRICATING 4 CR

Students will learn and apply basic layout and fabricating techniques, applying simple print reading concepts, and cutting and welding techniques, to produce simple fabricated small projects. Will familiarize students with shop equipment and sign-off each for safety. GMAW and FCAW welding processes may be used, as well as Plasma and Oxy/Fuel Thermal Cutting processes, and introduction to bevellers. The importance of accurate measuring; precision squares, angles, drilling and leveling; attention to detail, neatness, and the finished product will be demonstrated in an approved small fabrication project.

Prerequisite(s): WLD 101, WLD 105, WLD 110, and WLD 120, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 106, WLD 130 and WLD 140, all with a C- or higher; or concurrent enrollment in WLD 106, WLD 130 and WLD 140; or Instructor permission.

WLD 173

BASIC WELDING 2 CR

This course covers basic industrial welding techniques and safety. From beginning competencies in SMAW and oxy/fuel cutting, through GMAW and plasma cutting processes. Basic fabricating principles will cover lap, fillet, and butt weld joint set-up.

WLD 205

PRINT READING II - PIPE 3 CR

Students will learn to use prints and drawings used in the welding trade, with emphasis on piping. Students will study and interpret industry drawings and prints, ISO's, plan drawings, symbols, dimensions, terminology, notes, applied mathematics, sketching and drawing techniques.

Prerequisite(s): WLD 210 and WLD 211, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 215 and WLD 256, both with a C- or higher; or concurrent enrollment in WLD 215 and WLD 256; or Instructor permission.

WLD 206

PRINT READING II - WELDING & FABRICATION 3 CR

Students will learn to use prints and drawings used in the welding trade, with emphasis on structural steel. Students will study and interpret industry drawings and prints, plan drawings, symbols, dimensions, terminology, notes, applied mathematics, sketching and drawing techniques.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

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Completion Of or Concurrent Enrollment In: WLD 230, WLD 242 and WLD 252, all with a C- or higher; or concurrent enrollment in WLD 230, WLD 242 and WLD 252; or Instructor permission.

WLD 210

SMAW II

6 CR

Open-Root Carbon Steel late Shield Arc Welding in 2G and 3G positions. Emphasis on open-root groove welding on 3/8" - 1/2" plate with E6010 (Root), and E7018 (Fill & Cap) for students enrolled in Pipe Pathway. This welding practice follows AWS Welding Standard D1.1 and WABO Structural Steel Welding Code, and is beginning practice to qualify open-root welds to ASME IX: B31.3; and AP1104 SMAW Pipe Welding Certification Standards for pressure piping applications required by local refineries and affiliated industrial piping applications.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 211 with a C- or higher; or concurrent enrollment in WLD 211; or Instructor permission.

WLD 211

SMAW III

6 CR

Open Root Carbon Steel Plate Shield Metal Arc Welding in 4G position. Emphasis on open root groove welding on 3/8" - 1" plate with E6010 (Root), and E7018 (Fill & Cap) for students enrolled in Pipe Pathway. This welding practice follows AWS Welding Standard D1.1 Structural Steel Welding Code, and is beginning practice to qualify open root welds to ASME IX: B31.1 and B31.3; and AP1104 SMAW Pipe Welding Certification Standards for pressure piping applications required by local refineries and affiliated industrial piping applications.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 210 with a C- or higher; or concurrent enrollment in WLD 210; or Instructor permission.

WLD 213

PRINT READING III

3 CR

Advanced Print Reading for 2nd year students. Students will study interpretation of basic drawings and prints, dimensions, terminology, notes, applied mathematics and sketching and drawing techniques. Also may include applications for CNC Plasma Software, Isometric reading and drawing, and understanding basic AutoCAD applications.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 220, WLD 232 and WLD 254, all with a C- or higher, or concurrent enrollment in WLD 220, WLD 232 and WLD 254 for Welding & Fab: General pathway; or WLD 230, WLD 257 and WLD 262, all with a C- or higher, or concurrent enrollment in WLD 230, WLD 257 and WLD 262 for Welding & Fab: Pipe pathway; or Instructor permission.

WLD 215

SMAW PIPE

6 CR

Shield metal arc welding of open-root steel pipe in all positions in preparation for industrial applications and the AWS/WABO Pipe Welding Certification Test (AWS/WABO testing is offered in-house). This pipe welding practice follows AWS Welding Standard D1.1 and WABO Structural Welding Code and ASME IX and B31.3 SMAW Pipe Welding Certification Standards for pressure piping applications required by local refineries and affiliated industrial applications. Pipe welding conducted in 2G, 5G, and 6G positions on 8" pipe.

Prerequisite(s): WLD 210 and WLD 211, both with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 205 and WLD 256, both with a C- or higher; or concurrent enrollment in WLD 205 and WLD 256; or Instructor permission.

WLD 220

SMAW TEST PRACTICE II

4 CR

Lab exploring avenues for overcoming the difficulties of advanced SMA welding, including confined space applications, and out of position welding. Will apply practices on standard unlimited structural groove weld test plates.

Prerequisite(s): WLD 206, WLD 230, WLD 242, and WLD 252, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 213, WLD 232 and WLD 254, all with a C- or higher; or concurrent enrollment in WLD 213, WLD 232 and WLD 254; or Instructor permission.

WLD 230

FCAW II

3 CR

Advanced FCA welding techniques in all positions; in the weld booth and in work simulated difficult positions such as the welding module. Lab practice will include preparation for AWS and WABO certification testing.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 206, WLD 242 and WLD 252, all with a C- or higher, or concurrent enrollment in WLD 206, WLD 242 and WLD 252 if part of Welding & Fab: General pathway; or WLD 213, WLD 257 and WLD 262, all with a C- or higher, or concurrent enrollment in WLD 213, WLD 257 and WLD 262 if part of Welding & Fab: Pipe pathway; or Instructor permission.

WLD 232

FCAW PRACTICES II

4 CR

FCAW process in various positions for advanced welding techniques.

Prerequisite(s): WLD 206, WLD 230, WLD 242, and WLD 252, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 213, WLD 220 and WLD 254, all with a C- or higher; or concurrent enrollment in WLD 213, WLD 220 and WLD 254; or Instructor permission.

WLD 242

GTAW & GMAW ALLOY

6 CR

This course is designed to give students experience fabricating projects from aluminum, stainless steel and other alloys. Students will use large shop equipment including CNC plasma, press brake, hydraulic plate shear, and overhead bridge crane.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 206, WLD 230 and WLD 252, all with a C- or higher; or concurrent enrollment in WLD 206, WLD 230 and WLD 252; or Instructor permission.

WLD 252

ALLOY FABRICATION

6 CR

Advanced fabricating techniques for alloys. Students will use large shop equipment and welding power supplies to fabricate projects from alloys including but not limited to aluminum, stainless steel and titanium to an industry acceptable standard.

Prerequisite(s): WLD 101, WLD 105, WLD 106, WLD 110, WLD 116, WLD 120, WLD 121, WLD 130, WLD 131, WLD 140, WLD 141, and WLD 150, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 206, WLD 230 and WLD 242, all with a C- or higher; or concurrent enrollment in WLD 206, WLD 230 and WLD 242; or Instructor permission.

WLD 254

STEEL FABRICATION 5 CR

Advanced fabricating techniques for steel. Students will use large shop equipment and welding power supplies to fabricate projects from standard structural shapes to applicable industry standard.

Prerequisite(s): WLD 206, WLD 230, WLD 242, and WLD 252, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 213, WLD 220 and WLD 232, all with a C- or higher; or concurrent enrollment in WLD 213, WLD 220 and WLD 232; or Instructor permission.

WLD 256

PIPE FABRICATION I 6 CR

Advanced Fabrication techniques for Pipe, including basic trade math, measuring tools and techniques, pipe welding layout and fit-up techniques for large-bore and small-bore steel pipe; pipe materials and fittings; pipe fitting safety, tools and techniques; and preparation of beveled pipe joints for welding. Welding is to WABO structural, AWS and ASME Pressure pipe welding standards, and Fabrication to accepted Industry Standards. This course will be based extensively on The Pipe Fitter's Blue Book by Graves and BTC's Pipe Welding and Pipe Fitting from NCCER Pipefitting Levels 1-4.

Prerequisite(s): WLD 210 and WLD 211, both with a C- or higher, or instructor permission.

Completion Of or Concurrent Enrollment In: WLD 205 and WLD 215, both with a C- or higher; or concurrent enrollment in WLD 205 and WLD 215.

WLD 257

PIPE FABRICATION II 5 CR

Advanced Fabrication techniques for Pipe per Piping Industry accepted codes and standards. Will include trade math in laying-out angles and offsets; pipefitting calculations; special pipefitting problems, including branch connections, headers; and fabrication piping systems involving reducers, and fabrication of offsets. Also pipe support systems and rigging for piping installations in the Fabrication Module. This course will be based extensively on The Pipe Fitter's Blue Book by Graves and BTC's Pipe Welding and Pipe Fitting, Volumes I & II from NCCER Pipefitting Levels 1-4.

Prerequisite(s): WLD 205, WLD 215 and WLD 256, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 213, WLD 230 and WLD 262, all with a C- or higher; or concurrent enrollment in WLD 213, WLD 230 and WLD 262; or Instructor permission.

WLD 262

GTAW PIPE WELDING 4 CR

GTAW open root welding on carbon steel will be discussed. Pipe fitting techniques; for GTAW remote amperage adjustment and scratch-arc techniques. Welding in the booth and in the fabrication shop or Fabrication Module will be demonstrated and practiced.

Prerequisite(s): WLD 205, WLD 215 and WLD 256, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 213, WLD 230 and WLD 257, all with a C- or higher; or concurrent enrollment in WLD 213, WLD 230 and WLD 257; or Instructor permission.

WLD 271

WELDER TESTING 6 CR

This course requires successful completion of at least one AWS/WABO Certification Test (SMAW or FCAW) on 1" plate or 8" Schedule 80 Pipe. Proof of industry certification may substitute for this requirement by Instructor permission.

Prerequisite(s): WLD 213 and WLD 230, both with a C- or higher, or Instructor permission.

WLD 291

CAPSTONE PROJECT I 3 CR

A culminating project consisting of a portfolio, resume, and job search element, and a culminating fabrication project under the direction of staff.

Prerequisite(s): WLD 213 and WLD 230, both with a C- or higher, or instructor permission.

Completion Of or Concurrent Enrollment In: WLD 271 with a C- or higher, or concurrent enrollment in WLD 271; or instructor permission.

WLD 292

CAPSTONE PROJECT II 3 CR

A culminating project consisting of a portfolio, resume and job search element, and a culminating fabrication project under the direction of staff.

Prerequisite(s): Instructor permission.

WLD 293

WELDING INTERNSHIP I 3 CR

Industry on-the-job experience per individualized opportunities under guided practice. May be taken multiple times.

Prerequisite(s): Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 271 with a C- or higher, or concurrent enrollment in WLD 271; or Instructor permission.

WLD 294

WELDING INTERNSHIP II 6 CR

Industry on-the-job experience per individualized opportunities under guided practice.

Prerequisite(s): Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 271 with a C- or higher; or concurrent enrollment in WLD 271; or Instructor permission.

WLD 295

PIPE CAPSTONE PROJECT I 3 CR

A culminating project consisting of a portfolio, resume and job search element, and a culminating fabrication project under the direction of staff.

Prerequisite(s): WLD 213, WLD 230, WLD 257, and WLD 262, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 271 with a C- or higher; or concurrent enrollment in WLD 271; or Instructor permission.

WLD 296

PIPE CAPSTONE PROJECT II 3 CR

A culminating project consisting of a portfolio, resume, and job search element, and a culminating fabrication project under the direction of staff.

Prerequisite(s): WLD 213, WLD 230, WLD 257, and WLD 262, all with a C- or higher, or Instructor permission.

Completion Of or Concurrent Enrollment In: WLD 271 with a C- or higher; or concurrent enrollment in WLD 271; or Instructor permission.

ACCUPLACER and CASAS tests for Reading, Writing, and Math have recently changed and scores are recorded differently. Please check with an Academic Advisor or with Transitional Studies staff for the correct placement in courses that have a prerequisite test score.



BOARD OF TRUSTEES



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Jim Groves



Robert DeCoteau

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Trident Technical College
Certificate, Registered Radiologic
Technologist, American Registry of
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Certificate, Registered Diagnostic Medical
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Certificate, WABO-Structural Steel
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Certificate, WABO-Certified Welder,
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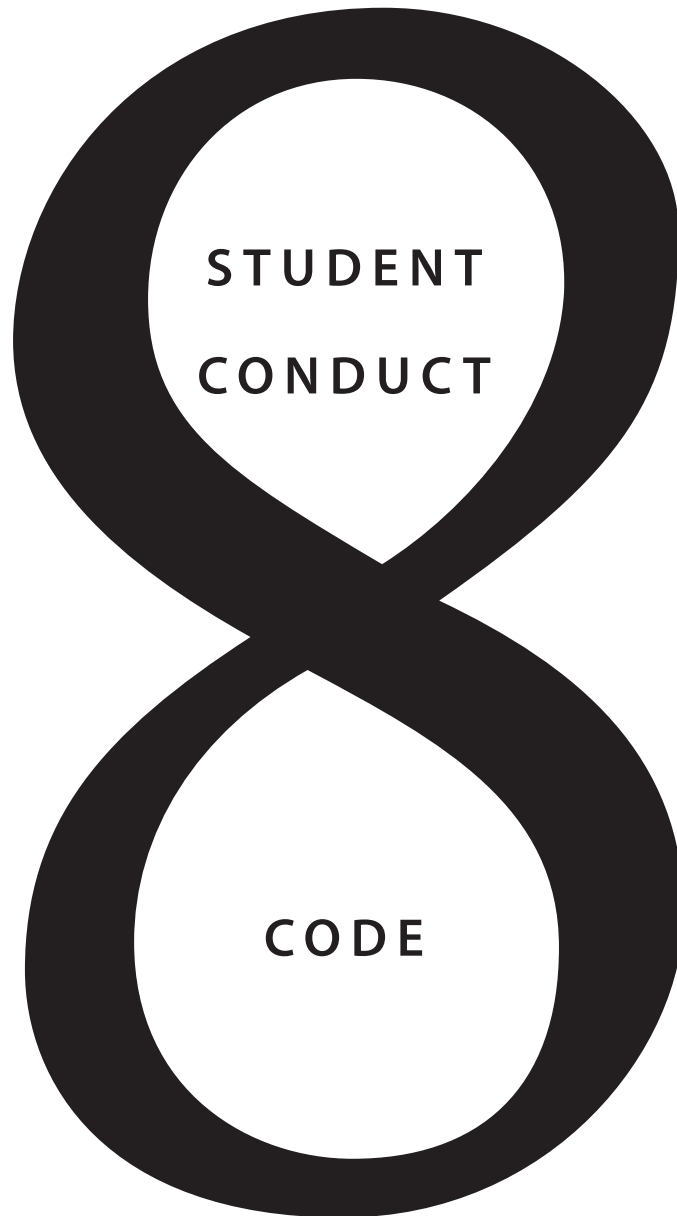
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STUDENT CONDUCT CODE

CHAPTER 495B-121 WAC

WAC 495B-121-230 Authority. The board of trustees, acting pursuant to RCW 28B.50.140(14), delegates to the president of Bellingham Technical College the authority to administer disciplinary action. Administration of the disciplinary procedures is the responsibility of the vice president of student services or their designee. Unless otherwise specified, the student conduct officer, or their designee, shall serve as the principal investigator and administrator for alleged violations of this code.

WAC 495B-121-235 Statement of jurisdiction.

1. The student conduct code shall apply to student conduct that occurs:
 - a. On Bellingham Technical College premises and facilities;
 - b. At or in connection with college-sponsored activities; or
 - c. To off-campus conduct that in the judgment of the college, adversely affects the college community or the pursuit of its objectives.
2. Jurisdiction extends to, but is not limited to, locations in which students or student groups are engaged in official college activities including, but not limited to, foreign or domestic travel, activities funded by the associated students, athletic events, training internships, cooperative and distance education, online education, practicums, supervised work experiences or any other college-sanctioned social or club activities.
3. Students are responsible for their conduct from notification of admission through the actual receipt of a degree, even though conduct may occur before classes begin or after classes end, as well as during the academic year and during periods between terms of actual enrollment.
4. These standards shall apply to a student's conduct even if the student withdraws from college while a disciplinary matter is pending. The college has sole discretion, on a case-by-case basis, to determine whether the student conduct code will be applied to conduct that occurs off campus.
5. The student conduct officer has sole discretion, on a case-by-case basis, to bring a student conduct proceeding under this code for academic dishonesty. Nothing in this code precludes instructors and/or academic divisions or departments from imposing an academic sanction, up to and including a failing grade in an academic course or dismissal from an academic program, in response to academic dishonesty. Policies and procedures governing the imposition of academic sanctions for academic dishonesty can be found in the college's academic integrity policy, the course syllabus, and any applicable program handbook.

WAC 495B-121-240 Statement of purpose. The purpose of these rules is to prescribe standards of conduct for students of Bellingham Technical College. Violations of these standards may be cause for disciplinary action as described in this code.

1. Bellingham Technical College is maintained by the state of Washington for the provision of programs of instruction in higher education and related community services. Like any other institution having its own special purposes, the college must maintain conditions conducive to the effective performance of its functions. Consequently, it has special expectations regarding the conduct of the various participants

in the college community.

2. Admission to the college carries with it the prescription that the student will conduct themselves as a responsible member of the college community. This includes an expectation that the student will obey appropriate laws, will comply with the rules of the college and its departments, and will maintain a high standard of integrity and honesty.
3. Sanctions for violations of college rules or conduct that interferes with the operation of college affairs may be applied by the college, and the college may impose sanctions independently of any action taken by civil or criminal authorities. In the case of minors, misconduct may be referred to parents or legal guardians.
4. The rules and regulations prescribed in this title shall be observed by guests and visitors while on campus, at all college functions and events, and on or within any other college-controlled or college-owned property. Guests and visitors who willfully refuse to obey college security or other duly designated college authorities to desist from conduct prohibited by such rules and regulations may be ejected from the premises. Refusal to obey such an order may subject the person to arrest under the provisions of the Washington criminal trespass law, in addition to such other sanctions as may be applicable.

WAC 495B-121-245 Definitions. The following definitions shall apply for the purpose of this student conduct code.

1. "Board" means the board of trustees of Bellingham Technical College.
2. "College" means Bellingham Technical College.
3. "Student conduct officer" is a Bellingham Technical College employee designated by the president to be responsible for implementing and enforcing the student conduct code. The president or vice president of student services is authorized to reassign any and all of the student conduct officer's duties or responsibilities as set forth in this chapter as may be reasonably necessary.
4. "Student group" for purposes of this code is a student organization or living group including, but not limited to, student clubs and organizations, members of a class or student cohort, and student performance groups.
5. "Conduct review officer" is the vice president of student services or other college administrator designated by the president to be responsible for receiving and for reviewing or referring appeals of student disciplinary actions in accordance with the procedures of this code. The president is authorized to reassign any and all of the conduct review officer's duties or responsibilities as set forth in this chapter as may be reasonably necessary.
6. "The president" is the president of the Bellingham Technical College. The president is authorized to:
 - a. Delegate any and all of their responsibilities as set forth in this chapter as may be reasonably necessary; and
 - b. Reassign any and all duties and responsibilities as set forth in this chapter as may be reasonably necessary.
7. "Disciplinary action" is the process by which the student conduct officer imposes discipline against a student for a violation of the student conduct code.
8. "Disciplinary appeal" is the process by which an aggrieved student can appeal the discipline imposed by the student conduct officer. Disciplinary appeals from a suspension in excess of ten instructional days or an expulsion are heard by

the student conduct appeals committee. Appeals of all other appealable disciplinary action shall be reviewed through brief adjudicative proceedings.

9. "Respondent" is the student against whom disciplinary action is initiated.
 10. "Service" is the process by which a document is officially delivered to a party. Unless otherwise provided, service upon a party shall be accomplished by:
 - a. Hand delivery of the document to the party; or
 - b. By sending the document by e-mail and by certified mail, or first-class mail, to the party's last known address.
- Service is deemed complete upon hand delivery of the document or upon the date the document is emailed and deposited in the mail.
11. "Filing" is the process by which a document is officially delivered to a college official responsible for facilitating a disciplinary review. Unless otherwise provided, filing shall be accomplished by:
 - a. Hand delivery of the document to the specified college official or college official's assistant; or
 - b. By sending the document by email and first-class mail to the specified college official's office and college e-mail address.
 12. Papers required to be filed shall be deemed filed upon actual receipt during office hours at the office of the specified college official. "College premises" includes all campuses of Bellingham Technical College, wherever located, and includes all land, buildings, facilities, vehicles, equipment, and other property owned, used, or controlled by the college.
 13. "Student" includes all persons taking courses at or through the college, whether on a full-time or part-time basis, and whether such courses are credit courses, noncredit courses, online courses, or otherwise. Persons who withdraw after allegedly violating the code, who are not officially enrolled for a particular term but who have a continuing relationship with the college, and persons who have been notified of their acceptance for admission are considered "students" for the purposes of this chapter.
 14. "Day" means a calendar day, except when a "business day" is specified. "Business day" means a weekday, excluding weekends and college holidays.
 15. A "complainant" is an alleged victim of sexual misconduct.
 16. "Sexual misconduct" has the meaning ascribed to this term in WAC 495B-121-265(13).

WAC 495B-121-250 General policies.

1. Bellingham Technical College is an agency of the state of Washington and adheres to all local, state, and federal laws. The college is obliged to demonstrate respect for laws by cooperating in their enforcement.
2. Bellingham Technical College cannot and will not establish regulations that would abridge constitutional rights.
3. Proper procedures are established to maintain conditions helpful to the effective function of the college, to protect individuals from unfair penalties, and to assure due process. Bellingham Technical College is granted the right by law to adopt rules to govern its operations.
4. If these rules are broken, the college has the right and the obligation to take that action which is in the best interest of the

entire college.

5. Bellingham Technical College reserves the right to impose provisions of this code and provide further sanctions before or after law enforcement agencies, courts, or other agencies have imposed penalties or otherwise disposed of a case. College hearings are not subject to challenge on the grounds that criminal or civil charges involving the same incident have been dismissed or reduced or in which the defendant has been found not guilty or otherwise not liable. In addition, the college reserves the right to refer incidents to the appropriate civilian authorities or law enforcement agencies.
6. If any provision of this code is invalidated by court order or operation of law, the affected provision of the code will no longer apply.

WAC 495B-121-255 Student responsibilities. Bellingham Technical College is a dynamic learning community that promotes growth and development by offering opportunities to gain knowledge, entrance skills, examine values, and pursue learning options. The college is committed to quality life-long learning through its values of respect, responsibility, and responsiveness. To that end, Bellingham Technical College maintains a strong commitment to providing a civil and nondisruptive learning environment. Students are reminded that they assume certain responsibilities of performance and conduct which have been reasonably established in order to accomplish Bellingham Technical College's educational goals. Therefore, the college expects that students will conduct themselves as responsible members of the college community, will comply with the rules and regulations of the college, will maintain high standards of integrity and honesty, and will respect the rights, privileges, and property of other members of the college community.

WAC 495B-121-260 Statement of student rights. As members of the Bellingham Technical College academic community, students are encouraged to develop the capacity for critical judgment and to engage in an independent search for truth. Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the larger community. Students should exercise their freedom with responsibility. The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the college community.

The following enumerated rights are guaranteed to each student within the limitations of statutory law and college policy, which are deemed necessary to achieve the educational goals of the college.

1. Academic freedom.
 - a. Students are guaranteed the rights of free inquiry, expression, and assembly upon and within college facilities that are generally open and available to the public.
 - b. Students are free to pursue appropriate educational objectives from among the college's curricula, programs, and services, subject to the limitations of RCW 28B.50.090 (3)(b).
 - c. Students shall be protected from academic evaluation which is arbitrary, prejudiced, or capricious, but are responsible for meeting the standards of academic performance established by each of their instructors.
 - d. Students have the right to a learning environment that is free from unlawful discrimination, inappropriate and disrespectful conduct, and any and all harassment,

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including sexual harassment.

2. Due process.
 - a. The rights of students to be secure in their persons, quarters, papers, and effects against unreasonable searches and seizures is guaranteed.
 - b. No disciplinary sanction may be imposed on any student without notice to the accused of the nature of the charges.
 - c. A student accused of violating this code of student conduct is entitled, upon request, to procedural due process as set forth in this chapter.

WAC 495B-121-265 Prohibited student conduct. The college may impose disciplinary sanctions against a student who commits, attempts to commit, aids, abets, incites, encourages, or assists another person to commit, an act(s) of misconduct, which include, but are not limited to, any of the following:

1. Academic dishonesty. Any act of academic dishonesty including, but not limited to, cheating, plagiarism, and fabrication.
 - a. Cheating includes any attempt to give or obtain unauthorized assistance relating to the completion of an academic assignment.
 - b. Plagiarism includes taking and using as one's own, without proper attribution, the ideas, writings, or work of another person in completing an academic assignment. Prohibited conduct may also include the unauthorized submission for credit of academic work that has been submitted for credit in another course.
 - c. Fabrication includes falsifying data, information, or citations in completing an academic assignment and also includes providing false or deceptive information to an instructor concerning the completion of an assignment.
 - d. Academic consequences for academic dishonesty or abetting in academic dishonesty may be imposed at the discretion of a faculty member up to and including a failing grade for the course or dismissal from an academic program. Policies and procedures governing the imposition of academic sanctions for academic dishonesty can be found in the college's academic integrity policy, the course syllabus, and any applicable program handbook. Incidents of academic dishonesty may also be referred to the student conduct officer for disciplinary action consistent with this chapter in addition to the academic consequences identified above.
2. Other dishonesty. Any other acts of dishonesty. Such acts include, but are not limited to:
 - a. Forgery, alteration, submission of falsified documents or misuse of any college document, record, or instrument of identification;
 - b. Tampering with an election by or for college students; or
 - c. Furnishing false information, or failing to furnish correct information, in response to the request or requirement of a college officer or employee.
3. Obstruction or disruptive conduct. Conduct, not otherwise protected by law, that interferes with, impedes, or otherwise unreasonably hinders:
 - a. Any instruction, research, administration, disciplinary proceeding, or other college activities, including the obstruction of the free flow of pedestrian or vehicular movement on campus property or at a college activity; or
 - b. Any activity that is authorized to occur on college property,

whether or not actually conducted or sponsored by the college.

4. Assault, intimidation, harassment. Unwanted touching, physical abuse, verbal abuse, threat(s), intimidation, harassment, bullying, or other conduct which harms, threatens, or is reasonably perceived as threatening the health or safety of another person or another person's property. For purposes of this code, "bullying" is defined as repeated or aggressive unwanted behavior, not otherwise protected by law, that intentionally humiliates, harms, or intimidates the victim.
5. Cyber misconduct. Cyberstalking, cyberbullying or online harassment. Use of electronic communications including, but not limited to, electronic mail, instant messaging, electronic bulletin boards, and social media sites, to harass, abuse, bully or engage in other conduct which harms, threatens, or is reasonably perceived as threatening the health or safety of another person. Prohibited activities include, but are not limited to, unauthorized monitoring of another's email communications directly or through spyware, sending threatening emails, disrupting electronic communications with spam or by sending a computer virus, sending false messages to third parties using another's email identity, nonconsensual recording of sexual activity, and nonconsensual distribution of a recording of sexual activity.
6. Property violation. Damage to, misappropriation of, unauthorized use or possession of, vandalism, or other nonaccidental damaging or destruction of college property or the property of another person. Property for purposes of this subsection includes computer passwords, access codes, identification cards, personal financial account numbers, other confidential personal information, intellectual property, and college trademarks.
7. Failure to comply with directive. Failure to comply with the direction of a college officer or employee who is acting in the legitimate performance of their duties, including failure to properly identify oneself to such person when requested to do so.
8. Weapons. Possession, holding, wearing, transporting, storage or presence of any firearm, dagger, sword, knife or other cutting or stabbing instrument, club, explosive devices, or any other weapon apparently capable of producing bodily harm is prohibited on the college campus, subject to the following exceptions:
 - a. Commissioned law enforcement personnel or legally authorized military personnel while in performance of their duties;
 - b. A student with a valid concealed weapons permit may store a pistol in their vehicle parked on campus in accordance with RCW 9.41.050 (2) or (3), provided the vehicle is locked and the weapon is concealed from view;
 - c. The president may grant permission to bring a weapon on campus upon a determination that the weapon is reasonably related to a legitimate pedagogical purpose. Such permission shall be in writing and shall be subject to such terms or conditions incorporated in the written permission; or
 - d. This policy does not apply to the possession and/or use of disabling chemical sprays when possessed and/or used for self-defense.
9. Hazing.

- a. Hazing is any act committed as part of:
 - i. A person's recruitment, initiation, pledging, admission into, or affiliation with a student group; or
 - ii. Any pastime or amusement engaged in with respect to such a student group; and
 - iii. That causes, or is likely to cause, bodily danger or physical harm, or serious psychological or emotional harm, to any student.
 - b. Examples of hazing include, but are not limited to:
 - i. Causing, directing, coercing, or forcing a person to consume any food, liquid, alcohol, drug, or other substance which subjects the person to risk of such harm;
 - ii. Humiliation by ritual act;
 - iii. Striking another person with an object or body part;
 - iv. Causing someone to experience excessive fatigue, or physical and/or psychological shock; or
 - v. Causing someone to engage in degrading or humiliating games or activities that create a risk of serious psychological, emotional, and/or physical harm.
 - c. "Hazing" does not include customary athletic events or other similar contests or competitions.
 - d. Consent is not a valid defense against hazing.
10. Alcohol, drug, and tobacco violations.
- a. Alcohol. The use, possession, delivery, sale, or being observably under the influence of any alcoholic beverage, except as permitted by law and applicable college policies.
 - b. Marijuana. The use, possession, delivery, sale, or being observably under the influence of marijuana or the psychoactive compounds found in marijuana intended for human consumption, regardless of form. While state law permits the recreational use of marijuana, federal law prohibits such use on college premises or in connection with college activities.
 - c. Drugs. The use, possession, delivery, sale, or being observably under the influence of any legend drug, including anabolic steroids, androgens, or human growth hormones as defined in chapter 69.41 RCW, or any other controlled substance under chapter 69.50 RCW, except as prescribed for a student's use by a licensed practitioner.
11. Tobacco, electronic cigarettes, and related products. The use of tobacco, electronic cigarettes, and related products in any building owned, leased, or operated by the college or in any location where such use is prohibited, including twenty-five feet from entrances, exits, windows that open, and ventilation intakes of any building owned, leased, or operated by the college, except in designated areas. The use of tobacco, electronic cigarettes, and related products on the college campus is restricted to designated smoking areas. "Related products" include, but are not limited to, cigarettes, cigars, pipes, bidi, clove cigarettes, waterpipes, hookahs, chewing tobacco, personal vaporizers, vape pens, electronic nicotine delivery systems, and snuff.
12. Lewd conduct. Conduct which is lewd or obscene that is not otherwise protected under the law.
13. Discriminatory conduct. Conduct which harms or adversely affects any member of the college community because of their race; color, national origin; sensory, mental, or physical disability; use of a service animal; gender, including pregnancy; marital status; age; religion; creed; sexual orientation; gender identify; veteran's status; or any other legally protected classification.
14. Sexual misconduct. The term "sexual misconduct" includes sexual harassment, sexual intimidation, and sexual violence. Sexual harassment prohibited by Title IX is defined in the supplemental procedures to this code. See WAC 495B-121-355 (supplemental Title IX student conduct procedures).
- a. Sexual harassment. The term "sexual harassment" means unwelcome sexual or gender-based conduct, including unwelcome sexual advances, requests for sexual favors, quid pro quo harassment, and other verbal, nonverbal, or physical conduct of a sexual or a gendered nature that is sufficiently severe, persistent, or pervasive as to:
 - i. Deny or limit the ability of a student to participate in or benefit from the college's educational programs;
 - ii. Alter the terms or conditions of employment for a college employee(s); and/or
 - iii. Create an intimidating, hostile, or offensive environment for other campus community members.
 - b. Sexual intimidation. The term "sexual intimidation" incorporates the definition of "sexual harassment" and means threatening or emotionally distressing conduct based on sex, including, but not limited to, nonconsensual recording of sexual activity or the distribution of such recording.
 - c. Sexual violence. "Sexual violence" is a type of discrimination and harassment. Nonconsensual sexual intercourse, nonconsensual sexual contact, domestic violence, dating violence, and stalking are all types of sexual violence.
 - i. Nonconsensual sexual intercourse. Any actual or attempted sexual intercourse (anal, oral, or vaginal), however slight, with any object or body part, by a person upon another person, that is without consent and/or by force. Sexual intercourse includes anal or vaginal penetration by a penis, tongue, finger, or object, or oral copulation by mouth to genital contact or genital to mouth contact.
 - ii. Nonconsensual sexual contact. Any actual or attempted sexual touching, however slight, with any body part or object, by a person upon another person that is without consent and/or by force. Sexual touching includes any bodily contact with the breasts, groin, mouth, or other bodily orifice of another individual, or any bodily contact in a sexual manner.
 - iii. Incest. Sexual intercourse or sexual contact with a person known to be related to them, either legitimately or illegitimately, as an ancestor, descendant, brother, or sister of either wholly or half related. Descendant includes stepchildren and adopted children under the age of 18.
 - iv. Statutory rape. Consensual intercourse between a person who is 18 years of age or older, and a person who is under the age of 16.
 - v. Domestic violence. Physical violence, bodily injury, assault, the infliction of fear of imminent physical

harm, sexual assault, or stalking committed by a person with whom the victim shares a child in common, by a person who is cohabitating with or has cohabitated with the victim as a spouse, by a person similarly situated to a spouse of the victim under domestic or family violence laws of the state of Washington, or by any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the state of Washington, RCW 26.50.010.

- vi. Dating violence. Physical violence, bodily injury, assault, the infliction of fear of imminent physical harm, sexual assault, or stalking committed by a person:
 - A. Who is or has been in a social relationship of a romantic or intimate nature with the victim; and
 - B. Where the existence of such a relationship shall be determined based on a consideration of the following factors:
 - I. The length of the relationship;
 - II. The type of relationship; and
 - III. The frequency of interaction between the persons involved in the relationship.
 - vii. Stalking. Engaging in a course of conduct directed at a specific person that would cause a reasonable person to:
 - A. Fear for their safety or the safety of others; or
 - B. Suffer substantial emotional distress.
- e. For the purposes of this code, "consent" means knowing, voluntary, and clear permission by word or action, to engage in mutually agreed upon sexual activity. Each party has the responsibility to make certain that the other has consented before engaging in the activity. For consent to be valid, there must be at the time of the act of sexual intercourse or sexual contact actual words or conduct indicating freely given agreement to have sexual intercourse or sexual contact.

A person cannot consent if they are unable to understand what is happening or are disoriented, helpless, asleep, or unconscious for any reason, including due to alcohol or other drugs. An individual who engages in sexual activity when the individual knows, or should know, that the other person is physically or mentally incapacitated has engaged in nonconsensual conduct.

Intoxication is not a defense against allegations that an individual has engaged in nonconsensual sexual conduct.

14. Harassment. Unwelcome conduct, including verbal, nonverbal, or physical conduct, that is directed at a person because such person's protected status and that is sufficiently serious as to deny or limit, and that does deny or limit, the ability of a student to participate in or benefit from the college's educational program, that changes the terms or conditions of employment for a college employee, or that creates an intimidating, hostile, or offensive environment for other campus community members. Protected status includes a person's race; color; national origin; sensory, mental, or physical disability; use of a service animal; gender, including pregnancy; marital status; age; religion; creed; sexual orientation; gender identity; veteran's status, or any

other legally protected classifications. See "sexual misconduct" for the definition of "sexual harassment." Harassing conduct may include, but is not limited to, physical conduct, verbal, written, social media and electronic communications.

15. Retaliation. Harming, threatening, intimidating, coercing, or taking adverse action of any kind against a person because such person reported an alleged violation of this code or college policy, provided information about an alleged violation, or participated as a witness or in any other capacity in a college investigation or disciplinary proceeding.
16. Misuse of electronic resources. Theft or misuse of computer time or other electronic information resources of the college. Such misuse includes, but is not limited to:
 - a. Unauthorized use of such resources or opening of a file, message, or other item;
 - b. Unauthorized duplication, transfer, or distribution of a computer program, file, message, or other item;
 - c. Unauthorized use or distribution of someone else's password or other identification;
 - d. Use of such time or resources to interfere with someone else's work;
 - e. Use of such time or resources to send, display, or print an obscene or abusive message, text, or image;
 - f. Use of such time or resources to interfere with normal operation of the college's computing system or other electronic information resources;
 - g. Use of such time or resources in violation of applicable copyright or other law;
 - h. Adding to or otherwise altering the infrastructure of the college's electronic information resources without authorization; or
 - i. Failure to comply with the college's electronic use policy.
17. Unauthorized access. Unauthorized possession, duplication, or other use of a key, keycard, or other restricted means of access to college property, or unauthorized entry onto or into college property.
18. Procedural interference. Abuse or misuse of any of the procedures relating to student complaints or misconduct including, but not limited to:
 - a. Disruption or interference with the orderly conduct of a proceeding;
 - b. Interfering with someone else's proper participation in a proceeding;
 - c. Destroying or altering potential evidence, or attempting to intimidate or otherwise improperly pressure a witness or potential witness; or
 - d. Attempting to influence the impartiality of, or harassing or intimidating, a student conduct committee member.
19. Safety violations. Nonaccidental conduct that interferes with or otherwise compromises any college policy, equipment, or procedure relating to the safety and security of the campus community, including tampering with fire safety equipment, triggering false alarms or other emergency response systems, or operating a motor vehicle on college property in a manner which is reasonably perceived as threatening the health or safety of another person.
20. Violation of other laws or policies. Violation of any federal, state,

or local law, rule, or regulation or other college rules or policies, including college traffic and parking rules.

21. Ethical violation. The breach of any generally recognized and published code of ethics or standards of professional practice that governs the conduct of a particular profession for which the student is taking a course or is pursuing as an educational goal or major.

In addition to initiating discipline proceedings for violations of the student conduct code, the college may refer any violations of federal, state, or local laws to civil and criminal authorities for disposition. The college shall proceed with student disciplinary proceedings regardless of whether the underlying conduct is subject to civil or criminal prosecution.

WAC 495B-121-270 Disciplinary sanctions.

1. Administration of the disciplinary procedure is the responsibility of the vice president of student services. The student conduct officer, or designee, shall serve as the principle investigator and prosecutor for alleged violations of this code.
2. Faculty members have the authority to take appropriate action to maintain order and proper conduct in the classroom and to maintain the effective cooperation of students in fulfilling the objectives of the course.
3. Bringing any person, thing, or object to a teaching and learning environment that may disrupt the environment or cause a safety or health hazard, without the express approval of the faculty member is expressly prohibited.
4. Faculty members or college administrators have the right to suspend any student from any single class or related activity for no more than one day, if the student's misconduct creates disruption to the point that it is difficult or impossible to maintain the decorum of the class, related activity, or the learning and teaching environment. The faculty member or college administrator shall report this suspension to the student conduct officer or designee on the same day of the suspension. In consultation with the faculty member or college administrator, the student conduct officer may set conditions for the student upon return to the class or activity.
5. The student has the right to appeal any disciplinary action of an instructor or college employee to the student conduct officer in accordance with the procedures set forth in this code.
6. A student formally charged or under investigation for a violation of this code may not excuse themselves from disciplinary hearings by withdrawing from the college.
7. In addition to initiating disciplinary proceedings for the violation of the student conduct code, the college may refer any violations of federal, state, or local laws to civil and criminal authorities for disposition. The college shall proceed with student disciplinary proceedings regardless of whether the underlying conduct is subject to civil or criminal prosecution.

WAC 495B-121-275 Disciplinary sanctions terms and conditions.

1. The following disciplinary sanctions may be imposed upon students found to have violated the student conduct code.
 - a. Disciplinary warning. A verbal statement to a student that there is a violation, and that continued violation may be cause for further disciplinary action. This sanction is not subject to appeal.
 - b. Written reprimand. Notice in writing that the student has violated one or more terms of this code of conduct and that

continuation or repetition of the same or similar may result in more severe disciplinary action. This sanction is not subject to appeal.

- c. Disciplinary probation. Formal action placing specific conditions and restrictions upon the student's continued attendance depending upon the seriousness of the violation and which may include a deferred disciplinary sanction. If the student, subject to a deferred disciplinary sanction, is found in violation of any college rule during the time of disciplinary probation, the deferred disciplinary sanction, which may include, but is not limited to, a suspension or a dismissal from the college, shall take effect immediately without further review. Any such sanction shall be in addition to any sanction(s) or conditions arising from the new violation. Probation may be for a limited period of time or may be for the duration of the student's attendance at the college.
 - d. Summary suspension. Immediate exclusion from classes and other privileges or activities in accordance with this code.
 - e. Disciplinary suspension. Dismissal from the college and from the student status for a stated period of time. There will be no refund of tuition or fees for the quarter in which the action is taken.
 - f. Deferred suspension. Notice of suspension from the college with the provision that the student may remain enrolled contingent on meeting any condition(s) specified. Not meeting the contingency shall immediately invoke the suspension for the period of time and under the conditions originally imposed.
 - g. Dismissal. The revocation of all rights and privileges of membership in the college community and exclusion from the campus and college-owned or controlled facilities without any possibility of return except as outlined in WAC 495B-121-340. There will be no refund of tuition or fees for the quarter in which the action is taken.
2. Disciplinary terms and conditions that may be imposed alone or in conjunction with the imposition of a disciplinary sanction(s) include, but are not limited to, the following:
 - a. Educational sanction. Participation in or successful completion of an educational assignment designed to create an awareness of the student's misconduct.
 - b. Restitution. Reimbursement for damage to or misappropriation of property, or for injury to persons, or for reasonable costs incurred by the college in pursuing an investigation or disciplinary proceeding. This may take the form of monetary reimbursement, appropriate service, or other compensation.
 - c. Professional evaluation. Referral for drug, alcohol, psychological or medical evaluation by an appropriately certified or licensed professional may be required. The student may choose the professional within the scope of practice and with the professional credentials as defined by the college. The student will sign all necessary releases to allow the college access to any such evaluation. The student's return to college may be conditioned upon compliance with recommendations set forth in such a professional evaluation, which may also include mandatory attendance at educational programs, courses, or other assignments. If the evaluation indicates that the student is not capable of functioning within the college community, the student

will remain suspended until future evaluation recommends that the student is capable of reentering the college and complying with the rules of conduct.

- d. Not in good standing. A student may be deemed "not in good standing" with the college. If so, that student shall be subject to the following restrictions:
 - i. Ineligible to hold any office in any student organization recognized by the college or to hold any elected or appointed office of the college.
 - ii. Ineligible to represent the college to anyone outside the college community in any way, including representing the college at any official function, or any forms of intercollegiate competition or representation.
- e. No trespass order. A student may be restricted from college property based on their misconduct.
- f. No contact order. An order directing a student to have no contact with a specified student, college employee, a member of the college community, or a particular college facility.

WAC 495B-121-280 Initiation of disciplinary action.

1. All disciplinary actions will be initiated by the student conduct officer. If that officer is the subject of a complaint initiated by the respondent, the president shall, upon request and when feasible, designate another person to fulfill any such disciplinary responsibilities relative to the complainant.
 2. The student conduct officer shall initiate disciplinary action by serving the respondent with written notice directing them to attend a disciplinary meeting. The notice shall briefly describe the factual allegations, the provision(s) of the conduct code the respondent is alleged to have violated, the range of possible sanctions for the alleged violation(s), and specify the time and location of the meeting. At the meeting, the student conduct officer will present the allegations to the respondent and the respondent shall be afforded an opportunity to explain what took place. If the respondent fails to attend the meeting after proper service of notice the student conduct officer may take disciplinary action based upon the available information.
 3. The student conduct officer, prior to taking disciplinary action in a case involving allegations of sexual misconduct, will make a reasonable effort to contact the complainant to discuss the results of the investigation and possible disciplinary sanctions and/or conditions, if any, that may be imposed upon the respondent if the allegations of sexual misconduct are found to have merit.
 4. Within ten days of the initial disciplinary meeting, and after considering the evidence in the case, including any facts or argument presented by the respondent, the student conduct officer shall serve the respondent with a written decision setting forth the facts and conclusions supporting their decision, the specific student conduct code provisions found to have been violated, the discipline imposed, if any, and a notice of any appeal rights with an explanation of the consequences of failing to file a timely appeal.
 5. The student conduct officer may take any of the following disciplinary actions:
 - a. Exonerate the respondent and terminate the proceedings;
 - b. Impose a disciplinary sanction(s), as described in WAC 495B-121-265;
 - c. Refer the matter directly to the student conduct committee
- for such disciplinary action as the committee deems appropriate. Such referral shall be in writing, to the attention of the chair of the student conduct committee, with a copy served on the respondent.
6. In cases involving allegations of sexual misconduct, the student conduct officer, on the same date that the disciplinary decision is served on the respondent, will serve a written notice informing the complainant whether the allegations of sexual misconduct were found to have merit and describing any disciplinary sanctions and/or conditions imposed upon the respondent for the complainant's protection, including disciplinary suspension or dismissal of the respondent. The notice will also inform the complainant of their appeal rights. If protective sanctions and/or conditions are imposed, the student conduct officer shall make a reasonable effort to contact the complainant to ensure prompt notice of the protective disciplinary sanctions and/or conditions.

WAC 495B-121-285 Appeal from disciplinary action.

1. The respondent may appeal a disciplinary action by filing a written notice of appeal with the conduct review officer within ten business days of service of the student conduct officer's decision. Failure to timely file a notice of appeal constitutes a waiver of the right to appeal and the student conduct officer's decision shall be deemed final.
2. The notice of appeal must include a brief statement explaining why the respondent is seeking review.
3. The parties to an appeal shall be the respondent and the conduct review officer.
4. A respondent, who timely appeals a disciplinary action or whose case is referred to the student conduct committee, has a right to a prompt, fair, and impartial hearing as provided for in these procedures.
5. On appeal, the college bears the burden of establishing the evidentiary facts underlying the imposition of a disciplinary sanction by a preponderance of the evidence.
6. Imposition of disciplinary action for violation of the student conduct code shall be stayed pending appeal, unless the respondent has been summarily suspended.
7. The student conduct committee shall hear appeals from:
 - a. The imposition of disciplinary suspensions in excess of ten instructional days;
 - b. Dismissals; and
 - c. Discipline cases referred to the committee by the student conduct officer, the conduct review officer, or the president.
8. Student conduct appeals from the imposition of disciplinary sanctions shall be reviewed through a brief adjudicative proceeding subject to the procedures outlined in WAC 495B-121-290 through 495B-121-305.
9. Except as provided elsewhere in these rules, disciplinary warnings and dismissals of disciplinary actions are final actions and not subject to appeal.
10. In cases involving allegations of sexual misconduct, the complainant has the right to appeal the following actions by the student conduct officer following the same procedures as set forth above for the respondent:
 - a. The dismissal of a sexual misconduct complaint; or
 - b. Any disciplinary sanction(s) and conditions imposed against a respondent for a sexual misconduct violation, including a

disciplinary warning.

11. If the respondent timely appeals a decision imposing discipline for a sexual misconduct violation, the college shall notify the complainant of the appeal and provide the complainant an opportunity to intervene as a party to the appeal.
12. Except as otherwise specified in this chapter, a complainant who timely appeals a disciplinary decision or who intervenes as a party to a respondent's appeal of disciplinary decisions shall be afforded the same procedural rights as are afforded the respondent.
13. Except as provided elsewhere in these rules, disciplinary warnings and dismissals of disciplinary actions are final actions and are not subject to appeal.

WAC 495B-121-286 Hazing prohibited - Sanctions.

1. Hazing by a student or student group is prohibited pursuant to WAC 495B-121-265(9).
2. No student may conspire to engage in hazing or participate in hazing of another. State law provides that hazing is a criminal offense, punishable as a misdemeanor.
3. Washington state law provides that:
 - a. Any student group that knowingly permits hazing is strictly liable for harm caused to persons or property resulting from hazing. If the organization, association, or student living group is a corporation whether for profit or nonprofit, the individual directors of the corporation may be held individually liable for damages.
 - b. Any person who participates in the hazing of another shall forfeit any entitlement to state-funded grants, scholarships, or awards for a period of time determined by the college.
 - c. Student groups found responsible for violating the code of student conduct, college anti-hazing policies, or state or federal laws relating to hazing or offenses related to alcohol, drugs, sexual assault, or physical assault will be disclosed in a public report issued by the college setting forth the name of the student group, the date the investigation began, the date the investigation ended, a finding of responsibility, a description of the incident(s) giving rise to the finding, and the details of the sanction(s) imposed.

WAC 495B-121-290 Brief adjudicative proceedings authorized.

This chapter is adopted in accordance with RCW 34.05.482 through 34.05.494. Brief adjudicative proceedings shall be used, unless provided otherwise by another rule or determined otherwise in a particular case by the president, or a designee, in regard to:

1. Student conduct appeals involving the following disciplinary actions:
 - a. Suspensions of ten instructional days or less;
 - b. Disciplinary probation;
 - c. Written reprimands;
 - d. Any condition or term imposed in conjunction with one of the foregoing disciplinary actions;
 - e. Summary suspensions; and
 - f. Appeals by a complainant in student disciplinary proceedings involving allegations of sexual misconduct in which the student conduct officer:
 - i. Dismisses disciplinary proceedings based upon a finding that the allegations of sexual misconduct have no merit;

or

- ii. Issues a verbal warning to respondent.
2. Brief adjudicative proceedings are informal hearings and shall be conducted in a manner which will bring about a prompt fair resolution of the matter.

WAC 495B-121-295 Brief adjudicative proceedings - Initial hearing.

1. Brief adjudicative proceedings shall be conducted by a conduct review officer. The conduct review officer shall not participate in any case in which they are a complainant or witness, or in which they have direct or personal interest, prejudice, or bias, or in which they have acted previously in an advisory capacity.
2. The parties to a brief adjudicative proceeding are the respondent, the student conduct officer, and in cases involving sexual misconduct, the complainant. Before taking action, the conduct review officer shall conduct an informal hearing and provide each party:
 - a. An opportunity to be informed of the college's view of the matter; and
 - b. An opportunity to explain the party's view of the matter.
3. The conduct review officer shall serve an initial decision upon the respondent and the student conduct officer within ten business days of consideration of the appeal. The initial decision shall contain a brief written statement of the reasons for the decision and information about how to seek administrative review of the initial decision. If no request for review is filed within ten business days of service of the initial decision, the initial decision shall be deemed the final decision.
4. In cases involving allegations of sexual misconduct, the conduct review officer, on the same date as the initial decision is served on the respondent, will serve a written notice upon the complainant informing the complainant whether the allegations of sexual misconduct were found to have merit and describing any disciplinary sanctions and/or conditions imposed upon the respondent for the complainant's protection. The notice will also inform the complainant of their appeal rights.
5. If the conduct review officer upon review determines that the respondent's conduct may warrant imposition of a disciplinary suspension of more than ten instructional days or expulsion, the matter shall be referred to the student conduct committee for a disciplinary hearing.

WAC 495B-121-300 Brief adjudicative proceedings - Review of an initial decision.

1. An initial decision is subject to review by the president, provided the respondent files a written request for review with the conduct review officer within ten business days of service of the initial decision.
2. The president shall not participate in any case in which they are a complainant or witness, or in which they have direct or personal interest, prejudice, or bias, or in which they have acted previously in an advisory capacity.
3. During the review, the president shall give all parties an opportunity to file written responses explaining their view of the matter and shall make any inquiries necessary to ascertain whether the sanctions should be modified or whether the proceedings should be referred to the student conduct committee for a formal adjudicative hearing.
4. The decision on review must be in writing and must include a

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brief statement of the reasons for the decisions and must be served on the parties within twenty business days of the initial decision or of the request for review, whichever is later. The decision on review will contain a notice that committee review may be available. A request for review may be deemed to have been denied if the president does not make a disposition of the matter within twenty business days after the request is submitted.

5. If the president, upon review, determines that the respondent's conduct may warrant imposition of a disciplinary suspension of more than ten instructional days or expulsion, the matter shall be referred to the student conduct committee for a disciplinary hearing.
6. In cases involving allegations of sexual misconduct, the president, on the same date as the final decision is served on the respondent, will serve a written notice upon the complainant informing the complainant whether the allegations of sexual misconduct were found to have merit and describing any disciplinary sanctions and/or conditions imposed upon the respondent for the complainant's protection, including suspension or dismissal of the respondent. The notice will also inform the complainant of their appeal rights.

WAC 495B-121-305 Brief adjudicative proceedings - Agency record. The agency record for brief adjudicative proceedings shall consist of any documents regarding the matter that were considered or prepared by the presiding officer for the brief adjudicative proceeding or by the reviewing officer for any review. These records shall be maintained as the official record of the proceedings.

WAC 495B-121-310 Student conduct committee.

1. The student conduct committee shall consist of five members:
 - a. Two full-time students appointed by the student government;
 - b. Two faculty members appointed by the president;
 - c. One administrative employee (other than an administrator serving as a student conduct or conduct review officer) appointed by the president at the beginning of the academic year.
2. The administrative employee appointed on a yearly basis shall serve as the chair of the committee and may act on preliminary hearing matters prior to convening the committee. The chair shall receive annual training on protecting victims and promoting accountability in cases involving allegations of sexual misconduct.
3. Hearings may be heard by a quorum of three members of the committee so long as one faculty member and one student are included on the hearing panel. Committee action may be taken upon a majority vote of all committee members attending the hearing.
4. Members of the student conduct committee shall not participate in any case in which they are a party, complainant, or witness, in which they have direct or personal interest, prejudice, or bias; or in which they have acted previously in an advisory capacity. Any party may petition for disqualification of a committee member pursuant to RCW 34.05.425(4).

WAC 495B-121-315 Student conduct committee - procedure and evidence.

1. Proceedings of the student conduct committee shall be governed by the Administrative Procedure Act, chapter 34.05 RCW.
2. The student conduct committee chair shall serve all parties with

written notice of the hearing not less than seven business days in advance of the hearing date. The chair may shorten this notice period if both parties agree, and may also continue the hearing to a later time for good cause shown.

3. The committee chair is authorized to conduct prehearing conferences and/or to make prehearing decisions concerning the extent and form of any discovery, issuance of protective decisions, and similar procedural matters.
4. If a request for a document exchange is filed at least five days before the hearing by any party or at the direction of the committee chair, the parties shall exchange, no later than the third business day prior to the hearing, lists of potential witnesses and copies of potential exhibits that they reasonably expect to present to the committee. Failure to participate in good faith in such a requested exchange may be cause for exclusion from the hearing of any witness or exhibit not disclosed, absent a showing of good cause for such failure.
5. The committee chair may provide to the committee members in advance of the hearing copies of:
 - a. The conduct officer's notification of imposition of discipline (or referral to the committee); and
 - b. The notice of appeal (or any response to referral) by the respondent. If doing so, however, the chair should remind the members that these "pleadings" are not evidence of any facts they may allege.
6. The parties may agree before the hearing to designate specific exhibits as admissible without objection and, if they do so, whether the committee chair may provide copies of these admissible exhibits to the committee members before the hearing.
7. The student conduct officer, upon request, shall provide reasonable assistance to the respondent in obtaining relevant and admissible evidence that is within the college's control.
8. Communications between committee members and other hearing participants regarding any issue in the proceeding, other than procedural communications that are necessary to maintain an orderly process, are generally prohibited without notice and opportunity for all parties to participate, and any improper "ex parte" communication shall be placed on the record, as further provided in RCW 34.05.455.
9. In cases heard by the committee, each party may be accompanied at the hearing by a nonattorney assistant of their choice. A respondent in all appeals before the committee, or a complainant in an appeal involving allegations of sexual misconduct before the committee, may elect to be represented by an attorney at their own cost, but will be deemed to have waived that right unless, at least four business days before the hearing, written notice of the attorney's identity and participation is filed with the committee chair with a copy to the student conduct officer. The committee will ordinarily be advised by an assistant attorney general. If the respondent and/or complainant is represented by an attorney, the student conduct officer may also be represented by a second, appropriately screened assistant attorney general.
10. At the option of the college president, the college may appoint an administrative law judge as a hearing officer responsible for handling procedural matters otherwise assigned to the chair and to conduct the hearing on behalf of the student conduct committee.

WAC 495B-121-320 Student conduct committee hearing

procedures.

1. Upon the failure of any party to attend or participate in a hearing, the student conduct committee may either:
 - a. Proceed with the hearing and issuance of its decision; or
 - b. Serve a decision of default in accordance with RCW 34.05.440.
2. The hearing will ordinarily be closed to the public. However, if all parties agree on the record that some or all of the proceedings be open, the chair shall determine any extent to which the hearing will be open. If any person disrupts the proceedings, the chair may exclude that person from the hearing location.
3. The chair shall cause the hearing to be recorded by a method that they select, in accordance with RCW 34.05.449. That recording, or a copy, shall be made available to any party upon request. The chair shall assure maintenance of the record of the proceeding that is required by RCW 34.05.476, which shall also be available upon request for inspection and copying by any party. Other recording shall also be permitted, in accordance with WAC 10-08-190.
4. The chair shall preside at the hearing and decide procedural questions that arise during the hearing, except as overridden by majority vote of the committee.
5. The student conduct officer (unless represented by an assistant attorney general) shall present the case for imposing disciplinary sanctions.
6. All testimony shall be given under oath or affirmation. Evidence shall be admitted or excluded in accordance with RCW 34.05.452.
7. In cases involving allegations of sexual misconduct, no party shall directly question or cross-examine the other. Attorneys for the parties are also prohibited from questioning the opposing party absent express permission from the committee chair. Subject to this exception, all cross-examination questions shall be directed to the committee chair, who in their discretion shall pose the questions on the party's behalf.

WAC 495B-121-325 Student conduct committee - Initial decision.

1. At the conclusion of the hearing, the student conduct committee shall permit the parties to make closing arguments in whatever form it wishes to receive them. The committee also may permit each party to propose findings, conclusions, and/or a proposed decision for its consideration.
2. Within ten business days following the latter of the conclusion of the hearing or the committee's receipt of closing arguments, the committee shall issue an initial decision in accordance with RCW 34.05.461 and WAC 10-08-210. The initial decision shall include findings on all material issues of fact and conclusions on all material issues of law, including which, if any, provisions of the student conduct code were violated. Any findings based substantially on the credibility of evidence or the demeanor of witnesses shall so be identified.
3. The committee's initial order shall also include a determination on appropriate discipline, if any. If the matter was referred to the committee by the student conduct officer, the committee shall identify and impose disciplinary sanction(s) or conditions, if any, as authorized in the student code. If the matter is an appeal by a party, the committee may affirm, reverse, or modify the disciplinary sanction and/or conditions imposed by the student conduct officer and/or impose additional disciplinary sanction(s) or conditions as authorized herein.
4. The committee chair shall cause copies of the initial decision to be served on the parties and their legal counsel of record.

The committee chair shall also promptly transmit a copy of the decision and the record of the committee's proceedings to the president.

5. In cases involving allegations of sexual misconduct, the chair of the student conduct committee, on the same date as the initial decision is served on the respondent, will serve a written notice upon the complainant informing the complainant whether the allegations of sexual misconduct were found to have merit and describing any disciplinary sanctions and/or conditions imposed upon the respondent for the complainant's protection, including suspension or dismissal of the respondent. The complainant may appeal the student conduct committee's initial decision to the president subject to the same procedures and deadlines applicable to the respondent. The notice will also inform the complainant of their appeal rights.

WAC 495B-121-330 Appeal from student conduct committee initial decision.

1. A party who is aggrieved by the findings or conclusions issued by the student conduct committee may appeal the committee's initial decision to the president by filing a notice of appeal with the president's office within ten business days of service of the committee's initial decision. Failure to file a timely appeal constitutes a waiver of the right and the initial decision shall be deemed final.
2. The notice of appeal must identify the specific findings of fact and/or conclusions of law in the initial decision that are challenged and must contain an argument as to why the appeal should be granted. If necessary, to aid review, the president may ask for additional briefing from the parties on issues raised on appeal. The president's review shall be restricted to the hearing record made before the student conduct committee and will be limited to a review of those issues and arguments raised in the notice of appeal.
3. The president shall provide a written decision to all parties within twenty-one business days after receipt of the notice of appeal. The president's decision shall be final and shall include a notice of any rights to request reconsideration and/or judicial review.
4. In cases involving allegations of sexual misconduct, the president, on the same date that the final decision is served upon the respondent, shall serve a written notice informing the complainant of the final decision. This notice shall inform the complainant whether the sexual misconduct allegation was found to have merit and describe any disciplinary sanctions and/or conditions imposed upon the respondent for the complainant's protection, including suspension or dismissal of the respondent.
5. The president shall not engage in any "ex parte" communication with any of the parties regarding an appeal.

WAC 495B-121-335 Summary suspension.

1. Summary suspension is a temporary exclusion from specified college premises and/or denial of access to all activities or privileges for which a respondent might otherwise be eligible, while an investigation and/or formal disciplinary procedures are pending.
2. The student conduct officer may impose a summary suspension if there is probable cause to believe that the respondent:
 - a. Has violated any provision of the code of conduct; and
 - b. Presents an immediate danger to the health, safety or welfare of members of the college community; or

- c. Poses an ongoing threat of disruption of, or interference with, the operations of the college.
3. Notice. Any respondent who has been summarily suspended shall be served with oral or written notice of the summary suspension. If oral notice is given, a written notification shall be served on the respondent within two business days of the oral notice.
4. The written notification shall be entitled "Notice of Summary Suspension" and shall include:
 - a. The reasons for imposing the summary suspension, including a description of the conduct giving rise to the summary suspension and reference to the provisions of the student conduct code or the law allegedly violated;
 - b. The date, time, and location when the respondent must appear before the conduct review officer for a hearing on the summary suspension; and
 - c. The conditions, if any, under which the respondent may physically access the campus or communicate with members of the campus community. If the respondent has been trespassed from the campus, a notice against trespass shall be included that warns the student that their privilege to enter into or remain on college premises has been withdrawn, that the respondent shall be considered trespassing and subject to arrest for criminal trespass if the respondent enters the college campus other than to meet with the student conduct officer or conduct review officer, or to attend a disciplinary hearing.
5. The conduct review officer shall conduct a hearing on the summary suspension as soon as practicable after imposition of the summary suspension. At the hearing the review officer will:
 - a. Determine whether there is probably cause to believe that the summary suspension should be continued pending the conclusion of disciplinary proceedings and/or whether the summary suspension should be less restrictive in scope; and
 - b. Provide the respondent the opportunity to explain why summary suspension should not be continued while disciplinary proceedings are pending or why the summary suspension should be less restrictive in scope.
6. If the respondent fails to appear at the designated hearing time, the conduct review officer may order that the summary suspension remain in place pending the conclusion of the disciplinary proceedings.
7. As soon as practicable following the hearing, the conduct review officer shall issue a written decision which shall include a brief explanation for any decision continuing and/or modifying the summary suspension and notice of any right to appeal.
8. To the extent permissible under applicable law, the conduct review officer shall provide a copy of the decision to all persons or offices who may be bound or protected by it.
9. In cases involving allegations of sexual misconduct, the complainant shall be notified that a summary suspension has been imposed on the same day that the summary suspension notice is served on the respondent. The college will also provide the complainant with timely notice of any subsequent changes to the summary suspension order.

WAC 495B-121-340 Readmission after dismissal. A student dismissed due to a code of conduct violation from the college may be readmitted only on written petition to the president. Petitions must indicate reasons that support reconsideration. The president

may use whatever review procedures are at the president's disposal in consideration of readmission. The president shall convey a decision in writing to the student within thirty days after completion of the review process.

WAC 495B-121-345 Review of rules. These rules will be reviewed annually by the student conduct officer. Upon determining a need to revise this code a review committee shall be convened to make recommendations for change in the code. The ASBTC Executive team will be notified of proposed changes.

SUPPLEMENTAL TITLE IX STUDENT CONDUCT PROCEDURES

WAC 495B-121-350 Order of precedence. This supplemental procedure applies to allegations of sexual harassment subject to Title IX jurisdiction pursuant to regulations promulgated by the United States Department of Education. See 34 C.F.R. Part 106. To the extent these supplemental hearing procedures conflict with the Bellingham Technical College's standard disciplinary procedures, WAC 495B-121-230 through 495B-121-345, these supplemental procedures shall take precedence. Bellingham Technical College may, at its discretion, contract with an administrative law judge or other person to act as presiding officer and assign such presiding officer to exercise any or all of the duties in lieu of the student conduct committee and committee chair.

WAC 495B-121-355 Prohibited conduct under Title IX. Pursuant to RCW 28B.50.140(13) and Title IX of the Education Amendments Act of 1972, 20 U.S.C. Sec. 1681, the college may impose disciplinary sanctions against a student who commits, attempts to commit, or aids, abets, incites, encourages, or assists another person to commit, an act(s) of "sexual harassment."

For the purposes of this supplemental procedure, "sexual harassment" encompasses the following conduct:

1. Quid pro quo harassment. A college employee conditioning the provision of an aid, benefit, or service of the college on an individual's participation in unwelcome sexual conduct.
2. Hostile environment. Unwelcome conduct that a reasonable person would find to be so severe, pervasive, and objectively offensive that it effectively denies a person equal access to the college's educational programs or activities, or employment.
3. Sexual assault. Sexual assault includes the following conduct:
 - a. Nonconsensual sexual intercourse. Any actual or attempted sexual intercourse (anal, oral, or vaginal), however slight, with any object or body part, by a person upon another person, that is without consent and/or by force. Sexual intercourse includes anal or vaginal penetration by a penis, tongue, finger, or object, or oral copulation by mouth to genital contact or genital to mouth contact.
 - b. Nonconsensual sexual contact. Any actual or attempted sexual touching, however slight, with any body part or object, by a person upon another person that is without consent and/or by force. Sexual touching includes any bodily contact with the breasts, groin, mouth, or other bodily orifice of another individual, or any other bodily contact in a sexual manner.
 - c. Incest. Sexual intercourse or sexual contact with a person known to be related to them, either legitimately

or illegitimately, as an ancestor, descendant, brother, or sister of either wholly or half related. Descendant includes stepchildren and adopted children under the age of eighteen.

- d. Statutory rape. Consensual sexual intercourse between someone who is eighteen years of age or older and someone who is under the age of sixteen.
4. Domestic violence. Physical violence, bodily injury, assault, the infliction of fear of imminent physical harm, sexual assault, or stalking committed by a person with whom the victim shares a child in common, by a person who is cohabitating with or has cohabitated with the victim as a spouse, by a person similarly situated to a spouse of the victim under the domestic or family violence laws of the state of Washington, or by any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the state of Washington, RCW 26.50.010.
5. Dating violence. Physical violence, bodily injury, assault, the infliction of fear of imminent physical harm, sexual assault, or stalking committed by a person:
 - a. Who is or has been in a social relationship of a romantic or intimate nature with the victim; and
 - b. Where the existence of such a relationship shall be determined based on a consideration of the following factors:
 - i. The length of the relationship;
 - ii. The type of relationship; and
 - iii. The frequency of interaction between the persons involved in the relationship.
6. Stalking. Engaging in a course of conduct directed at a specific person that would cause a reasonable person to fear for their safety or the safety of others, or suffer substantial emotional distress.

WAC 495B-121-360 Title IX jurisdiction.

1. This supplemental procedure applies only if the alleged misconduct:
 - a. Occurred in the United States;
 - b. Occurred during a college educational program or activity; and
 - c. Meets the definition of sexual harassment as that term is defined in this supplemental procedure.
2. For purposes of this supplemental procedure, an "educational program or activity" is defined as locations, events, or circumstances over which the college exercised substantial control over both the respondent and the context in which the alleged sexual harassment occurred. This definition includes any building owned or controlled by a student organization that is officially recognized by the college.
3. Proceedings under this supplemental procedure must be dismissed if the decision maker determines that one or all of the requirements of subsection (1)(a) through (c) of this section have not been met. Dismissal under this supplemental procedure does not prohibit the college from pursuing other disciplinary action based on allegations that the respondent violated other provisions of the college's student conduct code, WAC 495B-121-230 through 495B-121-345.
4. If the student conduct officer determines the facts in the investigation report are not sufficient to support Title IX jurisdiction and/or pursuit of a Title IX violation, the student

conduct officer will issue a notice of dismissal in whole or in part to both parties explaining why some or all of the Title IX claims have been dismissed.

WAC 495B-121-365 Initiation of discipline.

1. Upon receiving the Title IX investigation report from the Title IX coordinator, the student conduct officer will independently review the report to determine whether there are sufficient grounds to pursue a disciplinary action against the respondent for engaging in prohibited conduct under Title IX.
2. If the student conduct officer determines that there are sufficient grounds to proceed under these supplemental procedures, the student conduct officer will initiate a Title IX disciplinary proceeding by filing a written disciplinary notice with the chair of the student conduct committee and serving the notice on the respondent and the complainant, and their respective advisors. The notice must:
 - a. Set forth the basis for Title IX jurisdiction;
 - b. Identify the alleged Title IX violation(s);
 - c. Set forth the facts underlying the allegation(s);
 - d. Identify the range of possible sanctions that may be imposed if the respondent is found responsible for the alleged violation(s); and
 - e. Explain that the parties are entitled to be accompanied by their chosen advisor during the hearing and that:
 - i. The advisors will be responsible for questioning all witnesses on the party's behalf;
 - ii. An advisor may be an attorney; and
 - iii. The college will appoint the party an advisor of the college's choosing at no cost to the party, if the party fails to do so; and
3. Explain that if a party fails to appear at the hearing, a decision of responsibility may be made in their absence.

WAC 495B-121-370 Prehearing procedure.

1. Upon receiving the disciplinary notice, the chair of the student conduct committee will send a hearing notice to all parties, in compliance with WAC 495B-121-315. In no event will the hearing date be set less than ten days after the Title IX coordinator provided the final investigation report to the parties.
2. A party may choose to have an attorney serve as their advisor at the party's own expense. This right will be waived unless, at least five days before the hearing, the attorney files a notice of appearance with the committee chair with copies to all parties and the student conduct officer.
3. In preparation for the hearing, the parties will have equal access to all evidence gathered by the investigator during the investigation, regardless of whether the college intends to offer the evidence at the hearing.

WAC 495B-121-375 Rights of parties.

1. The college's student conduct procedures, WAC 495B-121-230 through 495B-121-345 and this supplemental procedure shall apply equally to all parties.
2. The college bears the burden of offering and presenting sufficient testimony and evidence to establish that the respondent is responsible for a Title IX violation by a preponderance of the evidence.
3. The respondent will be presumed not responsible until such time as the disciplinary process has been finally resolved.

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4. During the hearing, each party shall be represented by an advisor. The parties are entitled to an advisor of their own choosing and the advisor may be an attorney. If a party does not choose an advisor, then the Title IX coordinator will appoint an advisor of the college's choosing on the party's behalf at no expense to the party.

WAC 495B-121-380 Evidence. The introduction and consideration of evidence during the hearing is subject to the following procedures and restrictions:

1. Relevance: The committee chair shall review all questions for relevance and shall explain on the record their reasons for excluding any questions based on lack of relevance.
2. Relevance means that information elicited by the question makes facts in dispute more or less likely to be true.
3. Questions or evidence about a complainant's sexual predisposition or prior sexual behavior are not relevant and must be excluded, unless such question or evidence:
 - a. Is asked or offered to prove someone other than the respondent committed the alleged misconduct; or
 - b. Concerns specific incidents of prior sexual behavior between the complainant and the respondent, which are asked or offered on the issue of consent.
4. No negative inference: The committee may not make an inference regarding responsibility solely on a witness's or party's absence from the hearing or refusal to answer questions.
5. Privileged evidence: The committee shall not consider legally privileged information unless the holder has effectively waived the privilege. Privileged information includes, but is not limited to, information protected by the following:
 - a. Spousal/domestic partner privilege;
 - b. Attorney-client and attorney work product privileges;
 - c. Privileges applicable to members of the clergy and priests;
 - d. Privileges applicable to medical providers, mental health therapists, and counselors;
 - e. Privileges applicable to sexual assault and domestic violence advocates; and
 - f. Other legal privileges identified in RCW 5.60.060.

WAC 495B-121-385 Initial order.

1. In addition to complying with WAC 495B-121-325 the student conduct committee will be responsible for conferring and drafting an initial order that:
 - a. Identifies the allegations of sexual harassment;
 - b. Describes the grievance and disciplinary procedures, starting with filing of the formal complaint through the determination of responsibility, including notices to parties, interviews with witnesses and parties, site visits, methods used to gather evidence, and hearings held;
 - c. Makes findings of fact supporting the determination of responsibility;
 - d. Reaches conclusions as to whether the facts establish whether the respondent is responsible for engaging in sexual harassment in violation of Title IX;
 - e. Contains a statement of, and rationale for, the committee's determination of responsibility for each allegation;
 - f. Describes any disciplinary sanction or conditions imposed against the respondent, if any;
 - g. Describes to what extent, if any, the complainant is entitled

to remedies designed to restore or preserve complainant's equal access to the college educational programs or activities; and

- h. Describes the process for appealing the initial order to the college president.
2. The committee chair will serve the initial order on the parties simultaneously.

WAC 495B-121-390 Appeals.

1. The parties, including the student conduct officer in their capacity as a representative of the college, have the right to appeal from the determination of responsibility and/or from a dismissal, in whole or in part, of a formal complaint during the investigative or hearing process. Appeals must be in writing and filed with the president's office within 21 days of service of the initial order or notice of dismissal. Appeals must identify the specific findings of fact and/or conclusions of law in the initial order or dismissal that the appealing party is challenging and must contain argument as to why the appeal should be granted. Failure to file a timely appeal constitutes a waiver of the right to appeal and the initial order or dismissal shall be deemed final.
2. Upon receiving a timely appeal, the president's office will serve a copy of the appeal on all parties, who will have 10 days from the date of service to submit written responses to the president's office addressing issues raised in the appeal. Failure to file a timely response constitutes a waiver of the right to participate in the appeal. Upon receipt of written responses, the president's office shall serve copies of the response to the other parties.
3. Parties receiving a copy of the responses shall have five days in which to submit a written reply addressing issues raised in the response to the president's office.
4. The president or their delegate, based on their review of parties' submissions and the hearing or investigative record, will determine whether the grounds for appeal have merit, provide the rationale for this conclusion, and state whether a dismissal is affirmed or denied, or if the disciplinary sanctions and conditions imposed in the initial order are affirmed, vacated, or amended, and, if amended, set forth the new disciplinary sanctions and conditions.
5. President's office shall serve the final decision on the parties simultaneously.
6. All administrative decisions reached through this process are and may be judicially appealed pursuant to applicable provisions of chapter 34.05 RCW including, but not limited to, the timelines set forth in RCW 34.05.542. No decisions or recommendations arising from this disciplinary procedure will be subject to grievance pursuant to any collective bargaining agreement.



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