

# BATES TECHNICAL COLLEGE

2020 - 2021  
COURSE CATALOG



## Table of Contents: Sections 1, 2 and 3

At-A-Glance .....	9
General Information.....	9
Section 1 • About Bates .....	11
Mission .....	11
Core Themes.....	11
History .....	11
Advisory Committees .....	11
Bates Technical College Foundation.....	11
Career Education .....	12
College Website.....	12
Diverse Population .....	12
Diversity Statement.....	12
About Our College .....	12
Accreditation .....	12
Gainful Employment Disclosure .....	13
Limitation of Liability .....	13
GI Bill® statement.....	13
Notice .....	13
Notice of Non-Discrimination.....	13
Translations of Non-Discrimination Statement.....	13
Korean .....	14
Chinese .....	14
Russian.....	15
Spanish .....	15
To register for a career education program .....	15
Degrees and Certificates .....	15
Associate of Applied Science Degree .....	15
Associate of Applied Science - Transfer .....	16
Associate of Applied Science in Apprenticeship Studies.....	16
Certificate of Competency.....	16
Certificate of Training.....	16

# Bates Technical College 2020 – 2021 Course Catalog

## Sections 1 - 3

Associate in Business - Direct Transfer Agreement Transfer Degree/Major Related Program.....	16
Articulation Agreements .....	16
Residency.....	16
Certifications and Professional License Preparation.....	17
Certifications for Industry.....	17
Certifications .....	17
Preparation.....	17
Fire Service .....	17
Certification Preparation, Training and Testing .....	18
Professional License Preparation .....	18
General Education .....	18
General Education Courses .....	18
General Education Requirements .....	19
Transferring Bates General Education credits earned at Bates to another college.....	19
General Education class credits and high school students .....	19
General Education Pathways.....	19
Common Courses .....	20
Adult Basic Education, I-BEST, Adult High School Completion, High School+ .....	21
Adult Basic Education .....	21
Integrated Basic Education and Skills Training (I-BEST) .....	21
How to register for adult education classes.....	21
Adult High School Completion High School+.....	21
Running Start.....	21
Technical High School.....	21
Technical High School Graduation Requirements* .....	21
To register for running start and technical high school .....	22
Afternoon Technical High School .....	22
Section 2 • Extended Learning and other programs.....	23
Extended Learning.....	23
Articulation Agreements with Industry.....	23
Apprenticeship Committees.....	23
Manufacturing Academy .....	23

Articulation Agreements with Colleges and Universities .....	24
Articulation Agreements with K-12 .....	24
Workforce Contract Training.....	24
Continuing Education .....	24
Distance Learning .....	24
CTE Teacher Certification .....	25
General Educational Development (GED) .....	25
Industry Partnerships .....	25
Professional Improvement Units.....	25
Child Studies .....	25
Child Development/Early Education Staff Training Program .....	25
Cooperative Preschools.....	25
Early Childhood Education and Assistance Program (ECEAP) .....	26
Effective Parenting Courses.....	26
Early Education Resource Center .....	26
Washington State Training and Registry System (STARS) .....	26
Section 3 • Student Services .....	26
Student Services and Advising.....	26
Associated Student Government (ASG) .....	26
Barber Shop.....	27
Campus Store and Online Bookstore .....	27
Refund and Return Policy.....	27
Career Education Information Sessions .....	27
Child Care .....	27
Counseling Center .....	27
Community Health Clinics .....	27
Drug-Free Environment.....	28
Educational Opportunity Center .....	28
Email Accounts for Students .....	28
Emergency Closures and Delays.....	28
Financial Aid .....	28
Food/Dining Service .....	28

# Bates Technical College 2020 – 2021 Course Catalog

## Sections 1 - 3

Insurance .....	28
Job Placement .....	29
Library.....	29
New Student Orientation .....	29
National Voter Registration Act .....	29
Parking.....	29
Parking Fines.....	29
Parking Fine Appeal.....	29
Safety.....	30
Registration and College Calendar .....	30
2020-2021 Calendar .....	30
Summer Quarter 2020.....	30
Fall Quarter 2020.....	30
Winter Quarter 2020-2021.....	31
Spring Quarter 2021 .....	31
Campus Life and Activities Center.....	31
MyBates.....	31
Tuition Refund Policy.....	32
State-funded Instruction .....	32
Tuition Refund Policy-Financial Aid Recipients .....	32
Tuition Refund Policy-Self-Support .....	32
Drop for Non-Payment Policy.....	33
Tuition Payment Plan .....	33
Refunds.....	33
Tuition 2020-2021 Resident .....	34
Tutoring.....	35
Veterans Services .....	35
VA Pending Payment Compliance .....	35
Disability Support Services and Accommodation.....	36
Disability Support Services .....	36
Eligibility .....	36
Attendance .....	36

Student Rights .....	36
Equal Access .....	36
Obtaining Services .....	36
Confidentiality .....	37
Course Substitutions/Waivers .....	37
Student Grievance .....	37
Registration and Attendance Policies.....	37
Full-time Students .....	37
Allied Health Students.....	37
Enrollment/Registration Policy .....	37
Placement.....	37
Attendance Policy.....	37
Withdrawals .....	38
Student Absence for Faith or Conscience .....	38
Absence for Short-Term Military Assignments .....	38
International Student Information.....	38
International Students.....	38
International Student Services .....	39
Tuition and Expenses for International Students.....	39
Financial Responsibility .....	39
International Contract Training.....	39
Tuition 2020-2021 Non-Resident .....	40
Transcripts, Transfer of Credits .....	41
Transcripts .....	41
Transfer of Credits.....	41
Credit for Military Service .....	41
College-Level Examination Program.....	41
Transferability of Credits .....	41
Transferability of General Education Credits .....	42
Work-Based Learning .....	42
Financial Aid .....	42
How to Apply.....	42

# Bates Technical College 2020 – 2021 Course Catalog

## Sections 1 - 3

Eligibility Requirements.....	42
Types of Financial Aid.....	43
BankMobile.....	44
Withdrawals .....	44
Return of Title IV Financial Aid .....	44
WorkFirst .....	44
Worker Retraining .....	44
Basic Food and Employment Training (BFET).....	44
Able-Bodied Adult without Dependents (ABAWD) .....	45
Financial Aid Satisfactory Academic Progress .....	45
Introduction.....	45
Policy Summary .....	45
Policy Details .....	47
Appendix.....	55
Scholarships.....	56
Grading System .....	57
Grading Procedures.....	57
Reporting:.....	57
Academic Suspension .....	58
Program Curriculum .....	58
Program Completion Times.....	58
College Satisfactory Academic Progress.....	58
Academic Deficiency Policy .....	58
Academic Deficiency.....	58
Academic Probation .....	58
Academic Suspension.....	58
Re-entry after Academic Suspension .....	59
Academic Appeal.....	59
Student Rights and Responsibilities .....	59
WAC Student Rights and Responsibilities Chapter 495A-121 .....	59
Family Educational Rights and Privacy Act (FERPA): Confidentiality of Student Records.....	59
Student Right-To-Know .....	60

Policy Prohibiting Hazing.....60  
Sexual Harassment Policy.....60



## At-A-Glance

### General Information

[www.BatesTech.edu](http://www.BatesTech.edu), info@batestech.edu, 253.680.7000

- **Downtown Campus, 253.680.7000**
- **Central/Mohler Campus, 253.680.7603**
- **South Campus, 253.680.7400**
- **Toll free in-state, 800.562.7099**
- Academics, 253.680.7260
- Admissions, info@batestech.edu, 253.680.7002
- Adult Basic Education/GED, adult-ed@batestech.edu, 253.680.7274
- Advising, info@batestech.edu, 253.680.7002
- Apprenticeship Training, [www.BatesTech.edu/Apprenticeship](http://www.BatesTech.edu/Apprenticeship), apprentice@batestech.edu, 253.680.7402
- Assessment/Testing Center, [www.BatesTech.edu/Testing](http://www.BatesTech.edu/Testing), testing@batestech.edu, 253.680.7030
- Associated Student Government (ASG), [www.BatesTech.edu/ASG](http://www.BatesTech.edu/ASG) 253.680.7178
- Barber Shop, 253.680.7248
- Book Store, 253.680.7130 (Downtown) 253.680.7430 (South)
- Campus Public Safety, [www.BatesTech.edu/Safety](http://www.BatesTech.edu/Safety), 253.680.7111
- Career Education, [www.BatesTech.edu/areas-of-study](http://www.BatesTech.edu/areas-of-study), info@batestech.edu, 253.680.7000
- Child Care Center, childcare@batestech.edu, 253.680.7320
- Child Studies, [www.BatesTech.edu/Family](http://www.BatesTech.edu/Family) family@batestech.edu, 253.680.7500
- Closure/Weather Information Line, [www.BatesTech.edu/Weather](http://www.BatesTech.edu/Weather), 253.680.7060
- Communications and Marketing, communications@batestech.edu, 253.680.7106
- Continuing Education, [www.BatesTech.edu/ContinuingEd](http://www.BatesTech.edu/ContinuingEd), cont-ed@batestech.edu, 253.680.7402
- Deaf Relay Services, 711 or Washington Relay, 1.800.833.6384
- Dental Clinic, 253.680.7310
- Denturist Clinic, 253.680.7314
- Dining Services and Catering, [www.BatesTech.edu/Dining](http://www.BatesTech.edu/Dining), 253.680.7011
- Disability Support Services, [www.BatesTech.edu/DSS](http://www.BatesTech.edu/DSS), dss@batestech.edu, 253.680.7012

- Emergency Management, [www.BatesTech.edu/Emergency](http://www.BatesTech.edu/Emergency)
- Early Childhood Education and Assistance Program (ECEAP), [eceap@batestech.edu](mailto:eceap@batestech.edu), 253.680.7320
- Financial Aid, [www.BatesTech.edu/FinancialAid](http://www.BatesTech.edu/FinancialAid), [financialaid@batestech.edu](mailto:financialaid@batestech.edu), 253.680.7020
- Foundation, [www.BatesTech.edu/Foundation](http://www.BatesTech.edu/Foundation), [foundation@batestech.edu](mailto:foundation@batestech.edu), 253.680.7160
- Hearing Clinic, 253.680.7362
- High School, [highschool@batestech.edu](mailto:highschool@batestech.edu), 253.680.7004
- High School 21+ (HS21+), [adult-ed@batestech.edu](mailto:adult-ed@batestech.edu), 253.680.7274
- Human Resources, [hr@batestech.edu](mailto:hr@batestech.edu), 253.680.7181
- International Student Services, [www.BatesTech.edu/International](http://www.BatesTech.edu/International), [international@batestech.edu](mailto:international@batestech.edu), 253.680.7184
- KBTC Public Television, [www.KBTC.org](http://www.KBTC.org), [kbtc@batestech.edu](mailto:kbtc@batestech.edu), 253.680.7700
- Library, [www.BatesTech.edu/Library](http://www.BatesTech.edu/Library), [library@batestech.edu](mailto:library@batestech.edu), 253.680.7220 (Downtown), 253.680.7550 (South)
- Outreach and Recruitment, [www.BatesTech.edu/Outreach](http://www.BatesTech.edu/Outreach), [pchase@batestech.edu](mailto:pchase@batestech.edu), 253.680.7302
- Registration, [www.BatesTech.edu/Registration](http://www.BatesTech.edu/Registration), [registration@batestech.edu](mailto:registration@batestech.edu), 253.680.7019
- Running Start, [running-start@batestech.edu](mailto:running-start@batestech.edu), 253.680.7264
- Student Life and Diversity Center, [diversity@batestech.edu](mailto:diversity@batestech.edu), 253.680.7178
- Student Services, [www.BatesTech.edu/Student-Resources](http://www.BatesTech.edu/Student-Resources), 253.680.7002
- Teacher Prep and Certification, 253.680.7467
- Tutoring Center, [www.BatesTech.edu/Tutoring](http://www.BatesTech.edu/Tutoring), [tutors@batestech.edu](mailto:tutors@batestech.edu), 253.680.7208
- Veterans Benefits, [www.BatesTech.edu/va-benefits](http://www.BatesTech.edu/va-benefits), [vabenefits@batestech.edu](mailto:vabenefits@batestech.edu), VA Certifying Official, Downtown Campus, 253.680.7035
- Workforce Education Services, [www.BatesTech.edu/WES](http://www.BatesTech.edu/WES), 253.680.7290
- Worker Retraining, [www.BatesTech.edu/WES](http://www.BatesTech.edu/WES), [retraining@batestech.edu](mailto:retraining@batestech.edu), 253.680.7127
- WorkFirst, [www.BatesTech.edu/WES](http://www.BatesTech.edu/WES), 253.680.7347

## Section 1 • About Bates

### Mission

Bates Technical College enriches our diverse communities by inspiring student learning, challenging greater achievement, and educating for employment.

### Core Themes

Bates measures mission fulfillment through four strategic core themes.

- **Workforce Education:** We are committed to providing high quality training that helps students realize their potential for growth and success through innovative instruction.
- **Student Centered:** Bates supports students, enabling them to succeed, to aspire to education, to reach their educational goals and transition successfully to further education or employment.
- **General Education:** Bates recognizes that the skills and knowledge attained through general and related education are essential to success and ensuring well-rounded learners.
- **Community Relationships:** Strong local and global partnerships with business, industry, labor and the public make the college a respected, effective community resource, contributing to local community vitality.

### History

Since 1940, Bates Technical College has provided our region with accessible, affordable and quality educational programs that lead students to careers, and employers to well- trained employees.

The legacy of Bates Technical College began in the basement of an elementary school in East Tacoma. Initially named Tacoma Vocational School, the Tacoma School District-operated institute was a vital training location for the area. The site helped meet demand for skilled workers who would support the World War II defense effort.

When longtime Director of Vocational Education Laverne Bates retired, the school board changed the school's name to Bates Vocational Technical Institute. A 1991 state bill removed vocational schools from local school districts and set them under the community college system.

Today, Bates Technical College has grown to three Tacoma locations that offer an education that gives graduates a competitive workplace edge in a wide range of career disciplines.

College employees live its mission to enrich our diverse communities by inspiring student learning, challenging greater achievement, and educating for employment.

Residents of Pierce County and beyond choose Bates as their educational partner because we offer affordable educational opportunities for everyone, from certificates, certifications, Associate of Applied Science, and Associate of Applied Science-Transfer degrees, to adult education, lifelong learning and high school completion options.

### Advisory Committees

Some 500 individuals serve on 45+ program advisory committees. These committee members represent partnerships with business, labor and industry; provide curriculum recommendations to the college; and often offer program equipment, scholarships and job opportunities for students.

### Bates Technical College Foundation

Bates Technical College Foundation exists to support student and program success by securing resources through building community relationships and awareness. Through this nonprofit organization, local businesses, community members and Bates employees contribute to the foundation, providing over \$250,000 annually in scholarships, grants, faculty development opportunities, program support and emergency student assistance.

## Career Education

Unique classroom settings mirror the workplace, providing students with opportunities to practice and develop skills to levels required for successful employment. Students in specific programs gain hands-on experience in campus facilities.

## College Website

[www.BatesTech.edu](http://www.BatesTech.edu)

Bates Technical College maintains a website on the Internet. Information is available regarding academic programs, admission requirements, campus locations, student services, career development, and more. From this website, current students can perform many functions:

- View current class schedules
- Register for classes
- Access information on campus safety, voter registration and other important issues
- Check grades
- Use career services
- Keep current on clubs, activities, and other student services
- Apply for degrees and/or diplomas
- Register for commencement ceremonies

## Diverse Population

Our students and staff are from diverse backgrounds, races, religions, and points of view. The ages of students in any given class might range from 16 to 60 and can be high school students just starting their educational or career tracks, or people returning to school for a career change or to update job skills.

## Diversity Statement

Diversity supports the mission of Bates Technical College. Respecting and promoting diversity is vital to the education of our students and to the learning environment of our campus community. We foster an atmosphere where each of us is valued for our intellectual and cultural perspectives, increasing our ability to reflect critically and resolve challenges. We share a wealth of experiences that strengthens us

individually and as a society. As students and educators, we commit to building a diverse and engaged community.

## About Our College

### Accreditation

[www.nwccu.org](http://www.nwccu.org)

Bates Technical College is accredited by the Northwest Commission on Colleges and Universities.

Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process.

An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

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

Inquiries regarding an institution's accredited status by the Northwest Commission on Colleges and Universities should be directed to the administrative staff of the institution. Individuals may also contact:

### **Northwest Commission on Colleges and Universities**

8060 165th Avenue N.E., Suite 100, Redmond, WA 98052

425.558.4224, [www.nwccu.org](http://www.nwccu.org)

### Gainful Employment Disclosure

Bates Technical College is participating in early implementation of the rescission from the Gainful Employment requirements allowable by the Secretary's authority under section 482(c) of the HEA to designate the regulatory changes to subpart Q and subpart R of the Student Assistance General Provisions at title 34, part 668, of the Code of Federal Regulations for early implementation beginning on July 1, 2019.

### Limitation of Liability

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

### GI Bill® statement

GI Bill® is a registered trademark of the US Department of Veterans Affairs (VA). More information about educational benefits offered by the VA is available at the official US government website at <https://www.benefits.va.gov/gibill>.

### Notice

The information in the Course Catalog is accurate as of June 2020 and contains information relating to the 2020-2021 academic year. Bates Technical College reserves the right to make corrections and changes affecting policies, fees, curricula or any other matters contained in this and subsequent issues of the catalog or in any of its other publications.

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

Selected programs of study at Bates Technical College are approved by the Workforce Training and Education Coordinating Board's State Approving Agency (WTECB/SM) for enrollment of those eligible to receive benefits under Title 38 and Title 10, USC.

### Notice of Non-Discrimination

Bates Technical College offers 45+ career and technical education programs in accounting, practical nurse, barber, early childhood education, fire service, culinary arts and more.

Bates Technical College reaffirms its policy of equal opportunity and does not discriminate on the basis of race, ethnicity, color, national origin, creed, religion, sex, sexual orientation, gender identity, age, marital status, disability, or status as a disabled veteran or Vietnam era veteran in its programs and activities in accordance with college policy, and applicable federal and state statutes and regulations. Bates publications are available in alternate formats upon request by contacting the disability support services office at 253.680.7010. Inquiries regarding Bates' non-discriminatory policies, including Title IX and ADA, should be directed to: for student matters, the Dean of Student Services Jane Birkholz at 253.680.7102, [jbirkholz@batestech.edu](mailto:jbirkholz@batestech.edu), Downtown Campus A211. For employee matters, the Executive Director of Human Resources Christina Nelson at 253.680.7180, [cnelson@batestech.edu](mailto:cnelson@batestech.edu), Downtown Campus A326. If you need assistance due to sensory impairment or disability, contact the Disability Support Services Coordinator Dan Eberle, 253.680.7010, [deberle@batestech.edu](mailto:deberle@batestech.edu).

Bates Technical College will take steps to ensure that the lack of English language skills will not be a barrier to admission and participation in all educational and technical education programs.

### Translations of Non-Discrimination Statement

Bates Technical College complies with federal and state laws specifically requiring that the college does

not discriminate on the basis of race, ethnicity, color, creed, religion, national origin, sex, sexual orientation, age, marital status, gender identity, disability, or status as a disabled veteran or Vietnam era veteran in its programs and activities. Bates Technical College will address any barriers to admission and participation in technical or academic programs. This notice of non-discrimination is available in the following languages:

#### Korean

##### 反歧視年度公告

貝茲理工學院提供將近 50 項橫跨各個領域的學位和證書研習選擇，提供豐富的全套技術/專業、基礎技能以及延伸教育課程。尋求學位或證書的學生必須向招生部門提出申請，並向學位或證書的學程註冊。貝茲理工學院將正視任何進入和參與技術或學術課程之障礙，包含對於英語能力之缺乏。貝茲理工學院重申其機會均等之政策，根據學院政策及適用之聯邦和各州的法規和規章，在其學程和活動中絕不因種族、民族、膚色、信仰、宗教、國籍、性別、性取向、年齡、婚姻狀況、

性別認同、殘疾，或因傷殘退伍軍人或越戰時期老兵之身分而有所歧視。任何有關貝茲反歧視政策的問題，請洽：學員請聯絡學院效率與學員成功常務副院長 Jane Birkholz，電話為 253-680-7102，或寄電子郵件至 [jbirkholz@batestech.edu](mailto:jbirkholz@batestech.edu)，職員請聯絡人事部門主管 Christina Nelson，電話為

253-680-7180，或寄電子郵件至 [cnelson@batestech.edu](mailto:cnelson@batestech.edu)，亦可寄信至 1101 South Yakima Avenue, Tacoma, Washington 98405。更多有關反歧視與機會均等公告的資訊，請見民權處 (OCR) 之執行辦公室清單，以了解服務您所在區域之其辦公室地址和電話號碼，亦可洽詢 1-800-421-3481。任何有關教育法第九條和實施條例實行之問題，學院職員請聯絡人事部門主管 Christina Nelson，電話為 253-680-7181，學員請聯絡學院效率與學員成功常務副院長 Jane Birkholz，電話為 253-680-7102，[jbirkholz@batestech.edu](mailto:jbirkholz@batestech.edu)，或寄信至 1101 South Yakima Avenue, Tacoma, Washington 98405，亦可洽詢 1-800-562-7099。若您因知覺障

礙或殘疾而需要任何協助，請聯絡殘障支援服務協調人員，電話為 253-680-7010。反歧視聲明翻譯貝茲理工學院的反歧視公告提供英文、韓文、中文、俄文、塔加拉族文和西班牙文版本。若您需要上述任何語言版本之聲明副本，請向人事部門提出要求，電話為 253-680-7181 或寄電子郵件至 [hr@batestech.edu](mailto:hr@batestech.edu)。

#### Chinese

##### 年度不歧視聲明

貝茲技術學院有近 50 個不同領域的副學士學位和證書可供選擇，為技術/專業、基本技能和繼續教育計劃提供豐富的補充。想取得學位或證書的學生必須針對相應學位和證書課程申請入學和註冊。貝茲技術學院將會解決任何入學及參與技術或學術課程的障礙，包括英語語言技能不足。

貝茲技術學院再次強調本校的平等機會政策，遵循學院政策及適用的聯邦和州法令法規，在本校課程與活動中不採取針對種族、族裔、膚色、信仰、宗教、原籍、性別、性取向、年齡、婚姻狀況、性別認同、殘疾，或是傷殘退伍軍人或越戰退伍軍人的歧視行為。如有關於貝茲學院不歧視政策的問題，請諮詢以下人員：學生諮詢請聯繫 Dean of Student Services (教育質量與學生成就) 執行院長 Jane Birkholz，可致電 253.680.7102 或發送電郵至 [jbirkholz@batestech.edu](mailto:jbirkholz@batestech.edu)；員工諮詢請聯繫人力資源總監 Christina Nelson，可致電 253.680.7180 或發送電郵至 [cnelson@batestech.edu](mailto:cnelson@batestech.edu)，函件請寄往 1101 South Yakima Avenue, Tacoma, Washington 98405。如需了解更多關於不歧視和平等機會聲明的信息，請參閱民權辦公室 (OCR) 執行辦公室名單，查找您所在區域的相應辦公室地址和電話號碼，或致電 1.800.421.3481。關於教育法修正案第九條和實施條例的應用，學院職員應聯繫人力資源總監 Christina Nelson，電話號碼 253.680.7181；

學生應聯繫 Dean of Student Services (教育質量與學生成就) 執行院長 Jane Birkholz，電話號碼 253.680.7102，[jbirkholz@batestech.edu](mailto:jbirkholz@batestech.edu)，函件請寄往 1101 South Yakima Avenue, Tacoma, Washington 98405，也可致電 1.800.562.7099。如果您因感官機

能受损或残疾需要协助，请致电 253.680.7010 联系残障支持服务协调员。

### 不歧视声明翻译版本

贝茨技术学院的不歧视声明的语言版本有英文、韩文、中文、俄文、他加禄文和西班牙文。如果您需要上述语种的声明，请致电 253.680.7181 或发送电邮至 [hr@batestech.edu](mailto:hr@batestech.edu)，向人力资源部索取。

### Russian

ИнФормация о недискриминации в Техническом Колледже им. Бейтса сейчас доступна на английском, корейском, китайском, русском и испанском, языках. Если вы хотели бы приобрести её копию на любом из выше перечисленных языков, пожалуйста обратитесь в офис Прав и Обязаностей человека или в офис Охраны и Безопасности, 253.680.7180, или [hr@batestech.edu](mailto:hr@batestech.edu).

### Spanish

El aviso de no discriminación de Bates Technical College está disponible en inglés, coreano, chino, ruso y español. Si desea un copia de la declaración en una de las lenguas indicadas, por favor, solicite una copia del Vice presidente de recursos humanos y seguridad del campus, 253.680.7180 o [hr@batestech.edu](mailto:hr@batestech.edu).

### To register for a career education program

1. Attend an Information Session.
2. Apply for admissions to Bates at [www.BatesTech.edu/apply](http://www.BatesTech.edu/apply).
3. Apply for financial aid. Learn more at [www.BatesTech.edu/financialaid](http://www.BatesTech.edu/financialaid).
4. Establish college placement.  
If you have not previously taken college courses, take the ACCUPLACER. Visit [www.BatesTech.edu/testing](http://www.BatesTech.edu/testing) to learn more.  
If you have previously taken college courses, obtain a copy of your transcript.
5. Register for classes.  
Call 253.680.7002 to schedule an appointment with an advisor. Please bring

your assessment scores or transcripts. Your career advisor will help you determine your educational plan and your start date. Your non-refundable \$50 registration fee is due at this time.

6. Pay tuition and fees.  
Tuition and fees are payable by cash, check, credit card or financial aid/agency funding two weeks prior to the start of your program. (See [college calendar](#) for tuition due dates.)
7. Attend a New Student Orientation.  
Attend an orientation to learn about important student resources. See upcoming dates at [www.BatesTech.edu/NSO](http://www.BatesTech.edu/NSO).

More information: [www.BatesTech.edu/GetStarted](http://www.BatesTech.edu/GetStarted) or 253.680.7002

### Degrees and Certificates

All degree and certificate options require a minimum cumulative grade point average (GPA) of at least a 2.0 to earn a credential. Individual programs may require a higher grade point average.

If a student has a break in enrollment for a career education program, upon their return, they must complete the requirements for the most recent curriculum. If there is a curriculum change to a program while a student is continuously enrolled, it is the student's choice as to whether they complete the new curriculum or the curriculum they started under.

### Associate of Applied Science Degree

The Associate of Applied Science degree prepares graduates for the workforce, leading the graduate directly to employment in a specific occupation.

Associate of Applied Science degree career education programs have general education requirements. Students must complete college-level credits in communications, human relations and mathematics. This degree is not generally transferable to four-year institutions, though, in some cases, articulation agreements with specific institutions enable transfer. Career advisors can provide more information

regarding transfer opportunities with specific programs.

### Associate of Applied Science - Transfer

The Associate of Applied Science-T degree provides students in specifically identified career education programs with pathways to further educational opportunities through articulation (transferable) agreements with baccalaureate institutions. Completion requirements generally include no less than 20 college-level general education credits for courses generally accepted in transfer, and comprised of five credits each of English composition, mathematics, and social science, humanities or science.

### Associate of Applied Science in Apprenticeship Studies

Former students may be eligible if requirements are met, and if they have spent at least two of the last three years employed within the technical specialty (such as supervisor, foreman, manager, inspector, or instructor). Completion requirements for this degree include:

Documentation of completion of a Bates Technical College apprenticeship program that is at least three years (6,000 hours) in length.

Completion of 20 college-level credits comprised of five credits each of communications, mathematics, human relations and humanities.

### Certificate of Competency

This completion credential is designed specifically for non-licensed programs at least 45 credits in length. Completion requirements include:

Completion of the minimum number of pre-college (90-level) and college-level program specific credits.

Completion of 15 college level (100 level) credits comprised of five credits each of English, mathematics and human relations.

### Certificate of Training

Certificates of Training are awarded for specific occupational outcomes to students who successfully complete programs that are less than 45 credits in length.

### Associate in Business - Direct Transfer Agreement Transfer Degree/Major Related Program

This Bates Technical College degree is designed for students who want to transfer to a participating Washington State four-year college or university. The Business Direct Transfer Agreement/ Major Related Program meets all requirements of Washington's Direct Transfer Agreement between the baccalaureate institutions offering a bachelor of science or bachelor of arts in business administration including accounting, management, and management information systems, and the community and technical college system. The program consists of 90 college-level credits.

At least 60 of these credits are general education in areas such as communication, mathematics, humanities, social sciences, and natural sciences. If a student is admitted to a four-year degree program upon completion of the Business DTA/MRP, they will be granted junior standing and have met all prerequisites for the business major except as noted by specific universities. Admission to schools of business is highly competitive, and completion of the Associate in Business degree does not guarantee admission.

### Articulation Agreements

Bates has articulation agreements with many colleges and universities, including University of Washington Tacoma, The Evergreen State College and many more. For more information, see career training program information or contact a career advisor.

### Residency

Students must complete 30 credits relating to their credential at Bates. Active duty and former military service members must complete at least 25 percent of



the credits relating to their credential at Bates.

## Certifications and Professional License Preparation

### Certifications for Industry

Bates offers many courses that prepare students for industry-standard certifications as part of a degree program or as a separate professional track. Students are encouraged to obtain as many certifications as possible while completing career education programs. Certifications indicate to prospective employer that a person has successfully shown an understanding of the technical knowledge required in a chosen field.

#### Certifications

- Commercial Refrigeration
- Light Commercial Heating and AC
- Residential Heating and AC
- Automotive Service Excellence (ASE)
- Certified Dental Assistant (CDA)
- Certified Medical Transcriptionist
- Cisco Certified Network Associate (CCNA)
- EPA Section 608 II Technician
- Amazon AWS Solutions Architect
- Certified Erosion and Sediment Control Lead (CESCL)
- ACI Concrete Strength Testing Technician Certification (CP-19)
- Certification of Engineering
- Certified Electronic Technician (CET through ISCET)
- Certified Fiber Optics Technician (FOA)
- Certified Internet Web Professional (CIW)
- CIW User Interface Designer
- Electrical Engineering Technician (EET)
- EPA 308 (DFC Refrigerants)
- Inter-Industry Conference on Auto Collision Repair(I-CAR)
- International Conference of Building Officials (ICBO)
- Mobile Electronics Certified Professional (MECP)
- Networking Cabling Specialist (C-Tech)
- Network Cabling Systems (Leviton)

#### Preparation

- National Institute for the Technicians (NICET)
- NIMS Machinist and Toolmaking Technology
- Adobe
- Adobe Certified Associate
- Photoshop
- CompTIA
- A+
- Network+
- Security+
- Microsoft Corporation
- Certified Systems Administrator (MCSA)
- Microsoft Office Specialist (MOS)
- Modern Desktop Administrator Associate
- Microsoft Azure Fundamentals
- SolidWorks
- CSWA-Mechanical Design
- CSWP-Mechanical Design
- Oracle
- Oracle 11g Oracle Certified Associate (OCA)

#### Fire Service

Bates Fire Service Training is accredited to National Fire Protection Association

(NFPA) standards by the Washington State Patrol, Office of the State Fire Marshall, and the Fire Protection Policy Board through the International Fire Service Accreditation Congress (IFSAC) at the following levels:

- Firefighter I
- Firefighter II
- Fire Apparatus Driver/Operator\*
- Fire Instructor I
- Fire Instructor II

- Fire Officer I
- Fire Officer II
- Fire Officer III\*
- Fire Safety Officer\*
- Fire and Life Safety Educator I
- Hazardous Materials Awareness
- Hazardous Materials Operations
- Public Information Officer\*

\*Pending approval from the Washington State Fire Marshall

### Certification Preparation, Training and Testing

Bates is a primary trainer and provider of certification testing in several professions, including:

- Boiler Testing and Certification Class I, 11, III
- Operating Engineer Class IV Fireman
- Operator Class V Boiler Fireman
- CDL Truck Driver testing Certification
- Engine and Equipment Training Center
- High School career and technical teacher preparation
- Air Conditioning and Refrigeration Institute (ARI) Industry Competency Exam
- Post-secondary professional-technical certifications
- Washington Association of Building Officials (WABO)
- American Welding Society (AWS)
- Society of Broadcast Engineers (SBE)
- Certified Television Operator (CTO)
- Certified Broadcast Technologist (CBT)
- Certified Broadcast Network Technologist (CBNT)
- Federal Aviation Administration (FAA)
- FAA Aeronautical Knowledge Test (sUAS part 107 certification)

### Professional License Preparation

Students are encouraged to prepare and apply for the appropriate license for their profession prior to program completion. Occupational Therapy Assistant

program students can apply for state license after passing the NBCOT.

- Federal Communications Commission
- General Radiotelephone Operator License
- Radar Endorsement
- Maritime Distress and Safety System (GMDSS)
- State of Washington
- Barber
- Class A Communications
- Denturist
- Hearing Aid Fitter/Dispenser
- Licensed Practical Nurse
- Occupational Therapy Assistant
- STARS (State Training and Registry System)
- National Board for Certification in Dental Technology
- Recognized Graduate (RG)
- Certified Dental Technician (CDT)
- National Board for Certification in Occupational Therapy (NBCOT)

## General Education

### General Education Courses

[www.BatesTech.edu/college-academic-and-general-education](http://www.BatesTech.edu/college-academic-and-general-education)

General education (academic) courses provide students with pre-college (90-level) instruction and college (100- and 200-level) instruction in academic areas such as biology, chemistry, mathematics, English, psychology, communications and human relations.

General education courses teach skills that apply to all areas of career education and ensure that Bates graduates have professional communication and computation skills that complement their career choice.

General education courses are required as part of degree and certificate achievement and are necessary for the pursuit of higher-level degrees. General education requirements for degree and certificate

programs at Bates Technical College vary, depending upon the program, the credential, and the track the student chooses to pursue.

A prospective Bates student should check with their program advisor and determine the actual general education courses required to complete their degree or certificate.

Students who seek to complete their 100- or 200-level academic prerequisites for admittance into competitive degree programs at area colleges are welcome to enroll in any of Bates' general education 100- or 200-level college transfer courses.

Students who wish to enroll in transfer courses are welcome to contact the advising office at 253.680.7002 to request an advising appointment to facilitate registration into these courses.

Students must register for general education classes quarterly. Early registration is recommended, as space is limited, and certain classes and class offering times tend to fill up quickly.

The current general education class schedule may be accessed at <https://my.batestech.edu/>.

Most general education courses are available in alternative delivery formats (i.e. online courses or hybrid courses that provide a mix of online and face-to-face interaction with the instructor).

### General Education Requirements

General education requirements may be met in any combination of the following:

Complete general education classes at Bates Technical College.

Receive transfer credits based upon an evaluation of courses taken while in military service or by passing recognized post-secondary exams such as DANTES, CLEP, Advanced Placement (AP) or International Baccalaureate (IB) in a relevant subject area.

Request transfer of course credit completed at other colleges to Bates Technical College. Students must provide the college Registration Office with an official transcript and request a transfer evaluation. The transcript evaluator will determine if courses can be applied to a student's credential or degree requirements.

### Transferring Bates General Education credits earned at Bates to another college

The transferability of general education credits earned at Bates is subject to the policies of the receiving institution. Common Course (&) courses are generally transferrable to other colleges but cannot be guaranteed.

### General Education class credits and high school students

Students registered as Running Start students must take 100-level or above general education classes to be eligible for Running Start funding. Bates Technical High School students may take general education courses at any level, if they meet or exceed the minimum course requirements. General education credit earned is applied to a student's college and high school transcript, and helps students meet their high school diploma requirements and degree and certificate requirements at Bates Technical College.

### General Education Pathways

Each Bates program has specific requirements for general education classes. Students should seek the advice of their career advisor and instructors regarding the sequence in which they take their general education classes. Typically, several available general education courses may satisfy a particular degree requirement, however students should consider which of those courses best complements their degree program, check the future general education course schedules, and plan their registration accordingly.

Some general education courses are easier to transfer to other institutions. Students with educational goals

beyond an associate degree should consider Common Courses, indicated by an "&" in the course number of general education courses.

**Note:** Students register in initial general education courses based on placement test scores or other assessment methods can move sequentially through the General Education Pathway.

**Notes:** Some AAS and AAS-T degrees require additional 100-level courses.

Some students may require only one 90-level MATH course.

\* Successful completion of ENGL 091 or MATH 098 is a prerequisite for entry into 100-level English or math common-course numbered college transfer courses.

## Common Courses

Common course numbering makes course transfer between and among Washington state's 34 community and technical colleges easier for students, advisors, career advisors and receiving institutions

- ACCT& 201 Principles of Accounting I
- ACCT& 202 Principles of Accounting II
- ACCT& 203 Principles of Accounting III
- BIOL& 160 General Biology with Lab
- BIOL& 175 Human Biology with Lab
- BIOL& 241 Human Anatomy and Physiology I
- BIOL& 242 Human Anatomy and Physiology II
- BIOL& 260 Microbiology
- BUS& 101 Intro to Business
- BUS& 201 Business Law
- CMST& 102 Introduction to Mass Media
- CMST& 152 Intercultural Communication
- CMST& 210 Interpersonal Communication
- CMST& 220 Public Speaking
- CMST& 230 Small Group Communication
- CS& 131 Computer Science I C++
- CS& 141 Computer Science Java
- CHEM& 121 General Chemistry
- CHEM& 131 Introduction to Organic Chemistry
- ECED& 105 Introduction to Early Child Education
- ECED& 107 Health/Nutrition /Safety
- ECED& 115 Child Development
- ECED& 120 Practicum-Nurturing Relationships
- ECED& 130 Guiding Behavior
- ECED& 132 Infant Toddler Caregiving
- ECED& 150 Child/Family/Community
- ECED& 160 Curriculum Development
- ECED& 170 Environment-Young Children
- ECED& 180 Language/Literacy Development
- ECED& 190 Observation/Assessment
- ECON& 201 Micro Economics
- ECON& 202 Macro Economics
- ENGL& 101 English Composition I
- ENGL& 102 English Composition II
- ENGL& 235 Technical Writing
- MATH& 107 Math in Society
- MATH& 141 Pre-calculus I
- MATH& 142 Pre-calculus II
- MATH& 146 Introduction to Statistics
- MATH& 151 Calculus I
- MATH& 152 Calculus II
- MATH& 153 Calculus III
- NUTR& 101 Introduction to Nutrition
- SOCL& 101 Introduction to Sociology
- POLS& 101 Introduction to Political Science
- PSYC& 100 General Psychology
- PSYC& 200 Lifespan Psychology
- PHYS& 221 Engineering Physics I
- PHYS& 222 Engineering Physics II
- PHYS& 223 Engineering Physics III

## Adult Basic Education, I-BEST, Adult High School Completion, High School+

### Adult Basic Education

(Basic Studies)

Bates offers Adult Basic Education (ABE) classes and services in:

- Skill development in mathematics, reading, writing
- Adult High School Completion (High School+)

ABE classes are intended to help students improve mathematics, reading, and writing skills whether or not they have a high school diploma. Students register for basic studies to prepare for further general education courses, to complement career education, and for personal growth. Day and evening classes are offered with weekly start dates. More information: 253.680.7274

### Integrated Basic Education and Skills Training (I-BEST)

I-BEST career education programs provide academic support for students working toward a college-level certificate and two-year degrees. More information: 253.680.7002.

#### How to register for adult education classes

Call 253.680.7274 for orientation dates. Attend an orientation session. At the orientation, you will take the assessment test and may register for classes.

### Adult High School Completion High School+

Students 21 years of age and older may earn a high school diploma at Bates Technical College through completing coursework and by receiving credit for work-based and community learning experiences. More information: 253.680.7274.

Meet with a high school advisor to determine what needs to be completed to earn a high school diploma.

### Running Start

Most of the career education programs at Bates Technical College are state- approved Running Start courses.

The Running Start program allows academically qualified high school juniors and seniors to register in career education programs at Bates to earn credit toward a high school diploma and an Associate in Applied Science degree or a certificate concurrently.

Approved college courses are tuition- free, but fees, supplies, books and other incidental expenses are the student's responsibility.

Running Start students may also complete college-level general education courses required by their high school at Bates. Interested students must obtain permission from their current school district to register in Running Start at Bates.

### Technical High School

Bates Technical High School is available to students 16-20 years of age who have not yet earned a high school diploma. General Education Development (GED) completers are eligible to enroll in Bates Technical High School. Students may transfer to Bates' Technical High School from their current school district.

Students work toward a high school diploma and an Associate in Applied Science degree or certificate simultaneously. Individual graduation plans will vary depending on a student's choice of program.

Technical High School students pay a \$30-50 quarterly registration fee, and may be responsible for other fees, uniform, equipment and supply expenses.

### Technical High School Graduation Requirements\*

For the class of 2016, 2017 and 2018: Earn at least 20 high school credits, including:

- English: 4 credits
- Mathematics: 3 credits
- Science: 2 credits
- Social Studies: 3 credits
- Art: 1 credit
- Occupational Education: 1 credit
- Health and Fitness: 2 credits
- Electives: 5.5 credits

For the class of 2019 and beyond: Earn at least 24 high school credits, including:

- English: 4 credits
- Mathematics: 3 credits
- Science: 3 credits
- Social Studies: 3 credits
- Art: 2 credits

(1 Art credit may be replaced with Career Pathways requirements)

- Occupational Education: 1 credit
- Health and Fitness: 2 credits
- Electives: 4 credits

**\*NOTE:** If a student chooses to pursue a program that culminates in an Associate Degree (AA, AAS, AAS-T), the student may disregard all high school requirements and concentrate solely on the career pathway. Once the Associate Degree is earned, the student automatically earns their high school diploma.

### To register for running start and technical high school

Attend a Running Start or Technical High School orientation session

Complete your orientation assignment, complete application packet, take college entrance or placement test, and obtain transcripts from your previous high school.

Call the high school office, 253.680.7004, to schedule a meeting with a high school advisor.

Meet with an advisor and complete an education plan, register, pay fees, and begin your classes.

Complete a culminating project and High School and Beyond Plan. Your high school advisor will help you plan each step to complete your high school graduation requirements.

Pass State Tests or State-approved alternative. Students must earn a Certificate of Academic Achievement (CAA), by passing the reading and writing High School Smarter Balanced Assessment (SBA) and an End-of-Course (EOC) mathematics exam, or an approved alternative for each area. Approved alternatives at Bates Technical High School include successful completion of our college transition courses: English 090 or 091, and Math 096 or 098.

### Afternoon Technical High School

[www.BatesTech.edu/HighSchool](http://www.BatesTech.edu/HighSchool)

Since 2010, the Afternoon Technical High School at Bates' South Campus has provided area high school students the opportunity to enroll in specific career training programs while working simultaneously toward their high school diploma.

Afternoon high school career program offerings change frequently because of instructor availability. Please check with a high school advisor for a current roster of afternoon high school programs.

Afternoon Technical High School students take academic classes at South Campus prior to their career training course. Afternoon high school students who complete all their afternoon career program and academic classes may transfer into the full-time day program at the next available program entry point.

More information: 253.680.7004 or [www.BatesTech.edu/HighSchool](http://www.BatesTech.edu/HighSchool)

## Section 2 • Extended Learning and other programs

### Extended Learning

Extended learning courses are intended to be short-term training opportunities. The courses have specific start and end dates and are usually held evenings and weekends.

Bates also offers contract-funded or student-funded, non-credit extended learning courses to earn Continuing Education Units (CEUs). Ten clock-hours of instruction equals one CEU.

Documentation of coursework may be provided to the student in letter or certificate form, listing the student's name, course of study, and the number of CEUs awarded. After a student satisfactorily completes a designated element, a card is given to the student documenting course completion. More information: 253.680.7000.

### Articulation Agreements with Industry

Bates Technical College has a nearly 80-year history providing Washington state-approved apprenticeship training programs. Pre-apprenticeship career education programs at Bates include:

- Carpentry
- Machinist
- Sheet Metal Technology
- Welding

Bates offers a degree in Apprenticeship Studies. More information: 253.680.7402, [www.BatesTech.edu/Apprenticeship](http://www.BatesTech.edu/Apprenticeship).

### Apprenticeship Committees

[www.BatesTech.edu/Apprenticeship](http://www.BatesTech.edu/Apprenticeship)

#### **Aerospace Joint Apprenticeship Committee (AJAC) Apprenticeship Committee**

Roger Peters, Coordinator, 206.764.7940

#### **Industrial Maintenance Mechanic Apprenticeship**

Roger Peters, Coordinator, 206.764.7940

#### **Operating Engineers Regional Training JATC**

Ole Fjellstad, Training Director, 1.800.333.9752

#### **Pacific NW Iron Workers & Employers Local #86 Apprenticeship Committee**

James Owens, Coordinator, 206.244.2993

#### **Pierce County Meat Cutters Apprenticeship Committee**

253.589.0367

#### **Washington State Fire Fighters Joint Apprenticeship & Training Committee**

Dave Myers, Coordinator, 253.946.7331

#### **Western Washington Sheet Metal JATC**

Eric Peterson, Training Administrator, 425.438.1406

#### **Western Washington Operating Engineers Facilities Custodial Services Apprenticeship Committee**

Christian Dube, Coordinator, 253.351.0184

#### **Western Washington Stationary Engineers Apprenticeship Committee**

Christian Dube, Coordinator, 253.351.0184

### Manufacturing Academy

The Manufacturing Academy was created in a joint effort between Workforce Central, Bates Technical

College and Aerospace Joint Apprenticeship Committee (AJAC) to provide students with the skills and knowledge necessary to secure entry-level employment in the advanced manufacturing field.

So that students gain industry-relevant knowledge, curriculum content is aligned with state standards for manufacturing. While participating in the Manufacturing Academy, students actively search for a job utilizing all resources of both Workforce Central and AJAC.

The goal of this program is to build a workforce to fill industry need, and to provide long-term employment and career ladders for graduates within that industry. Employers participated in development of course content, ensuring it is relevant and meets industry need.

Graduates are hired directly by employers that support the program; resulting in a skilled pipeline of entry-level workers to support the growing number of aerospace/manufacturing jobs.

The Academy provides students with a pathway to enter into an apprenticeship or continue their education with Bates. Credits earned in this program transfer into the Machinist program at Bates Technical College.

Successful completion of the Manufacturing Academy satisfies the minimum requirements for entry into an aerospace apprenticeship.

Veterans should contact the certifying official of their apprenticeship, union, or trade organization to see if they are eligible to use GI Bill® benefits.

### Articulation Agreements with Colleges and Universities

Bates has agreements with several public and private colleges and universities to facilitate the transfer of credits and entry to educational options after earning a Bates credential.

Beyond the formalized articulation agreements, colleges have reciprocal transfer agreements and

understandings relating to the transfer of courses. General education courses meeting guidelines of the Intercollege Relations Commission are identified as 'generally transferable' in course descriptions. To determine if Bates credits are transferable to a specific college or university, contact the registrar at the receiving institution.

### Articulation Agreements with K-12

Bates works with K-12 school districts and other colleges and universities to provide additional educational options for students. K-12 articulation agreements are managed through the Pierce County Careers Connection.

These agreements provide students the opportunity to earn credit in the college's career education programs for Career and Technical Education programs at their high school. Students should inquire at their district high school about which Bates options are available.

### Workforce Contract Training

Bates Technical College provides contract training for industry-specific training. For more information: 253.680.7467 or 253.680.7404.

### Continuing Education

[www.BatesTech.edu/ContinuingEd](http://www.BatesTech.edu/ContinuingEd)

Continuing education courses for professional development and personal enrichment are student-supported and may include computer training, health and medical training, and training in construction and skilled trades areas. Generally held in the evenings and on weekends, the courses have quarterly start and end dates and include for-credit and not-for-credit courses. A schedule of continuing education courses is available online at [www.BatesTech.edu/ContinuingEd](http://www.BatesTech.edu/ContinuingEd). Registration is available online, by phone, or in person at the South Campus. More information: 253.680.7402.

### Distance Learning

Bates offers a variety of distance-learning options in career education, general education, and extended



learning, including e-learning for Educators, teacher preparation, international education, and Child Studies.

Web-facilitated formats blend face-to-face delivery with distance learning as well as offerings where most or all of the content is delivered via distance learning. More information: 253.680.7294.

### CTE Teacher Certification

Bates Technical College offers training to prepare individuals with business and industry experience for Career and Technical Education (CTE) teaching careers at the secondary level, grades

7-12. The Washington State Professional Educator Standards Board has approved Bates to offer this route to CTE teacher certification. Call 253.680.7467 for more information.

Our quality, competency-based education is flexible. Design a plan to meet your individual needs.

Courses are delivered in a mixture of weeknights, weekends, online, and during summer weekdays.

Visit [www.BatesTech.edu/TeacherPrep](http://www.BatesTech.edu/TeacherPrep) for a current schedule. Or call 253.680.7467 to learn more about the program, to register for classes, or for a transcript review.

### General Educational Development (GED)

[www.BatesTech.edu/Testing](http://www.BatesTech.edu/Testing)

The General Educational Development (GED) test certifies achievement of a high school level of academic knowledge and skills. GED testing is available through Bates' Assessment/Testing Center. More information: 253.680.7030, [www.BatesTech.edu/testing](http://www.BatesTech.edu/testing).

### Industry Partnerships

In many career education programs, full-circle partnerships exist between Bates and industry. As new technologies and equipment are developed, they may be tested at Bates or provided to Bates for

industry and student training. In some partnerships, industry provides specialized training according to specific hiring requirements. Students who meet those qualifications may apply for job openings as they occur and are often considered for internships (work-based learning opportunities).

### Professional Improvement Units

Through staff development activities, Bates offers a variety of non-credit staff and instructor improvement courses. Staff and student participation in these courses may be recognized with Professional Improvement Units (PIUs) based on a standardized ratio: 10 clock-hours of instruction equals one PIU.

Documentation of student participation may be made in letter or certificate form and will list the student's name, course of study, and the number of PIUs awarded. Documentation provided to the student must be signed by the program administrator/manager.

### Child Studies

[www.BatesTech.edu/Family](http://www.BatesTech.edu/Family)

Bates' Child Studies department offers job training and extended learning programs emphasizing knowledge, skills, and the understanding of values, attitudes, and standards that are important to specific careers. More information: 253.680.7500, [www.BatesTech.edu/Family](http://www.BatesTech.edu/Family).

### Child Development/Early Education Staff Training Program

This program is a cooperative effort between approximately 30 licensed childcare centers and Bates Technical College. The program offers affiliation opportunities for licensed childcare centers in the greater Pierce County area to receive on-site technical training, formal classes and support in early childhood education.

### Cooperative Preschools

Parents participate in a hands-on, interactive parent/child preschool classroom, learning the newest

developmentally appropriate early childhood education and guidance techniques to meet the developmental needs of children aged two through five years. Experienced, trained teachers supervise in a safe and secure preschool environment.

College faculty provide training, assistance and support. A trained early childhood educator assists children in activities and provides safety and supervision.

Professional college staff also provide parenting education classes, teacher and preschool board leadership training, and non-profit business assistance and support. More information: 253.680.7500.

#### [Early Childhood Education and Assistance Program \(ECEAP\)](#)

The Early Childhood Education and Assistance Program (ECEAP) is incorporated into the child care center at Bates and in several sites throughout

Pierce County. ECEAP provides additional services for young children, including health screening, developmental screening, and help with fees. The program is for families that qualify due to limited income. More information: 253.680.7324

#### [Effective Parenting Courses](#)

The research-based and nationally acclaimed Effective Parenting with Positive Discipline courses help build positive parenting skills that include winning cooperation, building relationships, and reducing struggles. More information: 253.680.7500.

#### [Early Education Resource Center](#)

A resource center for teachers and parents is located at Bates' South Campus to help students, teachers, parents, and childcare staff facilitate learning for infants, toddlers, preschoolers, and school-aged children.

Ongoing displays and activities include music, language, math, social skills, cognitive development skills, science, games, and rule development.

A library of resource books, videos, curriculum kits for teachers, and take-home activities is available. More information: 253.680.7500.

#### [Washington State Training and Registry System \(STARS\)](#)

STARS is based on Washington state WAC requirements for licensed child care centers. More information: 253.680.7500.

## Section 3 • Student Services

### [Student Services and Advising](#)

Career advisors and program instructors advise students. Contact with career advisors and instructors on a continual basis is an important part of student success.

Career advisors may assist with:

- Placement test results and general education placement
- Enrolling in career education programs and general education courses
- Career education program choices
- College resources, support services
- Degree and certificate requirements
- Information on program costs
- Educational and program planning
- Understanding college policies and procedures

Instructors may assist with:

- Placement test results review
- Curriculum requirements
- Program prerequisites
- Licensing requirements
- Employment opportunities
- Job searches

More information: 253.680.7002.

### [Associated Student Government \(ASG\)](#)

Administration and faculty strongly support the ASG, help in the promotion and development of student

activities, and provide for direct student representation in establishing college policies.

The ASG is responsible for developing the student activity budgets and for representing student interests on college committees and councils.

ASG officers hold regular meetings; host a monthly general assembly; meet with the college president regularly; and the ASG president provides a monthly report to the college's Board of Trustees.

All students are encouraged to attend monthly General Assembly meetings and student life events.

### Barber Shop

Students have access to the low-cost services of a 10-chair barber shop. All work is performed by students in the Barber program. The Barber Shop is open when the college is in session.

### Campus Store and Online Bookstore

The college's Downtown Campus bookstore is run by Barnes & Noble College, and the college runs the South Campus bookstore. In addition to textbooks, both stores carry a variety of school supplies, and official Bates-imprinted items such as sweatshirts, water bottles, notepads and more. Operating hours can be found on the webpage. A list of required books, supplies, and equipment is available from program instructors. Go to [www.BatesTech.edu/Campus-Stores](http://www.BatesTech.edu/Campus-Stores) for more information.

### Refund and Return Policy

Cash refunds are not permitted. Refunds of cash purchases or purchases made by check will be made via a refund check from the college. Credit card purchases are refunded to the credit card.

Sales of safety equipment, optional books (including study guides), software, supplies, tools and kits are not returnable. More information: [www.BatesTech.edu/CampusStores](http://www.BatesTech.edu/CampusStores).

### Career Education Information Sessions

If you are uncertain about which program to choose, select an area of interest and attend a Career Education Information Session.

### Child Care

Bates' Early Learning Center is available to students and staff, and includes an Early Childhood Education and Assistance Program (ECEAP) preschool and Early Head Start for qualifying infants and toddlers. The center serves one-month-olds through pre-kindergarten. Hours are 6:30 a.m.-5 p.m., Monday through Friday, based on the college student calendar.

Several non-college child care centers are close to Bates. Financial support for child care is available for students who qualify through other college programs. For more information, call 253.680.7384 or 253.680.7320.

### Counseling Center

A licensed mental health professional provides counseling services to current students. Consultation and referrals are available to faculty and staff with student-related mental health concerns. Students can call 253.680.7006 to schedule an appointment. For drop-in help, students can check with the front desk at the South and Downtown Campuses. In an emergency, call 911 or the Pierce County Crisis Line at 800.576.7764.

### Community Health Clinics

[www.BatesTech.edu/CommunityClinics](http://www.BatesTech.edu/CommunityClinics)

The college's community clinics serve as a hands-on learning experience for students, while providing the community with health-related services. Under the supervision and direction of faculty and professionals, the clinics serve those with little or no access to regular health care as a free or low-cost option. Clinics for dentistry, denture services, and audiology/hearing testing and hearing aid services are available.

## Drug-Free Environment

It is the intent of the college to provide a drug free and secure work and learning environment and to comply with the Federal Drug Free Workplace Act of 1988 and the Drug Free Schools and Communities Act of 1986 (Public Law 99-570, Title IV, Sub-Title B) and its amendment of 1989 (Public Law 101-226).

Unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in and on college-owned or controlled property. The use of alcohol while on college-owned or controlled property is also prohibited, except when authorized in writing by the president for special functions.

## Educational Opportunity Center

EOC provides free educational support for adults in the following areas: educational planning, career advising and exploration, assistance with financial aid forms and college applications, and student loan default. The EOC at Bates is located in the Financial Aid office, Downtown Campus. Call 253.680.7153 for more information.

## Email Accounts for Students

Registered career education students at Bates Technical College have a student email account provided as a service from Bates. Go to [my.batestech.edu](http://my.batestech.edu) for more information.

## Emergency Closures and Delays

In the case of severe weather conditions or college emergencies, information regarding the status of college operations will be located at the following locations:

- Weather and schedule information line: **253.680.7060**
- Official college social media channels: **Facebook and Twitter**
- Puget Sound radio and television stations through the Public Schools Emergency Communication System, and on their website: **[www.flashalert.net](http://www.flashalert.net)**.

- Rave Alert, the college's official emergency notification system used to communicate with students and employees during campus emergencies:

**[www.getrave.com/login/batestechcollege](http://www.getrave.com/login/batestechcollege)**

*Rave Alert is a licensed service Bates Technical College pays for to offer the quickest and most reliable communications possible. This system is used during campus emergencies that pose a safety concern for the community. **Learn more at [www.BatesTech.edu/EmergencyAlert](http://www.BatesTech.edu/EmergencyAlert).***

If classes are canceled, students and faculty do NOT report to the college. If classes are on a delayed schedule, by 5:30 a.m. on the affected day, the college will announce a specific start time for students to report.

## Financial Aid

[www.BatesTech.edu/FinancialAid](http://www.BatesTech.edu/FinancialAid)

See the Financial Aid section for financial aid eligibility standards and application procedures on page 41. More information: 253.680.7020.

## Food/Dining Service

[www.BatesTech.edu/Dining](http://www.BatesTech.edu/Dining)

Several food service options varying in offering and price are available. The culinary arts program provides food service at the Downtown Campus cafeteria, and catering and banquet services. Snacks are available in the bookstores; vending machines are located on campus.

## Insurance

Enrollment at Bates does not include health or medical insurance. Students who desire medical coverage must purchase their own. Basic Accident Medical Expense, Basic Sickness Medical Expense and Dental and Major Medical Expense programs are available at low cost to Bates students while they are attending the college. Students who do not have accident insurance are strongly encouraged to take advantage of this reduced-cost option. Forms are

available in the advising center, or visit  
[www.summitamerica-ins.com](http://www.summitamerica-ins.com).

## Job Placement

Job placement assistance is generally provided by program instructors who have close ties with advisory committees and industry representatives.

## Library

[www.BatesTech.edu/Library](http://www.BatesTech.edu/Library)

Library facilities at Downtown and South Campus locations provide value in service to students, staff, and faculty by supporting positive learning outcomes in information literacy and critical thinking.

Resources selected to enhance learning include an extensive collection of print books, powerful academic databases, eBooks, DVDs, and streaming videos to serve the diverse information needs of our college community.

Skilled professional library staff and a certified academic librarian are ready to provide expert help, face-to-face and online. [Library@batestech.edu](mailto:Library@batestech.edu), call: 253.680.7220 (Downtown Campus), 253.680.7550 (South Campus).

Access statewide 24/7 online librarian chat service:

[www.BatesTech.edu/Librarian-Chat](http://www.BatesTech.edu/Librarian-Chat)

## New Student Orientation

[www.BatesTech.edu/NSO](http://www.BatesTech.edu/NSO)

New Student Orientation is part of the new student experience to ensure all students are set for success and have the tools to navigate Bates Technical College. Students will hear about available resources and support services, meet new students, and receive information about their responsibilities as a student.

## National Voter Registration Act

Voter registration forms are available in the registration office in conformance of Program Participation Requirement, Section 487(a)20 U.S.C. 1094(a).

## Parking

[www.BatesTech.edu/Parking](http://www.BatesTech.edu/Parking)

It is the responsibility of every Bates student to follow all parking rules and regulations. Check the website for detailed information. Parking permits are required for parking on any school property or in any official parking place and can be obtained from Campus Public Safety. The parking permit application is available on the website. You can obtain your permit from Campus Public Safety.

[www.BatesTech.edu/Safety](http://www.BatesTech.edu/Safety).

## Parking Fines

- No valid permit displayed: \$25
- Parking in area not authorized by permit: \$25
- Blocking or obstructing traffic or impeding college operations\*: \$50
- Parking in reserved staff space without authorization: \$50
- Handicapped parking violation (RCW 46.19.050): \$450
- Parking adjacent to fire hydrant: \$25
- Parking in fire lane: \$25
- Parking in zone or area marked "no parking": \$25
- Traffic Fines\*:
  - Speeding: \$40-\$85
  - Reckless/ negligent driving: \$40-\$100
  - First offense: Parking privileges on all campuses revoked

*\*Fine to be reduced 50 percent if paid within five days of citation issuance.*

## Parking Fine Appeal

Parking fines, penalties and permit revocations may be appealed in some cases. A written appeal with specific details should be submitted to the Campus Public Safety Sergeant within five business days of receipt of the citation. If denied, the decision may be

appealed to the Director of Safety and Security for review. The decision of the Director of Safety and Security shall be final. Repeated or continued violations may result in having parking privileges revoked and/or vehicle impoundment at the owner's expense.

## Safety

[www.BatesTech.edu/Safety](http://www.BatesTech.edu/Safety)

Campus public safety officers provide escorts for students and employees; respond to campus emergencies; patrol buildings, parking areas and campus surroundings; and work with local law enforcement agencies.

All personal property should be kept under lock and key. Safety officers are on duty and should be contacted in case of theft or other concerns about property damage or physical endangerment. More information: [www.BatesTech.edu/Safety](http://www.BatesTech.edu/Safety). Downtown, Central/Mohler, South Campus, call 253.680.7111.

## Registration and College Calendar

[www.calendarwiz.com/BTC](http://www.calendarwiz.com/BTC)

A current college calendar is available online. Students can access the calendar from the homepage, [www.BatesTech.edu](http://www.BatesTech.edu), or students can go to [www.calendarwiz.com/BTC](http://www.calendarwiz.com/BTC)

## 2020-2021 Calendar

### Summer Quarter 2020

<b>June 18</b>	Summer Quarter Begins
<b>June 22</b>	Last Day to Add a Class w/o Instructor and Dean Permission
<b>June 24</b>	Last Day for 100% Refund Deadline for Instructors to Complete Withdrawal for "No Show"
<b>June 29</b>	Last Day to Add a Class with Instructor Permission
<b>July 13</b>	Fall Quarter Registration for Veterans
<b>July 14</b>	Fall Quarter Registration for Continuing Students
<b>July 16</b>	Last Day for 50% Refund

<b>July 20</b>	Fall Quarter Registration for New Students
<b>Aug 3</b>	Last Day to Withdraw and Receive a "W" on Transcript
<b>Aug 10</b>	Instructor Briefcase Opens
<b>Aug 17</b>	Summer Quarter Ends
<b>Aug 19</b>	Grades Due by 10 p.m.
<b>Aug 18–Sept 18</b>	Summer Break
<b>Sept 21</b>	Opening Day/ Non-Instruction
<b>Sept 22</b>	Planning
<b>Sept 23</b>	Non-Instruction
<b>Sept 24 - 25</b>	Planning

### Fall Quarter 2020

<b>Sept 14</b>	Fall Quarter Tuition Due Students Dropped for Non-Payment
<b>Sept 28</b>	Fall Quarter Begins
<b>Sept 30</b>	Last Day to Add a Class w/o Instructor and Dean Permission
<b>Oct 2</b>	Last Day for 100% Refund Deadline for Instructors to Complete Withdrawal for "No Show"
<b>Oct 9</b>	Last Day to Add a Class with Instructor and Dean Permission
<b>Oct 16</b>	In-Service Day/Non-Instruction
<b>Oct 26</b>	Last Day for 50% Refund
<b>Oct 26</b>	Winter Quarter Registration for Veterans
<b>Oct 27</b>	Winter Quarter Registration for Continuing Students
<b>Nov 2</b>	Winter Quarter Registration for New Students
<b>Nov 12</b>	Last Day to Withdraw and Receive a "W" on Transcript
<b>Nov 20</b>	Non-Instruction
<b>Nov 25</b>	1/2 Day Students/Faculty
<b>Dec 4</b>	Instructor Briefcase Opens
<b>Dec 11</b>	Fall Quarter Ends
<b>Dec 14 - 15</b>	Grades/Planning
<b>Dec 15</b>	Grades Due by 10 p.m.
<b>Dec 16</b>	Non-Instruction
<b>Dec 17-18</b>	Planning
<b>Dec 21 - Jan 1</b>	Winter Break

Winter Quarter 2020-2021

<b>Dec 21</b>	Winter Quarter Tuition Due Students Dropped for Non-Payment
<b>Jan 4</b>	Winter Quarter Begins
<b>Jan 6</b>	Last Day to Add a Class w/o Instructor and Dean Permission
<b>Jan 8</b>	Last Day for 100% Refund Deadline for Instructors to Complete Withdrawal for “No Show”
<b>Jan 15</b>	Last Day to Add a Class with Instructor and Dean Permission
<b>Feb 1</b>	Last Day for 50% Refund Spring Quarter Registration for Veterans
<b>Feb 2</b>	Spring Registration for Continuing Students
<b>Feb 8</b>	Spring Quarter Registration for New Students
<b>Feb 19</b>	Last Day to Withdraw and Receive “W” on Transcript
<b>March 9</b>	Instructor Briefcase Opens
<b>March 16</b>	Winter Quarter Ends
<b>March 17 - 18</b>	Grades/Planning
<b>March 18</b>	Grades Due by 10 p.m.
<b>March 19</b>	In-Service Day/Non-Instruction
<b>March 22 - 26</b>	Spring Break

Spring Quarter 2021

<b>March 15</b>	Spring Quarter Tuition Due Students Dropped for Non-Payment
<b>March 29</b>	Spring Quarter Begins
<b>March 31</b>	Last Day to Add a Class with Instructor and Dean Permission
<b>April 2</b>	Last Day for 100% Refund Deadline for Instructors to Complete Withdrawal for “No Show”
<b>April 9</b>	Last Day to Add a Class with Instructor and Dean Permission
<b>April 23</b>	Last Day for 50% Refund
<b>April 26</b>	Summer Quarter Registration for Veterans
<b>April 27</b>	Summer Quarter Registration for Continuing Students

<b>May 3</b>	Summer Quarter Registration for New Students
<b>May 12</b>	Last Day to Withdraw and Receive a “W” on Transcript
<b>May 27</b>	Non-Instruction/Commencement Date - Subject to Change
<b>May 28</b>	1/2 Day Students/Faculty
<b>June 1</b>	Instructor Briefcase Opens
<b>June 8</b>	Spring Quarter Ends
<b>June 9</b>	Grading/Planning
<b>June 9</b>	Grades Due by 10 p.m.
<b>June 10</b>	Non-Instruction
<b>June 11</b>	Planning
<b>June 14</b>	Non-Work day
<b>June 15</b>	Summer Quarter Begins

***Registration office accepts credential applications year-round.***

**Campus Life and Activities Center**

Located at the Downtown Campus, Room C301, Campus Life and Activities (CLA) offers meeting spaces, computer workstations, printing, conversation corner, study room, microwaves, student resource center, games and activities. In addition, CLA manages the college's chapter of the Phi Theta Kappa Honor Society (Beta Upsilon Omicron), college-level SkillsUSA, student-led clubs, and the department is responsible for developing student life activities and an inclusive campus environment. The CLA is a safe space where discussions exist in an atmosphere of respect and trust.

**MyBates**

My.BatesTech.edu

MyBates allows students to view and print an unofficial copy of their transcript, a form to request an official transcript, to find out which required financial aid documents have not been received, and if and when the college has sent an award letter.

## Tuition Refund Policy

### State-funded Instruction

For state supported classes, tuition and fees\* will be refunded upon official withdrawal by the student according to the following schedule:

- 100% if the College cancels the class.
- 100% if by the close of the fifth calendar day of the quarter.
- 50% if by the close of the 20th calendar day of the quarter.
- 0% after the 20th instructional day of the quarter.

It is the student's responsibility to complete a withdrawal form and submit it to the registration office. The date the withdrawal form is received will be used for calculating refunds.

Refunds are not granted to students withdrawn for disciplinary reasons.

Students called for military active duty will be granted a refund of tuition and fees paid during the current quarter, subject to the rules and regulations of their respective funding sources. Presentation of official orders is required.

The refund policy applies to all Bates students, regardless of financial aid status. The refund for students registered in courses or programs with an enrollment period other than the standard quarter will be applied on a prorated basis consistent with the general refund policy. Refunds for special programs will be made directly to the funding agency administrator.

\*Certain consumable and pass-thru fees are not refundable.

## Tuition Refund Policy-Financial Aid Recipients

Financial aid recipients are subject to the Return of Title IV Aid regulations as stated in this catalog.

## Tuition Refund Policy-Self-Support

- 100% if the College cancels the class.
- 100% if by the close of the fifth calendar day of the quarter.
- 50% if by the close of the 20th calendar day of the quarter.
- 0% after the 20th instructional day of the quarter.



### Drop for Non-Payment Policy

Student tuition and fees are due two weeks before the first day of each quarter. Students registering after the first day of the quarter must pay within two business days of registration.

Students with outstanding balances as of the quarterly drop date will be administratively withdrawn and notified by letter.

Exceptions for extenuating circumstances require approval by the Vice President of Finance and Administrative Services.

### Tuition Payment Plan

The Bates Tuition Payment Plan allows students to stretch out tuition payments so they do not have to pay the full tuition amount all at once. International students are unable to enroll in the Bates Tuition Payment Plan (Nelnet) at this time. Bates determines payment plan availability. Please be aware the college may elect not to have the payment plan available during specific times and dates during registration. If a tuition balance has changed due to changes in a class schedule or financial aid, please do not assume the balance will automatically be adjusted. Please review the payment plan balance online or contact the Cashier's Office at 253.680.7018 to confirm the change.

### Refunds

Payments affiliated with the tuition payment plans are processed by Nelnet, not Bates. Therefore, any refunds requested will be mailed by Bates in the form of a check in the student's name to the student's address on file in registration.

Costs to participate in the tuition payment plan are:

- \$25 per quarter nonrefundable enrollment fee
- \$30 nonrefundable returned payment fee if payment is returned

Tuition  
2020-2021  
Resident

# of Credits	Operating Fees	Building Fees	Maximum S&A Fees	Other Fees *	Total Tuition
1	\$89.24	\$12.18	\$9.00	\$21.00	\$131.42
2	\$178.48	\$24.36	\$18.00	\$42.00	\$262.84
3	\$267.72	\$36.54	\$27.00	\$63.00	\$394.26
4	\$356.96	\$48.72	\$36.00	\$84.00	\$525.68
5	\$446.20	\$60.90	\$45.00	\$105.00	\$657.10
6	\$535.44	\$73.08	\$54.00	\$126.00	\$788.52
7	\$624.68	\$85.26	\$63.00	\$147.00	\$919.94
8	\$713.92	\$97.44	\$72.00	\$168.00	\$1,051.36
9	\$803.16	\$109.62	\$81.00	\$189.00	\$1,182.78
10	\$892.40	\$121.80	\$90.00	\$210.00	\$1,314.20
11	\$937.30	\$126.09	\$96.59	\$231.00	\$1,390.98
12	\$982.20	\$130.38	\$103.18	\$252.00	\$1,467.76
13	\$1,027.10	\$134.67	\$109.77	\$273.00	\$1,544.54
14	\$1,072.00	\$138.96	\$116.36	\$294.00	\$1,621.32
15	\$1,116.90	\$143.25	\$122.95	\$315.00	\$1,698.10
16	\$1,161.80	\$147.54	\$129.54	\$336.00	\$1,774.88
17	\$1,206.70	\$151.83	\$136.13	\$357.00	\$1,851.66
18	\$1,251.60	\$156.12	\$142.72	\$378.00	\$1,928.44
19	\$1,353.02	\$156.12	\$142.72	\$399.00	\$2,050.86
20	\$1,454.44	\$156.12	\$142.72	\$420.00	\$2,173.28
21	\$1,555.86	\$156.12	\$142.72	\$441.00	\$2,295.70
22	\$1,657.28	\$156.12	\$142.72	\$462.00	\$2,418.12
23	\$1,758.70	\$156.12	\$142.72	\$483.00	\$2,540.54
24	\$1,860.12	\$156.12	\$142.72	\$504.00	\$2,662.96
25	\$1,961.54	\$156.12	\$142.72	\$525.00	\$2,785.38

**\*Other Fees:**

**Student Services/Parking**      \$      **1.50**

**Program Fee**                              \$      **14.00**

**Tech Fee**                                      \$      **5.50**

**\$      21.00**

## Tutoring

[www.BatesTech.edu/Tutoring](http://www.BatesTech.edu/Tutoring)

Tutoring is available at all campuses to registered students seeking assistance in any area related to academic success, including math, reading, writing, study skills, and program-specific materials.

Assistance is also available to prospective students who are preparing to take the ACCUPLACER or GED tests.

## Veterans Services

[www.BatesTech.edu/student-resources/financial-aid/va-benefits](http://www.BatesTech.edu/student-resources/financial-aid/va-benefits)

[www.BatesTech.edu/Veterans](http://www.BatesTech.edu/Veterans)

Veterans may use their Chapter 33 (Post 9/11), Chapter 31 (Voc-Rehab), Chapter 35 (DEAP, Chapter 30 (MGIB), or Chapter 1606 (MGIB-R). Active duty military and their spouses may use tuition assistance, GoArmyEd, or MyCAA benefits to attend the college.

Students who wish to use the GI Bill<sup>®</sup> benefits or other military funding sources must meet with the veterans certifying official located in the financial aid office to submit necessary documents to activate their benefits and receive up-to-date information about their benefits. GI Bill students must submit their certificate of eligibility letters from the Veterans Administration, and students using other military funding must submit their authorization paperwork before certification of benefits.

Submitting eligibility documentation does not automatically certify a student for GI Bill benefits. After registering for all of their classes, students must submit a certification request form (written request) to the college's certifying official each quarter they want to use their GI Bill, GoArmyEd, MyCAA, or other military tuition assistance program. The certification request form is available online, at the Registration Office, at program advisors' offices, and at Financial Aid. The certification request form should be

submitted at least 30 days prior to the beginning of each quarter to ensure timely benefits. Failure to submit a certification request form may result in delay of benefits.

VA-funded students may participate in VA-approved work-based learning experiences if they have completed in-residence at the college. For more information, call 253.680.7035 or email [vabenefits@batestech.edu](mailto:vabenefits@batestech.edu).

## VA Pending Payment Compliance

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

- Prevent the students 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

# Disability Support Services and Accommodation

## Disability Support Services

[www.BatesTech.edu/DSS](http://www.BatesTech.edu/DSS)

The primary focus of Disability Support Services (DSS) is to ensure nondiscrimination based on disability.

Through DSS, qualified persons with disabilities can address their concerns regarding attitudinal or procedural barriers encountered, as well as any need for academic adjustments and/or auxiliary aids to assure equal access. DSS will provide information and auxiliary aids or services, serving as a resource to the campus community while striving to make Bates Technical College both an accessible and hospitable place for persons with disabilities to enjoy full and equal participation.

### Eligibility

It is the student's responsibility to identify him or herself as having a documented disability and seek assistance from Disability Support Services (DSS).

Bates Technical College recognizes that traditional methods, programs, and services may need to be altered to ensure full accessibility to qualified persons with disabilities.

A qualified student is one who:

Has a physical, mental or sensory impairment that substantially limits one or more of her or his major life activities. Major life activity is defined as the ability to perform functions such as self-care, manual test taking, walking, seeing, hearing, speaking, breathing, learning, or working, and is either permanent or temporary; Has a record of such an impairment or; Is perceived to have such an impairment, or a student who has an abnormal condition that is medically cognizable or diagnosable.

### Attendance

Students are expected to attend their scheduled classes. The instructor determines the number of

absences that are allowed in his or her class. If a student with a disability has an absence from class due to a disability-related circumstance, he or she should contact DSS. Documentation must support the disability-related circumstance. The absence does not excuse the student from the obligation of any assignments, homework, tests/exams, and obtaining material missed during the absence. Students are responsible for contacting their instructors.

### Student Rights

Students have the right to services and reasonable accommodations that allow you to compete on an equal basis when you meet the basic requirement to perform the activities of the program.

### Equal Access

No qualified individual with a disability shall, because of such disability, be excluded from the participation in, or be denied the benefits of the services, programs or activities of any public entity, or be subject to discrimination by any such entity. Americans with Disabilities Act, 1990 (Section 202).

No otherwise qualified handicapped person shall, on the basis of a handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from Federal financial assistance. Rehabilitation Act of Congress, 1973; Title V (Section 504).

### Obtaining Services

We are committed to helping you succeed. In order to receive and retain reasonable accommodations, you must:

- Make an appointment with Disability Support Services at 253.680.7012, Relay Services 711
- Bring formal written documentation of your disability to the first meeting with Disability Support Services
- Documentation must be from a licensed professional
- Request the accommodation(s) you desire

- Request services early for timely accommodations (preferably six weeks before starting classes)

When your eligibility is established, it is your responsibility to present the Letter of Accommodation to all instructors at the beginning of each quarter. Discuss your accommodations with your instructor at the beginning of your class or program to ensure successful program completion.

### Confidentiality

Information regarding a student's disability is considered confidential. Information will not be released to anyone outside of the college without the written permission of the student. Information may be shared within the college with appropriate faculty and staff to facilitate services and reasonable accommodations.

### Course Substitutions/Waivers

Bates Technical College does not substitute courses or waive course requirements that would alter essential program requirements.

The college considers requests for course substitutions or waivers according to procedures outlined in the Policies and Procedures Regarding Reasonable Accommodations for Students with Disabilities Under 504-ADA. The procedure is located in the Downtown Campus Disability Support Services office, Room A211.

### Student Grievance

A student with disabilities who may have a grievance with Bates Technical College staff or faculty regarding disability-related issues should contact DSS to obtain a copy of the grievance procedure.

## Registration and Attendance Policies

### Full-time Students

To be considered full-time, a student must register for a minimum of 12 credits. This can be a combination of career training course work and general education classes.

### Allied Health Students

Students applying for entrance into the Dental Assisting, Dental Lab Technician, Denturist, Occupational Therapy Assistant, and Practical Nurse programs are required to submit official transcripts of any college-level credit they wish to transfer to Bates, to the Registration Office. Some of these programs have specific start dates. Contact the Admissions Office for more information.

### Enrollment/Registration Policy

Students must enroll by the tenth day of each quarter. Persons over 16 may register subject to the conditions of Bates' enrollment/registration policy.

If you are undecided about your program of study, consider attending a Career Education Information Session or contact the Admissions Office. More information: 253.680.7002, [www.BatesTech.edu/Information-Sessions](http://www.BatesTech.edu/Information-Sessions).

### Placement

Students may be placed into general education course work and meet course prerequisites through a variety of methods. These include Accuplacer testing (done in the testing center or brought from another college), evaluation of college transcripts, Advanced Placement test scores, and Smarter Balance test scores (must be within a year of high school graduation).

### Attendance Policy

The college retains the right to fill a vacant seat during the first 10 days from the beginning of each quarter. Consequently, if a student fails to attend class during the first three days of the quarter, the faculty member

may withdraw that student in order to allow another student to enroll.

Bates has a goal of 100 percent attendance, the standard for employees in industry, and students are expected to attend class each time it meets. Individual faculty members will state class attendance expectations in the course syllabi.

If a student has a break in enrollment for a career education program, upon their return, they must complete the requirements for the most recent curriculum. If there is a curriculum change to a program while a student is continuously enrolled, it is the student's choice as to whether they complete the new curriculum or the curriculum they started under.

### Withdrawals

Students must self-withdraw in the Registration Office. Students unable to present themselves to the Registration Office must submit their withdrawal in writing. Students can send an email from their Bates email address. The tuition refund policy will be effective when the withdrawal paperwork is received by the Registration Office.

### Student Absence for Faith or Conscience

Students are entitled up to two excused absences for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization during each calendar year.

- Students' grades may not be adversely impacted by absences authorized under this policy.
- Students must make up the work missed during the absence.
- Students must notify the college in writing within the first two weeks of the course in which they are requesting an absence under this policy.
- Each day taken will be counted as a full day and cannot be divided and taken incrementally over multiple days.

The college shall make no judgement about the legitimacy of reasons of faith or conscience.

### Absence for Short-Term Military Assignments

Per RCW 28B.10.270, students called to active duty for a period of 30 days or less may not be penalized for missed class time and must be provided the opportunity to make up work, labs, and exams within a reasonable period of time and without prejudice after they return. The student may not be dropped for non-attendance and no grade for the student's work may be issued until the student has been given the opportunity to make up the work and/or participation. Written verification that the person is being, or has been, ordered to service must be provided to the college prior to leaving for active duty. If the student is ordered to active duty for more than 30 days is entitled to withdraw from any courses with tuition and fees credited back to their account or receive an incomplete grade and allowed to complete the course upon release from active duty under the college incomplete course procedures.

## International Student Information

### International Students

[www.BatesTech.edu/International](http://www.BatesTech.edu/International)

Bates Technical College is proud to promote international education and training within the college, the community and around the world.

Faculty and staff assist students throughout their educational experience. Bates offers international students superior academic opportunities, unique cultural experiences, and a friendly and active campus environment.

### International Student Services

- Registration assistance and advising
- International student orientation
- Access to computer labs and library resources
- Access to activities through the college's Associated Student Government

International students should:

Show sufficient financial resources to pay college and living expenses for nine months.

Once a student is admitted and arrives at Bates, they are given an ACCUPLACER test. This test determines reading, listening, writing and mathematics levels so that we can place them in the appropriate level of English and mathematics classes.

Obtain an admission application online at [www.BatesTech.edu/International](http://www.BatesTech.edu/International) or via email: [International@batestech.edu](mailto:International@batestech.edu).

Bates Technical College issues F-1 and M-1 Certificates of Eligibility and I-20 forms required for the issuance of an F-1 Visa. Please take the I-20 form to the U.S. Consulate in your country to apply for a student visa.

Mail the completed admission application and forms to:

International Student Services Bates Technical College

1101 S. Yakima Ave., Room A123 Tacoma, WA 98405-4895, USA

Alternatively, scan and email the application and forms to [international@batestech.edu](mailto:international@batestech.edu).

When Bates Technical College receives the required admission application, application fee, and forms, the college will determine your eligibility for enrollment at Bates.

More information: 253.680.7184, email [international@batestech.edu](mailto:international@batestech.edu) or visit [www.BatesTech.edu/International](http://www.BatesTech.edu/International).

### Tuition and Expenses for International Students

The cost to attend Bates Technical College, including books, supplies, tuition, and living expenses is approximately \$19,100 (US) annual expenses. This does not include the cost of travel to or from the United States. The college provides limited scholarships for which international students can apply.

For a schedule of international tuition and fees, [www.BatesTech.edu/International](http://www.BatesTech.edu/International).

### Financial Responsibility

International student applicants supported by personal funds must return the Financial Resources Information document, found in the international student application, to the college with the appropriate signatures. Applicants supported by family, government, or agency funds must also obtain the signature of the party providing support.

### International Contract Training

Bates Technical College provides international and distance learning contract training for industry-specific training and/or for international educational partners. More information: 253.680.7184. [www.BatesTech.edu/International](http://www.BatesTech.edu/International).

## Tuition 2020-2021 Non-Resident

# of Credits	Operating Fees	Building Fees	Maximum S&A Fees	Other Fees *	Total Tuition
<b>1</b>	\$252.52	\$27.14	\$9.00	\$21.00	<b>\$309.66</b>
<b>2</b>	\$505.04	\$54.28	\$18.00	\$42.00	<b>\$619.32</b>
<b>3</b>	\$757.56	\$81.42	\$27.00	\$63.00	<b>\$928.98</b>
<b>4</b>	\$1,010.08	\$108.56	\$36.00	\$84.00	<b>\$1,238.64</b>
<b>5</b>	\$1,262.60	\$135.70	\$45.00	\$105.00	<b>\$1,548.30</b>
<b>6</b>	\$1,515.12	\$162.84	\$54.00	\$126.00	<b>\$1,857.96</b>
<b>7</b>	\$1,767.64	\$189.98	\$63.00	\$147.00	<b>\$2,167.62</b>
<b>8</b>	\$2,020.16	\$217.12	\$72.00	\$168.00	<b>\$2,477.28</b>
<b>9</b>	\$2,272.68	\$244.26	\$81.00	\$189.00	<b>\$2,786.94</b>
<b>10</b>	\$2,525.20	\$271.40	\$90.00	\$210.00	<b>\$3,096.60</b>
<b>11</b>	\$2,576.58	\$276.49	\$96.59	\$231.00	<b>\$3,180.66</b>
<b>12</b>	\$2,627.96	\$281.58	\$103.18	\$252.00	<b>\$3,264.72</b>
<b>13</b>	\$2,679.34	\$286.67	\$109.77	\$273.00	<b>\$3,348.78</b>
<b>14</b>	\$2,730.72	\$291.76	\$116.36	\$294.00	<b>\$3,432.84</b>
<b>15</b>	\$2,782.10	\$296.85	\$122.95	\$315.00	<b>\$3,516.90</b>
<b>16</b>	\$2,833.48	\$301.94	\$129.54	\$336.00	<b>\$3,600.96</b>
<b>17</b>	\$2,884.86	\$307.03	\$136.13	\$357.00	<b>\$3,685.02</b>
<b>18</b>	\$2,936.24	\$312.12	\$142.72	\$378.00	<b>\$3,769.08</b>
<b>19</b>	\$3,215.90	\$312.12	\$142.72	\$399.00	<b>\$4,069.74</b>
<b>20</b>	\$3,495.56	\$312.12	\$142.72	\$420.00	<b>\$4,370.40</b>
<b>21</b>	\$3,775.22	\$312.12	\$142.72	\$441.00	<b>\$4,671.06</b>
<b>22</b>	\$4,054.88	\$312.12	\$142.72	\$462.00	<b>\$4,971.72</b>
<b>23</b>	\$4,334.54	\$312.12	\$142.72	\$483.00	<b>\$5,272.38</b>
<b>24</b>	\$4,614.20	\$312.12	\$142.72	\$504.00	<b>\$5,573.04</b>
<b>25</b>	<b>\$4,893.86</b>	<b>\$312.12</b>	<b>\$142.72</b>	<b>\$525.00</b>	<b>\$5,873.70</b>



## Transcripts, Transfer of Credits

### Transcripts

Official transcripts for courses completed at Bates Technical College are available through the Registration Office at \$7.75 per copy.

A transcript request form may be obtained by mail or online at [my.batestech.edu](http://my.batestech.edu). Transcript requests must be submitted in writing and signed by the student. Telephone requests are not accepted, and transcripts will not be released without the student's signature.

A transcript may be requested via written request containing the student's name at the time of attendance, student identification number (SID), and dates of attendance. Transcripts are released provided that all outstanding financial obligations to the college have been satisfied.

Unofficial transcripts may be printed from the college website at [my.batestech.edu](http://my.batestech.edu).

High school transcripts may be requested from the Bates Technical High School office. More information: 253.680.7004.

### Transfer of Credits

Transferring in credit from other colleges, the military, approved high school dual credit programs, or CLEP tests can be done through the registration office and is free of charge. Credit granted from industry certifications, occupational crosswalks, course challenges, or other extra institutional learning may also be done but carries a fee of \$28 per credit. Please see the registration office for additional details.

Students must specifically request official transcripts be forwarded directly to the Registration Office from accredited post-secondary institutions or military service.

Students will receive notification from the credential evaluator detailing the specific classes accepted for

transfer credit. Questions about the decision should be directed to the contact on the Notification of Transferability.

### Credit for Military Service

Current and former service members should submit a Joint Service Transcript (JST) for review. Where applicable, Bates awards credit based upon the American Council on Education (ACE) recommendations. Bates allows course challenge, at no cost, for relevant experience that does not have ACE recommendations.

### College-Level Examination Program

The College-Level Examination Program (CLEP) is the most widely accepted credit-by-examination program in the country. Through CLEP, students can:

Demonstrate their knowledge in a subject area to earn exemption from taking introductory college courses;

Show their level of competency in a subject to determine placement; and

Accumulate credit toward a degree by demonstrating knowledge they have gained independently.

There are no eligibility requirements or prerequisites to take a CLEP exam. More information: 253.680.7030.

### Transferability of Credits

To determine transferability of credits earned at Bates Technical College to other institutions, students may request an official Bates transcript be forwarded to the college by which they wish to have credits evaluated. The receiving college determines the transferability of courses completed at Bates. Contact the registrar at the college to which you wish to send transcripts for evaluation. Official transcripts are requested online through Parchment.

## Transferability of General Education Credits

The transferability of general education credits earned at Bates Technical College is subject to the policies of the receiving institution. General education courses are required in career education programs and are necessary to pursue higher-level degrees.

Successful scores on appropriate College- Level Examination Program (CLEP) examinations may be used to meet general education requirements for a degree or certificate.

## Work-Based Learning

In collaboration with the instructor, student, and employer, students may, with appropriate approval, supplement their instruction with paid and unpaid work-based learning experiences in businesses throughout the Puget Sound area.

Veterans Administration and other program-funded students may participate in work-based learning experiences only if it is completed in--residence at the college, with permission of the funding agency. More information: 253.680.7529 or 680.7035.

## Financial Aid

[www.BatesTech.edu/FinancialAid](http://www.BatesTech.edu/FinancialAid)

The belief of financial aid programs is that the primary responsibility for meeting college costs lies with the student. If a student and their family cannot meet the full cost of education, the Financial Aid Office, through available financial aid programs, will help students and their parents meet the cost of their education.

These funds can come from a variety of sources such as the federal government, the state government, private sources and from the school itself. Financial aid may be awarded in the form of a grant or scholarship (money that does not have to be repaid); a loan (money which must be repaid), or Work-Study employment (students work and earn the award in the form of a paycheck). The type of aid a student is eligible for is determined by the federal or state

methodology when a student completes their FAFSA or WASFAA. Students will receive their Expected Family Contribution (EFC) and be assigned a budget and the "need" for educational expenses. All students have the right to accept or decline the financial aid awards. However, if a student chooses to decline an award, it does not guarantee the award will be replaced with other sources of funding.

### How to Apply

Students must complete and submit the Free Application for Federal Student Aid (FAFSA) or the Washington Application for State Financial Aid (WASFA), for *undocumented individuals* to apply for financial aid at Bates Technical College. This application will be used to determine a student's eligibility for federal, state and institutional sources of assistance. The Financial Aid Office recommends that students apply with a FAFSA at <https://studentaid.gov/> or WASFA at <https://readyssetgrad.wa.gov/wasfa-washington-application-state-financial-aid>.

### Eligibility Requirements

Currently enrolled and prospective students interested in applying for Federal aid must:

Be a U.S. citizen, permanent resident or eligible non-citizen.

Be enrolled or intending to enroll on at least a half-time basis for student loan programs.

**NOTE:** The PELL Grant may be available to students enrolled less than half-time.

Be enrolled in a financial aid eligible program of study leading to a degree or eligible certificate (credit or non-credit) offered by Bates Technical College.

**NOTE:** Auditing classes are not paid for by financial aid.

Be in "satisfactory academic standing" according to the college's academic probation policy.

Be maintaining "satisfactory academic progress" according to the college's Title IV Student Financial Assistance Satisfactory Academic Progress Policy.

Not be in default on any Stafford, Perkins, HEAL or loans, and not owe a refund on any PELL, SEOG, or SSIG received at Bates or any previously attended school.

Student must have a high school diploma, GED, high school equivalency, or meet Ability to Benefit criteria.

#### Types of Financial Aid

**Federal Pell Grant** - Awards generally range from \$0-\$6,345 per academic year. Students may be enrolled less than half-time.

**Federal Work-Study Program (FWSP)** - Students may work at designated sites on during the academic year. Maximum amount that can be earned is \$10,920 per academic year. Students must be enrolled at least half-time without exceeding unmet need and continue to meet all work-study program requirements.

**Direct Stafford Loan** - Requires a student loan application that can found at <https://www.batestech.edu/financial-aid-forms/>. Students are required to complete a Master Promissory Note and Entrance Counseling at [www.studentaid.gov](http://www.studentaid.gov). For current loan limits, see the Financial Aid Office. Students must maintain half-time enrollment. There is no filing deadline for the student loan, but it must be processed prior to the end of the quarter for which you have requested the loan. Student loan application must be received two weeks prior to the end of the quarter you are requesting the loan to ensure the loan can be processed.

There are two types of Direct Stafford Loans:

- **Subsidized Loan** - The interest on the loan is paid for by the federal government while a student is in school. The student makes no interest or principle payments until six

months after graduation or dropping below half-time status.

- **Unsubsidized Loan** - Interest accrues after loan is disbursed. Students can pay or have the interest capitalized. Principle payments are still deferred until six months after graduation or dropping below half-time.

**State Grant and Special Programs** - The Washington Student Achievement Council (WSAC) administers state financial aid including the Washington College Grant (formerly known as the State Need Grant), the College Bound Scholarship, and the Washington Application for State Financial Aid, or WASFA, for undocumented individuals.

The Council is committed to providing opportunities and support to ensure every Washington student can pursue education beyond high school. The application process for the Washington College Grant is simple. To apply online or review the status, go to <https://studentaid.gov/>. Or, the Washington Application for State Financial Aid (WASFA), for undocumented individuals to apply online or review the status, go to <https://readyssetgrad.wa.gov/wasfa-washington-application-state-financial-aid> .

**Veterans Benefits** - GI Bill<sup>®</sup> benefits help students pay for college, graduate school and training programs. Since 1944, the GI Bill has helped qualified Veterans and their family members get money to help subsidize the costs for school or training. Learn more about GI Bill benefits below—and how to apply for them <https://www.va.gov/education/about-gi-bill-benefits/>.

**Opportunity Grant** - Opportunity Grant is a funding program specifically for low-income students who are Washington state residents (for at least one year) and enrolling in and Opportunity Grant eligible program of study (see list below). The program is designed to help students overcome financial barriers while they pursue an education. The program is voluntary, and allows participants to get assistance with school expenses for

up to 45 credits of tuition and no longer than three years from the initial receipt of grant funds.

Eligibility requirements:

- Must be low-income based on FAFSA and current family income is at or below 200 percent of the Federal Poverty Level (see chart)
- Wash. state resident – for at least one year
- In an Opportunity Grant eligible program

In addition, students may NOT receive a second quarter of Opportunity Grant funding if they have not completed the FAFSA-based aid process.

For more information, contact: Opportunity Grant Specialist 253.680.7244

#### BankMobile

The college has partnered with BankMobile to facilitate financial aid refunds and disbursements. Learn more: [www.BatesTech.edu/FinancialAid](http://www.BatesTech.edu/FinancialAid)

#### Withdrawals

Students must self-withdraw in the Registration Office. Self-withdrawal forms can be found at [my.batestech.edu/batesforms](http://my.batestech.edu/batesforms). Students unable to present themselves to the Registration Office must submit their withdrawal in writing. Students can send an email from their Bates email address. The tuition refund policy will be effective when the withdrawal paperwork is received by the Registration Office. To withdraw after the refund period and receive a “W” on your transcripts, the registration office must receive a withdrawal form by the 45th instructional day of the quarter.

#### Return of Title IV Financial Aid

Students who are awarded Title IV aid and withdraw from courses are subject to the Return of Title IV regulations. The regulations require the college to evaluate the time the student was enrolled, using the Return of Title IV calculation.

Please refer to the student handbook at [my.batestech.edu](http://my.batestech.edu) for a full description of Return of

Title IV Funds and/or inquire at the Financial Aid Office.

#### WorkFirst

If students are currently receiving Temporary Assistance for Needy Families (TANF) and participate in Washington State’s WorkFirst program, they may qualify for WorkFirst financial assistance to complete their education at Bates. WorkFirst is designed to fill in gaps that financial aid does not cover. The college will check a student’s financial aid account before proceeding with a request for assistance. Participant must track and report weekly attendance to maintain eligibility. More information: 253.680.7347

#### Worker Retraining

This funding program is specifically for unemployed or under-employed dislocated (laid off) workers, displaced homemakers, transitioning and military veterans, and the formerly self-employed whose qualifying event\* took place within the previous 48 months from the time of application for the program. The program is designed to help students overcome financial barriers while they pursue an education. The program is voluntary and allows participants to obtain assistance with education-related expenses. Worker Retraining is designed to fill the gaps that FAFSA-based financial aid does not cover. The college will check a student’s financial aid account before proceeding with a request for assistance. More information: 253.680.7127 or [retraining@batestech.edu](mailto:retraining@batestech.edu)

\*Qualifying event: the event that causes an applicant to qualify, such as a layoff, divorce/separation, military separation, or loss of a business.

\*Qualifying event: the event that causes an applicant to qualify, such as a layoff, divorce/separation, military separation or loss of a business.

#### Basic Food and Employment Training (BFET)

Students may qualify for this benefit if they receive, or are eligible to receive, federal food assistance. Students who also receive TANF are not eligible. Students must check in monthly to maintain eligibility.

Students may receive assistance for tuition, fees, textbooks, tools and supplies, and emergency costs. Students may also qualify for childcare assistance through DSHS Working Connections. BFET assistance works with FAFSA based Financial Aid, and students must make a formal request for BFET assistance. BFET is designed to fill financial gaps that financial aid does not cover. Therefore, the BFET Compliance Specialist will check a student's financial aid account before proceeding with a request for assistance. More information: 253.680.7286.

**Able-Bodied Adult without Dependents (ABAWD)**  
Able-Bodied Adults without Dependents (ABAWD) is a Supplemental Nutrition Assistance Program (SNAP) population category where individuals are required to meet work requirements or exemption criteria in order to receive basic food assistance. The ABAWD navigator's role is to assist ABAWD's in finding relevant, meaningful employment or education training to meet SNAP work requirements. The program is designed to help ABAWD individuals overcome barriers that prevent them from obtaining meaningful work or education in the community.

ABAWD eligibility is determined by DSHS; individuals' in this category are considered an able-bodied adult who:

- Is aged 18-49;
- Has no dependent children living with them;
- Is physically and mentally able to work; and
- Has no exemptions from work registration.

For more information, contact the ABAWD Navigator: 253.680.7281.

## Financial Aid Satisfactory Academic Progress

### Introduction

Bates Technical College is responsible for monitoring the academic progress of financial aid recipients. Satisfactory Academic Progress Regulations (SAP) exist in both the Washington State Administrative Code (WAC), and in the

Code of Federal Regulations (CFR). The colleges SAP Policy must be as strict as, or stricter than, the academic regulations that are applied to students who do not receive student aid funding at the college.

The financial aid that students are eligible for also differs between enrollment levels (e.g. Full- Time, Part- Time). This policy provides the minimum standards and applies to all students whether or not financial aid was received. The colleges Financial Aid Census Date (10th day – Fall, Winter, Spring, & Summer) is the point in which students are held accountable for their academic progress of attempted hours. Credit adjustments students make after disbursement but prior to Census date may result in a repayment being owed and/or holds being placed on future disbursements.

The Bates Technical College Financial Aid Office reviews their SAP policy quarterly and implements necessary changes in order to maintain compliance. Any policy changes will be reflected in an updated version of this handbook, the Bates Technical College (BTC) website, and any printed pieces of information we distribute on this topic. If students have any questions or concerns regarding the requirements as described in this handbook, contact the Financial Aid Office at [financialaid@batestech.edu](mailto:financialaid@batestech.edu) or 253.680.7020.

Please read all of this information carefully. Students are responsible for understanding these requirements and must meet the academic performance standards outlined in this SAP policy handbook as a condition of initial or continuing eligibility for financial assistance.

### Policy Summary

#### 1. What is Satisfactory Academic Progress?

Satisfactory Academic Progress (SAP) is used to define the successful completion of coursework to maintain eligibility for student financial aid. Federal and state regulations require the College to establish, publish, and apply standards to monitor progress toward the completion of a students declared degree or certificate program (not all degree or certificates are aid eligible). These include a qualitative requirement for maintaining a specified GPA (Grade Point Average); a pace requirement for completing 67% of overall credit hours attempted; and a quantitative requirement for completing the degree within 150% (Federal) of the hours required for a particular major. This

progress is based on the number of attempted credits enrolled and completed, cumulative grade point average, and the length of enrollment including any transfer credits accepted by BTC. If these standards are not met, students may receive a warning, or immediate suspension from financial aid eligibility.

\*\*The SAP policy is subject to change at any time due to federal/state regulations and/or requirements established by the Financial Aid Office.

## 2. When is Satisfactory Academic Progress Determined?

BTC will review a student's academic progress prior to awarding any funds for the new award year and at the end of each quarter. Students who do not meet the minimum SAP standards will be placed in a Warning or Suspension status. Students in Warning status are eligible to receive aid for their next term of attendance. Future terms in which an academic standard is not met may result in a Suspension status and cancellation/loss of aid eligibility.

## 3. How is Satisfactory Academic Progress Determined?

### 3.1. Maximum Time Frame (MTF)

Students must complete their degree or certificate within 150% (federal aid) of the published length of their program. All attempted college level credits and transfer credits that are accepted by BTC are counted in this calculation.

\*\*Failure to meet this standard will result in an automatic Suspension status.

### 3.2. Minimum GPA (GPA)

Students must maintain at least a 2.00 Cumulative GPA.

### 3.3. Minimum Pace of Progression (POP)

Students must maintain at least a 67% cumulative completion rate (total number of attempted credits divided by total number of earned credits). All attempted college level credits, transfer credits that are accepted by BTC, and remedial/prerequisite credits are counted in this calculation.

### 3.4. Minimum Credit Completion (MCC)

Students must complete (earn) the level of enrollment for which their financial aid was calculated and disbursed.

\*\*Failure to complete at least 50% of the minimum number of credits will result in an automatic Suspension status from State Aid.

## 4. What are the Notification and Appeal Processes?

### 4.1 Notification

Students may receive communications via mail and/or email. Each notification will provide details on a student's current status, eligibility based on this status and if necessary, options available to regain eligibility or conditions to maintain eligibility.

### 4.2. Appeal Process

Students in a Warning status are eligible to receive financial aid funding but are unable to appeal this status. Students who are ineligible for aid because of a Suspension status may complete the Appeal or Reinstatement process in an effort to regain eligibility for funding. See section 4 (Re-Establishing Eligibility) for additional details.

## 5. Other Policy Highlights

### 5.1. Repeat Courses

Financial aid will only fund a previously passed or failed course once. The repeat is counted in credits attempted and completed and the replaced course is counted as attempted credits only.

### 5.2. Remedial or/and Prerequisite Coursework

Remedial or/and prerequisite courses will count toward the minimum credit course totals completed for SAP. Remedial courses that do not count towards the student's degree will still be considered when determining SAP. Students will be notified when they are nearing the 45- credit maximum for remedial/prerequisite credits.

### 5.3. Satisfactory Course Completion

Course Grades that are defined as being satisfactory in terms of completion are: "A", "B", "C", "D", and "S", while unsatisfactory in terms of completion are: "NC or O", "U", "IC", and "W".

Incomplete courses do not meet SAP and are counted towards a student's total attempted courses but are not considered completed courses.

#### 5.4. Transfer Courses

All transfer credits that are accepted by BTC are counted in the MTF and POP calculations.

#### 5.5. Consortium Credits

Consortium credits are not included in the MTF and POP calculations. Students Host School is responsible for evaluating the students SAP in accordance with their SAP policy.

#### 5.6. SAP Statuses

**Meets:** Students who are making satisfactory progress, as defined by the SAP policy, will be placed in a “Meets” status. These students are considered to be in good standing and eligible for financial aid.

**Warning:** Students who fail to make satisfactory progress for a single term, will be placed in a “Warning” status for the following term. Students who are in “Warning” will still be eligible to receive aid for the following quarter, the “Warning” status is for the student’s information only, it is not actionable, and cannot be appealed.

**Suspension:** Students who do not meet the SAP standards as defined in this policy will be placed in a “Suspension” status. These students are not eligible for aid but may be eligible to file an appeal to have their aid re-instated.

**Probation:** If a student completes an appeal and the appeal is approved, the student may be placed in a “Probation” status and expected to follow their Education plan or Program of Study Guide.

**Denied:** Students are considered to be denied if they have submitted an appeal and the appeal is not approved.

### Policy Details

#### 1. Overview

##### 1.1. Evaluation Period

Federal Regulation: “To be eligible for FSA funds, a student must make satisfactory academic progress, and your school must have a reasonable policy for monitoring that progress.” In addition, “the policy must require annual reviews and must correspond with the end of a payment period. For programs greater than one year, your policy may also call for

progress reviews after each payment period. If you review at each payment period, you must review SAP after a summer term if the student attends the summer term.” (FSA Handbook, pg. 1-12).

State Regulation: “At the end of each term, participating institutions shall examine the progress of each state aid recipient.” (WSAC WCG & CBS Program Manual, pg. 36).

BTC Policy: SAP will be evaluated prior to awarding any funds for all new student and at the end of each quarter (Fall, Winter, Spring and Summer) in order to ensure compliance with the Grade Point Average (GPA), Maximum Time Frame (MTF), credit completion (MCC), and Pace of Progression (POP) requirements. Based on this review, students may receive a SAP “Warning” quarter or be placed in a “Suspension” status.

#### 1.2. Notification

Federal Regulations: “A review of SAP is not complete until both the qualitative and quantitative measures have been reviewed. If a satisfactory progress check shows that a student does not have the re-quired GPA or is not maintaining the required pace, she becomes ineligible for FSA funds unless she is placed on financial aid warning (if your school re-views SAP at the end of each payment period) or probation (after a successful appeal), as explained below. Your policy must describe both of these statuses if it allows for them, and it must provide for notification to students of the results of any evaluation that affects their eligibility for FSA funds.” (FSA Handbook, pg. 1-14).

BTC Policy: Students will be given a notification via mail and/or email that will dictate what and/or if anything needs to be done to maintain or regain financial aid eligibility. If a student fails to meet the SAP standards, they will receive a notice of being placed on either warning or suspension. The suspension communication will explain the appeal and/or reinstatement process available to them.

Communications are based on information available at the time of review and are subject to change. If financial aid is released to a student and they are ineligible under the rules for SAP, aid will be canceled, the student will be notified, and a billing invoice will be sent out.

### 1.3. Definitions

Completed credits: credit hours which are successfully completed with an earned grade of A, B, C, D,

S – Satisfactory

Attempted credits: all credits for courses in which a student is formally enrolled in as of the financial aid census date (10th day of classes). They include all earned grades as listed above as well as

NC or 0 – Not Complete

IC – Incomplete

U – Unsatisfactory,

W – Official Withdrawal

Eligible Courses or Credits

- College Courses (100 level or above) – courses required for degree or certificate; or prerequisite for degree or certificate courses
- Remedial Courses (less than 100 level) – Math, Reading and English courses only; based on outcome of placement test
- Advanced Placement (AP)
- College Level Examination Program (CLEP)
- Prior Learning Credits

Ineligible Classes or Credits

- Adult Basic Education (ABE)
- Community Education
- Continuing Education
- Emergency Medical Technician (EMT)

- English as a Second Language (ESL)
- English Language Acquisition (ELA)
- High School Completion (HSC)
- Transitions (TRANS)

Federal Aid Programs

- Federal Pell Grant (Pell)
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Federal Work Study (FWS)
- Federal Direct Subsidized Loan (DL Sub)
- Federal Direct Unsubsidized Loan (DL Unsub)
- Federal Direct PLUS Loan (DL PLUS)

State Aid Programs

- WA College Grant (WCG)
- WA State College Bound Scholarship (CBS)
- WA State Passport to College Scholarship (Passport)
- WA State Work Study (SWS)

Institutional Aid Programs

- 3.5% Institutional Aid
- BTC Tuition Waiver

Payment Period: The academic period or period of enrollment established by an institution for which financial aid is disbursed.

## 2. Requirements

### 2.1. Maximum Timeframe (MTF)

Federal Regulation: “For an undergraduate program measured in credit hours, a period no longer than 150 percent of the published length of the program. A student is ineligible (via the maximum timeframe element) when it becomes mathematically impossible for him to complete his program within 150% of its



length if it is an undergraduate program, or within the maximum timeframe established by the school if it is a graduate program.” (FSA Handbook, pgs. 1-13-1-14)

State Regulation: The state policy indicates “A WCG recipient may receive the grant for a maximum of 15 quarters, 10 semesters, or the equivalent combination of the 2 at a full-time rate of enrollment. This includes combined usage under the apprenticeship program option and academic programs. CBS recipients may receive CBS funds for a maximum of 12 quarters, 8 semesters, or the equivalent combination of the two at a full-time rate of enrollment.” (WSAC WCG & CBS Program Manual, pgs. 4 & 36).

BTC Policy: A student who is unable to complete their program within 150% of the published length will be suspended from receiving federal financial aid, regardless of whether or not they received aid for all periods of enrollment. All attempted college level credits and transfer credits accepted by BTC will be included in this calculation. Students who mathematically cannot complete their degree prior to reaching the 150% MTF credit limit will be placed in a “Suspension” status and have the option to appeal. A Limits of Eligibility notification may be sent when a student falls within 45 credits of their maximum attempted credit limit.

Some additional factors to note are:

The 150% rule will be applied regardless of how many times a student has changed his or her program.

All quarters of enrollment at BTC, and any credit hours attempted while enrolled at BTC will count towards the MTF credit limit.

All transfer credits accepted by BTC will count towards the MTF credit limit.

If a student has completed all the requirements for their degree, regardless of whether they have applied for graduation or not, they will no longer be eligible for financial aid for that program.

Students who have completed a program and are pursuing a new program:

- All previous credits will be used in the MTF calculation

Quarters of enrollment in which no aid is received will count towards the maximum time frame limit. This includes any courses taken at another institution for which no aid was received, as well as summer credits, Running Start credits, Tech Prep credits (T#P), CLEP (C#P), Advanced Placement (A#P), or International credits.

If a student in a MTF deficiency submits an appeal, and the appeal is approved per professional judgement, the student will have eligibility extended to cover only the remaining required classes for their declared program as listed on their Program of Study Guide or Education Plan.

## 2.2. Grade Point Average (GPA)

Federal Regulation: “Students enrolled in a program of more than two academic years must have a GPA of at least a “C” or its equivalent or must have an academic standing consistent with your school’s graduation requirements” (FSA Handbook, pg. 1-13).

State Regulation: “The institution's satisfactory academic progress policy must contain a qualitative standard. For purposes of state aid programs, the qualitative standard used to comply with federal satisfactory academic progress standards is acceptable.” (WSAC SNG & CBS Program Manual, pg. 38).

BTC Policy: Students must maintain a quarterly and cumulative GPA of at least a 2.0. A warning or suspension will occur when a student does not meet this standard. Suspension status students will have the option to appeal and if the appeal is approved, will be placed in a “probation” status.

### 2.3. Pace of Progression (POP)

Federal Regulation: ‘Your policy must also specify the quantitative standard (pace) at which students must progress through their program to ensure that they will graduate within the maximum timeframe, and each academic progress check must measure this. You calculate the pace at which a student is progressing by dividing the total number of hours the student has successfully completed by the total number he has attempted.’ (FSA Handbook, pg. 1-13)

BTC Policy: To maintain eligibility for financial aid, each student must maintain at least a 67% cumulative completion rate. This is the minimum completion rate that is required for a student to complete their degree within the 150% Federal eligibility requirement. To calculate their pace of progression (completion rate), a student can divide their overall completed credit hours by their overall attempted credit hours. Students who drop below the 67% cumulative requirement may be placed in a “Warning” or “Suspension” status. All attempted college level credits, transfer credits accepted by BTC, and remedial/prerequisite credits will be included in this calculation.

Example: A student has completed 50 credit hours but has attempted 58; therefore,  $50/58=86\%$ .

### 2.4. Credit Hour Completion

State Regulation: The state policy indicates that “To meet “satisfactory academic progress” the student must successfully complete a minimum number of credit or clock hours for each term in which the grant was received.” Students can either be placed in a warning or denied status.

A “Warning Status for state aid recipients is triggered when a student completes at least one-half, but less than all of the minimum number of credits for which the aid was calculated and disbursed, or otherwise fails to fulfill the conditions of the institution’s satisfactory progress policy.” and “the student must be placed in a warning status for the following quarter

as it pertains to state aid”, however the school may make aid disbursements to a student who is in warning.

A “Denied status requires that each school's policy must deny further disbursements of all state aid at the conclusion of any term in which he or she fails to complete at least one-half of the minimum number of credits or clock hours for which the aid was disbursed or otherwise fails to fulfill the conditions of the institution's satisfactory progress policy. This status also may be given to a student who has remained in warning status for more terms than the institution’s policies allow.” (WSAC WCG & CBS Program Manual, pg. 36-38).

BTC Policy: To maintain eligibility for financial aid a student must complete the minimum number of credits for their enrollment level. The chart below outlines the number of credits the student needs to complete.

For example: a full-time student enrolled in 12 credits and only completes 7 will be placed in a “warning” status, as will a three-quarter time student who is enrolled in 9 credits and completes 7. If a student completes less than the credits needed to maintain a “meets” or Good Standing status they will be placed on either warning or suspension status.

Students who are placed in a warning status and fail to complete enough credits to put them back into compliance by the end of the second consecutive term will be suspended. Students who are suspended may appeal and if the appeal is approved will be placed in a “probation” status.

## 3. Other Policies

### 3.1. Repeat Courses

Federal Regulation: “A student may be repeatedly paid for repeatedly failing the same course (normal SAP policy still applies to such cases). If a student withdraws before completing the course that they are being paid Title IV funds for retaking, then that is not counted as their one allowed retake for that course.

However, if a student passed a class once and then is repaid for retaking it and fails the second time, that failure counts as their paid retake and the student may not be paid for retaking the class a third time. If your school has a policy that requires students to retake all of the coursework for a term in which a student fails a course, only the first retake of any previously passed course is eligible for Title IV aid.” (FSA Handbook, pgs. 3- 35).

BTC Policy: Financial aid will only fund a previously passed or failed course once. The repeat is counted in credits attempted and completed and the replaced course is counted as attempted credits only.

### 3.2. Remedial or Prerequisite Coursework

Federal Regulation: “A student can receive aid for up to 45 credits of remedial or prerequisite coursework that is included as part of a regular program. As long as the student qualifies for aid for remedial courses, you must include the remedial courses in the student’s enrollment status. Some schools give no credit or reduced credit for remedial classes. To determine enrollment status, credit hours for the remedial class should be the same as for the comparable full-credit class” (FSA Handbook, pgs. 1-4, 1-13, &1-18).

BTC Policy: Remedial and prerequisite courses will count toward the minimum credit course totals completed for SAP. Remedial courses that do not count towards the student’s degree will still be considered when determining SAP. Students will be notified when they are nearing the 45 credit maximum.

### 3.3. Satisfactory Course Completion

Federal Regulation: School Determined. (FSA Handbook, pgs. 1-14)

BTC Policy: Course Grades that are defined as being satisfactory in terms of completion are: “A”, “B”, “C”, “D”, “S”, while unsatisfactory in terms of completion are: “NC or 0”, “IC”, “U”, and “W” Unsatisfactory or

incomplete courses do not meet SAP and are counted towards a student’s total attempted courses but are not considered completed courses.

### 3.4. Transfer Courses

Federal Regulation: “However, only transfer credits that count toward the student’s current program must be counted (as both attempted and completed hours; credits not counted toward the student’s program may also be counted at your school’s discretion, as described in your SAP policy).” (FSA Handbook, pg. 1-14)

BTC Policy: Only transfer credits that are accepted by BTC are counted in the MTF and POP calculations.

### 3.5. Consortium Credits

Federal Regulation: “Also, although grades received through consortium or contractual agreements do not have to be included in a student’s grade point average, they must be included when calculating the quantitative component (the percentage of credits earned vs. attempted) of her satisfactory academic progress.” (FSA Handbook, pgs. 2-34)

BTC Policy: Consortium credits are not included in the MTF and POP calculations. Students Host School is responsible for evaluating the students SAP in accordance with their SAP policy.

### 3.6. Withdrawals and Non-Financial Aid Course(s)

Federal Regulation: “If a student withdraws from all Title IV eligible courses in the payment period or period of enrollment and continues to attend only the course(s) that he or she is completing or repeating for which he or she may not receive Title IV aid during that period, the student is a withdrawal for Title IV purposes. This is because a student is considered to be attending a Title IV eligible program only if he or she is attending one or more courses in that program for which the student is receiving Title IV, HEA program funds” (FSA Handbook, pg. 1- 19).

BTC Policy: If a student withdraws before completing the course that they are being paid Title IV funds for retaking, then that is counted as their one allowed retake for that course.

Withdrawals are counted as attempted but not completed credits.

### 3.7. Running Start/College in the High School Courses/Tech Prep

Federal Regulation: School determined. (FSA Handbook, pg. 2.9)

BTC Policy: These courses are treated as BTC courses and are included in the MTF and POP calculations.

### 3.8. AP/CLEP/IB Credits – Test-based Credits

Federal Regulation: “Some schools have developed tests in accord with their academic standards, such as language proficiency tests, which students can take and receive course credit. If such credits count toward the student’s program, the grades for those credits count in the student’s GPA for all FSA purposes. Such credits must be counted towards SAP for quantitative/pace purposes, and may, according to the school’s written policy, be counted towards the student’s qualitative/grades SAP measurement.” (FSA Handbook, pg. 1-14)

BTC Policy: AP/ CLEP/ IB credits that are obtained through testing and that are creditable and transferrable are treated as BTC credits and are included in the MTF and POP calculations.

### 3.9. Audited Courses

Federal Regulation: School determined. (FSA Handbook, pg. 1.18)

BTC Policy: Audited courses do not count toward student eligibility, release of a student’s financial aid, or in the calculation of completed credit hours for SAP purposes.

## 4. Re-Establishing Eligibility-Appeal Process

### 4.1. Overview

Federal Regulations: “All schools may use the financial aid probation as part of their satisfactory progress policy. When a student loses FSA eligibility because he failed to make satisfactory progress, if the school permits appeals, he may appeal that result on the basis of: his injury or illness, the death of a relative, or other special circumstances. His appeal must explain why he failed to make satisfactory progress and what has changed in his situation that will allow him to make satisfactory progress at the next evaluation. If you determine, based on the appeal, that the student should be able to meet the SAP standards by the end of the subsequent payment period, you may place him on probation without an academic plan. You must review the student’s progress at the end of that one payment period, as probation status is for one payment period only. If you determine, based on the appeal, that the student will require more than one payment period to meet progress standards, you may place him on probation and develop an academic plan for the student. You must review the student’s progress at the end of one payment period as is required of a student on probation status, to determine if the student is meeting the requirements of the academic plan. If the student is meeting the requirements of the academic plan (or the universally applicable SAP requirements, outside of any individualized academic reinstatement plan), the student is eligible to receive Title IV aid as long as the student continues to meet those requirements and is reviewed according to the requirements specified in the plan. Your school determines the process and documentation required for an appeal. It may decide to require more extensive information on an initial appeal and some type of an update statement on a subsequent appeal. The regulations do not specify what must be included in an academic plan. The school and the student must develop a plan that ensures that the student is able to meet the school’s satisfactory progress standards by a specific time, though an academic plan could instead take the student to successful program completion. Students must also appeal to change their plan. They must explain what has happened to make the change

necessary and how they will be able to make academic progress.” (FSA Handbook, pgs. 1-15)

State Regulations: “The Financial Aid Administrator may, on a case-by-case basis, reinstate a student into satisfactory academic progress in response to that student's extenuating circumstances. The Financial Aid Administrator (FAA) may choose to exercise professional judgment without a specific request to do so from the student. For example, the Financial Aid Administrator may decide to grant a student continued access to state aid if failure in one term is countered by an extensive history of prior success. The student's file must include documentation related to the professional judgment decision.” “Each institution's satisfactory academic progress policy shall state which conditions a denied status student must meet before state aid will be reinstated. For example: the student may have to attend the institution without state financial aid for a specific period of time or may have to show proof that credits have been made up within a designated time period.” (WSAC SNG & CBS Program Manual, pg. 38-39)

BTC Policy: Students must meet the academic performance standards outlined in the SAP policy as a condition of initial or continuing eligibility for financial assistance. If they are in a suspension status they may submit an appeal. Approval of the appeal is not guaranteed and the student is held responsible for any debt that is incurred while on financial aid suspension. If the appeal is approved, the student will be placed on 1 quarter of probation or a multiple term Education Plan or Program of Study Guide. Financial aid eligibility is then reinstated for the timeframe that the appeal has been approved.

#### 4.2. Appeal and Reinstatement Process

The process is completed by filling out the Appeal to Reinstatement Financial Aid Form found at [www.batestech.edu/financial-aid-forms/](http://www.batestech.edu/financial-aid-forms/). The form must be submitted with the required attachments as stated on the Appeal to Reinstatement Financial Aid Form and will not be reviewed until all requested

information has been received. Students will be notified if any additional information is required. Students will have a lifetime limit of 1 appeal at BTC. Appeals submitted beyond this limit will be forwarded to the Director of Financial Aid for review.

#### 4.2.1. Suspension Appeal

##### 4.2.1.1. Circumstances and Resolutions

Circumstances: The student's appeal letter must explain why they failed to make academic progress. Thus, the request on the appeal form asks the student to explain why you failed to make satisfactory academic progress.

Resolutions: The student's appeal letter must also explain what has changed will allow you to demonstrate progress at the next evaluation. Thus, the request on the appeal form asks for an explanation of the steps they have taken or plan to take to resolve the issues and how their situation has changed to allow them to satisfy the requirements as set forth by the college's SAP standards.

##### 4.2.1.2. Supporting Documentation

Not only does the appeal need to contain an explanation of circumstances and resolution but it also requires a signed Education Plan or Program of Study Guide detailing the remaining required classes needed for the student to complete their degree or certification program. The plan can be signed by their academic advisor (or designated Student Services staff). In addition to the signed education plan or program of study guide, a student may need supporting documentation to verify the circumstances cited in their explanation. (Please note that providing documentation does not guarantee appeal approval.)

If the reason for the appeal is due to a medical condition, a student may be asked to supply a letter from their health care provider stating whether the student is well enough to return to their academic program. (Submitting this documentation does not guarantee that an appeal will be approved.)

#### 4.2.1.3. Review

- The Appeal Committee will review a student's appeal for reinstatement of aid. They will review each student's individual situation, assessing their current and previous academic performance, as well as any documentation submitted to determine whether there is significant justification to warrant an exception to the existing SAP Policy for the student's individual circumstance.
- It is important to remember that the appeal process is a request for an exception to the SAP policy. Not all circumstances will warrant an exception to the SAP policy.
- Appeals submitted by students who failed to meet the terms of their probation, Program of Study Guide, or Education Plan must clearly explain what extraordinary circumstances occurred during or directly prior to the term for which the student was suspended. These appeals are required to have third-party documentation to verify the extraordinary circumstance.

#### 4.2.1.4. Approval

- If a student's appeal is approved
  - A notification will be sent via mail and/or email stating the conditions a student must meet to retain eligibility
  - The student will also be placed on a "Probation" status and expected to follow their Education Plan or Program of Study Guide. Student who require multiple quarters for them to meet the SAP standards must follow their Education Plan or Program of Study Guide and are eligible for financial aid.
  - Students will be placed in a "Probation" status for one term if they are able to meet SAP standards within their next term of attendance. During the probationary period the student is eligible for financial aid.
    - Failure to meet Probation requirements will result in SAP

suspension, regardless of whether or not the student meets all other SAP standards as outlined in this handbook.

- Aid eligibility is reinstated from the point of the appeal approval forward. Students will not be eligible for retroactive payments for terms that they were on suspension status.
- Change of program requests - Students who wish to request a change of program after an appeal has been approved must complete the following steps:
  - Officially submit a Change of Major request to the Registrar's Office
  - Submit to the Financial Aid Office
  - a written request explaining why they are changing their program and asking to have their aid eligibility reevaluated based on the new program
  - a signed Education Plan or Program of Study Guide for their newly declared program of study

#### 4.2.1.5. Denial

- If a student's appeal is not approved notification will be sent via mail and/or email.
- The student will no longer be eligible to receive financial aid funding but will have the option to regain eligibility by completing the Request for Reinstatement requirements listed in the next section.

#### 4.2.2. Request for Reinstatement

##### 4.2.2.1. Federal Funding

Students may submit a Request for Reinstatement form once they have successfully completed enough credits to meet the minimum GPA and POP standards. This may take more than one term to meet both the GPA and POP standards.

#### 4.2.2.2. State and Institutional funding

Students may submit a Request for Reinstatement after successfully completing one term without financial aid funding. Successful completion is defined as 100% completion of all attempted credits (5 credit minimum) with a 2.00 Quarterly GPA. If a student withdraws from a class during this term, they will no longer meet the 100% completion requirement for a Reinstatement.

#### 4.2.2.3. Approval

- If a student's reinstatement is approved, they will be sent a notification via mail and/or email.
- Aid eligibility is reinstated from the point the reinstatement is approved. Students will not be eligible for retroactive payments for quarters that they were on suspension status.

#### 4.2.2.4. Denial

- If a student's reinstatement is not approved a notification will be sent via mail and/or email.

#### 4.3. Considerations

- If a student has completed the SAP appeal process and is denied financial aid funding, yet the student believes they have extenuating circumstances that were not addressed in the original appeal, the student may submit additional and/or new documentation detailing these circumstances for review. However, the subsequent submission does not guarantee approval of the original appeal.

- Rerunning the SAP process: If a student has had a grade change or a late grade submitted and wishes to have their SAP recalculated, the student will need to send an email to [financialaid@batestech.edu](mailto:financialaid@batestech.edu) or written request regarding the grade change and ask that it be reviewed. In this situation, the student's SAP status will be reviewed and updated as necessary.

- Study Abroad: Students enrolled in study abroad courses will have their SAP status evaluated as

part of the regular process. Students will then be notified if they met satisfactory academic progress and if an appeal needs to be submitted by them for aid consideration. However, once grades are updated the student may request to have their SAP process recalculated.

- Work Based Learning: Students enrolled in Work Based Learning courses will have their SAP status evaluated as part of the regular process. Students will then be notified if they met satisfactory academic progress and if an appeal needs to be submitted by them for aid consideration. However, once grades are updated the student may request to have their SAP process recalculated.

### Appendix

These documents are referenced throughout this handbook:

- Department of Education; Federal Student Aid Handbook (2019-20)
  - <https://ifap.ed.gov/sites/default/files/attachments/2020-05/1920FSAHbkActiveIndex.pdf>
- Washington Student Achievement Council; State Need Grant and College Bound Scholarship Program Manual (2020-21)
  - [https://wsac.wa.gov/sites/default/files/20-21\\_WCGandCBS\\_ProgramManual.pdf](https://wsac.wa.gov/sites/default/files/20-21_WCGandCBS_ProgramManual.pdf)

## Scholarships

The Bates Technical College Foundation offers scholarships to new and current students every quarter. Scholarship offerings vary with awards ranging from \$100 to \$1,250 per quarter. Applications are available online at [www.BatesTech.edu/Foundation](http://www.BatesTech.edu/Foundation). To request information by email, please contact [scholarships@batestech.edu](mailto:scholarships@batestech.edu).

### **Who is eligible to apply for scholarships through the Bates Technical College Foundation?**

All Bates students registered in degree and certificate programs are eligible to apply for scholarships. Some scholarships are open to all students in any program, while others are limited to specific programs. Please read each scholarship announcement to determine eligibility.

### **Can I still apply for a scholarship even if I receive financial aid?**

Yes. Students are encouraged to apply for scholarships if their financial aid does not completely cover their tuition or if they have student loans. However, funds received as a scholarship may be deducted from a student's financial aid budget. Students should consult with the financial aid office to determine how a scholarship will affect their financial aid package.

### **Can I apply for a scholarship even if I received one in a previous quarter?**

Yes. Students are encouraged to apply for scholarships each quarter.

### **What is involved in the application process?**

The entire scholarship application is filled out online at <https://batesfoundation.awardspring.com/>. The application consists of filling out a brief biographical and financial section, and several short-answer essay questions. Applicants also submit an unofficial transcript and a letter of recommendation. Students must be in good academic standing to be considered for a scholarship.

### **Can I use my scholarship for living expenses such as rent, utilities and childcare?**

No. With the exception of a few scholarships designated for child care, scholarships through the foundation may only be used towards tuition, books, tools or supplies.

Learn more at [www.BatesTech.edu/Foundation](http://www.BatesTech.edu/Foundation).



## Grading System

### Grading Procedures

The following grading practices support academic freedom and provide a uniform and fair grading system for students and faculty.

Instructors are empowered to select criteria used to grade the courses they teach, and how those criteria will be weighted. Elements that contribute to grades can be as broad as needed and may include various methods of measuring student learning and achievement. For example: a possible combination of test scores, assignments, evaluation of lab/shop work, attendance, workplace behaviors evaluation, and other elements may be used.

At the beginning of each course students will be provided with a syllabus detailing what will be learned in the course and how outcomes will be measured and graded. Grading information will explain how the various factors will be weighted and how they contribute to the final grade.

### Reporting:

Numerical grades earned by students will be reported for each course at the end of the quarter using a scale from 4.0-1.0, or 0.0, and will apply to grade point average (GPA) calculations.

Numerical grades may be considered equivalent to letter grades as follows:

Numerical Grades	Letter
4.0	A
3.9-3.7	A-
3.6-3.3	B+
3.2-3.0	B
2.9-2.7	B-
2.6-2.3	C+
2.2-2.0	C

1.9-1.7	C-
1.6-1.3	D+
1.2-1.0	D
0.0	N/C

N/C-No Credit: Counted in GPA

S: Satisfactory completion of a pass/fail course (not factored in GPA)

U: Unsatisfactory completion of a pass / fail course (not factored in GPA)

W: Withdrawal - not counted in GPA

IC: Incomplete

\*4. Withdrawals (W): Students will be allowed to self-withdraw from courses in accordance with college procedures. To withdraw and receive a “W” on your transcript, the registration office must receive your withdrawal request by the 45th instructional day of the quarter.

\*5. Incomplete marks (IC)

An incomplete (IC) may be granted for a course in which the student enrolled but did not complete all work required to earn a numeric grade due to unusual or emergency circumstances beyond the student's control.

An IC is not a student right, but is an instructor granted extension of the time needed to finish and submit required work the student was unable to complete during the regular course time frame.

The student need not re-register nor pay additional tuition in the following quarter for the individual course in which an IC is granted.

An instructor may give an IC to a student provided there is a contract in place between the student and the instructor specifying:

- What work must be completed

- By what date the work will be completed

What the final grade for the course will be if the student does not complete all required work by the required date. If the student fails to complete the required work by the deadline set by the instructor (in no case beyond the end of the subsequent quarter), the IC will automatically change to the grade designated on the contract.

\* If you receive financial aid, please check with the Financial Aid Office if you receive incomplete (IC), zeros (NC), or withdrawals (W), as these grades can negatively impact your financial aid eligibility.

### Academic Suspension

Students who do not meet the satisfactory academic progress standard of a 2.0 GPA for three consecutive terms will be suspended for the immediately succeeding quarter for the duration of that quarter.

### Program Curriculum

The program descriptions in this catalog are provided for reference and list all curricula that exist for individual programs. Selection of specific elective classes will depend on the area(s) of program emphasis a student wishes to pursue; therefore, students may not need to complete every class segment that is listed in the catalog.

Students should consult with their advisors and faculty to determine the most appropriate and / or required classes for their desired program path and completion credential.

### Program Completion Times

Completion time ranges listed for each career education program in this catalog are averages based on the schedule of when courses will be offered and the number of credits needed to complete the required curriculum for that program. Program completion rates may vary from those listed based on individual student skills, aptitudes, and academic progress.

## College Satisfactory Academic Progress

### Academic Deficiency Policy

Please note that Financial Aid has separate policies and procedures pertaining to Satisfactory Academic Progress. Students may be subject to these policies individually or concurrently. Students are required to have a 2.0 cumulative GPA in order to be awarded credentials at Bates Technical College.

### Academic Deficiency

Any student who receives less than a 2.0 quarterly GPA will be notified that satisfactory academic progress is not met at the end of a given quarter. Notification of academic deficiency (1) will be sent to the student by the tenth instructional day of the succeeding second quarter. These students must achieve a 2.0 in the immediately succeeding quarter. Students who achieve a 2.0 or greater quarterly GPA in the succeeding quarter will be removed from academic deficiency. Students who do not achieve a quarterly 2.0 GPA in the immediately succeeding quarter will be moved to academic probation.

### Academic Probation

Students who receive less than a 2.0 for two consecutive quarters will immediately be placed on academic probation. Notification of academic probation (2) will be sent to the student by the tenth instructional day of the succeeding third quarter. Students who receive a quarterly GPA of 2.0 or greater in the immediately succeeding quarter will be removed from probation. Students should work closely with advising faculty in remedying their cumulative GPA to 2.0 or above. Students who do not achieve a quarterly 2.0 GPA in the immediately succeeding quarter will be moved to academic suspension.

### Academic Suspension

Students who receive less than a 2.0 for three consecutive quarters will immediately be placed on academic suspension for the following quarter.

Notification of academic suspension (3) will be sent to the student by the tenth instructional day in the succeeding fourth quarter. A student who has already begun classes will be administratively withdrawn with all tuition and fees refunded.

### Re-entry after Academic Suspension

After one quarter of suspension, students may petition to reenter. Students must first meet with a Career Specialist for a readiness assessment. Career Specialists may direct students to do the following things, but are not limited to the list below:

- Attend an academic intervention session
- Meet with the Dean of Student Services
- Obtain a skills assessment from an instructor

Students who reenter after academic suspension will return on academic probation. Students must receive at least 2.0 in the quarter they return in order or they will return to Academic Suspension. Students reentering from a second Academic Suspension must meet with the Dean of Student Services.

### Academic Appeal

Students may follow the process laid out in the student handbook if they wish to appeal their academic standing.

The handbook is located on MyBates at [my.batestech.edu](http://my.batestech.edu) or [www.batestech.edu/student-resources/](http://www.batestech.edu/student-resources/)

## Student Rights and Responsibilities

### WAC Student Rights and Responsibilities Chapter 495A-121

Bates Technical College is a two-year public institution of higher education. The college is maintained by the State of Washington for the provision of programs of instruction in higher education and related community services.

Broadly stated, the purpose of the college is to provide opportunities for all who desire to pursue educational goals.

Like any other institution having its own special purposes, the college must maintain conditions conducive to the effective performance of its functions.

To implement this objective, it is necessary to ensure that an environment is created wherein all students may progress in accordance with their capability and intensity of interest. The responsibility to create and maintain such an environment is shared by all members of the college community: students, faculty, staff and administration.

Upon registration, all students will be directed to an online copy of the Bates Technical College Student Handbook which details Student Rights & Responsibilities and includes chapters of the

Washington Administrative Code (WAC) pertaining to student conduct.

Conduct codes are subject to change. The most current code provisions are in the Washington State Register and [available here](#).

### Family Educational Rights and Privacy Act (FERPA): Confidentiality of Student Records

In compliance with the Family Educational Rights and Privacy Act (FERPA) and the Washington Administrative Code, the following information is designated as directory information: student's name; program in which the student is registered; dates of attendance; date and place of birth; degrees and awards received; and most recent previous education agency or institution attended. Only designated members of the registration staff may disclose directory information. The FERPA affords students certain rights with respect to their educational records:

The right to inspect and review the student's education records within 45 days of the day the college receives a request for access;

The right to request the amendment of information contained in the student's education records that the student believes is inaccurate or misleading;

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;

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. Visit [www.BatesTech.edu/MyBates](http://www.BatesTech.edu/MyBates).

Directory information may be released by Bates Technical College without parental or student consent unless parents or adult students 18 years of age or older specifically request that such information not be released.

Bates Technical College does not release directory information for commercial purposes. Parents of students under age 18 or adult students currently attending Bates should complete a form in the registration office if they do not wish to have directory information released.

### Student Right-To-Know

The Federal Student Right-To-Know and Campus Security Act requires institutions of higher education to report the percentages of completion and graduation rates for students registered full time, first time entering college, and degree or certificate students. Title 11 of this law, the Crime Awareness and Campus Security Act of 1990, requires publication of campus crime statistics and campus security policies. The third part of the law requires disclosure of student loan default rates.

These and other important, relevant statistics for each program, each campus, and the entire college can be viewed on the following websites:  
[nces.ed.gov/collegenavigator](http://nces.ed.gov/collegenavigator) (completion and

graduate rates), [ope.ed.gov/security](http://ope.ed.gov/security) (campus security data), and [www.ed.gov/about/offices/list/fsa](http://www.ed.gov/about/offices/list/fsa) (federal student aid).

Copies of these reports are also available in student services and the Registration Office. These reports reflect past student participation, completion rates, and placement wages ninety days after completion.

### Policy Prohibiting Hazing

Hazing is prohibited at Bates. Consistent with state law, hazing is defined as any method of initiation into a student organization or group that causes or is likely to cause bodily danger or physical, mental, or emotional harm.

Examples of prohibited activities, regardless of location, include but are not limited to: forced consumption of alcohol or drugs, excessive exercise, activities that may threaten an individual's health, or compelling individuals to engage in activities which violate Bates' Student Code of Rights and Responsibilities.

### Sexual Harassment Policy

All students must be allowed to learn in an environment free from sexual harassment. Sexual harassment may include unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature carried out by someone in the workplace or educational setting. Such behavior may offend the recipient, cause discomfort or humiliation, and interfere with job or school performance.

It is Bates' policy that sexual harassment is unacceptable conduct and will not be tolerated. Anyone violating this policy is subject to disciplinary procedures. Bates is committed to communicating this policy to all staff and students, and to investigating and resolving promptly any complaints of sexual harassment. If a student feels his/her rights have been violated, he/she should contact Student Services or Human Resources.

Degree Title	Degree Type	Required Credits	Program Length	Cred per qtr	Rounded	Tuition per qtr	Fees per qtr	Fee per credit	Class fees per qtr	Class fee per course	Courses per quarter	Course fee per quarter	Quarterly program fee	Qtrl Total	Program Total
ACCOUNTING	AAS	90	4	22.5	23.0	\$ 1,758.70	\$ 266.20		\$ -			\$ -		\$ 2,024.90	\$ 8,099.60
BOOKKEEPING	COC	45	3	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -			\$ -		\$ 1,383.10	\$ 4,149.30
ADMINISTRATIVE MEDICAL	COC	76	4	19.0	19.0	\$ 1,353.02	\$ 266.20	\$ 12.00	\$ 228.00			\$ -		\$ 1,847.22	\$ 7,388.88
ADMINISTRATIVE MEDICAL	AAS	99	6	16.5	17.0	\$ 1,206.70	\$ 266.20	\$ 12.00	\$ 204.00			\$ -		\$ 1,676.90	\$ 10,061.40
ADMINISTRATIVE OFFICE	AAS	93	6	15.5	16.0	\$ 1,161.80	\$ 266.20		\$ -			\$ -		\$ 1,428.00	\$ 8,568.00
BASIC OFFICE SUPPORT	COC	61	4	15.3	16.0	\$ 1,161.80	\$ 266.20		\$ -			\$ -		\$ 1,428.00	\$ 5,712.00
OFFICE FUNDAMENTALS	CoT	26	2	13.0	13.0	\$ 1,027.10	\$ 266.20		\$ -			\$ -		\$ 1,293.30	\$ 2,586.60
ARCHITECTURAL WOODWORKING/CABINET MAKING TECHNOLOGY	AAS	112	6	18.7	19.0	\$ 1,353.02	\$ 266.20	\$ 5.00	\$ 95.00			\$ -		\$ 1,714.22	\$ 10,285.32
PRODUCTION CABINET MAKING	COC	79	4	19.8	20.0	\$ 1,454.44	\$ 266.20	\$ 5.00	\$ 100.00					\$ 1,820.64	\$ 7,282.56
AUTO BODY REBUILDING AND	AAS	116	7	16.6	17.0	\$ 1,206.70	\$ 266.20	\$ 1.00	\$ 17.00			\$ -		\$ 1,489.90	\$ 10,429.30
AUTO BODY REPAIR	COC	116	7	16.6	17.0	\$ 1,206.70	\$ 266.20	\$ 1.00	\$ 17.00			\$ -		\$ 1,489.90	\$ 10,429.30
AUTOMOTIVE REFINISHING	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 1.00	\$ 20.00			\$ -		\$ 1,740.64	\$ 1,740.64
AUTOMOTIVE TECHNOLOGY	AAS	142	8	17.8	18.0	\$ 1,251.60	\$ 266.20	\$ 2.00	\$ 36.00	\$ 175.00	3.00	\$ 525.00		\$ 2,078.80	\$ 16,630.40
BARBER	COC	75	3	25.0	25.0	\$ 1,961.54	\$ 266.20	\$ 4.00	\$ 100.00			\$ -	\$ 510.00	\$ 2,837.74	\$ 8,513.22
BMST: CLINICAL ENGINEERING	AAS	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20	\$ 7.50	\$ 150.00			\$ -		\$ 1,870.64	\$ 11,223.84
BROADCAST AND VIDEO ELEMENTS	COC	75	4	18.8	19.0	\$ 1,353.02	\$ 266.20	\$ 10.00	\$ 190.00			\$ -		\$ 1,809.22	\$ 7,236.88
BROADCASTING/VIDEO PRODUCTION-ADV.ENG	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20	\$ 10.00	\$ 200.00			\$ -		\$ 1,920.64	\$ 11,523.84
BROADCASTING/VIDEO PRODUCTION-ADV.ENG	AAS	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 10.00	\$ 180.00			\$ -		\$ 1,697.80	\$ 10,186.80
BVP CERTIFICATE OF TRAINING - AUDIO	COT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 10.00	\$ 150.00			\$ -		\$ 1,533.10	\$ 1,533.10
BVP CERTIFICATE OF TRAINING - ENGINEERING	COT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 10.00	\$ 150.00			\$ -		\$ 1,533.10	\$ 1,533.10
BVP CERTIFICATE OF TRAINING - OPERATIONS	COT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 10.00	\$ 150.00			\$ -		\$ 1,533.10	\$ 1,533.10
BVP CERTIFICATE OF TRAINING - PRODUCTION	COT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 10.00	\$ 150.00			\$ -		\$ 1,533.10	\$ 1,533.10
BASIC CARPENTRY I	CoT	16	1	16.0	16.0	\$ 1,161.80	\$ 266.20	\$ 1.50	\$ 24.00			\$ -		\$ 1,452.00	\$ 1,452.00
BASIC CARPENTRY II	CoT	16	1	16.0	16.0	\$ 1,161.80	\$ 266.20	\$ 1.50	\$ 24.00			\$ -		\$ 1,452.00	\$ 1,452.00
CARPENTER TECHNICIAN	COC	77	4	19.3	20.0	\$ 1,454.44	\$ 266.20	\$ 1.50	\$ 30.00			\$ -		\$ 1,750.64	\$ 7,002.56
CARPENTRY	AAS	116	6	19.3	20.0	\$ 1,454.44	\$ 266.20	\$ 1.50	\$ 30.00			\$ -		\$ 1,750.64	\$ 10,503.84
CONCRETE FOUNDATIONS	CoT	14	1	14.0	14.0	\$ 1,072.00	\$ 266.20	\$ 1.50	\$ 21.00			\$ -		\$ 1,359.20	\$ 1,359.20

<b>EXTERIOR FINISHING</b>	CoT	17	1	17.0	17.0	\$ 1,206.70	\$ 266.20	\$ 1.50	\$ 25.50			\$ -		\$ 1,498.40	\$ 1,498.40
<b>INTERIOR FINISHING</b>	CoT	16	1	16.0	16.0	\$ 1,161.80	\$ 266.20	\$ 1.50	\$ 24.00			\$ -		\$ 1,452.00	\$ 1,452.00
<b>WOOD FRAMING</b>	CoT	22	1	22.0	22.0	\$ 1,657.28	\$ 266.20	\$ 1.50	\$ 33.00					\$ 1,956.48	\$ 1,956.48
<b>CULINARY ARTS</b>	AAS	118	6	19.7	20.0	\$ 1,454.44	\$ 266.20	\$ 60.00	\$ 1,200.00			\$ -		\$ 2,920.64	\$ 17,523.84
<b>CULINARY ARTS-LINE COOK</b>	CoT	32	2	16.0	16.0	\$ 1,161.80	\$ 266.20	\$ 60.00	\$ 960.00			\$ -		\$ 2,388.00	\$ 4,776.00
<b>CIVIL AND ENVIRONMENTAL ENGINEERING TECHNOLOGY</b>	AAS-T	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20	\$ 1.80	\$ 32.40			\$ -		\$ 1,550.20	\$ 9,301.20
<b>CIVIL AND ENVIRONMENTAL ENGINEERING TECHNOLOGY</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 1.80	\$ 27.00			\$ -		\$ 1,410.10	\$ 8,460.60
<b>CIVIL DESIGN</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 1.80	\$ 27.00			\$ -		\$ 1,410.10	\$ 1,410.10
<b>MAP ANALYSIS</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 1.80	\$ 27.00			\$ -		\$ 1,410.10	\$ 1,410.10
<b>STRUCTURAL BIM</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 1.80	\$ 27.00					\$ 1,410.10	\$ 1,410.10
<b>CERTIFIED MEDICAL ASSISTANT</b>	AAS	102	6	17.0	17.0	\$ 1,206.70	\$ 266.20	\$ 12.00	\$ 204.00			\$ -		\$ 1,676.90	\$ 10,061.40
<b>COMPUTER NETWORK SUPPORT TECHNICIAN</b>	CoC	45	3	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,563.10	\$ 4,689.30
<b>COMPUTER NETWORKING SYSTEMS TECHNICIAN</b>	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,900.64	\$ 11,403.84
<b>COMPUTER NETWORKING SYSTEMS TECHNICIAN</b>	AAS	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,697.80	\$ 10,186.80
<b>IT TECHNICIAN</b>	CoT	30	2	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,563.10	\$ 3,126.20
<b>COMPUTER SUPPORT</b>	CoT	30	2	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 21.00	\$ 315.00			\$ -		\$ 1,698.10	\$ 3,396.20
<b>CYBERSECURITY</b>	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20	\$ 21.00	\$ 420.00			\$ -		\$ 2,140.64	\$ 12,843.84
<b>CYBERSECURITY</b>	AAS	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 21.00	\$ 378.00			\$ -		\$ 1,895.80	\$ 11,374.80
<b>NETWORK SYSTEM SUPPORT</b>	CoC	60	4	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 21.00	\$ 315.00			\$ -		\$ 1,698.10	\$ 6,792.40
<b>DENTAL LAB TECHNICIAN</b>	AAS	124	6	20.7	21.0	\$ 1,555.86	\$ 266.20	\$ 10.00	\$ 210.00			\$ -		\$ 2,032.06	\$ 12,192.36
<b>DENTAL LAB TECHNICIAN</b>	COC	62	4	15.5	16.0	\$ 1,161.80	\$ 266.20	\$ 10.00	\$ 160.00			\$ -		\$ 1,588.00	\$ 6,352.00
<b>DIESEL AND HEAVY EQUIPMENT TECHNICIAN</b>	AAS	103	6	17.2	18.0	\$ 1,251.60	\$ 266.20	\$ 2.00	\$ 36.00			\$ -		\$ 1,553.80	\$ 9,322.80
<b>DIESEL ENGINES</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 2.00	\$ 30.00			\$ -		\$ 1,413.10	\$ 1,413.10
<b>DIESEL SERVICE TECHNICIAN</b>	COC	90	5	18.0	18.0	\$ 1,251.60	\$ 266.20	\$ 2.00	\$ 36.00			\$ -		\$ 1,553.80	\$ 7,769.00
<b>HEAVY DUTY TRUCK DRIVE</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 2.00	\$ 30.00			\$ -		\$ 1,413.10	\$ 1,413.10
<b>HYDRAULICS/PNEUMATICS</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 2.00	\$ 30.00			\$ -		\$ 1,413.10	\$ 1,413.10
<b>TRUCK AND HEAVY DUTY</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 2.00	\$ 30.00					\$ 1,413.10	\$ 1,413.10
<b>DIGITAL MEDIA</b>	AAS	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20	\$ 13.00	\$ 234.00			\$ -		\$ 1,751.80	\$ 10,510.80
<b>DIGITAL MEDIA</b>	COC	76	4	19.0	19.0	\$ 1,353.02	\$ 266.20	\$ 13.00	\$ 247.00			\$ -		\$ 1,866.22	\$ 7,464.88
<b>DIGITAL MEDIA</b>	AAS-T	111	6	18.5	19.0	\$ 1,353.02	\$ 266.20	\$ 13.00	\$ 247.00			\$ -		\$ 1,866.22	\$ 11,197.32
<b>EDITING</b>	CoT	16	1	16.0	16.0	\$ 1,161.80	\$ 266.20	\$ 13.00	\$ 208.00			\$ -		\$ 1,636.00	\$ 1,636.00
<b>IMAGING</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 13.00	\$ 195.00			\$ -		\$ 1,578.10	\$ 1,578.10
<b>MOBILE STORYTELLING</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 13.00	\$ 195.00			\$ -		\$ 1,578.10	\$ 1,578.10
<b>MOTION GRAPHICS</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 13.00	\$ 195.00			\$ -		\$ 1,578.10	\$ 1,578.10

<b>VIDEO PRODUCTION</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 13.00	\$ 195.00					\$ 1,578.10	\$ 1,578.10
<b>VIRTUAL REALITY AND 3D PRINTING</b>	CoT	14	1	14.0	14.0	\$ 1,072.00	\$ 266.20	\$ 13.00	\$ 182.00					\$ 1,520.20	\$ 1,520.20
<b>VIRTUAL REALITY AND RAPID PROTOTYPING</b>	AAS	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 13.00	\$ 234.00					\$ 1,751.80	\$ 10,510.80
<b>DENTAL ASSISTING</b>	AAS	90	5	18.0	18.0	\$ 1,251.60	\$ 266.20	\$ 12.00	\$ 216.00			\$ -	\$ 290.00	\$ 2,023.80	\$ 10,119.00
<b>DENTURIST</b>	AAS	120	6	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 60.10	\$ 1,202.00			\$ -		\$ 2,922.64	\$ 17,535.84
<b>BUSINESS</b>	DTA	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -			\$ -		\$ 1,383.10	\$ 8,298.60
<b>EARLY CHILDHOOD EDUCATION-AL</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-AL</b>	AAS-T	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-FCC</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-FCC</b>	AAS-T	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-I/TC</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-I/TC</b>	AAS-T	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-SAC</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>EARLY CHILDHOOD EDUCATION-SAC</b>	AAS-T	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 3.00	\$ 45.00			\$ -		\$ 1,428.10	\$ 8,568.60
<b>STATE EARLY CHILDHOOD EDUCATION CERTIFICATE</b>	COC	47	3	15.7	16.0	\$ 1,161.80	\$ 266.20	\$ 3.00	\$ 48.00					\$ 1,476.00	\$ 4,428.00
<b>STATE INITIAL EARLY CHILDHOOD EDUCATION CERTIFICATE</b>	CoT	12	1	12.0	12.0	\$ 982.20	\$ 266.20	\$ 3.00	\$ 36.00					\$ 1,284.40	\$ 1,284.40
<b>STATE SHORT ECE CERTIFICATE OF SPECIALIZATION - GENERAL</b>	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 3.00	\$ 60.00					\$ 1,780.64	\$ 1,780.64
<b>STATE SHORT ECE CERTIFICATE OF SPECIALIZATION - INFANT/TODDLER CARE</b>	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 3.00	\$ 60.00					\$ 1,780.64	\$ 1,780.64
<b>STATE SHORT ECE CERTIFICATE OF SPECIALIZATION - SCHOOL AGE CARE</b>	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 3.00	\$ 60.00					\$ 1,780.64	\$ 1,780.64

<b>STATE SHORT ECE CERTIFICATE OF SPECIALIZATION -FAMILY CHILD CARE</b>	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 3.00	\$ 60.00					\$ 1,780.64	\$ 1,780.64
<b>STATE SHORT EECE CERTIFICATE OF SPECIALIZATION - ADMINISTRATION</b>	CoT	20	1	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 3.00	\$ 60.00					\$ 1,780.64	\$ 1,780.64
<b>COMPUTER NETWORKING SYSTEMS TECHNICIAN</b>	COC	66	4	16.5	17.0	\$ 1,206.70	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,652.90	\$ 6,611.60
<b>ELECTRONIC AND COMMUNICATIONS SYSTEMS TECHNOLOGY</b>	AAS	100	6	16.7	17.0	\$ 1,206.70	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,652.90	\$ 9,917.40
<b>ELECTRONIC EQUIPMENT SERVICE TECHNICIAN</b>	AAS	114	7	16.3	17.0	\$ 1,206.70	\$ 266.20	\$ 7.50	\$ 127.50			\$ -		\$ 1,600.40	\$ 11,202.80
<b>ELECTRICAL CONSTRUCTION</b>	AAS	121	9	13.4	14.0	\$ 1,072.00	\$ 266.20	\$ 3.00	\$ 42.00	\$ 8.00	3.00	\$ 24.00		\$ 1,404.20	\$ 12,637.80
<b>RESIDENTIAL ELECTRICIAN</b>	COC	67	3	22.3	23.0	\$ 1,758.70	\$ 266.20	\$ 3.00	\$ 69.00	\$ 8.00	3.00			\$ 2,093.90	\$ 6,281.70
<b>ENGINEERING TECHNOLOGY</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 15.00	\$ 225.00			\$ -		\$ 1,608.10	\$ 1,608.10
<b>ELECTRICAL ENGINEERING TECHNOLOGY</b>	AAS-T	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 15.00	\$ 270.00			\$ -		\$ 1,787.80	\$ 10,726.80
<b>ELECTRICAL ENGINEERING TECHNOLOGY</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 15.00	\$ 225.00			\$ -		\$ 1,608.10	\$ 9,648.60
<b>BOILER OPERATIONS</b>	CoT	17	1	17.0	17.0	\$ 1,206.70	\$ 266.20	\$ 2.25	\$ 38.25			\$ -		\$ 1,511.15	\$ 1,511.15
<b>BUILDING/CARE MAINTENANCE</b>	COC	69	4	17.3	18.0	\$ 1,251.60	\$ 266.20	\$ 2.25	\$ 40.50			\$ -		\$ 1,558.30	\$ 6,233.20
<b>BUILDING/CARE MAINTENANCE I</b>	CoT	19	1	19.0	19.0	\$ 1,353.02	\$ 266.20	\$ 2.25	\$ 42.75			\$ -		\$ 1,661.97	\$ 1,661.97
<b>BUILDING/CARE MAINTENANCE II</b>	CoT	17	1	17.0	17.0	\$ 1,206.70	\$ 266.20	\$ 2.25	\$ 38.25			\$ -		\$ 1,511.15	\$ 1,511.15
<b>FACILITIES MAINTENANCE ENGINEER</b>	AAS	117	6	19.5	20.0	\$ 1,454.44	\$ 266.20	\$ 2.25	\$ 45.00			\$ -		\$ 1,765.64	\$ 10,593.84
<b>MAINTENANCE TECHNICIAN I</b>	CoT	18	1	18.0	18.0	\$ 1,251.60	\$ 266.20	\$ 12.00	\$ 216.00			\$ -		\$ 1,733.80	\$ 1,733.80
<b>MAINTENANCE TECHNICIAN II</b>	CoT	17	1	17.0	17.0	\$ 1,206.70	\$ 266.20	\$ 12.00	\$ 204.00			\$ -		\$ 1,676.90	\$ 1,676.90
<b>FIRE RECRUIT ACADEMY</b>	CoT	22	2	11.0	11.0	\$ 937.30	\$ 266.20		\$ -			\$ -		\$ 1,203.50	\$ 2,407.00
<b>FIRE SERVICE</b>	AAS	100	6	16.7	17.0	\$ 1,206.70	\$ 266.20		\$ -			\$ -	\$ 175.00	\$ 1,647.90	\$ 9,887.40
<b>FIRE SERVICE SUPERVISION</b>	AAS	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20		\$ -			\$ -		\$ 1,517.80	\$ 9,106.80
<b>WILDLAND FIREFIGHTER II</b>	CoT	2	1	2.0	2.0	\$ 178.48	\$ 42.36		\$ -					\$ 220.84	\$ 220.84
<b>HEARING AID SPECIALIST</b>	AAS	110	6	18.3	19.0	\$ 1,353.02	\$ 266.20		\$ -			\$ -	\$ 40.00	\$ 1,659.22	\$ 9,955.32
<b>HVAC/R SUPPORT TECHNICIAN</b>	COC	99	6	16.5	17.0	\$ 1,206.70	\$ 266.20		\$ -			\$ -	\$ 100.00	\$ 1,572.90	\$ 9,437.40
<b>HVAC/R TECHNICIAN</b>	AAS	103	6	17.2	18.0	\$ 1,251.60	\$ 266.20		\$ -			\$ -	\$ 100.00	\$ 1,617.80	\$ 9,706.80
<b>BASIC ELECTRICITY</b>	CoT	14	1	14.0	14.0	\$ 1,072.00	\$ 266.20		\$ -			\$ -	\$ 50.00	\$ 1,388.20	\$ 1,388.20
<b>ELECTRICAL TECHNICIAN</b>	COC	57	4	14.3	15.0	\$ 1,116.90	\$ 266.20		\$ -			\$ -	\$ 50.00	\$ 1,433.10	\$ 5,732.40
<b>ELECTRONICS TECHNICIAN</b>	CoT	30	2	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -			\$ -	\$ 50.00	\$ 1,433.10	\$ 2,866.20



<b>INDUSTRIAL ELECTRONICS AND ROBOTICS TECHNICIAN</b>	AAS	119	7	17.0	17.0	\$ 1,206.70	\$ 266.20		\$ -			\$ -	\$ 50.00	\$ 1,522.90	\$ 10,660.30
<b>COMPUTER REPAIR TECHNICIAN</b>	CoC	30	2	15.0	15.0	\$ 1,116.90	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,563.10	\$ 3,126.20
<b>INFORMATION TECHNOLOGY SPECIALIST</b>	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,900.64	\$ 11,403.84
<b>INFORMATION TECHNOLOGY SPECIALIST</b>	CoC	75	4	18.8	19.0	\$ 1,353.02	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,799.22	\$ 7,196.88
<b>INFORMATION TECHNOLOGY SPECIALIST</b>	AAS	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20		\$ -	\$ 60.00	3.00	\$ 180.00		\$ 1,697.80	\$ 10,186.80
<b>CNC OPERATOR-COT</b>	COT	14	1	14.0	14.0	\$ 1,072.00	\$ 266.20	\$ 13.00	\$ 182.00			\$ -		\$ 1,520.20	\$ 1,520.20
<b>MACHINIST</b>	AAS	97	6	16.2	17.0	\$ 1,206.70	\$ 266.20	\$ 12.00	\$ 204.00			\$ -		\$ 1,676.90	\$ 10,061.40
<b>TOOLMAKING TECHNOLOGY-COT</b>	CoT	15	1	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 12.00	\$ 180.00					\$ 1,563.10	\$ 1,563.10
<b>MARKETING - TRACK A: MARKETING</b>	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20		\$ -			\$ -		\$ 1,720.64	\$ 10,323.84
<b>MARKETING - TRACK A: MARKETING</b>	AAS	110	6	18.3	19.0	\$ 1,353.02	\$ 266.20		\$ -			\$ -		\$ 1,619.22	\$ 9,715.32
<b>MARKETING - TRACK B: BUSINESS MANAGEMENT</b>	AAS-T	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20		\$ -			\$ -		\$ 1,720.64	\$ 10,323.84
<b>MARKETING - TRACK B: BUSINESS MANAGEMENT</b>	AAS	110	6	18.3	19.0	\$ 1,353.02	\$ 266.20		\$ -			\$ -		\$ 1,619.22	\$ 9,715.32
<b>MECHANICAL ENGINEERING TECHNOLOGY</b>	AAS-T	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20	\$ 15.00	\$ 270.00			\$ -		\$ 1,787.80	\$ 10,726.80
<b>MECHANICAL ENGINEERING TECHNOLOGY</b>	AAS-T	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20	\$ 15.00	\$ 270.00			\$ -		\$ 1,787.80	\$ 10,726.80
<b>MECHANICAL ENGINEERING TECHNOLOGY</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 15.00	\$ 225.00			\$ -		\$ 1,608.10	\$ 9,648.60
<b>MECHANICAL ENGINEERING TECHNOLOGY</b>	AAS	90	6	15.0	15.0	\$ 1,116.90	\$ 266.20	\$ 15.00	\$ 225.00			\$ -		\$ 1,608.10	\$ 9,648.60
<b>OCCUPATIONAL THERAPY ASSISTANT</b>	AAS	120	6	20.0	20.0	\$ 1,454.44	\$ 266.20	\$ 10.00	\$ 200.00			\$ -		\$ 1,920.64	\$ 11,523.84
<b>PRACTICAL NURSE</b>	AAS	122	6	20.3	21.0	\$ 1,555.86	\$ 266.20	\$ 15.00	\$ 315.00	\$ 110.00	1.00	\$ 110.00	\$ 210.00	\$ 2,457.06	\$ 14,742.36
<b>MOTORCYCLE AND MARINE TECHNOLOGY DEGREE</b>	AAS	106	6	17.7	18.0	\$ 1,251.60	\$ 266.20	\$ 1.50	\$ 27.00			\$ -		\$ 1,544.80	\$ 9,268.80
<b>POWER SPORTS AND EQUIPMENT TECHNICIAN -C/E</b>	COC	76	4	19.0	19.0	\$ 1,353.02	\$ 266.20	\$ 1.50	\$ 28.50			\$ -		\$ 1,647.72	\$ 6,590.88
<b>POWERSPORTS AND EQUIPMENT TECHNICIAN E/E</b>	COC	76	4	19.0	19.0	\$ 1,353.02	\$ 266.20	\$ 1.50	\$ 28.50			\$ -		\$ 1,647.72	\$ 6,590.88

<b>SHEET METAL PRODUCTION SUPPORT</b>	COT	44	3	14.7	15.0	\$ 1,116.90	\$ 266.20	\$ 4.00	\$ 60.00					\$ 1,443.10	\$ 4,329.30
<b>SHEET METAL RESIDENTIAL INSTALLER</b>	CoT	46	3	15.3	16.0	\$ 1,161.80	\$ 266.20	\$ 4.00	\$ 64.00					\$ 1,492.00	\$ 4,476.00
<b>SHEET METAL TECHNICIAN</b>	COC	93	5	18.6	19.0	\$ 1,353.02	\$ 266.20	\$ 4.00	\$ 76.00					\$ 1,695.22	\$ 8,476.10
<b>SHEET METAL TECHNOLOGY</b>	AAS	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20	\$ 4.00	\$ 80.00					\$ 1,800.64	\$ 10,803.84
<b>SHEET METAL TECHNOLOGY</b>	COC	115	6	19.2	20.0	\$ 1,454.44	\$ 266.20	\$ 4.00	\$ 80.00					\$ 1,800.64	\$ 10,803.84
<b>BUSINESS AND DATA ANALYTICS CERTIFICATE</b>	COC	35	2	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 3.00	\$ 54.00	\$ 60.00	3.00			\$ 1,571.80	\$ 3,143.60
<b>BUSINESS DATA ANALYTICS</b>	CoT	35	2	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 3.00	\$ 54.00	\$ 60.00	3.00			\$ 1,571.80	\$ 3,143.60
<b>SOFTWARE DEVELOPMENT</b>	AAS-T	105	6	17.5	18.0	\$ 1,251.60	\$ 266.20	\$ 3.00	\$ 54.00	\$ 60.00	3.00			\$ 1,571.80	\$ 9,430.80
<b>SOFTWARE DEVELOPMENT</b>	AAS	95	6	15.8	16.0	\$ 1,161.80	\$ 266.20	\$ 3.00	\$ 48.00	\$ 60.00	3.00			\$ 1,476.00	\$ 8,856.00
<b>SOFTWARE DEVELOPMENT ELEMENTS CERTIFICATE</b>	COC	65	4	16.3	17.0	\$ 1,206.70	\$ 266.20	\$ 3.00	\$ 51.00	\$ 60.00	3.00			\$ 1,523.90	\$ 6,095.60
<b>COMMERCIAL TRUCK DRIVING</b>	CoT	44	2	22.0	22.0	\$ 1,657.28	\$ 266.20	\$ 45.00	\$ 990.00			\$ -	\$ 77.50	\$ 2,990.98	\$ 5,981.96
<b>WELDER</b>	COC	103	6	17.2	18.0	\$ 1,251.60	\$ 266.20		\$ -	\$ 33.00	3.00			\$ 1,517.80	\$ 9,106.80
<b>WELDER I</b>	CoT	32	2	16.0	16.0	\$ 1,161.80	\$ 266.20		\$ -	\$ 33.00	3.00			\$ 1,428.00	\$ 2,856.00
<b>WELDER II</b>	CoT	31	2	15.5	16.0	\$ 1,161.80	\$ 266.20		\$ -	\$ 33.00	3.00			\$ 1,428.00	\$ 2,856.00
<b>WELDING</b>	AAS	120	7	17.1	18.0	\$ 1,251.60	\$ 266.20		\$ -	\$ 33.00	3.00			\$ 1,517.80	\$ 10,624.60

## Program: Accounting

Accounting is the process that summarizes economic information about a business entity for use by decision makers. Users of this information include investors, creditors, management and government agencies. The accounting program at Bates Technical College provides training in many types of accounting; such as financial, managerial, payroll, individual taxation, and governmental accounting. Graduates are prepared for careers as accounting clerks, full charge bookkeepers, tax preparers, and small business accountants. General Education courses provide training in understanding diversity in the workplace, effective oral and written communication and human relations skills.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Use financial statements to make decisions
2	Prepare and evaluate financial statements according to generally accepted accounting principles
3	Perform basic accounting operations
4	Evaluate accounting systems
5	Prepare master budgets
6	Apply established auditing concepts
7	Analyze management control systems
8	Analyze transition cycles
9	Analyze and communicate the effects of basic tax rules on individuals, partnerships and corporations
10	Prepare basic tax returns for individuals and businesses
11	File tax returns for individuals and businesses
12	Identify accounting, tax, auditing and ethical issues in structure problems and unstructured fact-based situations
13	Perform research relating to the accounting field
14	Use a range of techniques to analyze information
15	Use software to improve efficiency and internal control

## Program: Accounting

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
ACCOUNTING AAS (90)	1	Required Courses	ACCT&201	Principles of Accounting I		5
		BUS&101	Introduction to Business		5	
		INFO101	Computer Application Essentials		5	
	2	Required Courses	ACCT&202	Principles of Accounting II		5
			ACCT205	Excel for Accounting		5
			ACCT220	Payroll Accounting		5
			BUS&201	Business Law		5
	3	Required Courses	ACCT&203	Principles of Accounting III		5
			ACCT207	QuickBooks		5
			ACCT230	Governmental Accounting		5
			ACCT235	Intermediate Accounting Topics		5
			BUS102	Business Communications		5
	4	Required Courses	ACCT225	Federal Income Tax		5
	6	Required Courses	ACCT207	Quickbooks		5
		Required Courses	ECON&201	Microeconomics		5

## Program: Accounting

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (10 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		ECON&201	MICROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH172	APPLIED BUSINESS MATH	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
	MATH&146		INTRODUCTION TO STATS	5	
	MATH&151		CALUCLUS I	5	
	MATH&152		CALCULUS II	5	

## Program: Accounting

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BOOKKEEPING COC (45)	1	Required Courses	ACCT&201	Principles of Accounting I		5
			INFO101	Computer Application Essentials		5
	2	Required Courses	ACCT&202	Principles of Accounting II		5
			ACCT205	Excel for Accounting		5
			ACCT220	Payroll Accounting		5
	3	Required Courses	ACCT207	QuickBooks		5
	6	Required Courses	ACCT207	Quickbooks		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options	Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCULUS I		5		
MATH&152	CALCULUS II	5			
MATH&153	CALCULUS III	5			

## Program: Administrative Medical Assistant

Students prepare for careers as integral members of a healthcare team in an outpatient setting. Competency-based activities in the program provide extensive hands-on practice for students in the use of computer application skills to create and handle medical information. Medical transcription, Electronic health records, medical terminology, patient administrative services, and professional ethics are presented with emphasis on the billing procedures of the insurance industry. The program also provides extended learning opportunities for persons previously or currently employed in related professions. In addition, work-based learning experiences are available in many medical settings and/or dental settings that support the theory presented in the classroom.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Demonstrate ethical behaviors, such as confidentiality, empathy and understanding in the workplace
- 2 Perform medical administrative tasks, medical transcription, and electronic health records
- 3 Use terminology related to human anatomy, physiology, common disease process and common medical procedures performed in the medical office setting
- 4 Use software associated with the medical workplace
- 5 Obtain skills in the management of multiple tasks and oral and written communication
- 6 Enhance career opportunities and employment skills expected for an entry-level medical office professional

## Program: Administrative Medical Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
ADMINISTRATIVE MEDICAL ASSISTANT AAS (98-99)	1	Required Courses	AMA110	Computer Basics		1
		AMA111	Introduction to Word Processing		3	
		AMA112	Fundamentals of Medical Terminology		4	
		AMA113	Healthcare Communications		5	
	2	Required Courses	AMA114	Introduction to the Health Care Profession		5
			AMA115	Digital Media Transcription		3
			AMA116	Medical Office Procedures		3
			AMA117	Beginning Medical Terminology	AMA112	4
	3	Required Courses	AMA118	Administrative Medical Concepts	AMA114	4
			AMA119	Advanced Medical Office Procedures		3
			AMA120	Introduction to Spreadsheets		3
			AMA121	Intermediate Medical Terminology	AMA117	4
	4	Required Courses	AMA122	Intermediate Administrative Medical Concepts	AMA114, AMA118	4
			AMA123	Electronic Health Records		4
			AMA124	First Aid/CPR		1
			AMA125	Practice Management System Applications		2
			AMA127	Medical Insurance and Reimbursement		4
			AMA128	Advanced Medical Terminology - Pathophysiology	AMA112, AMA117, AMA121	4
	5	Required Courses	AMA126	Advanced Administrative Medical Concepts		4
			AMA129	Medical Coding Applications	AMA112, AMA117, AMA121, AMA128	4
			AMA133	HIV Prevention Education		1
		Electives	AMA135	Practical Applications		3
			AMA296	Work-based Learning Experience		2
			AMA297	Work-based Learning Seminar		1
	6	Required Courses	AMA130	Medical Office Supervision and Management		3
			AMA131	Interview Techniques		3
			AMA134	Healthcare Credentialing		2
		Electives	AMA132	Phlebotomy		3



## Program: Administrative Medical Assistant

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	1 2 ...		
		ENGL&101	ENGLISH COMPOSITION I	1 2 ...		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	1 2 ...		
		BIOL&175	HUMAN BIOLOGY WITH LAB	1 2 ...		
		BIOL&241	ANATOMY & PHYSIOLOGY I	1 2 ...		
		BIOL&242	HUMAN A&P II	1 2 ...		
		BIOL&260	MICROBIOLOGY	1 2 ...		
		CHEM&121	INTRODUCTION CHEMISTRY	1 2 ...		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	1 2 ...		
		CMST&102	INTRO TO MASS MEDIA	1 2 ...		
		CMST&152	INTERCULTURAL COMM	1 2 ...		
		CMST&210	INTERPERSONAL COMMUNICTN	1 2 ...		
		CMST&220	PUBLIC SPEAKING	1 2 ...		
		CMST&230	SML GROUP COMMUNICATIONS	1 2 ...		
		ECON&201	MICROECONOMICS	1 2 ...		
		ECON&202	MACROECONOMICS	1 2 ...		
		HIST101	HISTORY-SCIENCE/TECH	1 2 ...		
		HREL111	COLLEGE/JOB SRCH SUCCESS	1 2 ...		
		NUTR&101	INTRO TO NUTRITION	1 2 ...		
		PHYS&221	ENGINEERING PHYS I W/LAB	1 2 ...		
		PHYS&222	ENGINEER PHYS II W/LAB	1 2 ...		
		PHYS&223	ENGINEER PHYS III W/LAB	1 2 ...		
		POLS&101	INTRO TO POL SCIENCE	1 2 ...		
		PSYC&100	GENERAL PSYCHOLOGY	1 2 ...		
		PSYC&200	LIFESPAN PSYCHOLOGY	1 2 ...		
		SOC&101	INTRO TO SOCIOLOGY	1 2 ...		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	1 2 ...
				MATH172	APPLIED BUSINESS MATH	1 2 ...
				MATH174	MATH FOR ALLIED HEALTH	1 2 ...
MATH&107	MATH IN SOCIETY			1 2 ...		
MATH&141	PRECALCULUS I			1 2 ...		
MATH&142	PRECALCULUS II			1 2 ...		
MATH&146	INTRODUCTION TO STATS			1 2 ...		
MATH&151	CALUCLUS I			1 2 ...		
MATH&153	CALCULUS III	1 2 ...				

## Program: Administrative Medical Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
ADMINISTRATIVE MEDICAL ASSISTANT COC (76)	1	Required Courses	AMA110	Computer Basics		1
			AMA111	Introduction to Word Processing		3
			AMA112	Fundamentals of Medical Terminology		4
			AMA113	Healthcare Communications		5
	2	Required Courses	AMA114	Introduction to the Health Care Profession		5
			AMA115	Digital Media Transcription		3
			AMA116	Medical Office Procedures		3
			AMA117	Beginning Medical Terminology	AMA112	4
	3	Required Courses	AMA118	Administrative Medical Concepts	AMA114	4
			AMA119	Advanced Medical Office Procedures		3
			AMA120	Introduction to Spreadsheets		3
			AMA121	Intermediate Medical Terminology	AMA117	4
	4	Required Courses	AMA122	Intermediate Administrative Medical Concepts	AMA114, AMA118	4
			AMA123	Electronic Health Records		4
			AMA124	First Aid/CPR		1
			AMA125	Practice Management System Applications		2
			AMA127	Medical Insurance and Reimbursement		4
			AMA128	Advanced Medical Terminology - Pathophysiology	AMA112, AMA117, AMA121	4

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options	Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCULUS I		5		
MATH&152	CALCULUS II	5			
MATH&153	CALCULUS III	5			

## Program: Administrative Office Assistant

Prepare for a career as an office or administrative assistant, or a variety of office support positions. Students learn fundamental skills in Microsoft Word, Excel, Outlook, PowerPoint, Access, business writing, and office procedures. Students receive practical experience in several areas, including grammar, keyboarding, employment preparation, and often gain work-based learning experience in temporary internships at local businesses or in residence at the college. The program also provides extended learning opportunities for persons previously or currently employed in related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Possess appropriate technological skills including: operating systems, word processing (including keyboarding), spreadsheets, database management and the Internet as a research tool
- 2 Demonstrate accurate text and data entry using an ergonomic keyboard
- 3 Use appropriate office procedures as it relates to the workplace environment
- 4 Compose complex business correspondence including memos, emails, letters, resumes and reports
- 5 Demonstrate excellent communication skills including speaking, writing and presenting of information
- 6 Use standard ARMA rules in records management for both electronic and paper documents

## Program: Administrative Office Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
ADMINISTRATIVE OFFICE ASSISTANT AAS (93)	1	Required Courses	ACCT&201	Principles of Accounting I		5
		AOA102	Professional Office Procedures		5	
		AOA106	MS Windows		1	
		AOA110	MS Word I		5	
		AOA112	Business Grammar I		1	
	2	Required Courses	AOA108	Records Management		4
			AOA111	MS Outlook		2
			AOA126	Business Grammar II		1
			AOA203	MS Excel I		5
	3	Required Courses	ACCT207	QuickBooks		5
			AOA105	Keyboarding I		5
			AOA121	MS Word II		5
			AOA132	Business Grammar III		1
			AOA205	MS Access I		3
	4	Required Courses	AOA103	Telecommunications		1
			AOA109	Business Ethics		2
			AOA202	Business Grammar IV		1
			AOA204	MS PowerPoint		3
			AOA223	MS Excel II		5
		Electives	AOA298	Work-Based Learning Experience		2
	5	Required Courses	AOA120	Keyboarding II		5
			AOA124	Business Presentations		3
			AOA207	Business Grammar V		1
Electives		AOA291	Practical Applications		2	
6	Required Courses	ACCT207	Quickbooks		5	
		AOA123	Applied Technical Communications		5	
		AOA217	Business Grammar VI		1	
		AOA234	Employment Preparation		1	
		AOA240	Capstone Project		2	
	Electives	AOA296	Work-Based Learning Experience		1	
		AOA297	Work-Based Learning Seminar		1	

## Program: Administrative Office Assistant

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH174	MATH FOR ALLIED HEALTH	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
	MATH&151		CALUCLUS I	5	
	MATH&153	CALCULUS III	5		

## Program: Administrative Office Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BASIC OFFICE SUPPORT COC (61)	1	Required Courses	AOA102	Professional Office Procedures		5
		AOA106	MS Windows		1	
		AOA110	MS Word I		5	
		AOA112	Business Grammar I		1	
	2	Required Courses	AOA108	Records Management		4
		AOA111	MS Outlook		2	
		AOA126	Business Grammar II		1	
		AOA203	MS Excel I		5	
	3	Required Courses	AOA105	Keyboarding I		5
		AOA132	Business Grammar III		1	
		AOA205	MS Access I		3	
	4	Required Courses	AOA103	Telecommunications		1
AOA109		Business Ethics		2		
AOA202		Business Grammar IV		1		
AOA204		MS PowerPoint		3		
6	Required Courses	AOA123	Applied Technical Communications		5	
	AOA234	Employment Preparation		1		

## Program: Administrative Office Assistant

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
				MATH&152	CALCULUS II	5
MATH&153	CALCULUS III	5				

## Program: Administrative Office Assistant

Degree	Quarter		Course ID	Title	Prerequisites	Credits
OFFICE FUNDAMENTALS CoT (26)	1	Required Courses	AOA102	Professional Office Procedures		5
			AOA106	MS Windows		1
			AOA110	MS Word I		5
			AOA112	Business Grammar I		1
	2	Required Courses	AOA111	MS Outlook		2
			AOA126	Business Grammar II		1
			AOA203	MS Excel I		5
	3	Required Courses	AOA105	Keyboarding I		5
	6	Required Courses	AOA234	Employment Preparation		1



## Program: Architectural Woodworking/Cabinet Making Technology

Students prepare for careers in cabinet making and millwork crafts, in positions such as wood pattern maker, cabinet maker, door assembler, solid surface fabricator, cabinet and millwork installer, project manager, sander, utility worker, wood pattern maker and machine operator. Shop activities are an integral part of the program and provide training and practical applications in complex joinery, finishing, and installation. Students work with wood and high-tech laminates, perform component design and fabrication, and learn the use of tools and equipment. This is a pre-apprenticeship program for the Seattle/Tacoma Millmen and Cabinet Makers Apprenticeship Committee. This program also provides extended learning opportunities for persons previously or currently employed in these and other related occupations.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Perform cabinetmaking activities to industry standards
- 2 Interpret drawings for production planning and estimating
- 3 Select, maintain, and operate hand tools, portable power tools, and stationary machinery
- 4 Select various grades of lumber and building materials
- 5 Perform sanding and adhesive operations to industry standards
- 6 Select and apply finishes and hardware used in manufacturing of furniture, cabinets and millwork
- 7 Produce cabinets and other architectural specialties including millwork and moldings to be installed in residential and commercial applications
- 8 Apply mathematical solutions for cabinetmaking applications

## Program: Architectural Woodworking/Cabinet Making Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ARCHITECTURAL WOODWORKING/CABINET MAKING TECHNOLOGY AAS (112)	1	Required Courses	ARWC101	Introduction to Cabinetmaking		3
			ARWC102	Safety Principles		4
			ARWC104	Materials		4
			ARWC105	Machine Tools I		4
			ARWC109	Hand Tools		3
			ARWC111	Tool Maintenance/Sharpening		3
	2	Required Courses	ARWC103	Cabinetry Blueprints/ Plans		4
			ARWC108	Portable Power Tools		3
			ARWC110	Basic Cabinet Joinery		4
			ARWC112	Cabinetmaking / Face Frame Construction I		4
			ARWC118	Occupational Math		3
	3	Required Courses	ARWC106	Machine Tools II		4
			ARWC107	Machine Tools / CNC		3
			ARWC113	Cabinetmaking / Face Frame Construction II		4
			ARWC116	Drawers and Doors		2
			ARWC119	Jigs and Fixtures		2
	4	Required Courses	ARWC114	Cabinetmaking / 32mm System		3
			ARWC115	Finishing Methods I		3
			ARWC117	Laminates / Countertops / Solid Surface		3
			ARWC120	Cabinetmaking / Commercial Construction		3
			ARWC204	Cabinet Installation - Residential / Commercial		4
			ARWC207	Veneering Technology		2
	5	Required Courses	ARWC202	Architectural Millwork		3
			ARWC203	Beginning Furniture Projects		5
			ARWC205	Advanced Joinery		4
			ARWC206	Cabinetmaking Computer Technology		4
	6	Required Courses	ARWC201	Wood Bending/Lamination Techniques		3
			ARWC208	Employment Preparation		3
			ARWC209	Advanced Projects		5
Electives	Electives	ARWC291	Practical Applications			
		ARWC292	Independent Project I		5	
		ARWC293	Independent Project II		5	
		ARWC294	Independent Project III	INSTR PERM REQ	5	
		ARWC296	Work-Based Learning Experience I	INSTR PERM REQ		
		ARWC297	Work-Based Learning Experience II	INSTR PERM REQ		

## Program: Architectural Woodworking/Cabinet Making Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Architectural Woodworking/Cabinet Making Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
PRODUCTION CABINET MAKING COC (79)	1	Required Courses	ARWC101	Introduction to Cabinetmaking		3
			ARWC102	Safety Principles		4
			ARWC104	Materials		4
			ARWC105	Machine Tools I		4
			ARWC109	Hand Tools		3
			ARWC111	Tool Maintenance/Sharpening		3
	2	Required Courses	ARWC103	Cabinetry Blueprints/ Plans		4
			ARWC108	Portable Power Tools		3
			ARWC110	Basic Cabinet Joinery		4
			ARWC112	Cabinetmaking / Face Frame Construction I		4
			ARWC118	Occupational Math		3
	3	Required Courses	ARWC106	Machine Tools II		4
			ARWC107	Machine Tools / CNC		3
			ARWC113	Cabinetmaking / Face Frame Construction II		4
			ARWC116	Drawers and Doors		2
			ARWC119	Jigs and Fixtures		2
	4	Required Courses	ARWC114	Cabinetmaking / 32mm System		3
			ARWC115	Finishing Methods I		3
			ARWC117	Laminates / Countertops / Solid Surface		3
			ARWC120	Cabinetmaking / Commercial Construction		3

## Program: Architectural Woodworking/Cabinet Making Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III			5		

## Program: Auto Body Rebuilding and Refinishing

Students prepare for entry-level employment in the auto body rebuilding and refinishing industry, serving independent auto shops, automotive dealerships, government agencies, utility firms, and other companies that maintain vehicle fleets. Positions include auto body repairer, automotive refinisher, frame repairer, glass installer, painter, renovator, and shop estimator. Upon successful completion of the program, students can qualify to take the I-CAR steel welding qualification test. The program also provides extended learning opportunities for persons previously or currently employed in related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Identify automobile parts and systems, and understand their operation, including supplemental restraint systems
2	Set up and operate various types of frame and unibody straightening equipment
3	Perform frame and unibody measuring using both manual and computerized measuring systems
4	Restore damaged frames and unibodies to factory specifications using the latest pulling systems
5	Perform structural sectioning of unibody components, using I-CAR approved procedures
6	Remove, replace and align sheet metal parts, suspension components, and replace automotive glass
7	Apply a variety of automotive finish materials
8	Participate in complete refinishing of automobiles, along with all aspects of spot repair and panel refinishing utilizing refinish materials and equip.
9	Perform compounding and polishing operations on both new and old automobile finishes
10	Perform interior and exterior detailing of automobiles
11	Estimate repair cost related to collision damage
12	Service automotive electrical systems
13	Perform structural and non-structural welds with wire feed welders to industry standards
14	Understand hazardous waste management
15	Demonstrate shop safety practices

## Program: Auto Body Rebuilding and Refinishing

Degree	Quarter		Course ID	Title	Prerequisites	Credits
AUTO BODY REBUILDING AND REFINISHING AAS (116)	1	Required Courses	AUTOB101	Auto Body Math Applications		3
			AUTOB102	Safety Principles		3
			AUTOB103	Materials Identification		3
			AUTOB111	Introduction to Surface Preparation	AUTOB102, AUTOB103	2
			AUTOB112	Surface Preparation Applications	AUTOB102, AUTOB103	5
	2	Required Courses	AUTOB104	Minor Body Repair Methods	AUTOB102, AUTOB103	5
			AUTOB107	Alignment - Bumpers	AUTOB102, AUTOB103	3
			AUTOB108	Alignment - Head Lamps	AUTOB102, AUTOB103	1
			AUTOB109	Trim and Accessories	AUTOB102, AUTOB103	3
			AUTOB110	Window Mechanisms	AUTOB102, AUTOB103	4
	3	Required Courses	AUTOB105	Major Panel Replacement	AUTOB102, AUTOB103	5
			AUTOB106	Alignment - Sheet Metal	AUTOB102, AUTOB103	5
			AUTOB113	Advanced Surface Preparations	AUTOB102, AUTOB103, AUTOB112	5
	4	Required Courses	AUTOB209	Shop Management	AUTOB102, AUTOB103	3
	5	Required Courses	AUTOB201	Topcoat Systems	AUTOB102, AUTOB103	5
			AUTOB206	Glass Installation	AUTOB102, AUTOB103	4
			AUTOB207	Introduction to Plastic Repair	AUTOB102, AUTOB103	2
			AUTOB211	Special Projects	AUTOB102, AUTOB103	4
	6	Required Courses	AUTOB204	Unibody Alignment	AUTOB102, AUTOB103	5
			AUTOB205	Body Over Frame Alignment	AUTOB102, AUTOB103	4
			AUTOB208	Plastic Repair Methods	AUTOB102, AUTOB103, AUTOB207	5
	7	Required Courses	AUTOB202	Topcoat Systems Applications	AUTOB102, AUTOB103, WBAS101	5
			AUTOB203	Shop Welding	AUTOB102, AUTOB103, WBAS101	5
			AUTOB210	Introduction to Estimating	AUTOB102, AUTOB103	4
		Required Courses	WBAS101	Welding Basics		8
		Electives	AUTOB291	Practical Applications	INSTR PERM REQ	18
			AUTOB292	Independent Project I	INSTR PERM REQ	5
			AUTOB293	Independent Project II	INSTR PERM REQ	5
			AUTOB294	Independent Project III	INSTR PERM REQ	5
	AUTOB296		Work-Based Learning Experience I	INSTR PERM REQ	13	
	AUTOB297		Work-Based Learning Experience-Seminar	INSTR PERM REQ	2	
	AUTOB298		Work-Based Learning Experience II	INSTR PERM REQ	13	

## Program: Auto Body Rebuilding and Refinishing

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
MATH&107	MATH IN SOCIETY			5		
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				



## Program: Auto Body Rebuilding and Refinishing

Degree	Quarter		Course ID	Title	Prerequisites	Credits
AUTO BODY REPAIR COC (116)	1	Required Courses	AUTOB101	Auto Body Math Applications		3
			AUTOB102	Safety Principles		3
			AUTOB103	Materials Identification		3
			AUTOB111	Introduction to Surface Preparation	AUTOB102, AUTOB103	2
			AUTOB112	Surface Preparation Applications	AUTOB102, AUTOB103	5
	2	Required Courses	AUTOB104	Minor Body Repair Methods	AUTOB102, AUTOB103	5
			AUTOB107	Alignment - Bumpers	AUTOB102, AUTOB103	3
			AUTOB108	Alignment - Head Lamps	AUTOB102, AUTOB103	1
			AUTOB109	Trim and Accessories	AUTOB102, AUTOB103	3
			AUTOB110	Window Mechanisms	AUTOB102, AUTOB103	4
	3	Required Courses	AUTOB105	Major Panel Replacement	AUTOB102, AUTOB103	5
			AUTOB106	Alignment - Sheet Metal	AUTOB102, AUTOB103	5
			AUTOB113	Advanced Surface Preparations	AUTOB102, AUTOB103, AUTOB112	5
	4	Required Courses	AUTOB209	Shop Management	AUTOB102, AUTOB103	3
	5	Required Courses	AUTOB201	Topcoat Systems	AUTOB102, AUTOB103	5
			AUTOB206	Glass Installation	AUTOB102, AUTOB103	4
			AUTOB207	Introduction to Plastic Repair	AUTOB102, AUTOB103	2
			AUTOB211	Special Projects	AUTOB102, AUTOB103	4
	6	Required Courses	AUTOB204	Unibody Alignment	AUTOB102, AUTOB103	5
			AUTOB205	Body Over Frame Alignment	AUTOB102, AUTOB103	4
			AUTOB208	Plastic Repair Methods	AUTOB102, AUTOB103, AUTOB207	5
	7	Required Courses	AUTOB202	Topcoat Systems Applications	AUTOB102, AUTOB103, WBAS101	5
			AUTOB203	Shop Welding	AUTOB102, AUTOB103, WBAS101	5
			AUTOB210	Introduction to Estimating	AUTOB102, AUTOB103	4
	Required Courses	AUTO291	Welding			
		WBAS101	Welding Basics			8
	Electives	AUTOB292	Independent Project I		INSTR PERM REQ	5
		AUTOB293	Independent Project II		INSTR PERM REQ	5
		AUTOB294	Independent Project III		INSTR PERM REQ	5
		AUTOB296	Work-Based Learning Experience I		INSTR PERM REQ	13
AUTOB297		Work-Based Learning Experience-Seminar		INSTR PERM REQ	2	
AUTOB298		Work-Based Learning Experience II		INSTR PERM REQ	13	

## Program: Auto Body Rebuilding and Refinishing

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&152	CALCULUS II			5		
		MATH&153	CALCULUS III	5		

## Program: Auto Body Rebuilding and Refinishing

Degree	Quarter		Course ID	Title	Prerequisites	Credits
AUTOMOTIVE REFINISHING CoT (20)	1	Required Courses	AUTOB102	Safety Principles		3
			AUTOB111	Introduction to Surface Preparation	AUTOB102, AUTOB103	2
			AUTOB112	Surface Preparation Applications	AUTOB102, AUTOB103	5
	5	Required Courses	AUTOB201	Topcoat Systems	AUTOB102, AUTOB103	5
	7	Required Courses	AUTOB202	Topcoat Systems Applications	AUTOB102, AUTOB103, WBAS101	5

## Program: Automotive Technology

In an active, campus auto service facility, students practice all aspects of the profession, from balancing tires to diagnosing engine problems. Using advanced computerized analyzers, students learn to perform repairs, overhaul engines and transmissions, service fuel injection systems, and much more. Bates' automotive program curriculum aligns with the National Automotive Technicians Education Foundation (NATEF) for both secondary and post-secondary levels. Bates' Automotive Mechanic program instructors are Evaluation Team Leaders for NATEF and evaluate other programs in the Puget Sound area for NATEF membership eligibility. Instruction is configured according to Automotive Service Excellence (ASE) certification requirements, and students are encouraged to take one or more ASE certification tests while completing the program.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Diagnose mechanical malfunctions and performance problems and make necessary repairs
- 2 Operate precision automotive diagnostic and repair equipment
- 3 Interpret repair manuals and computer-based programs dealing with specifications and repair procedures
- 4 Practice customer service skills with customers, employer, and fellow employees
- 5 Use tools and equipment found in an automotive repair shop
- 6 Diagnose and service a variety of automotive systems including electrical, brakes, engines, transmissions, and steering and suspension
- 7 Follow established procedures for safety and accident prevention in the automotive service facility
- 8 Describe the purpose of the laws concerning personal and environmentally safe handling of hazardous waste
- 9 Define information that should be completed on repair orders, accurately describing customer issues in pursuit of a satisfactory repair

## Program: Automotive Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
AUTOMOTIVE TECHNOLOGY AAS (142)	1	Required Courses	AUTOM101	Basic Engines		4
			AUTOM102	Engine Systems		4
			AUTOM103	Intro to Basic Electrical Theory		4
			AUTOM105	Basic Electrical Application		3
			AUTOM106	Shop Safety and Meter Certification		1
			AUTOM124	Intro to Emission Systems		2
	2	Required Courses	AUTOM121	Basic Engine Diagnosis		5
			AUTOM122	Basic Ignition Systems		5
			AUTOM123	Intro to Fuel Systems		4
			AUTOM125	Intro to Fuel Injection		2
	3	Required Courses	AUTOM130	Intro to Lighting Systems		4
			AUTOM131	Intro to Clutches/Manual Trans		4
			AUTOM132	Basic Auto Transmission/Transaxle		4
			AUTOM133	Intro to Four and All Wheel Drive		4
	4	Required Courses	AUTOM140	Applied Wheel Align/Steering System Service		4
			AUTOM141	Intro to Braking Systems		4
			AUTOM143	Basic Heating/ Air Conditioning		4
	5	Required Courses	AUTOM201	Advanced Engine Repair		5
			AUTOM202	Advanced Engine Assembly		3
			AUTOM203	Detailed Auto Electrical Systems		4
			AUTOM204	Advanced Battery, Starting/Charging Systems		4
	6	Required Courses	AUTOM220	Applied Ignition Systems Svc		4
			AUTOM221	Applied Fuel Systems Service		4
			AUTOM222	Applied Emissions Systems Service		3
			AUTOM223	Applied Fuel Injection Service		3
	7	Required Courses	AUTOM230	Advanced Lighting Systems		3
			AUTOM231	Advanced Clutches/Manual Transmission		5
			AUTOM232	Advanced Automatic Transmission Service		4
			AUTOM233	Applied Four/All-wheel Drive Service		4
	8	Required Courses	AUTOM240	Applied Wheel Align/Steering System Service		4
			AUTOM241	Advanced Brake System Service		4
			AUTOM242	Applied Drum and Disc Systems Service		4
			AUTOM243	Advanced HVAC		3
	Required..	AUTOM142	Drum and Disc Braking Systems		4	
	Electives	AUTOM296	Work-based Learning Experience (alternate cour.. INSTR APP. REQ			

## Program: Automotive Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Barber

Bates Technical College has the only day and evening college barber program in the State of Washington in which students prepare to become licensed barbers while learning in a stand-alone program and working in an on-campus shop that serves the public. Students are evaluated on the performance of each competency of the curriculum to ensure readiness to meet state licensure requirements and enter the profession. Prior to program completion, each student must take and pass a comprehensive written and practical examination that includes theoretical concepts. The program also provides extended learning opportunities for persons previously or currently employed in related professions. Required barber Kits (2) are purchased in first and second quarters, and are included in tuition and fees.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Perform all areas of Barbering Services while observing the safety and sanitation rules set forth by the Washington State Department of Licensing: Barbering.
- 2 Demonstrate effective human relations and communication skills to build and maintain clientele in the Barber Services industry.
- 3 Apply the Barber Code of Ethics consistent with responsible and professional Barber Services behavior.
- 4 Exhibit characteristics of entrepreneurs in the Barber Services industry.

## Program: Barber

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BARBER COC (75)	1	Required Courses	BARB110	Barbering Theory		1
			BARB111	Scalp and Hair Analysis		2
			BARB112	Shampooing (Kit 1)		3
			BARB113	Decontamination and Infection Control		5
			BARB114	Introduction to Barbering		5
			BARB115	Safety/First Aid		2
			BARB116	Basic Haircutting Techniques		4
			BARB117	Customer Service		3
			BARB118	Applied Communications		3
	2	Required Courses	BARB120	Math for Barbers		3
			BARB121	Facial Hair (Kit 2)		5
			BARB122	Barbering Applications		5
			BARB123	Intermediate Haircutting Techniques		3
			BARB124	Haircutting Applications		5
			BARB125	Applied Human Relations		3
	3	Required Courses	BARB131	Advanced Techniques		4
			BARB132	Advanced Applications		4
			BARB133	Cutting and Styling Methods		4
BARB134			Cutting and Styling Applications		5	
BARB135			Hair Styling		2	
BARB140			Hair Replacement		4	



## Program: Biomedical Service Technician: Clinical Engineering

Health care, the largest industry in the country, employs more than 14 million people, and figures continues to mount. From small-town private practices to mammoth inner-city hospitals, health care workers are in high demand. The patients in those practices and hospitals depend not only on the expertise of doctors and nurses, but on the proper functioning of sophisticated biomedical equipment. The people responsible for repairing and maintaining these highly specialized machines and instruments such as defibrillators, heart monitors, electric wheelchairs, medical imaging equipment (x rays, CAT scanners, and ultrasound equipment), are biomedical service technicians. They inspect and install equipment used by doctors, nurses, and other healthcare providers for researching, monitoring, diagnosing, and treating illnesses and disorders. They also repair, calibrate, and safety test the equipment in order to ensure proper function and safety for both the operator and the patient

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Practice safety measures and equipment as required by the FDA, NFPA, NEC, OSHA and others
2	Follow all HIPPA laws and guidelines for patient privacy
3	Operate biomedical equipment with knowledge of biological systems and signals as required to understand the equipment's correct function
4	Identify, analyze, and integrate the technical equipment requirements with needs of the medical staff and patients
5	Read and comprehend blueprints, wiring diagrams, schematic diagrams and service information
6	Operate electronic test equipment and tools to analyze and identify functional/non-functional biomedical equipment
7	Solder or replace defective components using appropriate tools and equipment
9	Establish professional oral and written business communication skills appropriate in a clinical environment
10	Maintain skills for lifelong learning by locating, evaluating and applying relevant information using external resources such as the internet, data books, trade publications and library resources
11	Display professional, ethical behaviors within the requirements of a clinical setting
12	Demonstrate effective working relationships with people who are similar or different
13	Function as a member of a team to complete a task in a timely and efficient manner; delegating, organizing and documenting tasks and results.

## Program: Biomedical Service Technician: Clinical Engineering

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BMST: CLINICAL ENGINEERING AAS (115)	1	Required Courses	BMST105	Testing Equipment		5
			BMST106	Soldering		2
			EEST101	Electrical Safety		4
			EEST102	Applied Math		4
			EEST103	Electronics Principles I		5
	2	Required Courses	BMST119	Medical Equipment Research I		2
			BMST217	Biomedical Instrumentation		5
			EEST104	DC Electronics		4
			EEST105	AC ELECTRONICS		5
			EEST106	RLC CIRCUITS		4
	3	Required Courses	BMST107	Schematics		3
			EEST107	Electronics Principles II		5
			EEST108	Electronic Devices I		4
			EEST223	Introduction to Digital Systems		5
	4	Required Courses	BMST109	Applied Service I		3
			BMST218	Biomedical Equipment		3
			BMST219	Medical Equipment Research II		2
			EEST109	Electronic Devices II		4
			EEST207	Introduction to Networking		5
	5	Required Courses	BMST110	Applied Service II		2
BMST201			Imaging Systems		3	
BMST215			Introduction to Medical Terminology		3	
EEST221			Electronic Principles -RFID		4	
6	Required Courses	BMST102	Blood Borne Pathogens		3	
		BMST103	HIPAA		2	
		BMST220	Biomedical Engineering Applications		5	

## Program: Biomedical Service Technician: Clinical Engineering

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
AAS	HUM/SS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		AAS	Natural Science (5 credits required)	BIOL&175	HUMAN BIOLOGY WITH LAB	5
		AAS	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Broadcasting/Video Production

If you have ever dreamed of working behind the scenes as a camera operator, technical director, chief engineer, editor, sUAS video(drone) pilot, audio engineer, or any other position, then the Bates Broadcasting/Video Production (BVP) is a great fit for you. Former BVP students are working in dozens of different industries and companies from major TV stations like KOMO, KIRO, KCPQ and KING to Microsoft studios, Century Link, Safeco Field, TVW, Root Sports, Victory Studios, and many more through the nation. The BVP curriculum has the rare distinction of being certified by the Society of Broadcasting Engineers (SBE). Students are encouraged to test for the SBE certification upon completion of the program.

Whether you like the creative side or the technical side of broadcasting and digital video production, this program could be your road to an exciting career.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Select and effectively use video and audio technology and field production equipment to produce deliverables that meet industry standards
- 2 Install, set up, maintain, operate audio/video and broadcast equipment
- 3 Follow established production processes for content creation
- 4 Apply legal, ethical, and professional standards that guide media practices
- 5 Demonstrate industry-expected soft skills
- 6 Discuss technological concepts of audio/video and broadcast systems
- 7 Combine production elements such as planning, scripting, storyboarding, budgeting and production

## Program: Broadcasting/Video Production

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BROADCASTING/ VIDEO PRODUCTION-ADV. ENG AAS (105)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD205	Receivers and Transmitters		5
			BROAD208	Content Delivery Systems		5
			BROAD211	Networking for Video and Audio		5
	Winter, Spring	Required Courses	BROAD217	Audio Engineering		5
			BROAD226	Video Engineering		5
	Winter, Summer	Required Courses	BROAD285	Practicum I		5
Electives			BROAD142	Program Editing		5
			BROAD143	Basic Maintenance & Troubleshooting		5
			BROAD170	Remote/Robotic Camera Systems		5
			BROAD214	Audio/Video Studio and Field Production		5
			BROAD216	Audio/Video Post-Production Applications		5
			BROAD222	Production Capstone II		5
			BROAD243	Master Control Operations II		5
			BROAD273	Video Graphics Applications		5
			BROAD278	Technical Directing		5
			BROAD280	Emerging Technologies		5
			BROAD289	Practicum V		5
			BROAD290	Practicum VI		5

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BROADCASTING/ VIDEO PRODUCTION-ADV. ENG AAS-T (115)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD205	Receivers and Transmitters		5
			BROAD208	Content Delivery Systems		5
			BROAD211	Networking for Video and Audio		5
	Winter, Spring	Required Courses	BROAD217	Audio Engineering		5
			BROAD226	Video Engineering		5
	Winter, Summer	Required Courses	BROAD285	Practicum I		5
			Electives	BROAD142	Program Editing	
		BROAD143	Basic Maintenance & Troubleshooting		5	
		BROAD170	Remote/Robotic Camera Systems		5	
		BROAD214	Audio/Video Studio and Field Production		5	
		BROAD216	Audio/Video Post-Production Applications		5	
		BROAD222	Production Capstone II		5	
BROAD243		Master Control Operations II		5		
BROAD273		Video Graphics Applications		5		
BROAD278		Technical Directing		5		
BROAD280		Emerging Technologies		5		
BROAD289		Practicum V		5		
BROAD290		Practicum VI		5		

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5



## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BROADCASTING/ VIDEO PRODUCTION-ADV. PRO AAS (105)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD212	Audio/Video Pre-Production Applications		5
			BROAD220	Production Capstone I		5
			BROAD288	Practicum IV		5
	Winter, Spring	Required Courses	BROAD207	Advanced Editing Projects		5
			BROAD224	Production Capstone III		5
	Winter, Summer	Required Courses	BROAD266	Field Production		5
		Electives	BROAD142	Program Editing		5
			BROAD143	Basic Maintenance & Troubleshooting		5
BROAD170			Remote/Robotic Camera Systems		5	
BROAD214			Audio/Video Studio and Field Production		5	
BROAD216			Audio/Video Post-Production Applications		5	
BROAD222			Production Capstone II		5	
BROAD243			Master Control Operations II		5	
BROAD273			Video Graphics Applications		5	
BROAD278			Technical Directing		5	
BROAD280			Emerging Technologies		5	
BROAD289			Practicum V		5	
BROAD290			Practicum VI		5	

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH174	MATH FOR ALLIED HEALTH	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&153	CALCULUS III	5			

## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BROADCASTING/ VIDEO PRODUCTION-ADV. PRO AAS-T (105)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD212	Audio/Video Pre-Production Applications		5
			BROAD220	Production Capstone I		5
			BROAD288	Practicum IV		5
	Winter, Spring	Required Courses	BROAD207	Advanced Editing Projects		5
			BROAD224	Production Capstone III		5
	Winter, Summer	Required Courses	BROAD266	Field Production		5
		Electives	BROAD142	Program Editing		5
			BROAD143	Basic Maintenance & Troubleshooting		5
BROAD170			Remote/Robotic Camera Systems		5	
BROAD214			Audio/Video Studio and Field Production		5	
BROAD216			Audio/Video Post-Production Applications		5	
BROAD222			Production Capstone II		5	
BROAD243			Master Control Operations II		5	
BROAD273			Video Graphics Applications		5	
BROAD278			Technical Directing		5	
BROAD280			Emerging Technologies		5	
BROAD289			Practicum V		5	
BROAD290			Practicum VI		5	

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BROADCASTING/ VIDEO PRODUCTION-ADV. PRO AAS-T (105)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD212	Audio/Video Pre-Production Applications		5
			BROAD220	Production Capstone I		5
			BROAD288	Practicum IV		5
	Winter, Spring	Required Courses	BROAD207	Advanced Editing Projects		5
			BROAD224	Production Capstone III		5
	Winter, Summer	Required Courses	BROAD266	Field Production		5
			Electives	BROAD142	Program Editing	
	BROAD143	Basic Maintenance & Troubleshooting			5	
	BROAD170	Remote/Robotic Camera Systems			5	
	BROAD214	Audio/Video Studio and Field Production			5	
	BROAD216	Audio/Video Post-Production Applications			5	
	BROAD222	Production Capstone II			5	
BROAD243	Master Control Operations II			5		
BROAD273	Video Graphics Applications			5		
BROAD278	Technical Directing			5		
BROAD280	Emerging Technologies			5		
BROAD289	Practicum V			5		
BROAD290	Practicum VI			5		

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BROADCASTING/ VIDEO PRODUCTION-ADV. PRO AAS-T (105)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5
	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5
	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5
	Summer	Required Courses	BROAD103	BVP Safety Principles		2
			BROAD135	Employment Preparation		3
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4
	Fall, Spring	Required Courses	BROAD212	Audio/Video Pre-Production Applications		5
			BROAD220	Production Capstone I		5
			BROAD288	Practicum IV		5
	Winter, Spring	Required Courses	BROAD207	Advanced Editing Projects		5
			BROAD224	Production Capstone III		5
	Winter, Summer	Required Courses	BROAD266	Field Production		5
			Electives	BROAD142	Program Editing	
	BROAD143	Basic Maintenance & Troubleshooting			5	
	BROAD170	Remote/Robotic Camera Systems			5	
	BROAD214	Audio/Video Studio and Field Production			5	
	BROAD216	Audio/Video Post-Production Applications			5	
	BROAD222	Production Capstone II			5	
BROAD243	Master Control Operations II			5		
BROAD273	Video Graphics Applications			5		
BROAD278	Technical Directing			5		
BROAD280	Emerging Technologies			5		
BROAD289	Practicum V			5		
BROAD290	Practicum VI			5		

## Program: Broadcasting/Video Production

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5



## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits	
BROADCAST AND VIDEO ELEMENTS COC (75)	Fall	Required Courses	BROAD110	Characteristics of Sound		5	
			BROAD120	Intro to Digital Audio Recording		5	
			BROAD124	Basic Audio Equipment		5	
	Winter	Required Courses	BROAD151	DC Electronics Theory		5	
			BROAD152	AC Electronics Theory		5	
			BROAD153	Basic Electronics Lab		5	
	Spring	Required Courses	BROAD111	Master Control Operations I		5	
			BROAD138	Control Room Equipment I		5	
			BROAD139	Broadcast Station Operations		5	
	Summer	Required Courses	BROAD103	BVP Safety Principles		2	
			BROAD135	Employment Preparation		3	
	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3	
			BROAD131	Intro to Studio and Field Production		4	
			BROAD136	Principles of Lighting		4	
			BROAD137	Basic Digital Video Editing		4	
			Electives	BROAD142	Program Editing		5
				BROAD143	Basic Maintenance & Troubleshooting		5
				BROAD170	Remote/Robotic Camera Systems		5
				BROAD214	Audio/Video Studio and Field Production		5
				BROAD216	Audio/Video Post-Production Applications		5
				BROAD222	Production Capstone II		5
				BROAD243	Master Control Operations II		5
				BROAD273	Video Graphics Applications		5
				BROAD278	Technical Directing		5
				BROAD280	Emerging Technologies		5
	BROAD289	Practicum V		5			
BROAD290	Practicum VI		5				

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options	Credits				
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5			
		ENGL&101	ENGLISH COMPOSITION I	5			
		HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
			BIOL&175	HUMAN BIOLOGY WITH LAB	5		
			BIOL&241	ANATOMY & PHYSIOLOGY I	5		
			BIOL&242	HUMAN A&P II	5		
			BIOL&260	MICROBIOLOGY	5		
			CHEM&121	INTRODUCTION CHEMISTRY	5		
			CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
			CMST&102	INTRO TO MASS MEDIA	5		
			CMST&152	INTERCULTURAL COMM	5		
			CMST&210	INTERPERSONAL COMMUNICTN	5		
			CMST&220	PUBLIC SPEAKING	5		
			CMST&230	SML GROUP COMMUNICATIONS	5		
			ECON&201	MICROECONOMICS	5		
			ECON&202	MACROECONOMICS	5		
			HIST101	HISTORY-SCIENCE/TECH	5		
			HREL111	COLLEGE/JOB SRCH SUCCESS	5		
			NUTR&101	INTRO TO NUTRITION	5		
			PHYS&221	ENGINEERING PHYS I W/LAB	5		
			PHYS&222	ENGINEER PHYS II W/LAB	5		
			PHYS&223	ENGINEER PHYS III W/LAB	5		
			POLS&101	INTRO TO POL SCIENCE	5		
			PSYC&100	GENERAL PSYCHOLOGY	5		
			PSYC&200	LIFESPAN PSYCHOLOGY	5		
			SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
					MATH172	APPLIED BUSINESS MATH	5
					MATH173	MATH CONCEPTS	5
					MATH&107	MATH IN SOCIETY	5
					MATH&141	PRECALCULUS I	5
					MATH&142	PRECALCULUS II	5
					MATH&146	INTRODUCTION TO STATS	5
					MATH&151	CALUCLUS I	5
					MATH&152	CALCULUS II	5
					MATH&153	CALCULUS III	5

## Program: Broadcasting/Video Production

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BVP CERTIFICATE OF TRAINING - AUDIO COT (15)	Fall	Required Courses	BROAD110	Characteristics of Sound		5
			BROAD120	Intro to Digital Audio Recording		5
			BROAD124	Basic Audio Equipment		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BVP CERTIFICATE OF TRAINING - ENGINEERING COT (15)	Winter	Required Courses	BROAD151	DC Electronics Theory		5
			BROAD152	AC Electronics Theory		5
			BROAD153	Basic Electronics Lab		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BVP CERTIFICATE OF TRAINING - OPERATIONS COT (15)	Spring	Required Courses	BROAD111	Master Control Operations I		5
			BROAD138	Control Room Equipment I		5
			BROAD139	Broadcast Station Operations		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BVP CERTIFICATE OF TRAINING - PRODUCTION COT (15)	Fall, Winter, Spring	Required Courses	BROAD121	Production Process Theory		3
			BROAD131	Intro to Studio and Field Production		4
			BROAD136	Principles of Lighting		4
			BROAD137	Basic Digital Video Editing		4

## Program: Business DTA

This Bates Technical College (BTC) degree is designed for students who want to transfer to a participating Washington State four-year college or university. The Business Direct Transfer Agreement/Major Related Program meets all requirements of Washington's Direct Transfer Agreement between the baccalaureate institutions offering a bachelor of science or bachelor of arts in business administration including accounting, management, and management information systems, and the community and technical college system. \* Completion of this degree does not guarantee admissions to any baccalaureate university. \* Typical transfer course practice is each course meets the minimum grade of at least 2.0.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Analyze and evaluate alternatives that lead to successful accomplishment of organizational objectives
- 2 Create and deliver information in written, oral and symbolic forms to convey information
- 3 Formulate strategies to collect and evaluate quantitative and qualitative data to support organizational objectives
- 4 Recognize and assess ethical dilemmas in the workplace
- 5 Recognize and adapt interpersonal behaviors and communication styles to effectively collaborate in a multicultural world
- 6 Appreciate the multiple contexts of business--social, political, economic and legal--within a domestic and global environment
- 7 Define how elements of the legal environment impact business
- 8 Record transactions and prepare financial statements for a business entity

## Program: Business

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BUSINESS DTA (90)	1	Required Courses	<b>ACCT&amp;201</b>	Principles of Accounting I		5
			<b>BUS&amp;101</b>	Introduction to Business		5
	2	Required Courses	<b>ACCT&amp;202</b>	Principles of Accounting II		5
			<b>BUS&amp;201</b>	Business Law		5
	3	Required Courses	<b>ACCT&amp;203</b>	Principles of Accounting III		5
	4	Required Courses	<b>ECON&amp;202</b>	Macroeconomics		5
		Required Courses	<b>CMST&amp;220</b>	Public Speaking		5
			<b>ECON&amp;201</b>	Microeconomics		5
			<b>ENGL&amp;101</b>	English Composition I	Placement or ENGL091	5
			<b>ENGL&amp;235</b>	Technical Writing	Placement or ENGL091	5
		<b>MATH&amp;146</b>	Statistics	Placement or MATH098	5	

## Program: Business

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
DTA	Communications (10 credits required)	CMST&220	PUBLIC SPEAKING	5
		ENGL&101	ENGLISH COMPOSITION I	5
		ENGL&235	TECHNICAL WRITING	5
	Humanities (10 credits required)	CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		POLS&101	INTRO TO POL SCIENCE	5
	Natural Sciences (10 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&260	MICROBIOLOGY	5
		MATH&146	INTRODUCTION TO STATS	5
		NUTR&101	INTRO TO NUTRITION	5
	Natural Sciences-LAB (5 credits required)	BIOL&175	HUMAN BIOLOGY WITH LAB	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
	Quantitative (10 credits required)	MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5
		MATH&151	CALUCLUS I	5
		MATH&152	CALCULUS II	5
		MATH&153	CALCULUS III	5
	Social Science (5 credits required)	PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5

## Program: Carpentry

Students prepare for entry-level employment in the construction industry, filling positions such as carpenter, framer, concrete worker, and interior and exterior finisher. Off-campus building and remodeling projects provide opportunities for extensive practical training, giving students valuable experience in the trade, from estimating construction projects through all phases of construction. This is a pre-apprenticeship program for the South Puget Sound Carpenters Joint Apprenticeship Training Committee.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Perform general carpentry skills
2	Identify, select and supervise application of construction materials
3	Draw, read and interpret drawings and specifications
4	Interpret and apply codes, regulations and contract documents
5	Survey and investigate construction sites
6	Select and maintain construction site tools and equipment
7	Interpret basic designs and apply sound construction principles
8	Take off quantities and estimate costs
9	Plan, coordinate, schedule and control projects
10	Use hand and power tools safely and efficiently
11	Demonstrate sustainable building practices and material application
12	Interpret technical information from blueprints
13	Estimate materials and labor necessary to complete a building project
14	Work as a productive carpentry team member
15	Apply the required safety standards in construction

## Program: Carpentry

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CARPENTRY AAS (116)	1	Required Courses	CARPT101	Carpentry Math		3
		CARPT102	Safety Principles		3	
		CARPT103	Prints and Plans		4	
		CARPT104	Construction Materials		2	
		CARPT105	Tools and Equipment		4	
	2	Required Courses	CARPT106	Power Tools		5
		CARPT107	Optical Instruments		3	
	3	Required Courses	CARPT108	Plot Plans and Building Layout		3
		CARPT110	Foundation		3	
		CARPT111	Foundation Footings		3	
		CARPT112	Foundation Walls		5	
	4	Required Courses	CARPT109	Introduction to Framing		4
		CARPT201	Floor Systems		5	
		CARPT202	Wall and Ceiling Construction		5	
		CARPT203	Stairs		3	
		CARPT205	Roof Construction		5	
	5	Required Courses	CARPT204	Introduction to Roofing		3
		CARPT206	Introduction to Exterior Finish Methods		4	
		CARPT207	Exterior Doors and Windows		5	
		CARPT208	Siding		5	
	6	Required Courses	CARPT209	Introduction to Interior Finish Methods		3
		CARPT210	Interior Floors, Walls and Ceilings		4	
		CARPT211	Interior Doors and Windows		5	
		CARPT213	Employment Preparation		2	
		CARPT292	Independent Projects		2	
		Required Courses	WBAS101	Welding Basics		8
	Electives	CARPT296	Work-Based Learning Experience	INSTR APP REQ	3	
CARPT297		Work-Based Learning Experience	INSTR APP REQ	2		

## Program: Carpentry

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				



## Program: Carpentry

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CARPENTER TECHNICIAN COC (77)	1	Required Courses	CARPT101	Carpentry Math		3
			CARPT102	Safety Principles		3
			CARPT103	Prints and Plans		4
			CARPT104	Construction Materials		2
			CARPT105	Tools and Equipment		4
	2	Required Courses	CARPT106	Power Tools		5
	3	Required Courses	CARPT110	Foundation		3
			CARPT111	Foundation Footings		3
			CARPT112	Foundation Walls		5
	4	Required Courses	CARPT201	Floor Systems		5
			CARPT202	Wall and Ceiling Construction		5
			CARPT203	Stairs		3
			CARPT205	Roof Construction		5
	5	Required Courses	CARPT208	Siding		5
	6	Required Courses	CARPT211	Interior Doors and Windows		5
			CARPT292	Independent Projects		2
		Electives	CARPT296	Work-Based Learning Experience	INSTR APP REQ	3
			CARPT297	Work-Based Learning Experience	INSTR APP REQ	2

## Program: Carpentry

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
				MATH&152	CALCULUS II	5
MATH&153	CALCULUS III	5				

## Program: Carpentry

Degree	Quarter	Course ID	Title	Prerequisites	Credits
BASIC CARPENTRY I CoT (16)	1 Required Courses	CARPT101	Carpentry Math		3
		CARPT102	Safety Principles		3
		CARPT103	Prints and Plans		4
		CARPT104	Construction Materials		2
		CARPT105	Tools and Equipment		4
BASIC CARPENTRY II CoT (16)	2 Required Courses	CARPT106	Power Tools		5
		CARPT107	Optical Instruments		3
	Required Courses	WBAS101	Welding Basics		8
CONCRETE FOUNDATIONS CoT (14)	3 Required Courses	CARPT108	Plot Plans and Building Layout		3
		CARPT110	Foundation		3
		CARPT111	Foundation Footings		3
		CARPT112	Foundation Walls		5
WOOD FRAMING CoT (22)	4 Required Courses	CARPT109	Introduction to Framing		4
		CARPT201	Floor Systems		5
		CARPT202	Wall and Ceiling Construction		5
		CARPT203	Stairs		3
		CARPT205	Roof Construction		5
	Electives	???Duetoinf..	Welding		
EXTERIOR FINISHING CoT (17)	5 Required Courses	CARPT204	Introduction to Roofing		3
		CARPT206	Introduction to Exterior Finish Methods		4
		CARPT207	Exterior Doors and Windows		5
		CARPT208	Siding		5
	Electives	CARPT296	Work-Based Learning Experience	INSTR APP REQ	3
		CARPT297	Work-Based Learning Experience	INSTR APP REQ	2
INTERIOR FINISHING CoT (16)	6 Required Courses	CARPT209	Introduction to Interior Finish Methods		3
		CARPT210	Interior Floors, Walls and Ceilings		4
		CARPT211	Interior Doors and Windows		5
		CARPT213	Employment Preparation		2
		CARPT292	Independent Projects		2
	Electives	CARPT296	Work-Based Learning Experience	INSTR APP REQ	3
		CARPT297	Work-Based Learning Experience	INSTR APP REQ	2

## Program: Culinary Arts

Students prepare for a variety of careers in the culinary arts profession and for advanced education at other culinary institutions. Career paths include dinner cook, institutional cook, cook's helper, baker's helper, fry cook, and short order cook. Students work in all aspects of the dining facilities on campus, planning and preparing meals and catering banquet functions. Instruction includes food planning and preparation, and serving and cleanup. Graduates receive a broad base of skills and are well prepared for a variety of entry-level culinary jobs.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Manage tasks in a challenging and changing culinary food preparation environment.
- 2 Demonstrate food safety and sanitation practices throughout the program and in the culinary industry.
- 3 Perform all forms of cooking methodologies using industry-level skills and knowledge.
- 4 Apply professional standards and conduct that meet the American Culinary Federation Education Foundation Accrediting Commission requirements.
- 5 Identify and adjust to workplace differences in order to operate collaboratively and effectively in a food service setting
- 6 Demonstrate an understanding of scaling and measuring techniques.
- 7 Apply principles and practices of sustainability in respect of the process and the health of the planet for future generations.

## Program: Culinary Arts

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CULINARY ARTS AAS (118)	Required Courses	CARTS155	Welding			
	Electives	CARTS291	Practical Applications	INSTRUCTOR APPROVAL		
		CARTS292	Independent Project I	INSTRUCTOR APPROVAL	5	
		CARTS293	Independent Project II	INSTRUCTOR APPROVAL	5	
		CARTS294	Independent Project III	INSTRUCTOR APPROVAL	5	
		CARTS296	WORK-Based Learning Experience	INSTRUCTOR APPROVAL		
		1	Required Courses	CARTS101	Intro Fundamentals to Culinary Arts	
	CARTS105			Garde Manger I		1
	CARTS154			SERVSAFE Sanitation		3
	2	Required Courses	CARTS106	Breakfast Methods		2
			CARTS111	Introduction to Baking		5
			CARTS150	Cooking Techniques		6
			CARTS151	Cooking Techniques II		6
	3	Required Courses	CARTS112	Advanced Cooking Techniques		5
			CARTS152	Introduction to Food Truck		5
			CARTS153	Mobile Food Operations		6
	4	Required Courses	CARTS104	Customer Service		3
			CARTS201	Menu Development		2
			CARTS202	Protein Identification/Utilization		3
			CARTS250	Catering/Banquets		6
			CARTS252	Regional Cuisines of North America		4
	5	Required Courses	CARTS204	Pastries and Plated Deserts		5
			CARTS253	Sustainability/Organic Foods		4
			CARTS254	Modern Bread Techniques		3
			CARTS258	Garde Manger II		5
	6	Required Courses	CARTS211	Student Practical		5
CARTS213			Wines/Spirits		4	
CARTS255			Culinary Trends		2	
CARTS256			Intro to Management		4	
CARTS257			Culinary Flavor Profiles		5	

## Program: Culinary Arts

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Culinary Arts

Degree	Quarter		Course ID	Title	Prerequisites	Credits
CULINARY ARTS-LINE COOK CoT (32)	1	Required Courses	CARTS101	Intro Fundamentals to Culinary Arts		6
			CARTS105	Garde Manger I		1
			CARTS154	SERVSAFE Sanitation		3
	2	Required Courses	CARTS106	Breakfast Methods		2
			CARTS111	Introduction to Baking		5
			CARTS150	Cooking Techniques		6
			CARTS151	Cooking Techniques II		6

## Program: Civil Engineering Technology

Students prepare for careers as civil engineering technicians who typically work under the direct supervision of a project engineer. The program environment emulates a civil engineering/surveying firm, giving students practice in many aspects of the profession, including defining project requirements, conducting survey/field work, field engineering, construction staking, designing, estimating, modeling and client presentations. Instruction includes computer-aided design, the preparation of engineering calculations, and coordinate systems, which include lengths, directions, slopes, bearings areas, volumes, weights densities, moments, forces, reactions, flows, and loads. Students learn to use a variety of computer software application packages, including, but not limited to Word, Excel, Civil 3D, Hydraflow and SurvCE

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Solve general, technical and engineering type problems
2	Use the computer as an aid to drafting
3	Produce drawings using computer aided drafting (CAD) software
4	Design digital 3D terrain models of existing and proposed surfaces
5	Design and calculate the 3D transportation geometrics to model alignments, profiles and sections
6	Read and produce drawings (orthographic) involving orthographic projection, sections, pictorial and auxiliary views
7	Solve problems involving plane trigonometry using a standard scientific calculator
8	Solve typical engineering strength of materials problems using a standard scientific calculator
9	Recognize the use of various materials in the construction industry
10	Solve engineering graphics problems using standard techniques and reference materials
11	Analyze physical and mechanical properties of soil and concrete
12	Identify drainage basins and compute runoff calculations using various models and methods
13	Solve basic hydraulic problems using the theory of incompressible fluids
14	Solve problems using theories learned in engineering mechanics
15	Utilize standard surveying equipment to make measurements and calculations to run a traverse, establish levels, keep notes and produce required drawi..
16	Establish grades, locate monuments and utilities
17	Use the Public Land Survey System to locate and describe parcels
18	Perform grading analyses and prepare volume calculations and calculate cut and fill by average-end-area



## Program: Civil Engineering Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits
CIVIL AND ENVIRONMENTAL ENGINEERING TECHNOLOGY AAS (90)	Fall/Spring	Required Courses	CEET122	Building Information Modeling	
			CEET131	Hydrological Engineering	
	Winter	Required Courses	CEET121	Statics & Mechanics of Materials	
	Summer	Required Courses	CEET132	Civil Infrastructure Design	
			CEET141	GIS for Asset Management	
			CEET142	Applied Surveying	
	Winter/Summer	Required Courses	CEET261	Civil & Environmental Site Design	
			Electives	CEET296	Work Based Learning Experience
		Electives	CEET231	Projects I	
			CEET232	Projects II	
	Fall	Required Courses	CEET251	Soil Mechanics	
			CEET252	Structural Design	

## Program: Civil Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5

## Program: Civil Engineering Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CIVIL AND ENVIRONMENTAL ENGINEERING TECHNOLOGY AAS-T (106)	Fall/Spring	Required Courses	<b>AMATH170</b>	Engineering Foundational Mathematics	MATH 087	5
		<b>CEET122</b>	Building Information Modeling		5	
		<b>ENGR&amp;111</b>	Engineering Graphics I		5	
		<b>ENGR&amp;112</b>	Engineering Graphics II		5	
	Winter/ Summer	Required Courses	<b>CEET260</b>	Advanced CAD Operations		5
		Required Courses	<b>CS&amp;141</b>	Computer Science 1 Java		5
		<b>ENGR&amp;214</b>	Statics	Physics&122	5	
		<b>ENGR191</b>	Engineering Technology Study Lab I		1	
		<b>ENGR192</b>	Engineering Technology Study Lab II	ENGR191	1	
		<b>ENGR193</b>	Engineering Technology Study Lab III	ENGR192	1	
<b>ENGR194</b>		Engineering Technology Study Lab IV	ENGR193	1		
<b>ENGR195</b>		Engineering Technology Study Lab V	ENGR194	1		
<b>ENGR196</b>	Engineering Technology Study Lab VI	ENGR195	1			

## Program: Civil Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/O (15 credits required)	CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Natural Science (20 credits required)	PHYS&222	ENGINEER PHYS II W/LAB	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
	Quantitative (25 credits required)	MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5
		MATH&151	CALUCLUS I	5
		MATH&152	CALCULUS II	5
		MATH&153	CALCULUS III	5

## Program: Civil Engineering Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
CIVIL DESIGN CoT (15)	Fall/ Spring	Required Courses	CEET131	Hydrological Engineering		5
	Summer	Required Courses	CEET132	Civil Infrastructure Design		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MAP ANALYSIS CoT (15)	Summer	Required Courses	CEET141	GIS for Asset Management		5
			CEET142	Applied Surveying		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STRUCTURAL BIM CoT (15)	Fall/ Spring	Required Courses	CEET122	Building Information Modeling		5
			CEET131	Hydrological Engineering		5
	Winter	Required Courses	CEET121	Statics & Mechanics of Materials		5
	Summer	Required Courses	CEET132	Civil Infrastructure Design		5
			CEET141	GIS for Asset Management		5
			CEET142	Applied Surveying		5
	Fall	Required Courses	CEET251	Soil Mechanics		5
			CEET252	Structural Design		5
	Winter/ Summer	Required Courses	CEET261	Civil & Environmental Site Design		5

## Program: Certified Medical Assistant

The Certified Medical Assistant program prepares students for both front-office clerical and back-office clinical medical assistant responsibilities by providing cognitive (knowledge), psychomotor (skills), and affective (behavior) learning competencies. Students prepare for careers as integral members of a health care team in various outpatient settings. Competency-based activities in the program provide extensive hands-on practice for students with skills to assist physicians with direct patient care. The program also provides extended learning opportunities for persons previously or currently employed in related professions. In addition, work-based learning experiences are available in many medical settings that support the theory presented in the classroom.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Perform administrative & clinical medical procedures
- 2 Communicate (written, verbal and non-verbal) with diverse patients and staff using appropriate medical terminology, confidentiality and empathy
- 3 Demonstrate ethical and legal behaviors when performing routine patient procedures in accordance with regulations, policies, laws and patient rights
- 4 Apply quality control measures in following health and safety policies and procedures to prevent illness and injury when performing fundamental procedures and tasks
- 5 Record vital signs and conduct a variety of diagnostic tests, such as EKGs
- 6 Draw blood samples, giving injections and removing sutures as directed by the physician
- 7 Successfully complete all criteria necessary for taking the Certified Medical Assistant Examination, a requirement for employment as a CMA

## Program: Certified Medical Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CERTIFIED MEDICAL ASSISTANT AAS (102)	1	Required Courses	AMA110	Computer Basics		1
		AMA111	Introduction to Word Processing		3	
		AMA112	Fundamentals of Medical Terminology		4	
		AMA113	Healthcare Communications		5	
	2	Required Courses	AMA116	Medical Office Procedures		3
			AMA117	Beginning Medical Terminology	AMA112	4
			CMA114	Introduction to the Health Care Profession		3
			CMA150	Medical Office Clinical Applications I		6
	3	Required Courses	AMA119	Advanced Medical Office Procedures		3
			AMA120	Introduction to Spreadsheets		3
			AMA121	Intermediate Medical Terminology	AMA117	4
			CMA151	Medical Office Clinical Applications II		6
	4	Required Courses	AMA123	Electronic Health Records		4
			AMA124	First Aid/CPR		1
			AMA127	Medical Insurance and Reimbursement		4
			AMA128	Advanced Medical Terminology - Pathophysiology	AMA112, AMA117, AMA121	4
			CMA152	Medical Office Laboratory Procedures		4
	5	Required Courses	AMA126	Advanced Administrative Medical Concepts		4
			AMA129	Medical Coding Applications	AMA112, AMA117, AMA121, AMA128	4
			AMA133	HIV Prevention Education		1
AMA135			Practical Applications		3	
CMA153			Human Diseases and Pharmacology		3	
6	Required Courses	CMA154	Practicum		6	
		CMA155	Medical Assistant Exam Review		2	
		CMA156	Job Readiness & Preparation		2	

## Program: Certified Medical Assistant

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
		MATH&153	CALCULUS III	5		



## Program: Computer Networking Systems Technician

Computer network systems technicians link the hardware and software that comprise computer data communications networks. They install, configure and maintain network components, work on client workstations, servers, domain controllers, shared printers, cables, and routers. They maintain network equipment, applications, data and user interfaces and workstations as well as troubleshoot local and wide area networks. Desktop, server and network administration positions are needed in all industries due to the ongoing movement towards computer automation. Students are encouraged to spend additional hours of study to obtain Microsoft, Cisco, and CompTIA A+, certifications. Possible certifications students can obtain include COMP TIA A+, Security +, Microsoft MCP, MCSA, MCSE, Cisco CCENT, or CCNA.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Design a small or medium sized computer network including media types, end devices and interconnecting devices that meets a customers specific needs
- 2 Perform basic tasks expected of a network administrator including management of user accounts, shared resources and network security
- 3 Perform basic configurations on routers and Ethernet switches
- 4 Perform operational tasks within a Linux environment, such as the creation and management of files, folders and accounts
- 5 Perform standard DNS and DHCP management operations, such as setup, modification and troubleshooting
- 6 Construct simple computer scripts that accomplish a given task
- 7 Define basic network security issues and possible solutions

## Program: Computer Networking Systems Technician

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
COMPUTER NETWORKING SYSTEMS TECHNICIAN AAS (105)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
		Electives	ECS201	Telecommunications Network Cabling System		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5
		Electives	ECS202	Fiber Optics		5
	3	Required Courses	CNST212	Cisco LAN Switching and Wireless		5
			CNST220	Cloud Services		5
			INFO205	Security I		5
	4	Required Courses	CNST213	Cisco - Accessing the WAN		5
			CNST218	Server I		5
			INFO206	Security II	INFO205	5
	5	Required Courses	CNST205	Fundamentals of Linux		5
CNST207			Server II	CNST218	5	
CNST214			Cyber Security		5	
6	Required Courses	CNST209	Server III	CNST207, CNST218	5	
		CNST216	Scripting		5	
	Electives	ECS249	Job Search and Preparation		3	
	Required Courses	CNST212	Cisco LAN Switching and Wireless		5	
CNST213		Cisco - Accessing the WAN		5		
CNST214		Cyber Security		5		
	Electives	INFO292	Independent Projects		5	

## Program: Computer Networking Systems Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Computer Networking Systems Technician

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
COMPUTER NETWORKING SYSTEMS TECHNICIAN AAS-T (115)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
		Electives	ECS201	Telecommunications Network Cabling System		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5
		Electives	ECS202	Fiber Optics		5
	3	Required Courses	CNST212	Cisco LAN Switching and Wireless		5
			CNST220	Cloud Services		5
			INFO205	Security I		5
	4	Required Courses	CNST213	Cisco - Accessing the WAN		5
			CNST218	Server I		5
			INFO206	Security II	INFO205	5
	5	Required Courses	CNST205	Fundamentals of Linux		5
CNST207			Server II	CNST218	5	
CNST214			Cyber Security		5	
6	Required Courses	CNST209	Server III	CNST207, CNST218	5	
		CNST216	Scripting		5	
	Electives	ECS249	Job Search and Preparation		3	
Required Courses	CNST212	Cisco LAN Switching and Wireless		5		
	CNST213	Cisco - Accessing the WAN		5		
	CNST214	Cyber Security		5		
	Electives	INFO292	Independent Projects		5	

## Program: Computer Networking Systems Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	Null	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	Null	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Computer Networking Systems Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
COMPUTER NETWORK SUPPORT TECHNICIAN CoC (45)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5
	3	Required Courses	CNST212	Cisco LAN Switching and Wireless		5
			CNST220	Cloud Services		5
			INFO205	Security I		5
		Required C..	CNST212	Cisco LAN Switching and Wireless		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	Null	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	Null	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
			MATH&153	CALCULUS III	5

## Program: Computer Networking Systems Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
IT TECHNICIAN CoT (30)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5

## Program: Cybersecurity

Build foundational IT skills with focus on network security. Prepare for a career to assess the security needs of computer and network systems. Investigate deviations from acceptable configurations, identify computer and network security vulnerabilities, solve problems, make decisions to recommend the appropriate defensive countermeasures. Implement adequate measures to reduce risks to a level conferring to compliance regulations. Graduates build skills in problem-solving, attention to detail, communication, and teamwork. Note: Students must possess basic keyboarding/word processing skills prior to enrollment in the program.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

---

- 1 Communicate effectively with diverse audiences across all levels and demonstrate an understanding of the value of diversity and community.
- 2 Demonstrate critical thinking to support integrity, confidentiality, availability of data and information.
- 3 Communicate an understanding of professional and ethical responsibility as it relates to legal liability in information technology and business.
- 4 Identify governance, risk, and compliance.
- 5 Collect and analyze data from a variety of sources to identify and report events that occur or might occur within the network to protect data information systems and networks from vulnerabilities and threats.
- 6 Investigate deviations from acceptable configurations, identify security vulnerabilities, solve problems, make decisions to recommend appropriate defensive countermeasures.
- 7 Demonstrate technical proficiency with procedures to operate more securely, efficiently, and effectively using decision-making strategies to understand the needs and limitations of business and information technology.
- 8 Prepare for industry certification exams.



## Program: Cybersecurity

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
CYBERSECURITY AAS (105)	1	Required Courses	CYBR101	Security Professional Practices		5
			CYBR102	Operating System Fundamentals		5
			CYBR104	IT Systems I		5
	2	Required Courses	CYBR105	IT Systems II		5
			CYBR106	Virtual Computing	CYBR102	5
			CYBR107	Network Fundamentals I		5
	3	Required Courses	CYBR108	Network Fundamentals II	CYBR107	5
			CYBR109	Windows Server Administration	CYBR102	5
			CYBR203	Advanced Operating Systems I	CYBR109	5
	4	Required Courses	CYBR103	Database/SQL Fundamentals		5
			CYBR201	Information Security I		5
			CYBR204	Advanced Operating Systems II	CYBR203	5
	5	Required Courses	CYBR202	Information Security II		5
			CYBR205	Mobile / Wireless Security	CYBR108, CYBR201	5
					CYBR201, CYBR108	5
	CYBR206	Attack Vectors	CYBR203, CYBR204	5		
	6	Required Courses	CYBR207	Network Attack Mitigation / Defense	CYBR203, CYBR204	5
			CYBR208	Network Scripting	CYBR204	5
CYBR292			Independent Project	Prior Coursework	5	

## Program: Cybersecurity

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Cybersecurity

Degree	Quarter		Course ID	Title	Prerequisites	Credits
CYBERSECURITY AAS-T (115)	1	Required Courses	CYBR101	Security Professional Practices		5
			CYBR102	Operating System Fundamentals		5
			CYBR104	IT Systems I		5
	2	Required Courses	CYBR105	IT Systems II		5
			CYBR106	Virtual Computing	CYBR102	5
			CYBR107	Network Fundamentals I		5
	3	Required Courses	CYBR108	Network Fundamentals II	CYBR107	5
			CYBR109	Windows Server Administration	CYBR102	5
			CYBR203	Advanced Operating Systems I	CYBR109	5
	4	Required Courses	CYBR103	Database/SQL Fundamentals		5
			CYBR201	Information Security I		5
			CYBR204	Advanced Operating Systems II	CYBR203	5
	5	Required Courses	CYBR202	Information Security II		5
			CYBR205	Mobile/Wireless Security	CYBR108, CYBR201	5
			CYBR206	Attack Vectors	CYBR203, CYBR204	5
	6	Required Courses	CYBR207	Network Attack Mitigation/Defense	CYBR203, CYBR204	5
			CYBR208	Network Scripting	CYBR204	5
			CYBR292	Independent Project	Prior Coursework	5

## Program: Cybersecurity

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	Null	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	Null	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Cybersecurity

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
NETWORK SYSTEM SUPPORT CoC (60)	1	Required Courses	CYBR101	Security Professional Practices		5
			CYBR102	Operating System Fundamentals		5
			CYBR104	IT Systems I		5
	2	Required Courses	CYBR105	IT Systems II		5
			CYBR106	Virtual Computing	CYBR102	5
			CYBR107	Network Fundamentals I		5
	3	Required Courses	CYBR108	Network Fundamentals II	CYBR107	5
			CYBR109	Windows Server Administration	CYBR102	5
			CYBR203	Advanced Operating Systems I	CYBR109	5

## General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options	Credits		
CoC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	Null	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&152	CALCULUS II	5			
MATH&153	CALCULUS III	5			

## Program: Cybersecurity

Degree	Quarter		Course ID	Title	Prerequisites	Credits
COMPUTER SUPPORT CoT (30)	1	Required Courses	CYBR101	Security Professional Practices		5
			CYBR102	Operating System Fundamentals		5
			CYBR104	IT Systems I		5
	2	Required Courses	CYBR105	IT Systems II		5
			CYBR106	Virtual Computing	CYBR102	5
			CYBR107	Network Fundamentals I		5
	3	Required Courses	CYBR108	Network Fundamentals II	CYBR107	5
			CYBR109	Windows Server Administration	CYBR102	5
			CYBR203	Advanced Operating Systems I	CYBR109	5

## Program: Dental Lab Technician

Students prepare for employment in dental laboratories, fabricating orthodontic appliances, complete and partial dentures, and gold or porcelain crowns and bridges. The curriculum complies with American Dental Association guidelines and is the only fully accredited ADA dental lab technician program in Washington State. Instructors of this program are certified, dental technicians.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Fabricate complete denture prostheses (removable)
- 2 Use work practices and safety protocols that promote a safe and sanitary environment
- 3 Apply general laboratory techniques to prepare and evaluate impressions and casts
- 4 Fabricate a variety of orthodontic appliances
- 5 Fabricate custom impression trays, baseplates and bite rims
- 6 Practice within the legal and ethical framework of the profession
- 7 Collect diagnostic treatment data
- 8 Fabricate partial denture prostheses to advanced competency standards
- 9 Fabricate fixed Crown & Bridge prostheses to advanced competency standards
- 10 Fabricate fixed porcelain-to-metal prostheses to advanced competency standards
- 11 Demonstrate business practices and procedures appropriate to managing or owning a dental laboratory business

## Program: Dental Lab Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DENTAL LAB TECHNICIAN AAS (124)	1	Required Courses	DENLB101	Introduction to Dental Lab Technology	Must pass entrance requirement	2
			DENLB102	Dental Anatomy I		3
			DENLB103	Dental Materials I		3
			DENLB104	Denture Processes I		4
	2	Required Courses	DENLB105	Denture Processes II	4	
			DENLB106	Dental Anatomy II	2	
			DENLB107	Denture Processes III	4	
			DENLB108	Denture Processes IV	3	
	3	Required Courses	DENLB110	Introduction to Orthodontics	3	
			DENLB111	Ortho Appliances - Fixed	3	
			DENLB112	Ortho Appliances - Removable	3	
			DENLB120	Removable Partial Dentures I	3	
	4	Required Courses	DENLB121	Removable Partial Dentures II	3	
			DENLB122	Removable Partial Dentures III	4	
			DENLB123	Removable Partial Dentures IV	3	
			DENLB124	Advanced Dentures	3	
			DENLB125	Advanced Orthodontics	3	
			DENLB126	Advanced RPDs	3	
	5	Required Courses	DENLB201	Tooth Morphology Practicum	5	
			DENLB202	Dental Materials II	2	
			DENLB203	Fixed Prosthodontics I	5	
			DENLB204	Principles of Occlusion	2	
	6	Required Courses	DENLB205	Fixed Prosthodontics II	5	
			DENLB206	Ceramics I	2	
			DENLB207	Understructure Design	5	
	7	Required Courses	DENLB208	Ethics, Jurisprudence and Laboratory Managem..	3	
			DENLB209	Ceramics II	5	
			DENLB211	Ceramics III	4	
	8	Required Courses	DENLB212	Computer Aided Design/Computer Aided Manufa..	5	
DENLB213			Advanced Technologies	4		
DENLB214			Advanced Crown and Bridge	3		
DENLB215			Advanced Dental Ceramics	3		
Electives			DENLB296	Work-based Learning Seminar	1	
	DENLB297	Work-based Learning Experience	3			



## Program: Dental Lab Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Dental Lab Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DENTAL LAB TECHNICIAN COC (62)	1	Required Courses	DENLB101	Introduction to Dental Lab Technology	Must pass entrance requirement	2
			DENLB102	Dental Anatomy I		3
			DENLB103	Dental Materials I		3
			DENLB104	Denture Processes I		4
	2	Required Courses	DENLB105	Denture Processes II		4
			DENLB106	Dental Anatomy II		2
			DENLB107	Denture Processes III		4
			DENLB108	Denture Processes IV		3
	3	Required Courses	DENLB110	Introduction to Orthodontics		3
			DENLB111	Ortho Appliances - Fixed		3
			DENLB112	Ortho Appliances - Removable		3
			DENLB120	Removable Partial Dentures I		3
4	Required Courses	DENLB122	Removable Partial Dentures III		4	
		DENLB123	Removable Partial Dentures IV		3	
		DENLB124	Advanced Dentures		3	

## Program: Dental Lab Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III	5				

## Program: Dental Assisting

Students prepare for careers as chair side dental assistants, dental office managers, and infection control specialists. The program is designed in accordance with American Dental Association guidelines and is fully accredited by the Commission on Dental Accreditation. After completing industry-specific competencies, students may take the Dental Assisting national board examination to earn nationally recognized credentials as a certified dental assistant. Note: General education requirements must be taken 1) prior to entering the program or, 2) before or after the regularly schedule dental assisting coursework.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1 Apply infection control and safety guidelines in the dental setting

2 Collect diagnostic treatment data

3 Perform clinical supportive treatments

4 Take diagnostic radiographs

5 Perform dental laboratory procedures

6 Provide patient oral health instruction

7 Model professional behaviors, ethics and appearance

## Program: Dental Assisting

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
DENTAL ASSISTING AAS (90)	Required Courses	DNTA139	Restorative Services I		5	
		1	Required Courses	DNTA110	Introduction to Dental Assisting	2
			DNTA111	Infection Control	5	
			DNTA112	Biomedical Sciences	5	
			DNTA114	Dental Sciences I	4	
			DNTA120	Introduction to Chairside Assisting	4	
			DNTA121	Chairside Assisting I	4	
			DNTA122	Dental Materials I	3	
			DNTA124	HIV/AIDS Training	1	
			DNTA127	Office Administration	3	
	2	Required Courses	DNTA128	Dental Sciences II	Completion of all previous courses	3
			DNTA130	Dental Sciences III		3
			DNTA131	Chairside Assisting II		3
			DNTA134	Chairside Assisting III		3
			DNTA144	Dental Radiology		5
			DNTA146	Chairside Assisting IV		5
			DNTA147	Dental Materials II		3
	3	Required Courses	DNTA150	Dental Sciences IV	Completion of 128 130 131 134 139 144 146 147	3
			DNTA151	Clinical Experience I		5
			DNTA152	Dental Materials III		4
			DNTA153	Office Administration Applications		2
			DNTA162	Clinical Experience II		3
			DNTA165	Clinical Experience III		2

## Program: Dental Assisting

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Denturist

Bates Technical College is the only college in Washington State to offer a denturist training program. Denturists are licensed specialists who make, fit, and repair complete and partial dentures. In order to meet the requirements of the denturist profession, candidates must obtain training at an accredited college to qualify to sit for the Washington, Oregon, Idaho, Montana, or Arizona denturist's license examination. Instruction includes anatomy, physiology, microbiology, ethics, medical emergencies, office management, and clinical/laboratory techniques as they apply to denture practices. Students receive clinical experience in the on-campus denturist clinic which provides services to the public. New students may enter the program at the beginning of fall and spring quarters.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Describe theoretical/conceptual and practical factors that impact the fitting of hearing aids.
- 2 Perform accurate assessment for the purposes of hearing aid fitting.
- 3 Explain various strategies and the rationale for use when recommending and selecting hearing aids for clients.
- 4 Integrate family and other professionals in the management/care of clients with hearing loss.
- 5 Identify hearing disorders and diseases for referral purposes.
- 6 Describe the acoustical characteristics of a variety of hearing aids.
- 7 Fit and adjust hearing aids.
- 8 Follow established clinical validation and verification protocols

## Program: Denturist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DENTURIST AAS (120)	1	Required Courses	DNTU101	Aspepsis, Infection, Hazard Control		2
			DNTU102	Biological Concepts		3
			DNTU103	Introduction to Complete Denture Prosthodontics		3
			DNTU104	Baseplates and Occlusion Rims		2
			DNTU105	Tooth Selection and Set I		3
			DNTU106	Dental Materials I		2
			DNTU107	Denture Techniques		2
			DNTU108	Complete Denture Fabrication I		2
			DNTU109	Dental Office Management I		1
	2	Required Courses	DNTU110	Head Anatomy and Physiology I		2
			DNTU111	Tooth Selection and Set II		1
			DNTU112	Medical Emergencies		3
			DNTU114	Clinical Denture Fabrication II		1
			DNTU115	Partial Dental Casts		2
			DNTU116	Framework Design -RFD		3
			DNTU117	Dental Office Management II		2
			DNTU118	Clinical Denture Procedures I		2
			DNTU119	Dental Impressions Procedures I		2
	3	Required Courses	DNTU120	Head Anatomy and Physiology II		3
			DNTU121	Tooth Selection and Set III		1
			DNTU123	Complete Denture Repair I		2
			DNTU124	RPD Frames Fabrication		2
			DNTU125	Oral Pathology		2
			DNTU126	Clinical Denture Procedures II		2
			DNTU127	Dental Impressions Procedures II		2
			DNTU128	Fabrication Clinical II		1
			DNTU129	Polish Methods - RPD Frames		1
	4	Required Courses	DNTU131	Wax Patterns - Partials		4
			DNTU132	Teeth Arrangement - RPD		2
			DNTU135	Introduction to Oral Pathology I		3
			DNTU136	Clinical Denture Procedures III		2
DNTU138			Fabrication Clinical III			
DNTU204			Dental Office Management IV		2	
DNTU210			Geriatric Patient Needs		3	
DNTU233			Finish Methods RPD		1	
5			Required Courses	DNTU201	Complete Denture Repair II	
	DNTU203	RPD Repair Methods			3	
	DNTU205	Denture Adjustments			1	
	DNTU206	Ethics and Jurisprudence			1	
	DNTU207	Malocclusions			2	
	DNTU208	Clinical Denture Procedures IV			2	
	DNTU211	Fabrication Clinical IV			2	
	DNTU220	Dental Office Management V			2	
6	Required Courses	DNTU212	Alternative RPD Systems		2	
		DNTU214	Advanced Special Services		1	
		DNTU215	Advanced Dental Appliances		1	
		DNTU222	Fabrication Clinical V		3	
		DNTU223	Dental Office Management VI		3	
		DNTU229	Clinical Denture Procedures V		4	
	Required..	DNTU213	WORK-BASE LEARN SEMINAR			
	Electives	DNTU296	Work-Based Learning		2	



## Program: Denturist

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
AAS	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		AAS	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&153	CALCULUS III	5				

## Program: Diesel & Heavy Equipment Technology

Students are prepared for employment in the diesel and heavy equipment industry, diagnosing, repairing, rebuilding, and replacing, components of diesel powered vehicles in an on-campus shop environment. Students learn the theory and application in a live shop setting working on actual customer equipment, preparing them for employment in the industry. With permission from the employer and the instructor the student may go on work based learning where they can work in the industry and receive college credits while working. The training received in the program educates the student for employment in the fields of repair and servicing of over the road trucks and equipment, heavy/construction equipment, and marine, power generation and agricultural equipment. Certificates of Training, a Certificate of Competency, and an "Associate in Applied Science Degree" are awarded as earned in the program. The program is articulated with BAS degree programs at Centralia College and Montana State University – Northern.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- |          |  |
|----------|--|
| <b>1</b> | Apply theory and principles for proper maintenance, diagnosis, and repair of hydraulic and pneumatic systems and components in trucks and heavy equipment                              |
| <b>2</b> | Trouble shoot, resolve equipment malfunctions, and perform routine maintenance on truck and heavy equipment electrical systems.  |
| <b>4</b> | Disassemble, assemble and resolve equipment malfunctions of diesel engines and heavy truck drive trains to manufactures standards.   |
| <b>5</b> | Perform preventive maintenance inspections and services for diesel trucks and heavy equipment using manufacturers' manuals in the performance of assigned work.                        |
| <b>6</b> | In a shop environment, apply a logical inspection, diagnosis, and repair process for truck and heavy equipment repair projects to the standards required of an entry-level technician. |
| <b>7</b> | Comply with personal and environmental safety practices associated with shop environments and activities within the diesel/heavy equipment industry.                                   |

## Program: Diesel & Heavy Equipment Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DIESEL AND HEAVY EQUIPMENT TECHNICIAN AAS (103)	1	Required Courses	DIESL100	Basic Electrical Systems		5
			DIESL112	Electrical Systems Application		4
			DIESL113	Electronic Engine Systems		3
			DIESL114	Mobile Air Conditioning Systems		3
	2	Required Courses	DIESL105	Introduction to Diesel Technology		1
			DIESL106	Engine Construction		5
			DIESL107	Engine Systems		1
			DIESL108	Engine Reassembly		4
			DIESL109	Fuel Systems		2
			DIESL110	Introduction to Air Brakes		2
	3	Required Courses	DIESL115	Introduction to Power Trains		1
			DIESL117	Automated Manual Transmission Service		2
			DIESL118	Clutch Service		2
			DIESL119	Automatic Transmission Service		2
			DIESL120	Driveline Service		1
			DIESL121	Differentials/Final Drive		2
			DIESL122	Wheel End Service		1
			DIESL123	Service Manual Transmissions		4
	4	Required Courses	DIESL130	Basic Hydraulics		5
			DIESL131	Hydraulics II		5
			DIESL132	Steering Systems		3
			DIESL133	Suspension Systems		2
	5	Required Courses	DIESL155	Basic Vehicle Services		8
			DIESL206	Advanced Service Applications		7
		Required Courses	DIESL296	Work-based Learning Experience (alternate course option)		13
		Electives	DIESL208	Advanced Service Techniques		7
	DIESL291		Practical Applications		13	
	DIESL292		Independent Projects		5	
	DIESL293		Independent Projects II		5	
	WBAS101		Welding Basics		8	

## Program: Diesel & Heavy Equipment Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Diesel & Heavy Equipment Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
DIESEL SERVICE TECHNICIAN COC (90)	1	Required Courses	DIESL100	Basic Electrical Systems		5
		DIESL112	Electrical Systems Application		4	
		DIESL113	Electronic Engine Systems		3	
		DIESL114	Mobile Air Conditioning Systems		3	
	2	Required Courses	DIESL105	Introduction to Diesel Technology		1
			DIESL106	Engine Construction		5
			DIESL107	Engine Systems		1
			DIESL108	Engine Reassembly		4
			DIESL109	Fuel Systems		2
			DIESL110	Introduction to Air Brakes		2
	3	Required Courses	DIESL115	Introduction to Power Trains		1
			DIESL117	Automated Manual Transmission Service		2
			DIESL118	Clutch Service		2
			DIESL119	Automatic Transmission Service		2
			DIESL120	Driveline Service		1
			DIESL121	Differentials/Final Drive		2
			DIESL122	Wheel End Service		1
			DIESL123	Service Manual Transmissions		4
	4	Required Courses	DIESL130	Basic Hydraulics		5
			DIESL131	Hydraulics II		5
			DIESL132	Steering Systems		3
			DIESL133	Suspension Systems		2
	5	Required Courses	DIESL155	Basic Vehicle Services		8
DIESL206			Advanced Service Applications		7	

## Program: Diesel & Heavy Equipment Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III	5				

## Program: Diesel & Heavy Equipment Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
TRUCK AND HEAVY DUTY EQUIPMENT ELECTRICAL SYSTEMS CoT (15)	1	Required Courses	DIESL100	Basic Electrical Systems		5
			DIESL112	Electrical Systems Application		4
			DIESL113	Electronic Engine Systems		3
			DIESL114	Mobile Air Conditioning Systems		3

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
DIESEL ENGINES CoT (15)	2	Required Courses	DIESL105	Introduction to Diesel Technology		1
			DIESL106	Engine Construction		5
			DIESL107	Engine Systems		1
			DIESL108	Engine Reassembly		4
			DIESL109	Fuel Systems		2
			DIESL110	Introduction to Air Brakes		2

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
HEAVY DUTY TRUCK DRIVE TRAINS CoT (15)	3	Required Courses	DIESL115	Introduction to Power Trains		1
			DIESL117	Automated Manual Transmission Service		2
			DIESL118	Clutch Service		2
			DIESL119	Automatic Transmission Service		2
			DIESL120	Driveline Service		1
			DIESL121	Differentials/Final Drive		2
			DIESL122	Wheel End Service		1
			DIESL123	Service Manual Transmissions		4

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
HYDRAULICS/PNEUMATICS CoT (15)	4	Required Courses	DIESL130	Basic Hydraulics		5
			DIESL131	Hydraulics II		5
			DIESL132	Steering Systems		3
			DIESL133	Suspension Systems		2

## Program: Digital Media

Digital media is a key component in film, television, video and website production, and encompasses a variety of projects, from filming and editing to digital animation and computer games. The constant implementation of new technology makes this a fast-moving field, a good fit for the student who seeks a career in a visual medium with leading-edge technology. Instruction includes production and editing software and the opportunity to achieve practical experience working on a variety of studio projects. Employment opportunities for digital media professionals include work as creative services editors, video editors and graphics editors for production studios, film companies, web design companies, advertising and multimedia companies. The program also provides extended learning opportunities for persons previously or currently employed in the industry.

For program costs and fees refer to the catalog TUTION AND FEES PAGE.

### Program Learning Outcomes

- 1 Use industry standard digital media/multimedia hardware and software
- 2 Create projects and presentations utilizing a variety of digital media/multimedia technologies
- 3 Design and generate still imagery/graphics
- 4 Design and generate video and/or animations in a multimedia project
- 5 Solve industry-related problems
- 6 Design and execute audio technology for a digital media/multimedia projects
- 7 Use computer applications for digital media/multimedia projects
- 8 Produce digital media/multimedia projects
- 9 Demonstrate appropriate communication skills



## Program: Digital Media

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DIGITAL MEDIA AAS (106)	1	Required Courses	DIGIT102	Image Editing		
			DIGIT103	Graphic Generation		
			DIGIT105	Digital Imaging		
	2	Required Courses	DIGIT121	Pre Production Process		
			DIGIT126	Production Process		
			DIGIT127	Post Production Process		
	3	Required Courses	DIGIT130	Production Editing I		
			DIGIT131	Production Editing II		
			DIGIT132	Digital Media - Video		
			DIGIT145	Digital Media - Audio		
	4	Required Courses	DIGIT141	Compositing I		
			DIGIT142	Compositing II		
			DIGIT143	Digital Media - Animation		
	5	Required Courses	DIGIT210	Pre-Production Project I		
			DIGIT211	Production Process Project I		
			DIGIT212	Post-Production Project I		
	6	Required Courses	DIGIT220	Pre-Production Project II		
			DIGIT221	Production Process Project II		
DIGIT222			Post-Production Project II			

## Program: Digital Media

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Digital Media

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DIGITAL MEDIA AAS-T (111)	1	Required Courses	DIGIT102	Image Editing		5
			DIGIT103	Graphic Generation		5
			DIGIT105	Digital Imaging		5
	2	Required Courses	DIGIT121	Pre Production Process		5
			DIGIT126	Production Process		5
			DIGIT127	Post Production Process		5
	3	Required Courses	DIGIT130	Production Editing I		3
			DIGIT131	Production Editing II		3
			DIGIT132	Digital Media - Video		5
			DIGIT145	Digital Media - Audio		5
	4	Required Courses	DIGIT141	Compositing I		5
			DIGIT142	Compositing II		5
			DIGIT143	Digital Media - Animation		5
	5	Required Courses	DIGIT210	Pre-Production Project I		5
			DIGIT211	Production Process Project I		5
DIGIT212			Post-Production Project I		5	
6	Required Courses	DIGIT220	Pre-Production Project II		5	
		DIGIT221	Production Process Project II		5	
		DIGIT222	Post-Production Project II		5	

## Program: Digital Media

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Digital Media

Degree	Quarter		Course ID	Title	Prerequisites	Credits
VIRTUAL REALITY AND RAPID PROTOTYPING AAS (105)	1	Required Courses	DIGIT102	Image Editing		5
			DIGIT103	Graphic Generation		5
	Winter	Required Courses	DIGIT153	Design of Film and Television Model		5
	2	Required Courses	DIGIT126	Production Process		5
			DIGIT130	Production Editing I		3
			DIGIT131	Production Editing II		3
	3	Required Courses	DIGIT145	Digital Media - Audio		5
			DIGIT141	Compositing I		5
			DIGIT142	Compositing II		5
	4	Required Courses	DIGIT143	Digital Media - Animation		5
			DIGIT210	Pre-Production Project I		5
			DIGIT211	Production Process Project I		5
	5	Required Courses	DIGIT212	Post-Production Project I		5
			DIGIT220	Pre-Production Project II		5
			DIGIT221	Production Process Project II		5
6	Required Courses	DIGIT222	Post-Production Project II		5	
		DIGIT152	VR Model Foundation		5	
		DIGIT154	Vray Indoor Rendering		5	
		Required Courses	DIGIT155	3D Printing Technology		4

## Program: Digital Media

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH174	MATH FOR ALLIED HEALTH	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&153	CALCULUS III	5			

## Program: Digital Media

Degree	Quarter		Course ID	Title	Prerequisites	Credits
DIGITAL MEDIA COC (76)	1	Required Courses	DIGIT102	Image Editing		5
			DIGIT103	Graphic Generation		5
			DIGIT105	Digital Imaging		5
	2	Required Courses	DIGIT121	Pre Production Process		5
			DIGIT126	Production Process		5
			DIGIT127	Post Production Process		5
	3	Required Courses	DIGIT130	Production Editing I		3
			DIGIT131	Production Editing II		3
			DIGIT132	Digital Media - Video		5
			DIGIT145	Digital Media - Audio		5
	4	Required Courses	DIGIT141	Compositing I		5
			DIGIT142	Compositing II		5
			DIGIT143	Digital Media - Animation		5
	5	Required Courses	DIGIT210	Pre-Production Project I		5
			DIGIT211	Production Process Project I		5
			DIGIT212	Post-Production Project I		5
	6	Required Courses	DIGIT220	Pre-Production Project II		5
			DIGIT221	Production Process Project II		5
DIGIT222			Post-Production Project II		5	

## Program: Digital Media

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III			5		



## Program: Digital Media

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MOBILE STORYTELLING CoT (15)		Required Courses	DIGIT106	Mobile Storytelling		5
			DIGIT107	Mobile Production I		5
			DIGIT108	Mobile Postproduction & Editing I		5
Degree	Quarter		Course ID	Title	Prerequisites	Credits
VIDEO PRODUCTION CoT (15)	2	Required Courses	DIGIT121	Pre Production Process		5
			DIGIT126	Production Process		5
			DIGIT127	Post Production Process		5
Degree	Quarter		Course ID	Title	Prerequisites	Credits
VIDEO PRODUCTION CoT (15)	2	Required Courses	DIGIT121	Pre Production Process		5
			DIGIT126	Production Process		5
			DIGIT127	Post Production Process		5
Degree	Quarter		Course ID	Title	Prerequisites	Credits
EDITING CoT (16)	3	Required Courses	DIGIT130	Production Editing I		3
			DIGIT131	Production Editing II		3
			DIGIT132	Digital Media - Video		5
			DIGIT145	Digital Media - Audio		5
Degree	Quarter		Course ID	Title	Prerequisites	Credits
MOTION GRAPHICS CoT (15)	4	Required Courses	DIGIT141	Compositing I		5
			DIGIT142	Compositing II		5
			DIGIT143	Digital Media - Animation		5
Degree	Quarter		Course ID	Title	Prerequisites	Credits
VIRTUAL REALITY AND 3D PRINTING CoT (14)		Required Courses	DIGIT152	VR Model Foundation		5
			DIGIT155	3D Printing Technology		4
	Winter	Required C..	DIGIT153	Design of Film and Television Model		5

## Program: Early Childhood Education

Students prepare for careers in Early Childhood Education (ECE) for such positions as Early Learning Program teacher, assistant teacher, program supervisor, and/or center director. The ECE curriculum prepares students to work with children birth to 8 years of age in diverse early childhood environments. The curriculum is based on the national standards outlined by the National Association for the Education of Young Children (NAEYC) and the national accreditation standards. Early Childhood students will combine learned theories and practical laboratory experiences with young children in early childhood education programs under supervision with qualified educators.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Create/design, implement and assess meaningful, culturally linguistic and ability diverse learning experiences
- 2 Use specialized knowledge of child development and of individual children to create developmentally appropriate intentional and challenging learning environments
- 3 Skillfully observe, document and assess all children's development and learning in collaboration with families
- 4 Build positive relationships and guide all children with reflective, thoughtful interactions
- 5 Build culturally inclusive and respectful partnerships with children's families and their communities
- 6 Engage in professional behavior, following the NAEYC Code of Ethics and utilize community resources
- 7 Recognize the obligation to lifelong learning and continued professional development

### AAS Specializations:

EARLY CHILDHOOD EDUCATION-AL AAS (90)	Administrationton Early Learning
EARLY CHILDHOOD EDUCATION-AL AAS-T (90)	Administrationton Early Learning
EARLY CHILDHOOD EDUCATION-FCC AAS (90)	Family Child Care
EARLY CHILDHOOD EDUCATION-FCC AAS-T (90)	Family Child Care
EARLY CHILDHOOD EDUCATION-I/TC AAS (90)	Infant/Toddler Care
EARLY CHILDHOOD EDUCATION-I/TC AAS-T (90)	Infant/Toddler Care
EARLY CHILDHOOD EDUCATION-SAC AAS (90)	School Age Care
EARLY CHILDHOOD EDUCATION-SAC AAS-T (90)	School Age Care
EARLYCHILDHOODEDUCATION-AL AAS (90)	Administrationton Early Learning
EARLYCHILDHOODEDUCATION-AL AAS-T (90)	Administrationton Early Learning
EARLYCHILDHOODEDUCATION-FCC AAS (90)	Family Child Care
EARLYCHILDHOODEDUCATION-FCC AAS-T (90)	Family Child Care
EARLYCHILDHOODEDUCATION-I/TC AAS (90)	Infant/Toddler Care
EARLYCHILDHOODEDUCATION-I/TC AAS-T (90)	Infant/Toddler Care
EARLYCHILDHOODEDUCATION-SAC AAS (90)	School Age Care
EARLYCHILDHOODEDUCATION-SAC AAS-T (90)	School Age Care

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
EARLY CHILDHOOD EDUCATION-AL AAS (90)		Required Courses	<b>ECED&amp;132</b>	Infant and Toddler Care		3
			<b>ECED&amp;134</b>	Family Child Care		3
			<b>ECED&amp;136</b>	School Age Care		3
			<b>ECED&amp;139</b>	Administration of EL		3
	Electives	<b>ECE296</b>	Work-Based Learning Experience	INSTR APP REQ		
1	Required Courses	<b>ECED&amp;105</b>	Intro to Early Childhood Education		5	
		<b>ECED&amp;107</b>	Health, Nutrition and Safety		5	
		<b>ECED&amp;170</b>	Environments for Young Children		3	
2	Required Courses	<b>ECED&amp;120</b>	Practicum - Nurturing Relationships		2	
		<b>EDUC&amp;115</b>	Child Development		5	
		<b>EDUC&amp;130</b>	Guiding Behavior		3	
		<b>EDUC&amp;150</b>	Child, Family and Community		3	
3	Required Courses	<b>ECED&amp;160</b>	Curriculum Development		5	
		<b>ECED&amp;180</b>	Language & Literacy Development		3	
		<b>ECED&amp;190</b>	Observation and Assessment		3	
5	Required Courses	<b>ECE204</b>	Early Childhood Practicum II		2	
		<b>ECE207</b>	Professionalism		5	
		<b>ECE210</b>	Early Childhood Practicum III		2	
6	Required Courses	<b>ECE211</b>	Emotional and Social Development		3	
		<b>EDUC&amp;203</b>	Exceptional Child		3	
7	Required Courses	<b>ECE212</b>	Cognitive Development		5	
		<b>ECE213</b>	Creative Experience - Art & Movement		5	

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH174		MATH FOR ALLIED HEALTH	5	
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&152	CALCULUS II		5		
MATH&153	CALCULUS III	5			

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits
EARLY CHILDHOOD EDUCATION-AL AAS-T (90)	Required Courses	ECED&132	Infant and Toddler Care		3
		ECED&134	Family Child Care		3
		ECED&136	School Age Care		3
		ECED&139	Administration of EL		3
1	Required Courses	ECED&105	Intro to Early Childhood Education		5
		ECED&107	Health, Nutrition and Safety		5
		ECED&170	Environments for Young Children		3
2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
		EDUC&115	Child Development		5
		EDUC&130	Guiding Behavior		3
		EDUC&150	Child, Family and Community		3
3	Required Courses	ECED&160	Curriculum Development		5
		ECED&180	Language & Literacy Development		3
		ECED&190	Observation and Assessment		3
5	Required Courses	ECE204	Early Childhood Practicum II		2
		ECE207	Professionalism		5
		ECE210	Early Childhood Practicum III		2
6	Required Courses	ECE211	Emotional and Social Development		3
		EDUC&203	Exceptional Child		3
7	Required Courses	ECE212	Cognitive Development		5
		ECE213	Creative Experience - Art & Movement		5

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
	MATH&153		CALCULUS III	5	

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits
EARLY CHILDHOOD EDUCATION-FCC AAS (90)		Required Courses	<b>ECED&amp;134</b> Family Child Care		3
		Electives	<b>ECE296</b> Work-Based Learning Experience	INSTR APP REQ	
	1	Required Courses	<b>ECED&amp;105</b> Intro to Early Childhood Education		5
		<b>ECED&amp;107</b> Health, Nutrition and Safety		5	
		<b>ECED&amp;170</b> Environments for Young Children		3	
	2	Required Courses	<b>ECED&amp;120</b> Practicum - Nurturing Relationships		2
		<b>EDUC&amp;115</b> Child Development		5	
		<b>EDUC&amp;130</b> Guiding Behavior		3	
		<b>EDUC&amp;150</b> Child, Family and Community		3	
	3	Required Courses	<b>ECED&amp;160</b> Curriculum Development		5
		<b>ECED&amp;180</b> Language & Literacy Development		3	
		<b>ECED&amp;190</b> Observation and Assessment		3	
	5	Required Courses	<b>ECE204</b> Early Childhood Practicum II		2
		<b>ECE207</b> Professionalism		5	
		<b>ECE210</b> Early Childhood Practicum III		2	
	6	Required Courses	<b>ECE211</b> Emotional and Social Development		3
		<b>EDUC&amp;203</b> Exceptional Child		3	
	7	Required Courses	<b>ECE212</b> Cognitive Development		5
		<b>ECE213</b> Creative Experience - Art & Movement		5	

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH174	MATH FOR ALLIED HEALTH	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
	MATH&151		CALUCLUS I	5	
	MATH&152		CALCULUS II	5	
	MATH&153	CALCULUS III	5		



## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
EARLY CHILDHOOD EDUCATION-FCC AAS-T (90)		Required Courses	<b>ECED&amp;134</b>	Family Child Care		3
	1	Required Courses	<b>ECED&amp;105</b>	Intro to Early Childhood Education		5
			<b>ECED&amp;107</b>	Health, Nutrition and Safety		5
			<b>ECED&amp;170</b>	Environments for Young Children		3
	2	Required Courses	<b>ECED&amp;120</b>	Practicum - Nurturing Relationships		2
			<b>EDUC&amp;115</b>	Child Development		5
			<b>EDUC&amp;130</b>	Guiding Behavior		3
			<b>EDUC&amp;150</b>	Child, Family and Community		3
	3	Required Courses	<b>ECED&amp;160</b>	Curriculum Development		5
			<b>ECED&amp;180</b>	Language & Literacy Development		3
			<b>ECED&amp;190</b>	Observation and Assessment		3
	5	Required Courses	<b>ECE204</b>	Early Childhood Practicum II		2
			<b>ECE207</b>	Professionalism		5
			<b>ECE210</b>	Early Childhood Practicum III		2
	6	Required Courses	<b>ECE211</b>	Emotional and Social Development		3
			<b>EDUC&amp;203</b>	Exceptional Child		3
	7	Required Courses	<b>ECE212</b>	Cognitive Development		5
			<b>ECE213</b>	Creative Experience - Art & Movement		5

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
	MATH&153		CALCULUS III	5	

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits
EARLY CHILDHOOD EDUCATION-I/TC AAS (90)		Required Courses ECED&132	Infant and Toddler Care		3
		Electives ECE296	Work-Based Learning Experience	INSTR APP REQ	
1	Required Courses	ECED&105	Intro to Early Childhood Education		5
		ECED&107	Health, Nutrition and Safety		5
		ECED&170	Environments for Young Children		3
2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
		EDUC&115	Child Development		5
		EDUC&130	Guiding Behavior		3
		EDUC&150	Child, Family and Community		3
3	Required Courses	ECED&160	Curriculum Development		5
		ECED&180	Language & Literacy Development		3
		ECED&190	Observation and Assessment		3
5	Required Courses	ECE204	Early Childhood Practicum II		2
		ECE207	Professionalism		5
		ECE210	Early Childhood Practicum III		2
6	Required Courses	ECE211	Emotional and Social Development		3
		EDUC&203	Exceptional Child		3
7	Required Courses	ECE212	Cognitive Development		5
		ECE213	Creative Experience - Art & Movement		5

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH174		MATH FOR ALLIED HEALTH	5	
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&152	CALCULUS II		5		
MATH&153	CALCULUS III	5			

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
EARLY CHILDHOOD 1 EDUCATION-I/TC AAS-T (90)	Required Courses	ECED&105	Intro to Early Childhood Education		5	
		ECED&107	Health, Nutrition and Safety		5	
		ECED&170	Environments for Young Children		3	
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			EDUC&130	Guiding Behavior		3
			EDUC&150	Child, Family and Community		3
	3	Required Courses	ECED&160	Curriculum Development		5
			ECED&180	Language & Literacy Development		3
			ECED&190	Observation and Assessment		3
	5	Required Courses	ECE204	Early Childhood Practicum II		2
			ECE207	Professionalism		5
			ECE210	Early Childhood Practicum III		2
	6	Required Courses	ECE211	Emotional and Social Development		3
			EDUC&203	Exceptional Child		3
7	Required Courses	ECE212	Cognitive Development		5	
		ECE213	Creative Experience - Art & Movement		5	
	Required Courses	ECED&132	Infant and Toddler Care		3	

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
	MATH&153		CALCULUS III	5	

## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
EARLY CHILDHOOD 1 EDUCATION-SAC AAS (90)	Required Courses	ECED&105	Intro to Early Childhood Education		5	
		ECED&107	Health, Nutrition and Safety		5	
		ECED&170	Environments for Young Children		3	
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			EDUC&130	Guiding Behavior		3
			EDUC&150	Child, Family and Community		3
	3	Required Courses	ECED&160	Curriculum Development		5
			ECED&180	Language & Literacy Development		3
			ECED&190	Observation and Assessment		3
	5	Required Courses	ECE204	Early Childhood Practicum II		2
			ECE207	Professionalism		5
			ECE210	Early Childhood Practicum III		2
	6	Required Courses	ECE211	Emotional and Social Development		3
			EDUC&203	Exceptional Child		3
7	Required Courses	ECE212	Cognitive Development		5	
		ECE213	Creative Experience - Art & Movement		5	
	Required Courses	EDUC&136	TBD			
	Electives	ECE296	Work-Based Learning Experience	INSTR APP REQ		

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (15 credits required)			
	BIOL&160	GENERAL BIOLOGY	5		
	BIOL&175	HUMAN BIOLOGY WITH LAB	5		
	BIOL&241	ANATOMY & PHYSIOLOGY I	5		
	BIOL&242	HUMAN A&P II	5		
	BIOL&260	MICROBIOLOGY	5		
	CHEM&121	INTRODUCTION CHEMISTRY	5		
	CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
	CMST&102	INTRO TO MASS MEDIA	5		
	CMST&152	INTERCULTURAL COMM	5		
	CMST&210	INTERPERSONAL COMMUNICTN	5		
	CMST&220	PUBLIC SPEAKING	5		
	CMST&230	SML GROUP COMMUNICATIONS	5		
	ECON&201	MICROECONOMICS	5		
	ECON&202	MACROECONOMICS	5		
	HIST101	HISTORY-SCIENCE/TECH	5		
	HREL111	COLLEGE/JOB SRCH SUCCESS	5		
	NUTR&101	INTRO TO NUTRITION	5		
	PHYS&221	ENGINEERING PHYS I W/LAB	5		
	PHYS&222	ENGINEER PHYS II W/LAB	5		
	PHYS&223	ENGINEER PHYS III W/LAB	5		
	POLS&101	INTRO TO POL SCIENCE	5		
	PSYC&100	GENERAL PSYCHOLOGY	5		
	PSYC&200	LIFESPAN PSYCHOLOGY	5		
	SOC&101	INTRO TO SOCIOLOGY	5		
	Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH174	MATH FOR ALLIED HEALTH	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
		MATH&146	INTRODUCTION TO STATS	5	
		MATH&151	CALUCLUS I	5	
		MATH&152	CALCULUS II	5	
		MATH&153	CALCULUS III	5	



## Program: Early Childhood Education

Degree	Quarter	Course ID	Title	Prerequisites	Credits
EARLY CHILDHOOD 1 EDUCATION-SAC AAS-T (90)	Required Courses	ECED&105	Intro to Early Childhood Education		5
		ECED&107	Health, Nutrition and Safety		5
		ECED&170	Environments for Young Children		3
2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
		EDUC&115	Child Development		5
		EDUC&130	Guiding Behavior		3
		EDUC&150	Child, Family and Community		3
3	Required Courses	ECED&160	Curriculum Development		5
		ECED&180	Language & Literacy Development		3
		ECED&190	Observation and Assessment		3
5	Required Courses	ECE204	Early Childhood Practicum II		2
		ECE207	Professionalism		5
		ECE210	Early Childhood Practicum III		2
6	Required Courses	ECE211	Emotional and Social Development		3
		EDUC&203	Exceptional Child		3
7	Required Courses	ECE212	Cognitive Development		5
		ECE213	Creative Experience - Art & Movement		5
	Required Courses	ECED&136	School Age Care		3

## Program: Early Childhood Education

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
	MATH&153		CALCULUS III	5	

## Program: Early Childhood Education

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE EARLY CHILDHOOD EDUCATION CERTIFICATE COC (47)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
			ECED&170	Environments for Young Children		3
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			EDUC&130	Guiding Behavior		3
			EDUC&150	Child, Family and Community		3
	3	Required Courses	ECED&160	Curriculum Development		5
			ECED&180	Language & Literacy Development		3
			ECED&190	Observation and Assessment		3

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
COC	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
		MATH172	APPLIED BUSINESS MATH	5
		MATH173	MATH CONCEPTS	5
		MATH174	MATH FOR ALLIED HEALTH	5
		MATH&107	MATH IN SOCIETY	5
		MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5
		MATH&146	INTRODUCTION TO STATS	5
MATH&151	CALUCLUS I	5		
MATH&153	CALCULUS III	5		

## Program: Early Childhood Education

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE INITIAL EARLY CHILDHOOD EDUCATION CERTIFICATE CoT (12)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE SHORT ECE CERTIFICATE OF SPECIALIZATION - GENERAL CoT (20)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			EDUC&130	Guiding Behavior		3

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE SHORT ECE CERTIFICATE OF SPECIALIZATION - SCHOOL AGE CARE CoT (20)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			ECED&136	School Age Care		3

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE SHORT ECE CERTIFICATE OF SPECIALIZATION -FAMILY CHILD CARE CoT (20)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			ECED&134	Family Child Care		3

Degree	Quarter		Course ID	Title	Prerequisites	Credits
STATE SHORT EECE CERTIFICATE OF SPECIALIZATION - ADMINISTRATION CoT (20)	1	Required Courses	ECED&105	Intro to Early Childhood Education		5
			ECED&107	Health, Nutrition and Safety		5
	2	Required Courses	ECED&120	Practicum - Nurturing Relationships		2
			EDUC&115	Child Development		5
			ECED&139	Administration of EL		3

## Program: Electronics & Communications Systems Technology

Students prepare for employment in the electronic and communications industry working to install, repair, test and maintain a wide variety of equipment including radio and mobile communication, avionics, marine electronics, cellular, satellite, as well as other electronic equipment and systems. Communications technicians may install and maintain structured cable or fiber optic systems to meet the needs of communication services including telephone, data, video, computer, broadcast or wireless networks. Graduates are employed as field or bench technicians with opportunities to work anywhere from an outdoor mountain top repeater station to a comfortable indoor work environment. Students also prepare for industry certifications and licenses including the Federal Communications Commission, Network Cabling Specialist, Certified Fiber Optic Technician and Certified Electronics Technician. Take charge of your life today and enroll in our Electronic and Communications Systems degree program to launch your career in any one of many high-growth industries with excellent income potential. With a rapidly changing economy, the time is right for you to acquire the specialized skills needed to succeed in today's fast paced world of electronics and communications.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Follow safety procedures and policies
2	Perform testing on DC, AC, analog, digital and microprocessor circuitry
3	Diagnose and troubleshoot electronic equipment utilizing industry specific test equipment
4	Perform installations, repairs and troubleshooting of electronic, RF and communication systems
5	Describe, calculate and identify electronic communications equipment and circuitry
6	Describe, calculate and identify wireless, broadband, cellular communications equipment and systems
7	Utilize the job search documents students have prepared and skills they have learned to efficiently look for jobs in the industry
8	Utilize industry certifications and licenses in their job search process
9	Perform installation, termination and testing of fiber optic systems to industry standards
10	Perform installation, termination and testing of twisted pair and coaxial cabling systems to industry standards
11	Perform routine installation and service activities

## Program: Electronics & Communications Systems Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRONIC AND COMMUNICATIONS SYSTEMS TECHNOLOGY AAS (100)	1	Required Courses	ECS101	Introduction to Electronics		2
			ECS102	DC Circuits		5
			ECS104	Analog Circuits I		2
			ECS201	Telecommunications Network Cabling System		5
			ETECH103	AC Circuits		5
	Electives	CNST201	Cisco Network Fundamentals		5	
		INFO101	Computer Application Essentials		5	
		INFO104	A+ Essentials		5	
	2	Required Courses	ECS105	Analog Circuits II		3
			ECS108	CET Certification Preparation		3
			ECS202	Fiber Optics		5
			ETECH105	Digital Circuits		5
		Electives	CNST202	Cisco Routing Protocols and Concepts		5
			ETECH106	Microcontrollers		5
	3	Required Courses	ECS210	Introduction to RF Communications		2
			ECS211	Amplitude Modulation		3
			ECS212	Single Sideband and Frequency Modulation		4
	4	Required Courses	ECS203	FCC Licensure Prep I		3
			ECS204	FCC Licensure Prep II		5
			ECS213	Transmission Lines and Antennas		2
			ECS214	Microwave, Telephony, and Cellular		2
	5	Required Courses	ECS205	Wireless/ RF Communications		2
			ECS206	Wireless Personal Area Networks		1
			ECS215	Data and Networking Fundamentals		2
			ECS216	Advanced Communication Principles		2
	6	Required Courses	ECS207	Wireless Local Area Networks		2
			ECS208	Wireless Broadband Networks		2
			ECS249	Job Search and Preparation		3
Electives	ECS230	Telecommunications Lab		2		
	ECS231	Radio Communications Lab		3		
	ECS232	Microwave Fundamentals Lab		2		
	ECS233	Signals Processing Lab		4		
	ECS290	Independent Study I				
	ECS291	Independent Study II				
ECS296	Work Based Learning Experience					

## Program: Electronics & Communications Systems Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
MATH&107	MATH IN SOCIETY			5		
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Electronics & Communications Systems Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits	
COMPUTER NETWORKING SYSTEMS TECHNICIAN COC (66)	1	Required Courses	ECS101	Introduction to Electronics		2	
			ECS102	DC Circuits		5	
			ECS104	Analog Circuits I		2	
			ECS201	Telecommunications Network Cabling System		5	
			ETECH103	AC Circuits		5	
	Electives	CNST201	Cisco Network Fundamentals		5		
		INFO101	Computer Application Essentials		5		
		INFO104	A+ Essentials		5		
	2	Required Courses	ECS105	Analog Circuits II		3	
			ECS108	CET Certification Preparation		3	
			ECS202	Fiber Optics		5	
			ETECH105	Digital Circuits		5	
		Electives	CNST202	Cisco Routing Protocols and Concepts		5	
				INFO105	A+ Practical		5
	3	Required Courses	ECS211	Amplitude Modulation		3	
	4	Required Courses	ECS203	FCC Licensure Prep I		3	
			ECS204	FCC Licensure Prep II		5	
	5	Required Courses	ECS205	Wireless/ RF Communications		2	
			ECS206	Wireless Personal Area Networks		1	
6	Required Courses	ECS207	Wireless Local Area Networks		2		
	Electives	ECS230	Telecommunications Lab		2		
		ECS231	Radio Communications Lab		3		
		ECS232	Microwave Fundamentals Lab		2		
		ECS233	Signals Processing Lab		4		
		ECS290	Independent Study I				
		ECS291	Independent Study II				
ECS296	Work Based Learning Experience						



## Program: Electronics & Communications Systems Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III	5				

## Program: Electronic Equipment Service Technician

Students prepare for careers in the electronic equipment service profession as technicians in a wide range of high tech industries, including broadcast audio, broadcast video, car audio, electronic service, medical equipment repair, office automation and video tape. Employment opportunities may also include mobile electronics installer and electronic assembler. Students acquire and hone service technician skills through extensive practice with live equipment, and prepare for industry certification as Certified Electronics Technicians, Mobile Electronics Certified Professionals, and Certified Broadcast Technologists. This program also provides extended learning opportunities for persons previously or currently employed in these and related occupations.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Safely perform maintenance and troubleshooting operations to the component and/or board level
- 2 Function as a member of a team to complete a task in a timely and efficient manner; delegating, organizing and documenting tasks and results.
- 3 Identify, analyze, and maintain technical equipment per customer requirements.
- 4 Apply professional oral and written communication skills appropriate in an industry environment.
- 5 Apply skills for life-long learning by locating, evaluating, and applying relevant information using external and internal resources.
- 6 Observe professional standards as required by industry
- 7 Demonstrate effective working relationships with people who are similar to or different.
- 8 Establish professional oral and written business communication skills appropriate in a clinical environment.

## Program: Electronic Equipment Service Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRONIC EQUIPMENT SERVICE TECHNICIAN AAS (114)	1	Required Courses	BMST105	Testing Equipment		5
			BMST106	Soldering		2
			EEST101	Electrical Safety		4
			EEST102	Applied Math		4
			EEST103	Electronics Principles I		5
	2	Required Courses	EEST104	DC Electronics		4
			EEST105	AC ELECTRONICS		5
			EEST106	RLC CIRCUITS		4
	3	Required Courses	BMST107	Schematics		3
			EEST107	Electronics Principles II		5
			EEST108	Electronic Devices I		4
			EEST223	Introduction to Digital Systems		5
	4	Required Courses	BMST109	Applied Service I		3
			EEST109	Electronic Devices II		4
			EEST207	Introduction to Networking		5
			EEST222	Introduction to Fiber Optic Communications		5
			EEST224	Introduction to Wireless Communications		4
			EEST225	Introduction to Microprocessors		4
	5	Required Courses	BMST110	Applied Service II		2
			EEST110	Introduction to Programmable Logic Controllers		5
			EEST208	Introduction to Embedded Controllers		5
			EEST221	Electronic Principles -RFID		4
	6	Required Courses	EEST206	Emerging Technologies		3
			EEST210	Captstone Project		5
		Required Courses	BMST108	TBD		

## Program: Electronic Equipment Service Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Electrical Construction

Full-time day and swing shift programs are available for students seeking to earn a degree or certificate in electrical construction for jobs in commercial and residential construction, public utility agencies, and industrial construction and maintenance. The program also provides extended learning opportunities for persons previously or currently employed in these and related occupations. Students interested in receiving an ELO1 license should consult with career advisors to ensure enrollment in the appropriate program.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Install, test and repair residential, commercial and industrial wiring systems
- 2 Work safely according to OSHA and NFPA Standards as well as contractor and customer safety protocols and policies
- 3 Recognize potential hazards
- 4 Interpret and comply with the National Electric Code NFPA 70 book and local codes
- 5 Interpret all sections of blueprints and draft electrical circuits
- 6 Integrate carpentry, masonry, plumbing and HVACR systems with electrical installation and maintenance
- 7 Produce take-off lists
- 8 Install new materials for existing and new projects

## Program: Electrical Construction

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRICAL CONSTRUCTION AAS (121)	1	Required Courses	ELCON101	Introduction to Electrical Construction		3
			ELCON102	Applied Physical Science		5
			ELCON103	Hand and Power Tools		4
			ELCON108	NFPA 70E Standards		4
	2	Required Courses	ELCON104	Electrical Service Installation		4
			ELCON105	Electrical Components		4
			ELCON109	Residential Design		3
			ELCON110	Residential Wiring Techniques		3
	3	Required Courses	ELCON106	Introduction to Residential Wiring		3
			ELCON107	National Electric Code		4
			ELCON112	Introduction to Blueprint Reading		3
			ELCON113	Blueprint Reading Applications		5
	4	Required Courses	ELCON111	Systems Troubleshooting		3
			ELCON114	New Residential Technologies		5
			ELCON201	Specialty Tools		4
			ELCON202	Commercial Wiring		3
			ELCON203	Commercial Codes and Regulations		3
	5	Required Courses	ELCON204	Commercial Material Identification		3
			ELCON205	Commercial Installation		3
			ELCON206	Industrial Wiring		3
			ELCON207	Industrial Material Identification		3
			ELCON208	Industrial Installation		3
	6	Required Courses	ELCON209	Industrial Hazards		3
			ELCON210	Motors and Controllers		4
			ELCON211	Project Estimation		5
			ELCON212	Control Circuits		3
	7	Required Courses	ELCON213	Motors and Controllers Applications		3
			ELCON214	Transformers		3
ELCON215			Advanced Motor Controls		3	
ELCON216			New Technology Commercial		4	
8	Electives	ELCON220	Advanced Projects I		10	
		ELCON221	Advanced Projects II		10	
		ELCON222	Advanced Projects III		10	
		ELCON223	Advanced Project IV		10	

## Program: Electrical Construction

Degree	Quarter		Course ID	Title	Prerequisites	Credits
RESIDENTIAL ELECTRICIAN COC (67)	1	Required Courses	ELCON101	Introduction to Electrical Construction		3
			ELCON102	Applied Physical Science		5
			ELCON103	Hand and Power Tools		4
			ELCON108	NFPA 70E Standards		4
	2	Required Courses	ELCON104	Electrical Service Installation		4
			ELCON105	Electrical Components		4
			ELCON109	Residential Design		3
			ELCON110	Residential Wiring Techniques		3
	3	Required Courses	ELCON106	Introduction to Residential Wiring		3
			ELCON107	National Electric Code		4
			ELCON112	Introduction to Blueprint Reading		3
			ELCON113	Blueprint Reading Applications		5
	4	Required Courses	ELCON111	Systems Troubleshooting		3
			ELCON201	Specialty Tools		4

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (5 credits required)			
			BIOL&160	GENERAL BIOLOGY	5
			BIOL&175	HUMAN BIOLOGY WITH LAB	5
			BIOL&241	ANATOMY & PHYSIOLOGY I	5
			BIOL&242	HUMAN A&P II	5
			BIOL&260	MICROBIOLOGY	5
			CHEM&121	INTRODUCTION CHEMISTRY	5
			CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
			CMST&102	INTRO TO MASS MEDIA	5
			CMST&152	INTERCULTURAL COMM	5
			CMST&210	INTERPERSONAL COMMUNICTN	5
			CMST&220	PUBLIC SPEAKING	5
			CMST&230	SML GROUP COMMUNICATIONS	5
			ECON&201	MICROECONOMICS	5
			ECON&202	MACROECONOMICS	5
			HIST101	HISTORY-SCIENCE/TECH	5
			HREL111	COLLEGE/JOB SRCH SUCCESS	5
			NUTR&101	INTRO TO NUTRITION	5
			PHYS&221	ENGINEERING PHYS I W/LAB	5
			PHYS&222	ENGINEER PHYS II W/LAB	5
			PHYS&223	ENGINEER PHYS III W/LAB	5
			POLS&101	INTRO TO POL SCIENCE	5
			PSYC&100	GENERAL PSYCHOLOGY	5
			PSYC&200	LIFESPAN PSYCHOLOGY	5
			SOC&101	INTRO TO SOCIOLOGY	5
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
	MATH&146		INTRODUCTION TO STATS	5	
	MATH&151		CALUCULUS I	5	
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Electrical Engineering Technology

The Electrical Engineering Technician program is the only one in the region that prepares student to design complete electrical systems for commercial buildings, stores, banks and schools. Students learn electrical theory, related math, fundamentals of physics and drafting. In a classroom and lab that mirror the professional workplace, they produce engineering reports, correspondence, and construction drawings. Power system designs include calculating loads, specifying power panels, breakers, wires, raceways, and building electrical service and equipment. On lighting projects they select energy efficient lighting fixtures and controls for each room, and draft fixture layouts and circuiting. Students select products and design low-voltage systems like fire alarms. For high-voltage projects, they size and specify transformers and components to distribute power through a commercial or residential development. Students design their projects in compliance with all electrical and energy codes and other standards. They use the latest CAD software and computers to draft their designs, plans schedules, notes and diagrams. The program is challenging, and may lead to employment in a high demand and rewarding profession working with engineers, contractors and utilities.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Design and draft all electrical systems for commercial buildings, including low-voltage signaling, interior and exterior lighting, and general power distribution
2	Perform all engineering calculations to determine amperage, voltage, phase, resistance and power consumption as needed for design of electrical systems for commercial buildings
3	Develop electrical construction cost estimates from complete electrical documents
4	Interpret and apply all applicable codes and standards to building design and construction
5	Calculate required number of luminaries, specify fixture types, layout and energy efficient controls and lighting products
6	Calculate loads and power requirements, specify required power panels, branch circuit conductors, raceways and overcurrent protection
7	Design and draft service entrance equipment including service disconnects, system grounding and metering
8	Assist in design of high-voltage power distribution systems including sizing and specifying transformers, pads, vaults, conductors and terminatoin equipment and components
9	Perform all advanced CAD operations and functions necessary to draft final electrical plans, including floor plans, schedules, notes and diagrams
10	Assist in preparing electrical project specifications
11	Compile data and compose engineering reports and correspondences
12	Perform calculations to determine amperage, voltage, resistance, and power requirements as needed for electrical system design
13	Evaluate electrical system designs by comparing with original design specifications using engineering skills
14	Review project instruction and criteria to ascertain specifications, procedures, and objectives for design of complete electrical systems
15	Review project instructions and specifications to identify, modify, and plan all needed building eletrical systems
16	Analyze a basic circuit and calculate relevant parameters
17	Apply physics and electrical concepts to solve real world problems
18	Use mathematical theorems and equations to calculate required parameters in diagrams and circuits
19	Write clear, concise, and organized documents with minimum errors
20	Understand basic information literacy and research techniques for report writing
21	Analyze group process and be able to identify group communication factors to achieve success
22	Perform algebraic functions, calculations using fractions and decimals applying them toward measurements and engineering formulas
23	Evaluate , graph, find domain and range of algebraic and trigonometric functions



## Program: Electrical Engineering Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
ELECTRICAL ENGINEERING TECHNOLOGY AAS (90)	Fall/Spring	Required Courses	AMATH170	Engineering Foundational Mathematics	MATH 087	
			ENGR&111	Engineering Graphics I		
			ENGR&112	Engineering Graphics II		
			ETRIC251	Physics for Engineers with Lab		
			ETRIC291	Practical Applications	None	
			ETRIC296	Work-based Learning Experience (alternate course option)	None	
Winter	Required Courses	ETRIC120	CAD Design Applications			
		ETRIC121	Technical Communications with Lab			
		ETRIC260	Advanced CAD Operations	ENGR&111, ENGR&112		
Spring	Required Courses	ETRIC148	Electrical Systems with Simulation			
		ETRIC249	Project Management			
		ETRIC250	Senior Project			
		ETRIC297	Work-Based Learning Seminar			
Summer	Required Courses	ETRIC128	Electical Math			
		ETRIC147	Code Applications			

## Program: Electrical Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5

## Program: Electrical Engineering Technology

Degree	Course ID	Title	Prerequisites	Credits	
ELECTRICAL ENGINEERING TECHNOLOGY AAS-T (105)	Required Courses	AMATH170	Engineering Foundational Mathematics	MATH 087	5
	CS&141	Computer Science 1 Java			5
	ENGR&111	Engineering Graphics I			5
	ENGR&112	Engineering Graphics II			5
	ENGR&214	Statics	Physics&122		5
	ENGR191	Engineering Technology Study Lab I			1
	ENGR192	Engineering Technology Study Lab II	ENGR191		1
	ENGR193	Engineering Technology Study Lab III	ENGR192		1
	ENGR194	Engineering Technology Study Lab IV	ENGR193		1
	ENGR195	Engineering Technology Study Lab V	ENGR194		1
	ENGR196	Engineering Technology Study Lab VI	ENGR195		1
	ETRIC234	CAD Design Applications	ETRIC225		4
	ETRIC260	Advanced CAD Operations	ENGR&111, ENGR&112		5

## Program: Electrical Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/O (15 credits required)	CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Natural Science (20 credits required)	PHYS&222	ENGINEER PHYS II W/LAB	5
			CHEM&121	INTRODUCTION CHEMISTRY	5
			PHYS&221	ENGINEERING PHYS I W/LAB	5
			PHYS&223	ENGINEER PHYS III W/LAB	5
		Quantitative (25 credits required)	MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
			MATH&153	CALCULUS III	5

## Program: Emergency Medical Technician

This course prepares students to meet the requirements for employment as an EMT. It adheres to the National EMS Scope of Practice Model, The National EMS Educational Standards, the Instructor Guidelines Published in January 2009, and the Washington State Amended EMS Educational Standards.

The EMT Class is a stressful, fast-paced course that requires both cognitive and psychomotor skills working together. Our process prepares you to achieve the best outcome for the citizen that activates the Emergency Medical System (EMS), thus requesting the services provided by EMT's, Paramedics, and Hospital staff. We train each EMT to be competent enough to not only meet the minimum skills and knowledge required to pass the course and certification exams, but also instill competence and confidence to treat their own families, friends, and community when needed. We will help you develop critical thinking skills needed for this environment.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcome

1. Successful completion of this course earns students the opportunity to take the National Registry EMT Certification Exam Demonstrate ethical behaviors, such as confidentiality, empathy and understanding in the workplace

Degree	Course ID	Title	Prerequisites	Credits
<b>Emergency Medical Technician (COT)</b>	Required Course FIRES225	Emergency Medical Technician		14

## Program: Engineering Technology

Engineering Technology Certificate of Training (15 credits), prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties, including civil, mechanical, electronic, architectural, chemical, and petroleum engineering.

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ENGINEERING TECHNOLOGY CoT (15)	1	Required Courses	AMATH170	Engineering Foundational Mathematics	MATH 087	5
			ENGR&111	Engineering Graphics I		5
			ENGR&112	Engineering Graphics II		5

## Program: Facilities Maintenance Engineer

Students prepare for careers in the building care and maintenance industry, including boiler operator, building repairer, facilities maintenance engineer and custodian in industrial and office buildings, hotels, schools, and government agencies. Instruction includes electricity, welding, blueprint reading, machine maintenance, grounds keeping, boiler repair and operation, HVAC/R and advanced industry applications. Major elements of the program prepare students for Class V and Class IV boiler operator/fireman certification. This is a pre-apprenticeship program for the Western Washington Operating Engineers Facilities Custodial Services Apprenticeship Committee and the Western Washington Stationary Engineers Apprenticeship Committee. The program also provides extended learning opportunities for persons previously or currently employed in these or other related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Maintain, diagnose and repair conventional building technologies and systems: wiring, heating, cooling, plumbing and ventilation systems
- 2 Repair and maintain basic electrical fixtures
- 3 Operate common hand tools, electrical test equipment and power tools used in the maintenance trade in a safe and efficient manner
- 4 Identify National Electrical Code standards, recommended practices and guides for commercial and industrial building electrical distribution
- 5 Perform basic welding repairs
- 6 Measure, calculate and estimate needed supplies and costs
- 7 Read and interpret basic blueprints, shop drawings and electrical schematics
- 8 Apply safety procedures when using maintenance tools
- 9 Follow fire prevention practices

## Program: Facilities Maintenance Engineer

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
FACILITIES MAINTENANCE ENGINEER AAS (117)	1	Required Courses	FACM101	Safety Principles		3
			FACM102	Fundamentals of Electricity		3
			FACM103	Electrical Service		4
			FACM104	Introduction to Blueprint Reading		5
			FACM105	Engineering Drawings		4
	2	Required Courses	FACM106	Introduction to Hydraulics/Pneumatics		5
			FACM107	Machine Components		5
			FACM108	Mechanical and Machine Maintenance		5
			FACM109	Tools and Equipment		3
	3	Required Courses	FACM111	Building Maintenance and Repair Methods		5
			FACM113	Introduction to Building Maintenance		3
			FACM121	Grounds Keeping		5
			FACM222	Introduction to Remodeling		4
	4	Required Courses	FACM122	HVAC Systems		4
			FACM221	Small Business Planning		3
			FACM230	Computers in Industry		2
			FACM231	Computer Applications		4
	5	Required Courses	FACM140	Boiler Operations and Certifications		12
			FACM144	Advanced Boiler Operations		5
	6	Required Courses	FACM143	Advanced Projects		3
		Required Courses	WBAS101	Welding Basics		8
		Electives	FACM292	Independent Project I	INSTR PERM REQ	5
			FACM293	Independent Project II	INSTR PERM REQ	5
			FACM294	Independent Project III	INSTR PERM REQ	5
			FACM296	Work-Based Learning Experience I	INSTR PERM REQ	
			FACM297	Work-Based Learning Experience II	INSTR PERM REQ	



## Program: Facilities Maintenance Engineer

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Facilities Maintenance Engineer

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BUILDING/CARE MAINTENANCE COC (69)	1	Required Courses	FACM101	Safety Principles		3
			FACM102	Fundamentals of Electricity		3
			FACM103	Electrical Service		4
			FACM104	Introduction to Blueprint Reading		5
			FACM105	Engineering Drawings		4
	2	Required Courses	FACM106	Introduction to Hydraulics/Pneumatics		5
			FACM107	Machine Components		5
			FACM108	Mechanical and Machine Maintenance		5
			FACM109	Tools and Equipment		3
	3	Required Courses	FACM111	Building Maintenance and Repair Methods		5
			FACM113	Introduction to Building Maintenance		3
			FACM121	Grounds Keeping		5
			FACM222	Introduction to Remodeling		4

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5
		ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		HIST101	HISTORY-SCIENCE/TECH	5
		HREL111	COLLEGE/JOB SRCH SUCCESS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
	POLS&101	INTRO TO POL SCIENCE	5	
	PSYC&100	GENERAL PSYCHOLOGY	5	
	PSYC&200	LIFESPAN PSYCHOLOGY	5	
	SOC&101	INTRO TO SOCIOLOGY	5	
	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
		MATH172	APPLIED BUSINESS MATH	5
		MATH173	MATH CONCEPTS	5
		MATH&107	MATH IN SOCIETY	5
		MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5
		MATH&146	INTRODUCTION TO STATS	5
MATH&151		CALUCLUS I	5	
MATH&152	CALCULUS II	5		
MATH&153	CALCULUS III	5		

## Program: Facilities Maintenance Engineer

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BUILDING/CARE MAINTENANCE I CoT (19)	1	Required Courses	FACM101	Safety Principles		3
			FACM102	Fundamentals of Electricity		3
			FACM103	Electrical Service		4
			FACM104	Introduction to Blueprint Reading		5
			FACM105	Engineering Drawings		4

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MAINTENANCE TECHNICIAN I CoT (18)	2	Required Courses	FACM106	Introduction to Hydraulics/Pneumatics		5
			FACM107	Machine Components		5
			FACM108	Mechanical and Machine Maintenance		5
			FACM109	Tools and Equipment		3

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BUILDING/CARE MAINTENANCE II CoT (17)	3	Required Courses	FACM111	Building Maintenance and Repair Methods		5
			FACM113	Introduction to Building Maintenance		3
			FACM121	Grounds Keeping		5
			FACM222	Introduction to Remodeling		4

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MAINTENANCE TECHNICIAN II CoT (17)	4	Required Courses	FACM112	Basic Refrigeration		4
			FACM122	HVAC Systems		4
			FACM221	Small Business Planning		3
			FACM230	Computers in Industry		2
			FACM231	Computer Applications		4

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BOILER OPERATIONS CoT (17)	5	Required Courses	FACM140	Boiler Operations and Certifications		12
			FACM144	Advanced Boiler Operations		5

## Program: Fire Service

Students prepare for careers as fire fighters, or in closely related occupations that require certification as a firefighter in this program that is accredited by the International Fire Service Accreditation Congress. Training incorporates all entry-level requirements according to nationally recognized standards. Students who choose the management option are prepared for leadership in the fire service with emphasis on the administration and management of fire service organizations. The program is intended to develop skills in critical and analytical reasoning as they apply to fire services.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- |    |   |
|----|---|
| 1  | Meet the minimum academic training requirements of the Standard for Fire Fighter Professional Qualifications (Fire Fighter I)   |
| 2  | Identify laws, regulations, codes and standards that influence fire department operations   |
| 3  | Identify regulatory and advisory organizations that create laws and codes in the areas of fire prevention, building codes and ordinances, and firefighter health and safety |
| 4  | Analyze the cause of fire to determine extinguishing agents and methods   |
| 5  | Differentiate between the stages of the fire and fire development and compare methods of heat transfer  |
| 6  | Calculate flow requirements for fire apparatus  |
| 7  | Apply mathematic formulae to hydraulics problems  |
| 8  | Maintain fire apparatus and equipment   |
| 9  | Identify the common types of building construction and conditions associated with structural collapse and firefighter safety  |
| 10 | Use the Incident Command System to manage a wide variety of planned and un-planned incidents  |
| 11 | Apply the principles of interpersonal communication, cooperative teamwork, supervision and management for leadership in the fire service                                    |

## Program: Fire Service

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
FIRE SERVICE AAS (100)	1	Required Courses	FIRES101	Orientation to Fire Service		2
			FIRES102	Firefighter Safety		4
			FIRES103	Fire Service Applications I		5
			FIRES104	Physical Fitness I		1
			FIRES106	Fire Hose and Appliances		3
	2	Required Courses	FIRES105	Introduction to Fire Science	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	3
			FIRES107	Fire Service Applications II	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	5
			FIRES108	Physical Fitness II	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	1
			FIRES109	Ladders	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	5
	3	Required Courses	FIRES110	Intermediate Fire Service	FIRES105, FIRES107, FIRES108, FIRES109	2
			FIRES111	Fires Service Applications III	FIRES105, FIRES107, FIRES108, FIRES109	4
			FIRES112	Physical Fitness III	FIRES105, FIRES107, FIRES108, FIRES109	1
			FIRES121	Wildland Firefighter	FIRES105, FIRES107, FIRES108, FIRES109	2
			FIRES125	Fire Vehicle Operations	FIRES105, FIRES107, FIRES108, FIRES109	3
	4	Required Courses	FIRES123	Fire Service Applications IV	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	5
			FIRES124	Physical Fitness IV	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	1
			FIRES201	Rescure Procedures	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	3
			FIRES202	Advanced Fire Service	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	3
			FIRES215	Hazardous Materials I	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	1
	5	Required Courses	FIRES203	Fire Service Applications V	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	5
			FIRES204	Physical Fitness V	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	1
			FIRES206	Employment Preparation	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	2
			FIRES207	Strategy, Tactics, and Incident Management	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	2
			FIRES208	Fires Service Applications VI	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	4
			FIRES216	Hazardous Materials II	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	2
	6	Required Courses	FIRES209	Basic Life Support	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	1
			FIRES225	Emergency Medical Technician (EMT)	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	14
		Electives	FIRES212	Advanced Firefighter	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	4
FIRES213			Physical Fitness VI	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	1	
FIRES220			Fire Service Applications VII	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	4	
FIRES222			Advanced Pump Operations	FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216	4	

## Program: Fire Service

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&153	CALCULUS III	5				

## Program: Fire Service

Degree	Quarter		Course ID	Title	Prerequisites	Credits
FIRE SERVICE SUPERVISION AAS (106)	1	Required Courses	FIRES101	Orientation to Fire Service		2
			FIRES102	Firefighter Safety		4
			FIRES103	Fire Service Applications I		5
			FIRES104	Physical Fitness I		1
			FIRES106	Fire Hose and Appliances		3
	2	Required Courses	FIRES105	Introduction to Fire Science	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	3
			FIRES107	Fire Service Applications II	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	5
			FIRES108	Physical Fitness II	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	1
			FIRES109	Ladders	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	5
	3	Required Courses	FIRES110	Intermediate Fire Service	FIRES105, FIRES107, FIRES108, FIRES109	2
			FIRES111	Fires Service Applications III	FIRES105, FIRES107, FIRES108, FIRES109	4
			FIRES112	Physical Fitness III	FIRES105, FIRES107, FIRES108, FIRES109	1
	4	Required Courses	FIRES123	Fire Service Applications IV	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	5
			FIRES124	Physical Fitness IV	FIRES110, FIRES111, FIRES112, FIRES121, FIRES125	1
	5	Required Courses	FIRES203	Fire Service Applications V	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	5
			FIRES207	Strategy, Tactics, and Incident Management	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	2
			FIRES216	Hazardous Materials II	FIRES123, FIRES124, FIRES201, FIRES202, FIRES215	2
	Required Courses		FIRES230	Fire Protection Strategies and Tactics		5
			FIRES231	Fire Protection Systems		5
			FIRES232	Fire Protection Hydraulics		5
			FIRES233	Building Construction		5
			FIRES234	Codes and Inspections		5
			FIRES240	Fire Instructor		3
			FIRES241	Fire Safety Office		2
			FIRES242	Fire Officer I		5
	FIRES243	Fire Officer II		5		

## Program: Fire Service

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH174	MATH FOR ALLIED HEALTH	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&153	CALCULUS III	5			



## Program: Fire Service

Degree	Quarter		Course ID	Title	Prerequisites	Credits
FIRE RECRUIT ACADEMY CoT (22)	1	Required Courses	FIRES102	Firefighter Safety		4
			FIRES103	Fire Service Applications I		5
			FIRES104	Physical Fitness I		1
			FIRES106	Fire Hose and Appliances		3
	2	Required Courses	FIRES107	Fire Service Applications II	FIRES101, FIRES102, FIRES103, FIRES104, FIRES106	5
	3	Required Courses	FIRES111	Fires Service Applications III	FIRES105, FIRES107, FIRES108, FIRES109	4

Degree	Quarter		Course ID	Title	Prerequisites	Credits
WILDLAND FIREFIGHTER II CoT (2)	3	Required Courses	FIRES121	Wildland Firefighter	FIRES105, FIRES107, FIRES108, FIRES109	2

## Program: Hearing Aid Specialist

A Hearing Aid Specialist is a healthcare professional who is responsible for assessing hearing and providing services to hard of hearing individuals who can benefit from the use of hearing aids. Responsibilities include assessment, counseling, recommendations, and selection, procurement, fitting and follow-up services for patients. One pathway to licensure requires satisfactory completion of two-year associates of applied sciences in hearing instruments. The applicant must also pass a written state examination and jurisprudence examination administered by the state of Washington. Successful completion of the Hearing Instrument Program fulfills the two-year degree requirement. Instruction includes acoustics, hearing instrument sciences, anatomy and physiology of the human auditory system, pathophysiology of the auditory system, psychological aspects of hearing loss, tests of the hearing organ, making impressions of the ear, business aspects of the hearing industry, an overview of related fields and medical implants to improve hearing. An in-house hearing clinic provides at minimum 260 hours of direct and 260 hours of indirect clinical supervision by a licensed audiologist.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Apply principles of anatomy and physiology in the assessment and design of dental prosthetics
2	Describe theoretical/conceptual and practical factors that impact the fitting of hearing aids
3	Identify dental and oral diseases and disorders
4	Perform accurate assessment for the purposes of hearing aid fitting
5	Perform a complete visual/digital oral examination and evaluation of the patient
6	Explain various strategies and the rationale for use when recommending and selecting hearing aids for clients
7	Apply principles of materials science in the development of dental prosthetics
8	Integrate family and other professionals in the management/care of clients with hearing loss
9	Classify prescription drugs and their contraindications related to the design and fitting of dental prosthetics
10	Identify hearing disorders and diseases for referral purposes
11	Devise treatment plans specific to individual patient conditions
12	Describe the acoustical characteristics of a variety of hearing aids
13	Design, fabricate, and inserts dentures in the mouths of patients
14	Fit and adjust hearing aids
15	Perform any adjunctive services such as repair, relines or adjustments of removable dentures
16	Follow established clinical validation and verification protocols
17	Supervises auxiliary personnel in the performance of their delegated duties
18	Communicate effectively with patients, their families and associates, members of the dental team and other health professionals involved in patient care..

## Program: Hearing Aid Specialist

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
HEARING AID SPECIALIST AAS (110)	1	Required Courses	HEAR110	Introduction to Hearing Professions		5
			HEAR120	Anatomy and Physiology		5
			HEAR131	Hearing Aids I		5
	2	Required Courses	HEAR111	Safety Practices		4
			HEAR112	Acoustics		5
			HEAR113	Hearing Assessment I		3
			HEAR130	Disorders of the Auditory System		5
	3	Required Courses	HEAR121	Instrumentation		5
			HEAR122	Hearing Assessment II		3
			HEAR132	Audiometric Interpretation I		5
			HEAR222	Hearing Aids II		5
	4	Required Courses	HEAR210	Hearing Assessment III		3
			HEAR213	Clinical I		3
			HEAR220	Hearing Aid Evaluation		5
			HEAR221	Audiometric Interpretation II		5
	5	Required Courses	HEAR211	Aural Rehabilitation I		3
			HEAR212	Business Aspects I		5
			HEAR223	Clinical II		3
			HEAR230	Hearing Aid Service and Repair		5
	6	Required Courses	HEAR231	Aural Rehabilitation II		4
			HEAR232	Business Aspects II		5
HEAR233			Clinical III		4	

## Program: Hearing Aid Specialist

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
AAS	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		AAS	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&153	CALCULUS III	5				

## Program: Heating, Ventilation, Air Conditioning and Refrigeration Technician

Students prepare for certified entry-level employment in the heating, ventilation, air conditioning, and refrigeration industry. The technical skills acquired in this program may be applied in areas such as air conditioning, systems controls, energy management systems, heating and ventilation technicians, and sales. For those individuals already in the HVAC/R trade, customized training to upgrade skills is also provided, as well as applicable sustainable construction practices. The program also provides extended learning opportunities for persons previously or currently employed in related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Follow safe working practice.
2	Apply the principles and strategies used for the installation of air condition systems, heat pump systems, electric furnace, fossil fuel furnace, and system controls.
3	Apply the principles and strategies used to troubleshoot and service air condition systems, heat pump systems, electric furnaces, hydronic systems, fossil fuel furnace, and system controls.
4	Interpret and apply codes, regulations and contract documents
5	Recognize components and design principles used in air distribution systems.
6	Use mathematical skills to solve problems in electrical, heating, and air conditioning systems.
7	Apply troubleshooting skills to diagnose and repair the following: air distribution, electrical, heating systems, hydronic systems, cooling systems, and system controls.
8	Use tools and equipment required for repairing, testing, and installation of air conditioning systems, heat pump systems, hydronic systems, electric furnace, fossil fuel furnace, and system controls
9	Perform basic business, employability and customer service skills as related to the HVA/C-R industry
10	Complete AHRI Industry Heating and Cooling Competency Exam (ICE exam).
11	Handle refrigerant by completing EPA Section 608 Type II Technician Certification.
12	Apply the basic principles of energy management

## Program: Heating, Ventilation, Air Conditioning and Refrigeration Technician

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
HVAC/R TECHNICIAN AAS (103)	1	Required Courses	HVAC150	Introduction to Tools and Fasteners		1
			HVAC151	OSHA 30-hour Construction Industry Outreach Training Program		3
			HVAC152	Basic First Aid and CPR		1
			HVAC153	Basic Electricity, Magnetism	HVAC150,HVAC151,HVAC152	2
			HVAC154	Types of Electrical Motors and Applications	HVAC150,HVAC151,HVAC152	4
			HVAC155	Motor Controls & Troubleshooting	HVAC150,HVAC151,HVAC152	4
	2	Required Courses	HVAC156	Theroy of Heat	HVAC150,HVAC151,HVAC152	2
			HVAC157	Introduction to Automatic Controls, Troubleshooting	HVAC150,HVAC151,HVAC152	3
			HVAC158	Indoor Air Quality, Advanced Controls	HVAC150,HVAC151,HVAC152	3
			HVAC159	Electric & Oil Heat	HVAC150,HVAC151,HVAC152	4
	3	Required Courses	HVAC160	Gas & Hydronic Heat	HVAC150,HVAC151,HVAC152	3
			HVAC161	Referigeration, Oil Chemistry, Management, Recovery	HVAC150,HVAC151,HVAC152	2
			HVAC162	EPA 608 Universal, Leak Detection, System Evacuation	HVAC150,HVAC151,HVAC152	3
			HVAC163	Tubing Piping ande Brazing	HVAC 162 & EPA 608 Card	2
			HVAC164	System Charging	HVAC 162 & EPA 608 Card	3
			HVAC165	Refrigeration System Components	HVAC 162 & EPA 608 Card	5
	4	Required Courses	HVAC206	Basic Metalworking		2
			HVAC207	Basic Layout and Patterns		2
			HVAC208	Fabrication Practices		2
			HVAC209	Air Balance and Duct Sizing		2
			HVAC251	Load Calculations, Duct Design, Air Balance	HVAC 162 & EPA 608 Card	4
			HVAC260	Operating Conditions, Introduction to Drafting	HVAC 162 & EPA 608 Card	4
	5	Required Courses	HVAC261	Special Refrigeration Systems	HVAC 162 & EPA 608 Card	4
			HVAC262	Heat Pump Systems, Air and Geothermal	HVAC 162 & EPA 608 Card	4
			HVAC263	Domestic Appliances	HVAC 162 & EPA 608 Card	4
			HVAC264	Commercial Refrigeration Systems & Troubleshooting	HVAC 162 & EPA 608 Card	4
	6	Required Courses	HVAC265	Comfort, Psychrometrics & Energy Auditing	HVAC 162 & EPA 608 Card	5
			HVAC266	Troubleshooting	HVAC 162 & EPA 608 Card	3
HVAC267			Chilled Water Systems	HVAC 162 & EPA 608 Card	3	
HVAC268			Operating, Maintenance, Troubleshooting Chilled Water Systems	HVAC 162 & EPA 608 Card	4	

## Program: Heating, Ventilation, Air Conditioning and Refrigeration Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Heating, Ventilation, Air Conditioning and Refrigeration Technician

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
HVAC/R SUPPORT TECHNICIAN COC (99)	1	Required Courses	HVAC101	HVAC Fundamentals		3
			HVAC102	Safety		2
			HVAC103	HVAC/R Science		2
			HVAC104	Tools and Equipment		4
			HVAC105	Refrigerant/Refrigeration Systems I		4
	2	Required Courses	HVAC106	Refrigerant/Refrigeration Systems II		3
			HVAC107	HVACR Electrical Systems and Components		5
			HVAC108	Electrical Troubleshooting		2
			HVAC109	Soldering and Brazing Applications		3
	3	Required Courses	HVAC110	Residential HVAC Systems		5
			HVAC111	Light Commercial HVAC Systems		5
			HVAC112	Heat Pump Systems		4
	4	Required Courses	HVAC210	Drafting and Blueprint Reading		4
	5	Required Courses	HVAC211	Commercial Environmental Systems		5
			HVAC212	Chilled Water Systems		2
			HVAC213	Hydronic Heating Systems		2
			HVAC214	Cooling Towers Basics		1
			HVAC215	Introduction to Thermal Storage		2
			HVAC216	CFC Exam Preparation		1
	6	Required Courses	HVAC217	Commercial Refrigeration		3
			HVAC218	Installation/Maintenance/Troubleshooting		2
HVAC219			AHRI Industry Competency Exam # 1 (ICE)		3	
HVAC220			AHRI Industry Competency Exam # 2 (ICE)		3	
HVAC221			HVAC/R Industry Math		5	



## Program: Heating, Ventilation, Air Conditioning and Refrigeration Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCLUS I		5		
MATH&152	CALCULUS II	5			
MATH&153	CALCULUS III	5			

## Program: Industrial Electronics and Robotics Technician

In the Industrial Electronics and Robotics Technician program, students learn to install, diagnose, maintain, modify, test, and calibrate electronic, electrical, and mechanical systems used in manufacturing support equipment and production machinery, including precision machine tools (CNC) and industrial robots. The program consists of a certificate of training in Basic Electricity, a one-year Electrical Technician certificate, and a two-year Industrial Technology degree that prepares students for entry into electrical apprenticeships. The program features equipment and software from industry leaders such as Allen Bradley, Rockwell Automation, FANUC Robotics, Bosch, Siemens, Famic Technologies, and National Instruments. Focus is on the intelligent control of machines and processes using programmable logic controllers (PLCs), embedded controllers, variable frequency drives (VFDs), industrial networks, sensors & transducers, instrumentation and robotics. The electrical curriculum is based on guidelines from the National Joint Apprenticeship Training Committee (NJATC) for electrical trades. The program also offers in-depth career training for those interested in becoming an electronics technician in the manufacturing, scientific, aerospace, or civilian military industries.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Describe current status of robotics technology and new development
2	Identify common electronic components, devices and symbols
3	Analyze direct current and alternating current circuits using various circuit simplification and analysis techniques
4	Apply theoretical principles to physically design electric circuits to solve technical problems
5	Operate/program/repair industrial robots
6	Solve real-world and theoretical problems related to semiconductors, digital systems and PLCs
7	Identify common electronic components, devices, and symbols and verify their operation
8	Construct and troubleshoot the operation of DC and AC circuits using lab equipment
9	Measure and source voltages, currents and frequencies using power supplies, function generators, and oscilloscope
10	Solve a problem using digital logic and Karnaugh mapping
11	Identify common transistor circuits and prove their operation in a lab setting
12	Identify common amplifier circuits and prove their operation in a lab setting
13	Use microcontrollers and variable frequency drives to regulate the speed of an AC motor
14	Specify a motor type to solve a specific problem
15	Connect single and three-phase motors to sources and successfully energize
16	Program and interface a microcontroller to discrete hardware to obtain desired functionality

## Program: Industrial Electronics and Robotics Technician

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
INDUSTRIAL ELECTRONICS AND ROBOTICS TECHNICIAN AAS (119)	1	Required Courses	IERT110	Electricity & Magnetism		2
			IERT115	DC Circuit Analysis		5
			IERT118	Fluid Power		5
	2	Required Courses	IERT120	Alternating Current		2
			IERT125	AC Circuit Analysis		5
			IERT128	Polyphase AC Power Generation & Distribution		5
			IERT135	Mechanics		3
	3	Required Courses	IERT104	Blue Print Reading		3
			IERT126	Analog Electronics		5
			IERT140	Motors & Control Systems		5
			IERT145	Construction Practices, The NEC, and UL Guides		5
	4	Required Courses	IERT106	Introduction to Numeric Controls		3
			IERT108	Basic Precision Measuring Tools		3
			IERT225	Sensors and Transducers		3
			IERT255	Instrumentation		5
	5	Required Courses	IERT215	Programmable Logic Controllers (PLCs)		5
			IERT230	Programming Methodologies		2
			IERT238	Embedded Controllers		5
	6	Required Courses	IERT101	Introductory Industrial Robotics		5
			IERT231	PLC Programming Projects		5
	Required Courses	IERT212	Digital Electronics		3	
IERT292		Independent Projects		5		
IERT293		Independent Projects		5		
Electives	IERT250	Independent Study		5		
	IERT251	Independent Study		5		
	IERT298	Workbased Learning				
7	Required Courses	IERT220	Allen Bradley SLC 500 PLCs		5	
		IERT240	Industrial Robots using the Fanuc Robotics 200iC		5	

## Program: Industrial Electronics and Robotics Technician

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Industrial Electronics and Robotics Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRICAL TECHNICIAN COC (57)	1	Required Courses	IERT110	Electricity & Magnetism		2
			IERT115	DC Circuit Analysis		5
			IERT118	Fluid Power		5
	2	Required Courses	IERT120	Alternating Current		2
			IERT125	AC Circuit Analysis		5
			IERT128	Polyphase AC Power Generation & Distribution		5
			IERT135	Mechanics		3
	3	Required Courses	IERT126	Analog Electronics		5
			IERT140	Motors & Control Systems		5
			IERT145	Construction Practices, The NEC, and UL Guides		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (5 credits required)			
		BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
			MATH&152	CALCULUS II	5
	MATH&153	CALCULUS III	5		

## Program: Industrial Electronics and Robotics Technician

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRONICS TECHNICIAN CoT (30)	1	Required Courses	ECS101	Introduction to Electronics		2
			ECS102	DC Circuits		5
			ECS104	Analog Circuits I		2
			ETECH103	AC Circuits		5
	2	Required Courses	ECS105	Analog Circuits II		3
			ECS108	CET Certification Preparation		3
			ETECH105	Digital Circuits		5
			ETECH106	Microcontrollers		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
ELECTRONICS TECHNICIAN CoT (30)	1	Required Courses	ECS101	Introduction to Electronics		2
			ECS102	DC Circuits		5
			ECS104	Analog Circuits I		2
			ETECH103	AC Circuits		5
	2	Required Courses	ECS105	Analog Circuits II		3
			ECS108	CET Certification Preparation		3
			ETECH105	Digital Circuits		5
			ETECH106	Microcontrollers		5

## Program: Information Technology Specialist

Information technology specialists are an integral part of nearly every industry in today's technology-dominated workplace. Students in this program prepare for careers that focus on PC and network support with emphasis on both practical experience and certification preparation. Possible careers include IT support technician, desktop support specialist, or network administrator. Students are encouraged to spend additional hours of study to obtain Microsoft, Cisco, and CompTIA A+, certifications. Possible certifications students can obtain include CompTIA A+, Security+, Microsoft MTA, MCSA, MCSE, Cisco CCENT, or CCNA

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Demonstrate efficient application of core productivity software to solve business problems and increase efficiency as applied in industry.
2	Perform effective procedures to install, diagnose, configure, support and troubleshoot computer-based hardware and mobile devices to industry standard
3	Develop configuration solutions for technical issues with computers, laptops, mobile devices, networks while balancing business needs to industry standard.
4	Configure connectivity for computers, networks, and mobile systems while applying security principles, system and network vulnerabilities, and common mitigation practices to industry standard
5	Identify network infrastructure, subnetting, troubleshooting procedures configuring network devices to industry standard
6	Develop strategies for network defense using firewalls, routers, switches, antivirus, and anti-spyware tools to industry standard
7	Perform termination and testing of network cabling to industry standard.
8	Identify categories of virtualization products, perform common management tasks and support virtual desktop infrastructure to industry standard
9	Demonstrate concepts related to identities, security measures and access management using computer, network or cloud services to industry standard
10	Perform analysis following established procedures for testing, maintenance, and implementation of devices and services applying effective end-user support as practiced in industry to industry standard
11	Articulate effective communication, make decisions, and define work ethics and its application to employment in industry
12	Prepare for and successfully complete industry certification.

## Program: Information Technology Specialist

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
INFORMATION TECHNOLOGY SPECIALIST AAS (105)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
			INFO121	Virtualization		5
		Electives	ECS201	Telecommunications Network Cabling System		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5
			INFO123	Cloud Fundamentals		5
		Electives	ECS202	Fiber Optics		5
	3	Required Courses	CNST220	Cloud Services		5
			INFO205	Security I		5
		Electives	CNST212	Cisco LAN Switching and Wireless		5
	4	Required Courses	CNST218	Server I		5
			INFO206	Security II	INFO205	5
		Electives	CNST213	Cisco - Accessing the WAN		5
	5	Required Courses	CNST205	Fundamentals of Linux		5
			CNST207	Server II	CNST218	5
		Electives	CNST214	Cyber Security		5
	6	Required Courses	CNST209	Server III	CNST207, CNST218	5
			INFO122	User Support Fundamentals	INFO104, INFO105	5
		Electives	ECS249	Job Search and Preparation		3
		Electives	CNST212	Cisco LAN Switching and Wireless		5
	CNST213		Cisco - Accessing the WAN		5	
	CNST214		Cyber Security		5	
INFO292	Independent Projects			5		
INFO296	Work-Based Learning					



## Program: Information Technology Specialist

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Information Technology Specialist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
INFORMATION TECHNOLOGY SPECIALIST AAS-T (115)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
			INFO121	Virtualization		5
		Electives	ECS201	Telecommunications Network Cabling System		5
	2	Required Courses	CNST202	Cisco Routing Protocols and Concepts		5
			INFO105	A+ Practical		5
			INFO120	Client Operating System		5
			INFO123	Cloud Fundamentals		5
		Electives	ECS202	Fiber Optics		5
	3	Required Courses	CNST220	Cloud Services		5
			INFO205	Security I		5
		Electives	CNST212	Cisco LAN Switching and Wireless		5
	4	Required Courses	CNST218	Server I		5
			INFO206	Security II	INFO205	5
		Electives	CNST213	Cisco - Accessing the WAN		5
	5	Required Courses	CNST205	Fundamentals of Linux		5
			CNST207	Server II	CNST218	5
		Electives	CNST214	Cyber Security		5
	6	Required Courses	CNST209	Server III	CNST207, CNST218	5
INFO122			User Support Fundamentals	INFO104, INFO105	5	
Electives		ECS249	Job Search and Preparation		3	
Electives		CNST212	Cisco LAN Switching and Wireless		5	
		CNST213	Cisco - Accessing the WAN		5	
	CNST214	Cyber Security		5		
	INFO292	Independent Projects		5		
	INFO296	Work-Based Learning				

## Program: Information Technology Specialist

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	Null	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	Null	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Information Technology Specialist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
INFORMATION TECHNOLOGY SPECIALIST CoC (75)	1	Required Courses	CNST201	Cisco Network Fundamentals		5
			INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
			INFO121	Virtualization		5
	2	Required Courses	INFO105	A+ Practical		5
			INFO120	Client Operating System		5
			INFO123	Cloud Fundamentals		5
	3	Required Courses	CNST220	Cloud Services		5
			INFO205	Security I		5
	4	Required Courses	CNST218	Server I		5
			INFO206	Security II	INFO205	5
	6	Required C..	INFO122	User Support Fundamentals	INFO104, INFO105	5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
CoC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY
			BIOL&175	HUMAN BIOLOGY WITH LAB	5
			BIOL&241	ANATOMY & PHYSIOLOGY I	5
			BIOL&242	HUMAN A&P II	5
			BIOL&260	MICROBIOLOGY	5
			CHEM&121	INTRODUCTION CHEMISTRY	5
			CHEM&131	Null	5
			CMST&102	INTRO TO MASS MEDIA	5
			CMST&152	INTERCULTURAL COMM	5
			CMST&210	INTERPERSONAL COMMUNICTN	5
			CMST&220	PUBLIC SPEAKING	5
			CMST&230	SML GROUP COMMUNICATIONS	5
			ECON&201	MICROECONOMICS	5
			ECON&202	MACROECONOMICS	5
			HIST101	HISTORY-SCIENCE/TECH	5
			HREL111	COLLEGE/JOB SRCH SUCCESS	5
			NUTR&101	INTRO TO NUTRITION	5
			PHYS&221	ENGINEERING PHYS I W/LAB	5
			PHYS&222	ENGINEER PHYS II W/LAB	5
			PHYS&223	ENGINEER PHYS III W/LAB	5
			POLS&101	INTRO TO POL SCIENCE	5
			PSYC&100	GENERAL PSYCHOLOGY	5
			PSYC&200	LIFESPAN PSYCHOLOGY	5
			SOC&101	INTRO TO SOCIOLOGY	5
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
	MATH&151		CALUCLUS I	5	
	MATH&152		CALCULUS II	5	
		MATH&153	CALCULUS III	5	

## Program: Information Technology Specialist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
COMPUTER REPAIR TECHNICIAN CoT (30)	1	Required Courses	INFO101	Computer Application Essentials		5
			INFO104	A+ Essentials		5
			INFO121	Virtualization		5
	2	Required Courses	INFO105	A+ Practical		5
			INFO120	Client Operating System		5
	6	Required Courses	INFO122	User Support Fundamentals	INFO104, INFO105	5

## Program: Machinist

Machinists produce precision parts, tools, and instruments utilizing both manual and computerized machining systems. For over sixty years, the machinist program has prepared students for apprentice positions through local apprenticeship agencies. The instruction contains extensive hands-on experience in the use of traditional precision tooling and machining equipment, as well as sophisticated, state-of-the-art technology including CNC lathes, CNC milling machines, and program-specific software. The program also provides extended learning opportunities for persons previously or currently employed in related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Apply safety procedures appropriate to running a modern machine shop
2	Interpret Material Safety Data Sheets (MSDS) used in machining fluids and materials
3	Use micrometers, indicators, calipers, height gauges etc. to measure and inspect parts accurately
4	Solve practical trigonometry problems related to the geometry of parts
5	Read and interpret engineering drawings as they apply to machined parts
6	Use geometric dimensioning and tolerancing symbols as applied to Engineering drawings
7	Identify and use appropriate tool materials for a given application
8	Apply speeds and feeds for various cutting tools and materials
9	Set up and operate a variety of manual lathes, milling machines, and precision grinding machines to produce parts to specification
10	Use common CNC machine language to write programs for CNC lathes and mills
11	Set up and operate a variety of CNC lathes and milling machines using 2, 3 and 4 axis movements to produce parts to specifications
12	Use CAD/CAM software to generate geometry and tool path
13	Produce a capstone project to include the above skill sets

## Program: Machinist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MACHINIST AAS (97)	1	Required Courses	CNCM127	Blueprint Reading & GD&T		5
			MACH150	Measurement, Materials, & Safety		5
			MACH155	Job Planning, Bench-work, and Layout		5
			MACH160	Conventional Machining		5
	2	Required Courses	MACH120	Machine Shop Mathematics II (RI)		5
			MACH166	Conventional Turning		3
			MACH167	Conventional Milling		3
			MACH168	Surface Grinding		3
	3	Required Courses	CNCM113	CNC Programming		4
			CNCM126	CNC Mill & Lathe Operations & Set-Up		5
			MACH117	Measurement Applications		5
	4	Required Courses	CNCM114	CNC Troubleshooting	CNCM113	3
			CNCM203	CNC Mill II	CNCM113, CNCM114	5
			CNCM211	CNC Lathe II		5
	5	Required Courses	CNCM215	Computer-Aided Manufacturing CAM I		5
			CNCM218	CMM Programming		3
			MACH142	Advanced Machine Shop Applications		8
			WBAS101	Welding Basics		8
	6	Required Courses	MACH224	Computer-Aided Manufacturing CAM II		5
			MACH232	Advanced CNC Machining		5
		Electives	MACH292	Independent Projects		
MACH293			Independent Projects			
MACH294			Independent Projects			

## Program: Machinist

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5
		ENGL&101	ENGLISH COMPOSITION I	5
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		HIST101	HISTORY-SCIENCE/TECH	5
		HREL111	COLLEGE/JOB SRCH SUCCESS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
SOC&101	INTRO TO SOCIOLOGY	5		
RI	Computation (5 credits required)	MACH120	MACHINE SHOP MATH II	5



## Program: Machinist

Degree	Quarter		Course ID	Title	Prerequisites	Credits
CNC OPERATOR-COT COT (14)	1	Required Courses	MACH117	Measurement Applications		5
	2	Required Courses	CNCM113	CNC Programming		4
	5	Required Courses	CNCM126	CNC Mill & Lathe Operations & Set-Up		5

Degree	Quarter		Course ID	Title	Prerequisites	Credits
TOOLMAKING TECHNOLOGY-COT CoT (15)	1	Required Courses	MACH150	Measurement, Materials, & Safety		5
			MACH155	Job Planning, Bench-work, and Layout		5
			MACH160	Conventional Machining		5

## Program: Marketing and Business Management

Students prepare for careers in sales, advertising, merchandising, customer service, market research, business and management, and public relations. When available, work-based learning activities provide students with the opportunity to work in Puget Sound businesses. Major projects allow students to apply competencies such as preparing formal business plans, performing research studies, and developing advertising campaigns. This program also provides extended learning opportunities to persons previously or currently employed in these and related professions.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Recognize the marketing mix of an organization and develop a strategic marketing plan designed to capture the interest of and motivate the target market
2	Analyze an organization's strengths, weaknesses, opportunities, and threats from a marketing and organizational perspective
3	Demonstrate professional written and interpersonal communication skills that will enable them to collaboratively interact with customers, employees and suppliers
4	Craft a comprehensive business plan to assist the business clarify their vision, to secure financing, and to gain business partners and suppliers
5	Apply practical management decision-making tools and techniques to various types of business issues, both simulated and real-world as shared by community businesses
6	Apply relationship management methods using best leadership practices gained from exposure to leadership theories and styles desired by successful organizations
7	Recognize the management functions of planning, organizing, leading and controlling
8	Evaluate organizational structures focused on strategic, tactical and operational areas with a global and ethical perspective
9	Strategically plan for staffing requirements using appropriate employee talent recruitment and retention methods
10	demonstrate heightened self-awareness and an ethical leadership style expected by organizations in the industry
11	Recognize, weigh, analyze risk associated with business including transactions, form of business, intellectual and privacy rights, human resources, and ethical ramifications; they will identify when to seek legal assistance when appropriate
12	Interpret financial data and use it to make informed decisions about the operating performance and financial position of a company

## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK A: MARKETING AAS (105-110)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
	2	Required Courses	MARK106	Business Concepts		5
			MARK113	Accounting Principles		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
	Required Courses	MARK203	Introduction to Business Accounting and Finance		5	
	Electives	ACCT&201	Principles of Accounting I		5	
MARK296		Work-Based Learning Experience				

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
MATH&107	MATH IN SOCIETY			5		
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK A: MARKETING AAS-T (110-115)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
	2	Required Courses	MARK106	Business Concepts		5
			MARK113	Accounting Principles		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
Required Courses		MARK203	Introduction to Business Accounting and Finance		5	
Electives		ACCT&201	Principles of Accounting I		5	
		MARK296	Work-Based Learning Experience			

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK B: BUSINESS MANAGEMENT AAS (105-110)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
	2	Required Courses	MARK106	Business Concepts		5
			MARK113	Accounting Principles		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
	Required Courses	MARK203	Introduction to Business Accounting and Finance		5	
	Electives	ACCT&201	Principles of Accounting I		5	
MARK296		Work-Based Learning Experience				

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				



## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK B: BUSINESS MANAGEMENT AAS-T (110-115)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
	2	Required Courses	MARK106	Business Concepts		5
			MARK113	Accounting Principles		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
Required Courses		MARK203	Introduction to Business Accounting and Finance		5	
Electives		ACCT&201	Principles of Accounting I		5	
		MARK296	Work-Based Learning Experience			

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
			MATH&153	CALCULUS III	5

## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK B: BUSINESS MANAGEMENT AAS-T (110-115)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
		Electives	ACCT&201	Principles of Accounting I		5
	2	Required Courses	MARK106	Business Concepts		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
	Required Courses	MARK113	Accounting Principles		5	
MARK203		Introduction to Business Accounting and Finance		5		
	Electives	MARK296	Work-Based Learning Experience			

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Marketing and Business Management

Degree	Quarter		Course ID	Title	Prerequisites	Credits
MARKETING - TRACK B: BUSINESS MANAGEMENT AAS-T (110-115)	1	Required Courses	MARK101	Marketing Principles		5
			MARK102	Customer Service		5
			MARK103	Written Business Communication		3
			MARK105	Information Research and Acquisition		1
			MARK204	Introduction to Presentations and Facilitation		3
		Electives	ACCT&201	Principles of Accounting I		5
	2	Required Courses	MARK106	Business Concepts		5
			MARK209	Entrepreneurial Concepts		5
	3	Required Courses	MARK107	Cross Cultural Communication		5
			MARK110	Principles of Management and Supervision		5
	4	Required Courses	MARK108	International Trade Practice		5
			MARK109	Economics-Marketing Perspective		5
			MARK206	Teaming for Success		3
			MARK210	Introduction to Project Management		4
	5	Required Courses	MARK104	Business Negotiations and Collaboration		3
			MARK111	Cyber Marketing/E-Commerce		5
			MARK112	Business Law		5
			MARK201	Introduction to Leadership Skills and Ethics		3
	6	Required Courses	MARK202	Introduction to Strategic Marketing		4
			MARK205	Advanced Business Project		5
MARK207			Introduction to Managing Change		3	
MARK208			Achieving Results Through Influence		3	
	Required Courses	MARK113	Accounting Principles		5	
MARK203		Introduction to Business Accounting and Finance		5		
	Electives	MARK296	Work-Based Learning Experience			

## Program: Marketing and Business Management

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&132	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&102	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
			MATH&151	CALUCLUS I	5
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Mechanical Engineering Technology

Students prepare for careers as engineering technicians with an emphasis on mechanical systems. Instruction focuses on computer-aided drafting and design (CADD). Students have opportunities to work on community and college projects that may include patent application drawings and detailed machine shop production drawings. Extended learning opportunities are available with industry partners

For program costs and fees refer to the catalog TUTION AND FEES PAGE.

### Program Learning Outcomes

- 1 Apply principles of mathematics and applied science to perform technical calculations and solve technical problems
- 2 Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software
- 3 Analyze a loaded beam
- 4 Collect and analyze experimental data
- 5 Analyze a body in motion and describe using position, velocity and acceleration
- 6 Identify characteristics of steel, ceramics, and plastics
- 7 Design and carry out experiments
- 8 Identify and apply appropriate standards necessary to complete a project
- 9 Produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances
- 10 Solve engineering problems through computer modeling, employing an engineering computer language, and hand calculations
- 11 Conduct standards tests, collect data, and apply results to improve processes
- 12 Design systems, components or processes
- 13 Function professionally and with ethical responsibility as an individual and on multidisciplinary teams

## Program: Mechanical Engineering Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
MECHANICAL ENGINEERING TECHNOLOGY AAS (90)	1	Required Courses	<b>AMATH170</b>	Engineering Foundational Mathematics	MATH 087	5
			<b>ENGR&amp;111</b>	Engineering Graphics I		5
			<b>ENGR&amp;112</b>	Engineering Graphics II		5
	5	Electives	<b>MET214</b>	Engineering Projects I		7
	6	Required Courses	<b>MET111</b>	Geometric Dimensioning and Tolerancing		5
		Electives	<b>MET216</b>	Engineering Projects II		7
	Required Courses	<b>ENGR&amp;214</b>	Statics	Physics&122	5	
		<b>MET218</b>	Introduction to 3 D Modeling	ENGR&111, ENGR&112	5	
		<b>MET260</b>	Advanced CAD Operations	ENGR&111, ENGR&112	5	
	Electives	<b>MET297</b>	Work-based Learning Seminar		2	
	Fall..	Required Courses	<b>MET140</b>	Mechanical Measurements		5
		Electives	<b>MET296</b>	Work-based Learning Experience (alternate course option)		
	Su..	Required Courses	<b>MET130</b>	Manufacturing Methods		5



## Program: Mechanical Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Quantitative (5 credits required)	MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5

## Program: Mechanical Engineering Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
MECHANICAL ENGINEERING TECHNOLOGY AAS-T (106)	1	Required Courses	<b>AMATH170</b>	Engineering Foundational Mathematics	MATH 087	5
		<b>ENGR&amp;111</b>	Engineering Graphics I			5
		<b>ENGR&amp;112</b>	Engineering Graphics II			5
	Required Courses	<b>CS&amp;141</b>	Computer Science 1 Java			5
		<b>ENGR&amp;214</b>	Statics		Physics&122	5
		<b>ENGR191</b>	Engineering Technology Study Lab I			1
		<b>ENGR192</b>	Engineering Technology Study Lab II		ENGR191	1
		<b>ENGR193</b>	Engineering Technology Study Lab III		ENGR192	1
		<b>ENGR194</b>	Engineering Technology Study Lab IV		ENGR193	1
		<b>ENGR195</b>	Engineering Technology Study Lab V		ENGR194	1
<b>ENGR196</b>		Engineering Technology Study Lab VI		ENGR195	1	
<b>MET218</b>	Introduction to 3 D Modeling		ENGR&111, ENGR&112	5		
<b>MET260</b>	Advanced CAD Operations		ENGR&111, ENGR&112	5		

## Program: Mechanical Engineering Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/O (15 credits required)	CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
	PSYC&200	LIFESPAN PSYCHOLOGY	5	
	SOC&101	INTRO TO SOCIOLOGY	5	
Natural Science (20 credits required)	PHYS&222	ENGINEER PHYS II W/LAB	5	
	CHEM&121	INTRODUCTION CHEMISTRY	5	
	PHYS&221	ENGINEERING PHYS I W/LAB	5	
	PHYS&223	ENGINEER PHYS III W/LAB	5	
Quantitative (25 credits required)	MATH&141	PRECALCULUS I	5	
	MATH&142	PRECALCULUS II	5	
	MATH&151	CALUCLUS I	5	
	MATH&152	CALCULUS II	5	
	MATH&153	CALCULUS III	5	

## Program: Nursing Assistant Certified (NAC)

The Nursing Assistant Program prepares students for employment as a nursing assistant under the supervision of professional licensed nurses. Upon successful completion, students are eligible to take the Washington State written and manual skills examination to become a Nursing Assistant Certified (NAC).

### Prerequisites

1. High School Diploma or GED Equivalent
2. Proof of 2-MMR vaccines or positive titer
3. Proof of 3-Hepatitis B vaccines (must have titer drawn) or started series
4. TB Vaccination
5. Proof of 2-vaccines Varicella Zoster (chicken pox) or positive titer
6. T-DAP in the last 10 years
7. Seasonal Flu shot

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcome

1. Students will be eligible to take the Washington State written and manual skills examination to become a Nursing Assistant Certified (NAC)

Degree	Course ID	Title	Prerequisites	Credits
Nursing Assistant Certified (COT)	Required Course CTNA 101	Nursing Assistant Certified		7

## Program: Occupational Therapy Assistant

Occupational therapy assistants work under the direction of occupational therapists to provide services to persons whose lives have been challenged due to injury, illness, developmental deficits or aging. Occupational therapy assistants view individuals in a holistic manner and help people prevent, lessen or overcome disabilities so they are able to function more independently in every aspect of daily living. Occupational therapy assistants use therapeutic activities and exercises to improve a client's skills for performing a variety of important everyday tasks safely and independently in their role at work, home, school, and in the community. Students in this program receive fundamental skills in occupational therapy and extensive clinical training. Successful completion of the program prepares students for careers as occupational therapy assistants in hospitals, outpatient clinics, rehabilitation centers, mental health centers, assisted living and nursing care facilities, and school systems.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Apply practice models, knowledge and skills through the use of clinical reasoning and thinking to a wide variety of settings, including hospitals, private practices, outpatient clinics, client homes, long term care facilities, retirement communities, assi
2	Describe the role of the occupational therapy assistant and the occupational therapist, the differences in the scope of practice, and the supervision guidelines, both legal and professional
3	Provide skilled treatment that is reflective of evidenced-based practice through the ability to locate current research information, evaluate and apply the information to the populations they serve
4	Establish therapeutic relationships with clients, families and caregivers that are representative of an understanding of their self and their impact on the therapeutic process
5	Provide occupation-based/medically-based centered care that is reflective both of the environment the client is in, and also of the individuality and unique roles of that client
6	Demonstrate respect and professionalism in all patient interactions despite the differences in culture, beliefs about health and wellness, and lifestyle choices
7	Demonstrate professional behaviors with clients, families, and other healthcare personnel, including communication skills, good work habits and sound judgment
8	Demonstrate skill, knowledge and attitudes to successfully pass the national certification examination for occupational therapy assistants and to gain employment and cope successfully with ever-changing workforce requirements

## Program: Occupational Therapy Assistant

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
OCCUPATIONAL THERAPY ASSISTANT AAS (120)	1	Required Courses	OTA102	Health and Wellness and the OTA		3
			OTA103	Functional Movement		5
			OTA104	Therapeutic Use of Self		5
			OTA111	Introduction to Occupational Therapy		5
	2	Required Courses	OTA105	Nervous System Function		4
			OTA106	Therapeutic Activities and Performance I		5
			OTA107	Devel. Disabilities - Treatment and Applications		5
			OTA108	Applied Experience I - A		1
			OTA110	Documentation Skills		3
	3	Required Courses	OTA109	Adaptive Technologies		5
			OTA201	Therapeutic Activities and Performance II		5
			OTA202	Psychosocial Dysfunctions : Treatment and Applications		8
			OTA203	Applied Experience I - B		1
			OTA204	Seminar - Applied Mental Health		1
	4	Required Courses	OTA210	Physical Disabilities - Treatment and Applications		8
			OTA212	Applied Experience - I - C		1
			OTA213	Seminar - Applied Physical Rehabilitation		1
			OTA231	OTA and Special Settings		4
			OTA232	Professional Issues for the OTA		4
	5	Required Courses	OTA220	Clinical Fieldwork Level II - Rotation A		11
			OTA221	Clinical Fieldwork Level II - Seminar A		1
	6	Required Courses	OTA222	Clinical Fieldwork Level II - Rotation B		11
			OTA223	Clinical Fieldwork Level II - Seminar B		1

## Program: Occupational Therapy Assistant

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS (5 credits required)	PSYC&200	LIFESPAN PSYCHOLOGY	5
	Natural Science (7 credits required)	BIOL170	MEDICAL TERMINOLOGY-BSC	2
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
	Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
		MATH172	APPLIED BUSINESS MATH	5
		MATH173	MATH CONCEPTS	5
		MATH174	MATH FOR ALLIED HEALTH	5
		MATH&141	PRECALCULUS I	5
		MATH&142	PRECALCULUS II	5
		MATH&146	INTRODUCTION TO STATS	5
		MATH&151	CALUCLUS I	5
		MATH&153	CALCULUS III	5

## Program: Phlebotomy (Basic and Advanced)

These programs are established to meet the State of Washington Department of Health Medical Assistant-Phlebotomist Certification requirements. It also meets the needs for student so take the NHA national certification exam. The course includes HIV/AIDS training, basic anatomy and physiology, medical terminology, how to avoid pre analytical errors, and how to be successful in collecting blood samples. You will learn how to collect blood samples using all of the tools currently being used in the Laboratory industry.

Students will collect blood samples from fellow students as well allowing fellow students to collect blood from you to help everyone in class to meet the objectives in the class. You will learn how to process samples to get them ready for analysis. You will learn how to deal with age specific needs of patients, customer service, special collections, and non-blood samples.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

<b>Degree</b>	<b>Course ID</b>		<b>Title</b>	<b>Credits</b>
<b>Basic Phlebotomy (COT)</b>	Required Course	PNURS292	Phlebotomy	3
Program Learning Outcome	<ol style="list-style-type: none"> <li>1. Students learn to draw and process blood specimens for analysis.</li> <li>2. Provide for the specific needs of patients</li> <li>3. Provide excellent customer service</li> </ol>			
<b>Degree</b>	<b>Course ID</b>		<b>Title</b>	<b>Credits</b>
<b>Advanced Phlebotomy (COT)</b>	Required Course	PNURS293	Advanced Phlebotomy	7
Program Learning Outcomes	<ol style="list-style-type: none"> <li>1. Take patient vital signs</li> <li>2. Perform EKGs</li> <li>3. Participate in 120 hours of externship (20 hours per week)</li> </ol>			



## Program: Practical Nurse

Students prepare for careers as licensed practical nurses in a variety of healthcare settings. Clinical activities are an integral part of this program, which is approved by the Washington Nursing Care Quality Assurance Commission. During the clinical phase, students demonstrate nursing competencies under supervision at clinical sites and improve skills by working with a healthcare professional in a preceptorship role. Graduates are required to pass the Washington State Practical Nursing licensing exam to practice as licensed practical nurses in Washington State. Prior to licensing exam, the applicant will need to provide proof of high school graduation or equivalent.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Assist in implementing the nursing process
- 2 Use communication skills effectively in order to function as a member of the nursing team and apply beginning skills in verbal, non-verbal and written communication, recognizing and respecting cultural diversity and the spiritual beliefs of individual clients
- 3 Provide care that is safe, compassionate and culturally and developmentally appropriate
- 4 Assist in the health teaching of clients recognizing individual differences.
- 5 Demonstrate an understanding of own role in the health care delivery system
- 6 Use communication skills effectively to function as a safe healthcare team member
- 7 Demonstrate an understanding of a nurse's personal role in the health care delivery system
- 8 Recognize the need for change in the structured healthcare setting and demonstrate active participation in change

## Program: Practical Nurse

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
PRACTICAL NURSE AAS (105-122)	1	Required Courses	PNUR202	Professional Vocational Relationships	All GEN EDS, CTNA course, Active NAC License	4
		PNUR203	Nursing Fundamentals I/Simulation I	All GEN EDS, CTNA course, Active NAC License	7	
		PNUR204	Intro to Med-Surg Nursing	All GEN EDS, CTNA course, Active NAC License	4	
	2	Required Courses	PNUR220	Nursing Fundamentals II/ Simulation II		4
			PNUR222	Clinical I / Simulation III/ Clinical Math		4
			PNUR223	MED/Surg I		3
			PNUR224	NursingMath/Pharmacology		4
	3	Required Courses	PNUR230	Med-Surg II		5
			PNUR233	Clinical II/Simulation IV		3
			PNUR234	Advanced Clinical II/Simulation V/Clinical Math		3
	4	Required Courses	PNUR240	Med-Surg III		7
			PNUR241	Clinical III/Simulation VI/Clinical Math		4
			PNUR242	Preceptor Experience		4
		Required Courses	PNUR235	Newborn/Maternal/Repro/Pediatrics		4
	Electives	PNUR290	Independent Project I		3	
PNUR295		Independent Project II		3		
PNUR299		Independent Project III		3		

## Program: Practical Nurse

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS (10 credits required)	CMST&210	INTERPERSONAL COMMUNICTN	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
	Natural Science (25 credits required)	BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		NUTR&101	INTRO TO NUTRITION	5
	Quantitative (5 credits required)	MATH&146	INTRODUCTION TO STATS	5

## Program: Power Sports and Equipment Technology

Students in the program prepare for careers in the power sports and power equipment industries. Technicians in these areas maintain and repair a variety of two- and four-cycle engines, power trains, and chassis. Power Sports: Maintenance and repair of power sports vehicles such as motorcycles, sport utility vehicles, all-terrain vehicles, personal watercraft, and boats for employment in dealerships, independent repair shops, and self-employment. Power Equipment: Maintenance and repair of outdoor power equipment, including lawn and garden equipment and light industrial/commercial equipment. Employment may be in lawn and garden stores, department stores, rental companies, landscaping companies, golf courses, fleet repair facilities, government agencies, and self-employment.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Demonstrate knowledge of the Power Sports Industry
2	Demonstrate the ability to use a variety of tools specific to the Power Sports industry
3	Demonstrate the ability to service a variety of vehicles
4	Demonstrate the ability to service brake systems on power sports vehicles
5	Demonstrate the ability to service tires on a variety of power sports applications
6	Demonstrate the ability to diagnose engine related customer concerns
7	Demonstrate the ability to repair a variety of internal combustion engines
8	Demonstrate the ability to diagnose and service carburetors
9	Demonstrate the ability to diagnose and service a variety of electrical related customer concerns
10	Demonstrate the ability to diagnose a variety of vehicle no start conditions
11	Demonstrate the ability to service and repair a variety of clutch and transmission related customer concerns
12	Demonstrate the ability to service and repair a variety of drivetrain customer concerns
13	Demonstrate the ability to service a variety of suspension systems
14	Demonstrate the ability to test a variety of fuel injection components
15	Demonstrate the ability to fill out all proper service documentation

## Program: Power Sports and Equipment Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
MOTORCYCLE AND MARINE TECHNOLOGY DEGREE AAS (91)	1	Required Courses	POW101	Introduction to Power Sports		3
		POW102	Power Sports Maintenance		5	
		POW105	Brakes Service and Repair		5	
		POW106	Tire Service and Repair		5	
	2	Required Courses	POW154	Computerized System Basics		3
			POW155	Electronic Fuel Injection		5
	3	Required Courses	POW150	Transmission Service and Repair		5
			POW151	Drive Train Service and Repair		5
			POW161	Chassis Service		5
	4	Required Courses	POW140	Fundamentals of Electricity		5
			POW141	Electrical Charging and Starting Systems		5
			POW142	Ignition Systems		5
	5	Required Courses	POW120	Engines - Failure Analysis		5
			POW121	Engine Repair Methods		5
			POW123	Carburetor Service and Repair		5
	6	Electives	POW162	Advanced Projects		15
			POW296	Work Based Learning		
		Required Courses	POW162	Advanced Projects		15
			POW296	Work Based Learning		
		Electives	WBAS101	Welding Basics		8
	Required Courses	POW122	Engine Installation Methods		5	
		WBAS101	Welding Basics		8	

## Program: Power Sports and Equipment Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131				
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Power Sports and Equipment Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
POWERSPORTS AND EQUIPMENT TECHNICIAN E/E COC (76)	1	Required Courses	POW101	Introduction to Power Sports		3
			POW102	Power Sports Maintenance		5
			POW105	Brakes Service and Repair		5
			POW106	Tire Service and Repair		5
	2	Required Courses	POW154	Computerized System Basics		3
			POW155	Electronic Fuel Injection		5
	4	Required Courses	POW140	Fundamentals of Electricity		5
			POW141	Electrical Charging and Starting Systems		5
			POW142	Ignition Systems		5
	5	Required Courses	POW120	Engines - Failure Analysis		5
			POW121	Engine Repair Methods		5
			POW123	Carburetor Service and Repair		5
		Required C..	POW122	Engine Installation Methods		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (5 credits required)			
			BIOL&160	GENERAL BIOLOGY	5
			BIOL&175	HUMAN BIOLOGY WITH LAB	5
			BIOL&241	ANATOMY & PHYSIOLOGY I	5
			BIOL&242	HUMAN A&P II	5
			BIOL&260	MICROBIOLOGY	5
			CHEM&121	INTRODUCTION CHEMISTRY	5
			CHEM&131		
			CMST&102	INTRO TO MASS MEDIA	5
			CMST&152	INTERCULTURAL COMM	5
			CMST&210	INTERPERSONAL COMMUNICTN	5
			CMST&220	PUBLIC SPEAKING	5
			CMST&230	SML GROUP COMMUNICATIONS	5
			ECON&201	MICROECONOMICS	5
			ECON&202	MACROECONOMICS	5
			HIST101	HISTORY-SCIENCE/TECH	5
			HREL111	COLLEGE/JOB SRCH SUCCESS	5
			NUTR&101	INTRO TO NUTRITION	5
			PHYS&221	ENGINEERING PHYS I W/LAB	5
			PHYS&222	ENGINEER PHYS II W/LAB	5
			PHYS&223	ENGINEER PHYS III W/LAB	5
			POLS&101	INTRO TO POL SCIENCE	5
			PSYC&100	GENERAL PSYCHOLOGY	5
			PSYC&200	LIFESPAN PSYCHOLOGY	5
			SOC&101	INTRO TO SOCIOLOGY	5
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
	MATH&146		INTRODUCTION TO STATS	5	
	MATH&151		CALUCLUS I	5	
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Power Sports and Equipment Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
POWERSPORTS AND EQUIPMENT TECHNICIAN E/E COC (76)	1	Required Courses	POW101	Introduction to Power Sports		3
			POW102	Power Sports Maintenance		5
			POW105	Brakes Service and Repair		5
			POW106	Tire Service and Repair		5
	2	Required Courses	POW154	Computerized System Basics		3
			POW155	Electronic Fuel Injection		5
	4	Required Courses	POW140	Fundamentals of Electricity		5
			POW141	Electrical Charging and Starting Systems		5
			POW142	Ignition Systems		5
	5	Required Courses	POW120	Engines - Failure Analysis		5
			POW121	Engine Repair Methods		5
			POW123	Carburetor Service and Repair		5
	Required C..		POW122	Engine Installation Methods		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options	Credits				
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5			
		ENGL&101	ENGLISH COMPOSITION I	5			
	HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
			BIOL&175	HUMAN BIOLOGY WITH LAB	5		
			BIOL&241	ANATOMY & PHYSIOLOGY I	5		
			BIOL&242	HUMAN A&P II	5		
			BIOL&260	MICROBIOLOGY	5		
			CHEM&121	INTRODUCTION CHEMISTRY	5		
			CHEM&131				
			CMST&102	INTRO TO MASS MEDIA	5		
			CMST&152	INTERCULTURAL COMM	5		
			CMST&210	INTERPERSONAL COMMUNICTN	5		
			CMST&220	PUBLIC SPEAKING	5		
			CMST&230	SML GROUP COMMUNICATIONS	5		
			ECON&201	MICROECONOMICS	5		
			ECON&202	MACROECONOMICS	5		
			HIST101	HISTORY-SCIENCE/TECH	5		
			HREL111	COLLEGE/JOB SRCH SUCCESS	5		
			NUTR&101	INTRO TO NUTRITION	5		
			PHYS&221	ENGINEERING PHYS I W/LAB	5		
			PHYS&222	ENGINEER PHYS II W/LAB	5		
			PHYS&223	ENGINEER PHYS III W/LAB	5		
			POLS&101	INTRO TO POL SCIENCE	5		
			PSYC&100	GENERAL PSYCHOLOGY	5		
			PSYC&200	LIFESPAN PSYCHOLOGY	5		
			SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
					MATH172	APPLIED BUSINESS MATH	5
					MATH173	MATH CONCEPTS	5
	MATH&107	MATH IN SOCIETY			5		
	MATH&141	PRECALCULUS I			5		
	MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS	5					
MATH&151	CALUCLUS I	5					
MATH&152	CALCULUS II	5					
MATH&153	CALCULUS III	5					



## Program: Sheet Metal Technology

Bates offers the only program in the region that prepares students for apprenticeship employment in the sheet metal industry. Customer projects completed in the classroom, shop, and the field, provide students with the necessary foundational skills to succeed in this high demand and rewarding occupation. Instruction includes equipment operation, fabrication and installation of various ventilation systems, blueprint reading, computer-aided drafting, air distribution, and material handling. This is a pre-apprenticeship program for the Western Washington Sheet Metal Joint Apprenticeship Training Committee. Students who complete all required elements of the selected Sheet Metal Technology course offerings will be awarded direct entry into the Western Washington Sheet Metal JATC Local 66 building trades or residential apprenticeship program. Students will be placed at the end of the out of work list. Prior educational credits are recognized upon entrance into the apprenticeship.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

1	Lay out, measure, and mark dimensions and reference lines on material
2	Use calculators, scribes, dividers, squares, and rulers
3	Fasten joints together with a variety of fasteners
4	Install a variety of assemblies: flashings, heating and air conditioning ducts, and furnace casings
5	Interpret blueprints relating to construction sites
6	Perform basic computer functions
7	Use shears, hammers, punches, or drills to fabricate or modify parts
8	Identify gauge types of sheet metal or nonmetallic materials
9	Install section components
10	Drill and punch holes in metal for screws, bolts, and rivets
11	Develop positive interpersonal abilities to create a team environment in the workplace
12	Work independently as well as cooperatively in a sheet metal shop environment
13	Identify commonly used hand tools and machines for sheet metal fabrication
14	Interpret guidelines set forth by OSHA/WISHA/HAZ COM and occupation standards
15	Use calculators, hand tools and machines on sheet metal or paper for fabrication
16	Install a variety of components including outdoor metal flashings, gutters, and siding
17	Perform basic computer functions relating to duct design and CAD fabrication
18	Install a variety of components including HVAC ductwork, piping and equipment

## Program: Sheet Metal Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
SHEET METAL TECHNOLOGY AAS (115)	1	Required Courses	SHME101	Introduction to Sheet Metal Technology		3
			SHME103	Fitting Fabrication I		7
			SHME105	Materials Technology		3
			SHME150	Hand Tools and Machines		5
	2	Required Courses	SHME107	Applied Math		5
			SHME151	Safety and Health		4
			SHME152	Drafting I		6
			SHME217	Energy Codes		2
	3	Required Courses	SHME112	Fitting Fabrication II		8
			SHME153	Architectural Sheet Metal		5
	4	Required Courses	SHME203	Blueprint Reading Applications		5
			SHME206	Complex Components Fabrication		5
			SHME250	Drafting II		7
	5	Required Courses	SHME213	Introduction to Blueprint Reading		4
			SHME251	Duct Design and Air Balancing Concepts		5
			SHME252	Field Installation I	SHME103, SHME112, SHME152	6
SHME253			Field Installation II	SHME152, SHME112, SHME252	6	
6	Required Courses	SHME254	Commercial Projects	SHME251, SHME252, SHME253	6	
	Required Courses	WBAS101	Welding Basics		8	

## Program: Sheet Metal Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
			Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
MATH&107	MATH IN SOCIETY			5		
MATH&141	PRECALCULUS I			5		
MATH&142	PRECALCULUS II			5		
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&153	CALCULUS III	5				

## Program: Sheet Metal Technology

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
SHEET METAL TECHNOLOGY COC (115)	1	Required Courses	<b>SHME101</b>	Introduction to Sheet Metal Technology		3
		<b>SHME103</b>	Fitting Fabrication I		7	
		<b>SHME105</b>	Materials Technology		3	
		<b>SHME150</b>	Hand Tools and Machines		5	
	2	Required Courses	<b>SHME107</b>	Applied Math		5
		<b>SHME151</b>	Safety and Health		4	
		<b>SHME152</b>	Drafting I		6	
		<b>SHME217</b>	Energy Codes		2	
	3	Required Courses	<b>SHME112</b>	Fitting Fabrication II		8
		<b>SHME153</b>	Architectural Sheet Metal		5	
	4	Required Courses	<b>SHME203</b>	Blueprint Reading Applications		5
		<b>SHME206</b>	Complex Components Fabrication		5	
		<b>SHME250</b>	Drafting II		7	
	5	Required Courses	<b>SHME213</b>	Introduction to Blueprint Reading		4
		<b>SHME251</b>	Duct Design and Air Balancing Concepts		5	
		<b>SHME252</b>	Field Installation I	SHME103, SHME112, SHME152	6	
<b>SHME253</b>		Field Installation II	SHME152, SHME112, SHME252	6		
6	Required Courses	<b>SHME254</b>	Commercial Projects	SHME251, SHME252, SHME253	6	
	Required Courses	<b>WBAS101</b>	Welding Basics		8	

## Program: Sheet Metal Technology

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
MATH&146	INTRODUCTION TO STATS			5		
MATH&151	CALUCLUS I			5		
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III			5		

## Program: Sheet Metal Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
SHEET METAL TECHNICIAN COC (93)	1	Required Courses	SHME101	Introduction to Sheet Metal Technology		3
			SHME103	Fitting Fabrication I		7
			SHME105	Materials Technology		3
			SHME150	Hand Tools and Machines		5
	2	Required Courses	SHME107	Applied Math		5
			SHME151	Safety and Health		4
			SHME152	Drafting I		6
			SHME217	Energy Codes		2
	3	Required Courses	SHME112	Fitting Fabrication II		8
			SHME153	Architectural Sheet Metal		5
	4	Required Courses	SHME203	Blueprint Reading Applications		5
			SHME250	Drafting II		7
	5	Required Courses	SHME213	Introduction to Blueprint Reading		4
			SHME251	Duct Design and Air Balancing Concepts		5
			SHME252	Field Installation I	SHME103, SHME112, SHME152	6
		Required C..	WBAS101	Welding Basics		8

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5	
		BIOL&175	HUMAN BIOLOGY WITH LAB	5	
		BIOL&241	ANATOMY & PHYSIOLOGY I	5	
		BIOL&242	HUMAN A&P II	5	
		BIOL&260	MICROBIOLOGY	5	
		CHEM&121	INTRODUCTION CHEMISTRY	5	
		CHEM&131	INTRODUCTION TO ORGANIC/BIOCHEMISTRY	5	
		CMST&102	INTRO TO MASS MEDIA	5	
		CMST&152	INTERCULTURAL COMM	5	
		CMST&210	INTERPERSONAL COMMUNICTN	5	
		CMST&220	PUBLIC SPEAKING	5	
		CMST&230	SML GROUP COMMUNICATIONS	5	
		ECON&201	MICROECONOMICS	5	
		ECON&202	MACROECONOMICS	5	
		HIST101	HISTORY-SCIENCE/TECH	5	
		HREL111	COLLEGE/JOB SRCH SUCCESS	5	
		NUTR&101	INTRO TO NUTRITION	5	
		PHYS&221	ENGINEERING PHYS I W/LAB	5	
		PHYS&222	ENGINEER PHYS II W/LAB	5	
		PHYS&223	ENGINEER PHYS III W/LAB	5	
		POLS&101	INTRO TO POL SCIENCE	5	
		PSYC&100	GENERAL PSYCHOLOGY	5	
		PSYC&200	LIFESPAN PSYCHOLOGY	5	
		SOC&101	INTRO TO SOCIOLOGY	5	
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
	MATH&107		MATH IN SOCIETY	5	
	MATH&141		PRECALCULUS I	5	
	MATH&142		PRECALCULUS II	5	
	MATH&146		INTRODUCTION TO STATS	5	
MATH&151	CALUCULUS I		5		
MATH&152	CALCULUS II	5			
MATH&153	CALCULUS III	5			

## Program: Sheet Metal Technology

Degree	Quarter		Course ID	Title	Prerequisites	Credits
SHEET METAL PRODUCTION SUPPORT COT (44)	1	Required Courses	SHME103	Fitting Fabrication I		7
			SHME105	Materials Technology		3
			SHME150	Hand Tools and Machines		5
	2	Required Courses	SHME107	Applied Math		5
			SHME217	Energy Codes		2
	3	Required Courses	SHME112	Fitting Fabrication II		8
	5	Required Courses	SHME253	Field Installation II	SHME152, SHME112, SHME252	6
		Required Courses	WBAS101	Welding Basics		8

Degree	Quarter		Course ID	Title	Prerequisites	Credits
SHEET METAL RESIDENTIAL INSTALLER CoT (46)	1	Required C..	SHME150	Hand Tools and Machines		5
	5	Required C..	SHME253	Field Installation II	SHME152, SHME112, SHME252	6
	Required Courses		SHME120	Introduction to Sheet Metal Technology		3
			SHME124	Fitting Fabrication		4
			SHME125	Applied Math		3
			SHME127	Prefabricated Components		2
			SHME128	Materials Handling Technology		
			SHME129	Wood working Tools		1
			SHME130	Crpentry Installation		3
			SHME131	Air Properties Technology		1
			SHME132	Duct Installation		3
			SHME133	Residential Venting Technology		2
			SHME134	Unit Operations		2
			SHME135	Code Principals		2
			SHME136	Gas Pipping Technology		2
			SHME137	Duct Design Technology		3
SHME138	Preventive Maintenance		2			

## Program: Software Development

Instruction in the Software Development program includes designing, coding, and implementing software applications in a variety of programming languages: SQL, Java, C Sharp, Python. In addition, students build skills in problem-solving, attention to detail, communication, and teamwork. There are two new certifications, Business Data Analytics and Software Development, both of which feature open source programming. Business and Data Analytics develop skills with SQL, Business Intelligence, and Visualization, and the Software Development certificate focuses on mobile application development and data structures.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- |    |   |
|----|---|
| 1  | Write application software that makes efficient and secure use of operating system services   |
| 2  | Develop an information system using accepted software development processes   |
| 3  | Produce user applications using a specialized technology that builds upon fundamental software development practices  |
| 4  | Apply principles of human-computer interaction in the design of computer interfaces   |
| 5  | Analyze a problem and identify the appropriate data, hardware components and/or software requirements to develop a feasible solution                                      |
| 6  | Use current tools and practices that support the software documentation process   |
| 7  | Document system requirements and/or developing materials for clients in the proper use of hardware or software  |
| 8  | Work cooperatively and effectively in teams to accomplish a shared goal   |
| 9  | Analyze local and global information technology (IT) trends, while recognizing the influences of IT on cultural, economic, ethical, and legal issues and responsibilities |
| 10 | Support the management of information systems   |
| 11 | Use industry standard digital media/multimedia hardware and software  |



## Program: Software Development

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
SOFTWARE DEVELOPMENT AAS (95)	1	Required Courses	SOFT101	Introduction to Information Technology		5
			SOFT102	Programming Fundamentals with JavaScript		5
			WEB102	Web Development I		5
	2	Required Courses	DATA101	Database Design and SQL		5
			DATA104	Excel for Analytics		5
	3	Required Courses	DATA102	Advanced SQL	DATA101	5
			SOFT121	C-Sharp I		5
			SOFT123	Web Programming w/JavaScript	SOFT102	5
	4	Required Courses	SOFT207	Web Application Development	SOFT123	5
			SOFT290	Capstone Project		5
		Electives	DATA205	Business Data Analytics I - SQL Server Administration	DATA104	5
			SOFT210	Mobile Application Development I	CS&141	5
	5	Electives	DATA206	Business Data Analytics II- Intro to Business Intelligence	DATA104	5
			DATA207	Business Data Analytics III - Visualization		5
			SOFT144	Data Structures	CS&141	5
			SOFT211	Mobile Application Development II	SOFT211	5
		Required Courses	CS&141	Computer Science 1 Java		5
	Electives	SOFT204	Open Source Programming		5	

## Program: Software Development

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	Null	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Quantitative (10 credits required)	MATH&107	MATH IN SOCIETY	5
		MATH&141	PRECALCULUS I	5
		MATH&146	INTRODUCTION TO STATS	5

## Program: Software Development

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
SOFTWARE DEVELOPMENT AAS-T (105)	1	Required Courses	<b>SOFT101</b>	Introduction to Information Technology		5
			<b>SOFT102</b>	Programming Fundamentals with JavaScript		5
			<b>WEB102</b>	Web Development I		5
	2	Required Courses	<b>DATA101</b>	Database Design and SQL		5
			<b>DATA104</b>	Excel for Analytics		5
	3	Required Courses	<b>DATA102</b>	Advanced SQL	DATA101	5
			<b>SOFT121</b>	C-Sharp I		5
			<b>SOFT123</b>	Web Programming w/JavaScript	SOFT102	5
	4	Required Courses	<b>SOFT207</b>	Web Application Development	SOFT123	5
			<b>SOFT290</b>	Capstone Project		5
		Electives	<b>DATA205</b>	Business Data Analytics I - SQL Server Administration	DATA104	5
			<b>SOFT210</b>	Mobile Application Development I	CS&141	5
	5	Electives	<b>DATA206</b>	Business Data Analytics II- Intro to Business Intelligence	DATA104	5
			<b>DATA207</b>	Business Data Analytics III - Visualization		5
			<b>SOFT144</b>	Data Structures	CS&141	5
			<b>SOFT211</b>	Mobile Application Development II	SOFT211	5
		Required Courses	<b>CS&amp;141</b>	Computer Science 1 Java		5
	Electives	<b>SOFT204</b>	Open Source Programming		5	

## Program: Software Development

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
AAS-T	Communications (5 credits required)	ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (15 credits required)	BIOL&160	GENERAL BIOLOGY	5
		BIOL&175	HUMAN BIOLOGY WITH LAB	5
		BIOL&241	ANATOMY & PHYSIOLOGY I	5
		BIOL&242	HUMAN A&P II	5
		BIOL&260	MICROBIOLOGY	5
		CHEM&121	INTRODUCTION CHEMISTRY	5
		CHEM&131	Null	5
		CMST&102	INTRO TO MASS MEDIA	5
		CMST&152	INTERCULTURAL COMM	5
		CMST&210	INTERPERSONAL COMMUNICTN	5
		CMST&220	PUBLIC SPEAKING	5
		CMST&230	SML GROUP COMMUNICATIONS	5
		ECON&201	MICROECONOMICS	5
		ECON&202	MACROECONOMICS	5
		NUTR&101	INTRO TO NUTRITION	5
		PHYS&221	ENGINEERING PHYS I W/LAB	5
		PHYS&222	ENGINEER PHYS II W/LAB	5
		PHYS&223	ENGINEER PHYS III W/LAB	5
		POLS&101	INTRO TO POL SCIENCE	5
		PSYC&100	GENERAL PSYCHOLOGY	5
		PSYC&200	LIFESPAN PSYCHOLOGY	5
		SOC&101	INTRO TO SOCIOLOGY	5
	Quantitative (10 credits required)	MATH&107	MATH IN SOCIETY	5
		MATH&141	PRECALCULUS I	5
		MATH&146	INTRODUCTION TO STATS	5

## Program: Software Development

Degree	Quarter		Course ID	Title	Prerequisites	Credits
SOFTWARE DEVELOPMENT ELEMENTS CERTIFICATE COC (65)	1	Required Courses	SOFT101	Introduction to Information Technology		5
			SOFT102	Programming Fundamentals with JavaScript		5
			WEB102	Web Development I		5
	2	Required Courses	DATA101	Database Design and SQL		5
			DATA104	Excel for Analytics		5
	3	Required Courses	DATA102	Advanced SQL	DATA101	5
			SOFT121	C-Sharp I		5
			SOFT123	Web Programming w/JavaScript	SOFT102	5
	4	Required Courses	SOFT207	Web Application Development	SOFT123	5
			SOFT290	Capstone Project		5
		Required C..	CS&141	Computer Science 1 Java		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits	
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5	
		ENGL&101	ENGLISH COMPOSITION I	5	
		HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY
			BIOL&175	HUMAN BIOLOGY WITH LAB	5
			BIOL&241	ANATOMY & PHYSIOLOGY I	5
			BIOL&242	HUMAN A&P II	5
			BIOL&260	MICROBIOLOGY	5
			CHEM&121	INTRODUCTION CHEMISTRY	5
			CHEM&131	Null	5
			CMST&102	INTRO TO MASS MEDIA	5
			CMST&152	INTERCULTURAL COMM	5
			CMST&210	INTERPERSONAL COMMUNICTN	5
			CMST&220	PUBLIC SPEAKING	5
			CMST&230	SML GROUP COMMUNICATIONS	5
			ECON&201	MICROECONOMICS	5
			ECON&202	MACROECONOMICS	5
			HIST101	HISTORY-SCIENCE/TECH	5
			HREL111	COLLEGE/JOB SRCH SUCCESS	5
			NUTR&101	INTRO TO NUTRITION	5
			PHYS&221	ENGINEERING PHYS I W/LAB	5
			PHYS&222	ENGINEER PHYS II W/LAB	5
			PHYS&223	ENGINEER PHYS III W/LAB	5
			POLS&101	INTRO TO POL SCIENCE	5
			PSYC&100	GENERAL PSYCHOLOGY	5
			PSYC&200	LIFESPAN PSYCHOLOGY	5
			SOC&101	INTRO TO SOCIOLOGY	5
		Quantitative (5 credits required)	MATH171	TECHNICAL MATH	5
			MATH172	APPLIED BUSINESS MATH	5
			MATH173	MATH CONCEPTS	5
			MATH&107	MATH IN SOCIETY	5
			MATH&141	PRECALCULUS I	5
			MATH&142	PRECALCULUS II	5
			MATH&146	INTRODUCTION TO STATS	5
	MATH&151		CALUCLUS I	5	
	MATH&152		CALCULUS II	5	
	MATH&153		CALCULUS III	5	

## Program: Software Development

Degree	Quarter		Course ID	Title	Prerequisites	Credits
BUSINESS AND DATA ANALYTICS CERTIFICATE COC (35)	2	Required Courses	DATA101	Database Design and SQL		5
			DATA104	Excel for Analytics		5
	3	Required Courses	DATA102	Advanced SQL	DATA101	5
	4	Required Courses	DATA205	Business Data Analytics I - SQL Server Administration	DATA104	5
	5	Required Courses	DATA206	Business Data Analytics II- Intro to Business Intelligence	DATA104	5
			DATA207	Business Data Analytics III - Visualization		5
		Required Courses	SOFT204	Open Source Programming		5

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5
		ENGL&101	ENGLISH COMPOSITION I	5
	HUM/SS/NS/O (5 credits required)	BIOL&160	GENERAL BIOLOGY	5
BIOL&175		HUMAN BIOLOGY WITH LAB	5	
BIOL&241		ANATOMY & PHYSIOLOGY I	5	
BIOL&242		HUMAN A&P II	5	
BIOL&260		MICROBIOLOGY	5	
CHEM&121		INTRODUCTION CHEMISTRY	5	
CHEM&131		Null	5	
CMST&102		INTRO TO MASS MEDIA	5	
CMST&152		INTERCULTURAL COMM	5	
CMST&210		INTERPERSONAL COMMUNICTN	5	
CMST&220		PUBLIC SPEAKING	5	
CMST&230		SML GROUP COMMUNICATIONS	5	
ECON&201		MICROECONOMICS	5	
ECON&202		MACROECONOMICS	5	
HIST101		HISTORY-SCIENCE/TECH	5	
HREL111		COLLEGE/JOB SRCH SUCCESS	5	
NUTR&101		INTRO TO NUTRITION	5	
PHYS&221		ENGINEERING PHYS I W/LAB	5	
PHYS&222		ENGINEER PHYS II W/LAB	5	
PHYS&223		ENGINEER PHYS III W/LAB	5	
POLS&101		INTRO TO POL SCIENCE	5	
PSYC&100		GENERAL PSYCHOLOGY	5	
PSYC&200		LIFESPAN PSYCHOLOGY	5	
SOC&101		INTRO TO SOCIOLOGY	5	
Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
		MATH172	APPLIED BUSINESS MATH	5
		MATH173	MATH CONCEPTS	5
	MATH&107	MATH IN SOCIETY	5	
	MATH&141	PRECALCULUS I	5	
	MATH&142	PRECALCULUS II	5	
	MATH&146	INTRODUCTION TO STATS	5	
	MATH&151	CALUCLUS I	5	
	MATH&152	CALCULUS II	5	
MATH&153	CALCULUS III	5		

## Program: Software Development

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
BUSINESS DATA ANALYTICS CoT (35)	2	Required Courses	<b>DATA101</b>	Database Design and SQL		5
			<b>DATA104</b>	Excel for Analytics		5
	3	Required Courses	<b>DATA102</b>	Advanced SQL	DATA101	5
	4	Required Courses	<b>DATA205</b>	Business Data Analytics I - SQL Server Administration	DATA104	5
	5	Required Courses	<b>DATA206</b>	Business Data Analytics II- Intro to Business Intelligence	DATA104	5
			<b>DATA207</b>	Business Data Analytics III - Visualization		5
		Required Courses	<b>SOFT204</b>	Open Source Programming		5

## Program: Commercial Truck Driving

Bates Technical College is the only school in Washington State certified by the Professional Truck Driver Institute. Students prepare for entry-level employment as commercial truck drivers with the goal of a Class A Commercial Driver's License (CDL) with all endorsements. Bates prepares future commercial motor vehicle operators by providing classroom instruction, on-campus driving range, street driving, using a high tech commercial truck simulator among the various types of equipment.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Exhibit an ability to think critically about transportation problems, communicate effectively, and perform as an accountable professional
- 2 Demonstrates honesty, integrity and reliability.
- 3 Meets and maintains employment eligibility criteria, such as drug/alcohol-free status, clean driving record, etc.
- 4 Display professional, ethical behaviors as a commercial motor vehicle driver
- 5 Construct and maintain required CMV logbook/DVIR documentation
- 6 Demonstrates proper hooking/unhooking of trailers, cargo handling, weight distribution and securement safely by utilizing common CMV tools
- 7 Recognize, avoid or solve potential hazardous situations related to truck driving.
- 8 Plan or adjust routes based on changing conditions, using computer equipment, global positioning systems (GPS) equipment, or other navigation tools to minimize fuel consumption and carbon emissions.



## Program: Commercial Truck Driving

Degree	Quarter		Course ID	Title	Prerequisites	Credits
COMMERCIAL TRUCK DRIVING CoT (44)	1	Required Courses	TRUCK101	Safety/First Aid		3
			TRUCK102	Introduction to the Trucking Industry		4
			TRUCK103	Commercial Drivers License (CDL)		4
			TRUCK104	Pre-Trip Requirements		3
			TRUCK105	Close Quarters Operation		5
	2	Required Courses	TRUCK106	Materials/Cargo I		3
			TRUCK107	City/Town Driving		5
			TRUCK108	Freeway/Open Road I		5
			TRUCK110	City/Town Driving		4
			TRUCK112	Freeway/Open Road II		4
			TRUCK113	Advanced Commercial Driving		4

## Program: Welding

Students prepare for apprenticeship employment as welders, filling positions in industries including shipbuilding, industrial construction, energy fields, sheet metal, and auto body. Extensive practical training in all aspects of welding is included as students work in the shop on a variety of welding projects. Upon completion of the welding competencies, students are encouraged to take the certification tests for the American Welding Society and the Washington Association of Building Officials. This program also provides extended learning for persons previously or currently employed in these professions. Note: Through an Opportunity Grant, special tuition and book funding is available to assist low-income adult students entering this program.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

### Program Learning Outcomes

- 1 Weld in (flat, horizontal, vertical, and overhead positions) using the basic welding processes SMAW, GMAW, FCAW, and GTAW
- 2 Perform metal layout processes
- 3 Cut metals using (oxyfuel and, plasma, arc) cutting process
- 4 Apply the fundamentals of welding processes
- 5 Apply the principles of metallurgy during the welding process
- 6 Read and interpret basic blueprints and welding symbols to fabricate components
- 7 Apply basic math and measurement
- 8 Follow industry safety practices

## Program: Welding

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
WELDING AAS (120)	1	Required Courses	WELD101	Safety Principles		2
			WELD102	Fabrication Plans		4
			WELD103	Pre and Post Welding Activities		2
			WELD104	Oxyacetalene Cutting		3
			WELD105	Introduction to Shielded Metal Arc Welding		5
	2	Required Courses	WELD107	Brazing and Soldering		1
			WELD108	Full Penetration Welds - Flat/Horizontal		5
			WELD109	Full Penetration Welds - Vertical/Overhead		5
			WELD117	Welding Symbols		5
	3	Required Courses	WELD110	Full Penetration Welds - Open Root		5
			WELD111	Introduction to Gas Metal Arc Welding		3
			WELD112	Gas Metal Arc Welding - Full Penetration		4
			WELD113	Gas Metal Arc Welding - Aluminum		5
	4	Required Courses	WELD114	Introduction to Flux Core Arc Welding		4
			WELD115	Flux Core Arc Welding - Full Penetration		5
			WELD116	Carbon Arc Cutting		5
	5	Required Courses	WELD201	Introduction to Gas Tungsten Arc Welding		5
			WELD202	Gas Tungsten Arc Welding - Full Penetration		5
			WELD203	Gas Tungsten Arc Welding - Aluminum		5
	6	Required Courses	WELD204	Welding Certification Testing - SMAW		5
			WELD205	Advanced Welding Applications - Pipe/SMAW		5
			WELD206	Advanced Welding Applications - Pipe/GTAW		5
	7	Required Courses	WELD207	Welding Certification Testing - Flux Core		5
			WELD208	Non-destructive Testing		2
			WELD210	Advanced Welding Applications - Project		5

## Program: Welding

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
AAS	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O (5 credits required)		BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative (5 credits required)		MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH174	MATH FOR ALLIED HEALTH	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&153	CALCULUS III	5				

## Program: Welding

Degree	Quarter		Course ID	Title	Prerequisites	Credits
WELDER COC (103)	1	Required Courses	WELD101	Safety Principles		2
			WELD102	Fabrication Plans		4
			WELD103	Pre and Post Welding Activities		2
			WELD104	Oxyacetalene Cutting		3
			WELD105	Introduction to Shielded Metal Arc Welding		5
	2	Required Courses	WELD107	Brazing and Soldering		1
			WELD108	Full Penetration Welds - Flat/Horizontal		5
			WELD109	Full Penetration Welds - Vertical/Overhead		5
			WELD117	Welding Symbols		5
	3	Required Courses	WELD110	Full Penetration Welds - Open Root		5
			WELD111	Introduction to Gas Metal Arc Welding		3
			WELD112	Gas Metal Arc Welding - Full Penetration		4
			WELD113	Gas Metal Arc Welding - Aluminum		5
	4	Required Courses	WELD114	Introduction to Flux Core Arc Welding		4
			WELD115	Flux Core Arc Welding - Full Penetration		5
			WELD116	Carbon Arc Cutting		5
	5	Required Courses	WELD201	Introduction to Gas Tungsten Arc Welding		5
			WELD202	Gas Tungsten Arc Welding - Full Penetration		5
			WELD203	Gas Tungsten Arc Welding - Aluminum		5
	6	Required Courses	WELD204	Welding Certification Testing - SMAW		5
WELD205			Advanced Welding Applications - Pipe/SMAW		5	

## Program: Welding

### General Education Requirements

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Degree	Gen Ed Area	Course Options		Credits		
COC	Communications (5 credits required)	ENGL175	PROFESSIONAL WRITING	5		
		ENGL&101	ENGLISH COMPOSITION I	5		
HUM/SS/NS/O	(5 credits required)	BIOL&160	GENERAL BIOLOGY	5		
		BIOL&175	HUMAN BIOLOGY WITH LAB	5		
		BIOL&241	ANATOMY & PHYSIOLOGY I	5		
		BIOL&242	HUMAN A&P II	5		
		BIOL&260	MICROBIOLOGY	5		
		CHEM&121	INTRODUCTION CHEMISTRY	5		
		CHEM&131	Null	5		
		CMST&102	INTRO TO MASS MEDIA	5		
		CMST&152	INTERCULTURAL COMM	5		
		CMST&210	INTERPERSONAL COMMUNICTN	5		
		CMST&220	PUBLIC SPEAKING	5		
		CMST&230	SML GROUP COMMUNICATIONS	5		
		ECON&201	MICROECONOMICS	5		
		ECON&202	MACROECONOMICS	5		
		HIST101	HISTORY-SCIENCE/TECH	5		
		HREL111	COLLEGE/JOB SRCH SUCCESS	5		
		NUTR&101	INTRO TO NUTRITION	5		
		PHYS&221	ENGINEERING PHYS I W/LAB	5		
		PHYS&222	ENGINEER PHYS II W/LAB	5		
		PHYS&223	ENGINEER PHYS III W/LAB	5		
		POLS&101	INTRO TO POL SCIENCE	5		
		PSYC&100	GENERAL PSYCHOLOGY	5		
		PSYC&200	LIFESPAN PSYCHOLOGY	5		
		SOC&101	INTRO TO SOCIOLOGY	5		
		Quantitative	(5 credits required)	MATH171	TECHNICAL MATH	5
				MATH172	APPLIED BUSINESS MATH	5
				MATH173	MATH CONCEPTS	5
				MATH&107	MATH IN SOCIETY	5
				MATH&141	PRECALCULUS I	5
				MATH&142	PRECALCULUS II	5
				MATH&146	INTRODUCTION TO STATS	5
				MATH&151	CALUCLUS I	5
MATH&152	CALCULUS II			5		
MATH&153	CALCULUS III			5		

## Program: Welding

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
WELDER I CoT (32)	1	Required Courses	WELD101	Safety Principles		2
			WELD102	Fabrication Plans		4
			WELD103	Pre and Post Welding Activities		2
			WELD104	Oxyacetalene Cutting		3
			WELD105	Introduction to Shielded Metal Arc Welding		5
	2	Required Courses	WELD107	Brazing and Soldering		1
			WELD108	Full Penetration Welds - Flat/Horizontal		5
			WELD109	Full Penetration Welds - Vertical/Overhead		5
			WELD117	Welding Symbols		5

Degree	Quarter	Course ID	Title	Prerequisites	Credits	
WELDER II CoT (31)	3	Required Courses	WELD110	Full Penetration Welds - Open Root		5
			WELD111	Introduction to Gas Metal Arc Welding		3
			WELD112	Gas Metal Arc Welding - Full Penetration		4
			WELD113	Gas Metal Arc Welding - Aluminum		5
	4	Required Courses	WELD114	Introduction to Flux Core Arc Welding		4
			WELD115	Flux Core Arc Welding - Full Penetration		5
			WELD116	Carbon Arc Cutting		5

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ACCT205	Excel for Accounting	<p><u>Description:</u> This course focuses on how to use Excel to create accounting models which focus on solving accounting problems and completing accounting projects. Learn practical application for concepts emphasized in financial accounting and managerial accounting</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT207	QuickBooks	<p><u>Description:</u> This course provides hands-on experience and practice in computerized accounting applications (QuickBooks) for small businesses. Use the general ledger, accounts payable, accounts receivable, inventory, invoicing and payroll modules</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT220	Payroll Accounting	<p><u>Description:</u> A comprehensive study of payroll concepts including compute wages and salaries, withholding for social security and income taxes and unemployment compensation taxes, maintain payroll records and prepare the relevant tax forms.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT225	Federal Income Tax	<p><u>Description:</u> An introduction to federal income tax for individuals including current tax law, preparation of individual income tax form 1040 and related schedules</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT230	Governmental Accounting	<p><u>Description:</u> An introduction to the accounting and reporting requirements for governmental and non-profit entities. Covers the essentials of fund accounting and applies techniques to transactions in governmental units including governmental fund types, proprietary fund types, and fiduciary fund types</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT235	Intermediate Accounting Topics	<p><u>Description:</u> This course provides an in-depth study of financial accounting theory and practice. Primary focus is on financial statement preparation for small to medium-sized domestic companies. Topics include revenue recognition and income determination, financial statement preparation and account reconciliation and analysis.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT&201	Principles of Accounting I	<p><u>Description:</u> An introduction to the concepts and methods underlying the preparation of corporate financial statements using generally accepted accounting principles. Topics covered include the accounting cycle, cash, and receivables.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ACCT&202	Principles of Accounting II	<p><u>Description:</u> A continuation of the concepts and methods underlying the preparation of corporate financial statements using generally accepted accounting principles. Topics covered include long-term assets, liabilities, stockholders' equity, statement of cash flows and financial statement analysis</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ACCT&203	Principles of Accounting III	<p><u>Description:</u> An introduction to the concepts and methods of managerial accounting and how accounting information is essential for management decisions. Topics covered include job costing, activity based costing, inventory management, cost - volume - profit relationships, budgets, short-term business decisions and capital investment decisions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA110	Computer Basics	<p><u>Description:</u> This course will provide the basic vocabulary and terminology related to computer and word processing applications. An introduction to computer hardware and software is provided. This course will help build confidence and skills in using computer technology.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA111	Introduction to Word Processing	<p><u>Description:</u> This course is an introduction to the basic concepts of MS Word. The components that will be covered are document creation, editing and saving, formatting text and paragraphs, working with tables, etc. as related to healthcare.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA112	Fundamentals of Medical Terminology	<p><u>Description:</u> This course is an introduction to the first of a series of medical terminology courses associated with anatomy/physiology and the understanding of the disease process. Students use basic prefixes, suffixes, combining forms, and medical abbreviations.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA113	Healthcare Communications	<p><u>Description:</u> This course focuses on the growing emphasis on customer service, the patient experience, cultural competence, quality improvement, patient safety, and corporate compliance that healthcare professionals deal with every day. Emphasis is placed on communicating appropriately, working well in teams, respecting and valuing differences, using limited resources efficiently, and interacting effectively with coworkers, patients, and guests.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA114	Introduction to the Health Care Profession	<p><u>Description:</u> This course is an introduction to the basic concepts of the administrative medical assistant profession with emphasis on professional behaviors as they relate to the patient-physician-medical assistant relationship.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA115	Digital Media Transcription	<p><u>Description:</u> The course is an introduction to the processes used to transcribe a variety of medical correspondence and reports with emphasis on the development of proofreading and editing skills. Digital media is introduced.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA116	Medical Office Procedures	<p><u>Description:</u> This is a practical applications course that focuses on a variety of administrative medical tasks to include appointment scheduling, internet research, referral processes for treatment, and records management. Students are introduced to a medical office simulation project.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
AMA117	Beginning Medical Terminology	<p><u>Description:</u> This course is an introduction to medical terminology with an emphasis on the Integumentary, Digestive, Respiratory, and Cardiovascular Systems. Prerequisite required: AMA 112</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA112 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA118	Administrative Medical Concepts	<p><u>Description:</u> This course focuses on the Administrative Medical office functions. Communication regarding patient appointments will be focused upon. Students will be introduced to proper telephone techniques, a variety of filing systems in the medical office, understanding how equipment and supplies are essential the office, and will learn the basic concepts of performing front-office reception duties in the medical office. Prerequisite: AMA 114.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA114 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA119	Advanced Medical Office Procedures	<p><u>Description:</u> This is an advanced practical applications course that focuses on a variety of administrative medical tasks. Students will continue their simulation project and will include designing a medical office waiting area as well as performing medical practice financials.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA120	Introduction to Spreadsheets	<p><u>Description:</u> This course is an introduction to the basic concepts of MS Excel. Students will be performing basic calculations using formulas, formatting and printing worksheets, and creating powerful charts and graphs for the healthcare industry.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA121	Intermediate Medical Terminology	<p><u>Description:</u> This is a continuance course focusing on medical terminology with an emphasis on the Blood, Lymph and Immune Systems; Musculoskeletal System, Urinary System, and Female Reproductive System. Prerequisite required: AMA 117</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA117 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA122	Intermediate Administrative Medical Concepts	<p><u>Description:</u> This course is an introduction to administrative skills related to schedule management, insurance billing, coding, collections, and the financial management of a medical practice. Prerequisites: Successful completion of AMA 114 and AMA 118.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA114, AMA118 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA123	Electronic Health Records	<p><u>Description:</u> This course introduces the concepts and history of Electronic Health Record software, including meaningful use. The students will be oriented in a hands-on EHR simulation utilizing Spring Charts software. Emphasis will be placed on the basic patient's chart to labs, tests, codes, and templates. Students will apply all aspects utilizing EHR computer software</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA124	First Aid/CPR	<p><u>Description:</u> This course will fulfill the requirements for students to achieve their 2-year First Aid/CPR card required by the healthcare industry.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
AMA125	Practice Management System Applications	<p><u>Description:</u> This course offers students an opportunity learn to use a medical practice management system (PMS) and practice a variety of practice management functions common to a healthcare facility. Students will practice with hands-on software in scheduling, billing, account balancing, and financial report analysis.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA126	Advanced Administrative Medical Concepts	<p><u>Description:</u> This course is an introduction to administrative skills related to schedule management, insurance billing, coding, collections, and the financial management of a medical practice.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA127	Medical Insurance and Reimbursement	<p><u>Description:</u> This course focuses on medical insurance terminology and processes for billing a variety of insurance types. They learn specifics of Medicaid, Medicare, TriCare, L&amp;I, and commercial insurance and analyze agency payment vouchers. Secondary insurance billing requirements, rebilling, and electronic billing are included.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA128	Advanced Medical Terminology - Pathophysiology	<p><u>Description:</u> This is an advanced medical terminology course with an emphasis on the Male Reproductive System, Endocrine System, Nervous System, and Special Senses. Prerequisite required: Successful completion of AMA112, AMA 117, and AMA121.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA112, AMA117, AMA121 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA129	Medical Coding Applications	<p><u>Description:</u> This course is an introduction to coding of diagnoses and procedures of health care records with emphasis on coding for insurance reimbursement. Students learn to use both CPT and ICD-9-CM/ICD-10-CM classification manuals and reference materials. Prerequisite required: Successful completion of AMA 112, AMA 117, AMA 121, and AMA 128.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> AMA112, AMA117, AMA121, AMA128 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA130	Medical Office Supervision and Management	<p><u>Description:</u> This course will focus on developing practical skills in managing people and issues of supervision. Components will consist of building effective work teams, communication skills for supervisors, conflict resolution, managing change, and supervision principles in the healthcare setting.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA131	Interview Techniques	<p><u>Description:</u> This course focuses on the interview techniques. Students will discuss different types of interview formats, brainstorm interview questions and answers, participate in mock interviews, and learn how to handle unexpected interview situations.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA132	Phlebotomy	<p><u>Description:</u> This course provides instruction on how to be successful in collecting blood samples. The student will learn how to collect blood samples using all of the tools currently being used in the Laboratory industry. Collection of blood samples will be from fellow students as well as allowing blood to be drawn from students. Processing samples for analysis will be part of the curriculum. Students will learn how to deal with age specific needs of patients, customer service, special collections, and non-blood samples.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 50 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AMA133	HIV Prevention Education	<p><u>Description:</u> This course meets Washington State Department of Health objectives for the 4- and 7-hour HIV/Bloodborne Pathogens education requirement for credentialed healthcare providers and non-credentialed healthcare facility employees.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA134	Healthcare Credentialing	<p><u>Description:</u> This course is an introduction to the necessary components of healthcare credentialing. State, Federal, and administrative requirements are addressed.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA135	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The projects focus is on prior course work.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMA297	Work-based Learning Seminar	<p><u>Description:</u> Students enroll in the work-based learning seminar in order to receive an orientation to the work-based learning experience. Faculty meets with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AMATH170	Engineering Foundational Mathematics	<p><u>Description:</u> This course is a modular web-enhanced progression of foundational mathematical concepts and computation: skills required for success in engineering technology fields of study. Math concepts are taught using STEM field contextual basis. Successful completion of this course is equivalent to completion of intermediate algebra and meets the pre-requisites for math courses requiring a MATH 098 Pre-requisite. Pre-requisite: MATH 087 or qualifying compass or CASA scores equivalent to MATH 092.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> MATH 087 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA102	Professional Office Procedures	<p><u>Description:</u> This course is an introduction to duties and responsibilities found within the office administrative professions including the investigation of career paths, the development of career goals, and the exploration of customer service philosophies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA103	Telecommunicati..	<p><u>Description:</u> This course focuses on customer service, arrangement of business travel, operation of multi-line phone systems and facsimile equipment are introduced.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AOA105	Keyboarding I	<p><u>Description:</u> This course is an introduction to basic typewriting and computer keypad data entry skills.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA106	MS Windows	<p><u>Description:</u> This course is an introduction to MS Windows where students learn to Identify computer system components, use Windows software, and manage digital files.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u>      <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA108	Records Management	<p><u>Description:</u> In this course students perform records management activities at the level required within the administrative office assistant industry.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA109	Business Ethics	<p><u>Description:</u> This course focuses on the concept of ethics and its role in business are presented with emphasis on the examination of ethical situations and the creation of steps to solve the issue.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA110	MS Word I	<p><u>Description:</u> This course is an introduction to basic word processing skills using MS Word.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA111	MS Outlook	<p><u>Description:</u> This course is an introduction on how to manage calendars and utilize basic and advanced features of email systems.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA112	Business Grammar I	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA120	Keyboarding II	<p><u>Description:</u> In this course students continue to enhance typewriting/keyboarding and keypad data entry skills and increase their keyboarding speed and accuracy</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AOA121	MS Word II	<p><u>Description:</u> This course is a continuation of the concepts introduced in AOA 110; students develop more advanced word processing skills</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA123	Applied Technical Communications	<p><u>Description:</u> In this course students develop written communication skills required within the business and office environment</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA124	Business Presentations	<p><u>Description:</u> In this course students practice business meeting structure, conduct and protocols, with emphasis on meeting facilitators responsibilities</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA126	Business Grammar II	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA132	Business Grammar III	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA202	Business Grammar IV	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA203	MS Excel I	<p><u>Description:</u> In this course, students create, edit, maintain, and print spreadsheets and data sheets and create and edit macros.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA204	MS PowerPoint	<p><u>Description:</u> This course is an introduction to presentation software that is used to create computer-based slide shows.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AOA205	MS Access I	<p><u>Description:</u> This course is an introduction to Microsoft Access with emphasis on the acquisition of database maintenance skills</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA207	Business Grammar V	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA217	Business Grammar VI	<p><u>Description:</u> This course is an introduction to basic grammar including parts of speech and writing grammatically correct sentences.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA223	MS Excel II	<p><u>Description:</u> This course students will apply advanced functions such as graphing, working with multiple spreadsheets, and formatting and printing spreadsheets and data sheets.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA234	Employment Preparation	<p><u>Description:</u> In this course students conduct job search techniques, resume writing, and receive assistance in developing career goals and educational plans.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA240	Capstone Project	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project creating a variety of documents using the computer and grammar skills learned throughout the program.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AOA297	Work-Based Learning Seminar	<p><u>Description:</u> This course is the work-based learning seminar in order to receive an orientation to the work-based learning experience. Faculty meets with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AOA298	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 0   <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC101	Introduction to Cabinetmaking	<p><u>Description:</u> This course is an introduction to the basic fundamentals of the cabinetmaking trade including sources and products of cabinetmaking and different occupational opportunities</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC102	Safety Principles	<p><u>Description:</u> This course is an introduction to the required safety and shop rules to be applied in the lab as well as the OSHA and WISHA rules and regulations that help maintain a safe and productive work environment</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC103	Cabinetry Blueprints/ Plans	<p><u>Description:</u> An introduction to the fundamental skills of show drawings and detail plans, students read and interpret plans including material and cabinet take-offs. Basic sketching is also introduced</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC104	Materials	<p><u>Description:</u> This course is an introduction to the materials used in the cabinetmaking trade including both natural-made and man-made materials: MDF, particle board, laminates, veneers, solid surfaces, and sustainable sourced woods</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC105	Machine Tools I	<p><u>Description:</u> This course is an introduction to the proper use, maintenance, and application of basic machines used for the building of cabinets and woodworking projects. Basic machines may include the jointer, planer; radial arm saw, wide belt sander, table saw, vertical panel saw, line boring machine, motorized miter saw, and drill presses</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 60   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC106	Machine Tools II	<p><u>Description:</u> This course is a continuation of the concepts introduced in ARWC 105; students demonstrate the proper use of maintenance and the application of complex machine tools used for the building of cabinets and woodworking projects. Advanced machines may include edge banders, sliding table/table saw, spindle shapers, panel raising attachment, panel router, Euro hinge machines similar to Blum Mini press, and the hollow chisel mortise</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 60   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ARWC107	Machine Tools / CNC	<p><u>Description:</u> This course is an introduction to the proper use, maintenance, and application of CNC machining used for the cutting/milling of cabinets, woodworking parts, templates, and projects. The use of basic layouts on the computer and software used for this application is emphasized</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC108	Portable Power Tools	<p><u>Description:</u> This course is an introduction to the proper use, maintenance, and application of portable power tools, such as common tool use and care of routers and bits, the different types of routers and their application, biscuit cutter, pocket hole jigs, drills and drivers, various joint- making tools, and set-up</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC109	Hand Tools	<p><u>Description:</u> This course is an introduction to the proper use, maintenance, and application of hand tools used for the cutting/milling, assembly, and installation of cabinets. , woodworking parts, templates, and projects. Common hands tools include the block plane; measuring and marking tools; and cutting tools such as dovetail saws, back saws, and Japanese saws</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC110	Basic Cabinet Joinery	<p><u>Description:</u> Students demonstrate the proper use and application of joints used in the assembly and production of cabinets. Emphasis is on function, strength, ease of machining, and basic uses of various joints. Also introduced is the application and suitability to different materials and production settings</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC111	Tool Maintenance/ Sharpening	<p><u>Description:</u> This course is an introduction to the maintenance and sharpening of tools used in the shop. Routine maintenance will be covered as well as some minor tool repair and adjustments. Students use assigned/instructor approved projects to replace knives, adjust cutting performance, and maintain machines</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC112	Cabinetmaking/ Face Frame Construction I	<p><u>Description:</u> In this course students cut, assemble, and complete traditional face frame cabinets. In addition, the design, layout, and proper material use are introduced, as well as carcass assembly, face frames, door and drawer construction</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC113	Cabinetmaking/ Face Frame Construction II	<p><u>Description:</u> This course is a continuation of the concepts introduced in ARWC 112; students cut, assemble, and complete traditional face frame cabinets. Design, layout, and proper material use are introduced as well as carcass assembly, face frames and door and drawer construction. Students are assigned instructor- approved projects to develop more advanced knowledge and skills</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC114	Cabinetmaking/ 32mm System	<p><u>Description:</u> Students acquire knowledge and skills in the use and application of the 32mm cabinet system. This includes the construction methods, materials, hardware, and assembly of frameless cabinets</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ARWC115	Finishing Methods I	<p><u>Description:</u> Students are introduced to the use and application of finishes used in a shop setting including a variety of techniques: wipe-on, spray, and brushing</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC116	Drawers and Doors	<p><u>Description:</u> Students assemble doors and drawers and design and manufacture different door/drawer styles to assigned/personal projects.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC117	Laminates/ Countertops /Solid Surface	<p><u>Description:</u> Students are introduced to the fabrication and assembly methods of various countertop materials including plastic laminates and solid surface materials</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC118	Occupational Math	<p><u>Description:</u> This course is an introduction to mathematical computations as they related to the architectural woodworking/cabinetry industry. Applied skills include material estimation and board, square, and linear footage calculations</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC119	Jigs and Fixtures	<p><u>Description:</u> This course is an introduction to the use of jigs, templates, and fixture for doing machining processes when more than one part is required to be identical or parts need to be held for machining. Skills taught include material selection, measurements, proper tooling, and ease of use. Work is on shop projects and simulated mock-ups</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC120	Cabinetmaking/ Commercial Construction	<p><u>Description:</u> Students assemble commercial casework including assembly methods, construction standards, and materials</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC201	Wood Bending/ Lamination Techniques	<p><u>Description:</u> Students apply wood bending/laminating techniques including vacuum bagging and lamination bending. Types of forms, construction of forms, adhesives, and best materials for bending are included</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC202	Architectural Millwork	<p><u>Description:</u> Students practice architectural millwork fabrication and design methods using projects and mockups. Molding selection, machining, material selection, and cutting are also included</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ARWC203	Beginning Furniture Projects	<p><u>Description:</u> In this course furniture design, styles, and assembly methods are taught</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC204	Cabinet Installation - Residential/ Commercial	<p><u>Description:</u> Students install residential and commercial cabinets and fixtures. Layout, leveling, and fastening methods are also taught</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC205	Advanced Joinery	<p><u>Description:</u> The selection and proper use of tools and materials in the creation of advanced joinery are emphasized</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC206	Cabinetmaking Computer Technology	<p><u>Description:</u> This course is an introduction to the use of different industry software for design, layout, and manufacture of cabinets</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC207	Veneering Technology	<p><u>Description:</u> In this course students use a variety of methods of applying, fitting, and trimming veneers</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC208	Employment Preparation	<p><u>Description:</u> Students practice job search techniques, resume writing, and receive assistance in developing career goals and educational plans</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC209	Advanced Projects	<p><u>Description:</u> With instructor approval, students select and complete an advanced project</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 1 to 13 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u>      <u>Guided practice</u>      <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ARWC292	Independent Project I	<p><u>Description:</u> The Independent Project I course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC293	Independent Project II	<p><u>Description:</u> The Independent Project II course offers students further opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC294	Independent Project III	<p><u>Description:</u> The independent project III course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC296	Work-Based Learning Experience I	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ARWC297	Work-Based Learning Experience II	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB101	Auto Body Math Applications	<p><u>Description:</u> This course is an introduction to mathematical theory and its application to the automotive refinishing industry. Topics include an overview of general mathematical concepts and how they are successfully utilized in practical situations</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB102	Safety Principles	<p><u>Description:</u> This course is an introduction to the safety practices and procedures common to the automotive refinishing industry</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB103	Materials Identification	<p><u>Description:</u> Students are introduced to the various types of automotive materials, finishes and the equipment used in their application. Emphasis is placed on identification of a variety of repair and refinishing materials, types of equipment, and proper safety precautions</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
AUTOB104	Minor Body Repair Methods	<p><u>Description:</u> Students identify materials used in minor body repair and how to use them to fill/smooth depressed areas in sheet metal. The removal and installation of bolt-on panels are also included</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB105	Major Panel Replacement	<p><u>Description:</u> Students apply the basic theory of major panel replacement and alignment/replacement methods, including welding. They are also introduced to automobile body construction types and their common mechanical components: energy absorbers, suspension and steering systems and CV joints</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB106	Alignment - Sheet Metal	<p><u>Description:</u> This course includes practical applications in the adjustment/alignment of bolt-on sheet metal doors, hoods, fenders, and trunk lids</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB107	Alignment - Bumpers	<p><u>Description:</u> Students align a variety of bumpers including impact-absorbing, fixed mounted and metal reinforced</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 40   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB108	Alignment - Head Lamps	<p><u>Description:</u> Students will align various types of headlamps in automobiles</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 20   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB109	Trim and Accessories	<p><u>Description:</u> Students will replace trim molding, hardware, locks and latches and repair/replace window adjustment mechanisms and restraint devices</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 40   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB110	Window Mechanisms	<p><u>Description:</u> Students install mechanical and power window mechanisms</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB111	Introduction to Surface Preparation	<p><u>Description:</u> Basic principles of interior and exterior surface preparation are introduced. Students analyze the components of primers, undercoats, and topcoats</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 0   <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AUTOB112	Surface Preparation Applications	<p><u>Description:</u> This course introduces students to methods of surface preparation for automotive refinishing. Topics include sanding techniques, metal treatment, selection and use of undercoats, and proper masking procedures</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB113	Advanced Surface Preparations	<p><u>Description:</u> A continuation of the concepts introduced in AUTOB 111 and 112, students continue to apply advanced surface preparation techniques to restore cars to factory standards after collision damage</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103, AUTOB112 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB201	Topcoat Systems	<p><u>Description:</u> Students are introduced to the basic principles of topcoat systems with emphasis on the types of automotive topcoat systems and their application procedures</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB202	Topcoat Systems Applications	<p><u>Description:</u> A continuation of the concepts introduced in AUTOB 201, students apply a variety of automotive topcoats including single-stage, basecoat/clearcoat, and tri-coat finishes. Buffing, compounding, and detailing of newly painted vehicles for delivery is also presented</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103, WBAS101 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB203	Shop Welding	<p><u>Description:</u> This course provides instruction in automotive metal inert gas (MIG) and oxyacetylene welding with emphasis on safety, set-up and operation of welding equipment. Students successfully join automotive sheet metal using the MIG process</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103, WBAS101 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB204	Unibody Alignment	<p><u>Description:</u> Students implement the basic theory and application of major unibody and frame repair. Topics include methods of inspection, types of measuring equipment, and identifying types of structural damage</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB205	Body Over Frame Alignment	<p><u>Description:</u> Students measure, align, and repair a unibody and body over frame vehicle</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB206	Glass Installation	<p><u>Description:</u> This course is an introduction to glass installation methods with emphasis on the removal and replacement of structural glass, non-structural glass, and auto trim. Cleanup of vehicle interior after breakage is also included</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
AUTOB207	Introduction to Plastic Repair	<p><u>Description:</u> Students identify the various types of plastics, their characteristics and locations, and which procedures to follow while repairing or refinishing the various types of plastics</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB208	Plastic Repair Methods	<p><u>Description:</u> This course is a continuation of the concepts introduced in AUTOB 207. Students repair or refinish various plastic surfaces</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103, AUTOB207      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB209	Shop Management	<p><u>Description:</u> Students are introduced to the basic principles of body shop management with emphasis on management structure, customer relations, and sound business practices</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB210	Introduction to Estimating	<p><u>Description:</u> Students estimate collision damage, auto body repair, and finishing costs. Traditional and computer-assisted methods used for determining cost involved in labor, parts, and materials are emphasized</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB211	Special Projects	<p><u>Description:</u> This course is an independent study in special projects to give students additional training in a specific area selected by the instructor. Emphasis is on individual student needs to improve or expand skills in a variety of areas</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> AUTOB102, AUTOB103      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 18 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 340 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB292	Independent Project I	<p><u>Description:</u> The independent project I course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB293	Independent Project II	<p><u>Description:</u> The independent project II course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
AUTOB294	Independent Project III	<p><u>Description:</u> The independent project III course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB296	Work-Based Learning Experience I	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB297	Work-Based Learning Experience-Seminar	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOB298	Work-Based Learning Experience II	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM101	Basic Engines	<p><u>Description:</u> This course is an introduction to internal combustion engine theory, configuration operation and diagnosis</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM102	Engine Systems	<p><u>Description:</u> This course is an introduction to the operation and diagnosis of engine subassemblies such as valve trains, timing components and short blocks</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM103	Intro to Basic Electrical Theory	<p><u>Description:</u> This course is an introduction to electrical theory including Ohm's Law, Series and Parallel Circuits and measuring devices</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM105	Basic Electrical Application	<p><u>Description:</u> This course is an introduction to automotive electrical applications such as charging systems and starting systems and problem diagnosis</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
AUTOM106	Shop Safety and Meter Certification	<p><u>Description:</u> This course is a introduction to standard automotive shop safety procedures including handling and disposal of hazardous materials, the proper use of protective gear and equipment, and the operation of specialized automotive shop equipment. They also receive training in the use of a diagnostic meter for automotive electrical applications commonly used in the automotive industry.</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM121	Basic Engine Diagnosis	<p><u>Description:</u> This course is an introduction to engine performance, diagnosis, and computer applications</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM122	Basic Ignition Systems	<p><u>Description:</u> This course is an introduction to electronic and computer operated ignition systems including primary controls and secondary high voltage.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM123	Intro to Fuel Systems	<p><u>Description:</u> This course is an introduction to electrical and mechanical fuel delivery systems and test equipment.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM124	Intro to Emission Systems	<p><u>Description:</u> This course is an introduction to EGR, evaporative and exhaust emission systems, their requirements and operation.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM125	Intro to Fuel Injection	<p><u>Description:</u> This course is an introduction to electronic fuel injection, controls, and test equipment.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM130	Intro to Lighting Systems	<p><u>Description:</u> This course is an introduction to lighting types, switches and controls. Instrumentation theory and applications are examined.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM131	Intro to Clutches/Manual Trans	<p><u>Description:</u> This course is an introduction to gear trains and synchromesh transmission operation.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AUTOM132	Basic Auto Transmission/ Transaxle	<p><u>Description:</u> This course is an introduction to automatic transmission principles, hydraulics and planetary gear sets.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM133	Intro to Four and All Wheel Drive	<p><u>Description:</u> This course is an introduction to four wheel drive, transfer cases and differentials.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM140	Applied Wheel Align/Steering System Service	<p><u>Description:</u> This course is an introduction to wheel alignment, rack and pinion steering, and suspension systems.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM141	Intro to Braking Systems	<p><u>Description:</u> This course is an introduction to hydraulics, system splitting and power brakes.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM142	Drum and Disc Braking Systems	<p><u>Description:</u> This is an introduction course to brake types and application including anti-lock</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM143	Basic Heating/ Air Conditioning	<p><u>Description:</u> This course is an introduction to automatic and manual mobile HVAC systems. Principles of heat transfer and refrigerant are examined.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM201	Advanced Engine Repair	<p><u>Description:</u> In this advanced segment, detailed engine diagnosis and repair is performed. Crankshaft measuring, plastic gauge and piston rings are all examined.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM202	Advanced Engine Assembly	<p><u>Description:</u> In this advanced course, engine subassemblies, cylinder heads, short blocks and timing components are repaired to current standards.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AUTOM203	Detailed Auto Electrical Systems	<p><u>Description:</u> In this advanced course, diagnostic testers and electrical troubleshooting are examined.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM204	Advanced Battery, Starting/Charging Systems	<p><u>Description:</u> In this advanced course, battery, starting, and charging systems are diagnosed and repaired.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM220	Applied Ignition Systems Svc	<p><u>Description:</u> In this advanced course, computer and electronic ignition systems are diagnosed and repaired.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM221	Applied Fuel Systems Service	<p><u>Description:</u> In this advanced course, pressurized fuel delivery systems are diagnosed and repaired.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM222	Applied Emissions Systems Service	<p><u>Description:</u> In this advanced course, emissions are measured using modern test equipment and control systems adjusted and repaired.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM223	Applied Fuel Injection Service	<p><u>Description:</u> In this advanced course, fuel injection is examined, adjusted and repaired using modern test equipment and diagnostic procedures.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM230	Advanced Lighting Systems	<p><u>Description:</u> In this advanced course, lights, wiring and instruments are examined, adjusted and repaired using modern test equipment and diagnostic procedures.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM231	Advanced Clutches/Manual Transmission	<p><u>Description:</u> In this advanced course, clutches and transmissions are examined and repaired using modern repair procedures.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
AUTOM232	Advanced Automatic Transmission Service	<p><u>Description:</u> In this advanced course, automatic transmissions and transaxles are examined and repaired using modern repair procedures.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM233	Applied Four/All-wheel Drive Service	<p><u>Description:</u> In this advanced course, multi wheel drive systems are diagnosed and repaired using modern repair procedures.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM240	Applied Wheel Align/Steering System Service	<p><u>Description:</u> In this advanced course, steering and suspension systems are serviced and aligned using modern alignment equipment.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM241	Advanced Brake System Service	<p><u>Description:</u> In this advanced course, brake hydraulic systems are serviced using modern brake service equipment.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM242	Applied Drum and Disc Systems Service	<p><u>Description:</u> In this advanced course, disc and drum brake systems are serviced and repaired using modern brake service equipment.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM243	Advanced HVAC	<p><u>Description:</u> In this advanced course, heating and air conditioning systems are service and repaired using modern AC service equipment.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
AUTOM296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in the automobile repair and maintenance industry. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR APP. REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB110	Barbering Theory	<p><u>Description:</u> This course provides an orientation to the basic science of barber-styling. Concepts of personal and professional aesthetics and future roles within the aesthetics industry are also included.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
BARB111	Scalp and Hair Analysis	<p><u>Description:</u> Students are introduced to the techniques used to analyze hair as to texture, density, and growth and their application to the barbering process.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB112	Shampooing (Kit 1)	<p><u>Description:</u> This course is an introduction to the basic methods of shampooing, rinsing and conditioning of the hair.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB113	Decontamination and Infection Control	<p><u>Description:</u> This course is an introduction to the proper sanitation procedures relating to tools and equipment, station, and the shop. Additionally, students are trained in safety procedures for barber shops including special emphasis on the materials, equipment and procedures used for the protection of staff and customers from infectious disease organisms.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB114	Introduction to Barbering	<p><u>Description:</u> This course is an introduction to the fundamentals of barber-styling including the use and care of a variety of barbering implements.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB115	Safety/First Aid	<p><u>Description:</u> Students use proper safety measures concerning the use of electrical equipment, chemicals, and blood-related injuries. Students will also demonstrate shop safety procedures. Students will earn a CPR-First Aid car.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB116	Basic Haircutting Techniques	<p><u>Description:</u> This course provides theory and practical experience in basic shear and clipper haircutting.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB117	Customer Service	<p><u>Description:</u> Students identify customers' needs and solve problems. Special emphasis is given to the development of interpersonal communication skills and examining how employees' actions can directly impact customers' impressions.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB118	Applied Communications	<p><u>Description:</u> Students use effective communication skills and apply them in a practical setting.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
BARB120	Math for Barbers	<p><u>Description:</u> Instructional emphasis is on acquiring mathematical and problem-solving skills that apply to the barbering industry.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB121	Facial Hair (Kit 2)	<p><u>Description:</u> This course is an introduction to the methods used to prepare a client for shaving, including proper razor handling and stroking. The fourteen facial areas are also included.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB122	Barbering Applications	<p><u>Description:</u> This course provides practical application of barber-styling fundamentals with emphasis on the care of implement, shampooing, and basic haircutting methods.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB123	Intermediate Haircutting Techniques	<p><u>Description:</u> Students practice various types of hair styles and procedures to perform them</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB124	Haircutting Applications	<p><u>Description:</u> Students apply the techniques previously learned in BARB 110, 111, 113</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB125	Applied Human Relations	<p><u>Description:</u> Students apply human relation skills as interpersonal communications, conflict management on the job and team-building skills</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB131	Advanced Techniques	<p><u>Description:</u> In this course students are introduced to razor cutting techniques</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB132	Advanced Applications	<p><u>Description:</u> This course provides advanced techniques in all phases of hair cutting to ready the student for employment. Students are prepared for State Board licensing examination on theory and practical procedures.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
BARB133	Cutting and Styling Methods	<p><u>Description:</u> This course provides advanced techniques in all phases of hair cutting to ready the student for employment. Students are prepared for State Board licensing examination on theory and practical procedures.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB134	Cutting and Styling Applications	<p><u>Description:</u> In this course the practical applications of cutting and styling are emphasized.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB135	Hair Styling	<p><u>Description:</u> This course introduces the student to the art of hair style and design with emphasis on the selection of styles to complement facial features.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BARB140	Hair Replacement	<p><u>Description:</u> This course is an introduction to the basic concepts of hair replacement systems and techniques.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST102	Blood Borne Pathogens	<p><u>Description:</u> This course meets the requirements of OSHA's Bloodborne Pathogens requirements and standards that are found in Title 29 of the Code of Federal Regulations at 29CFR 1910.1030. To prepare and ensure a scientifically clean and sterile environment within the laboratory setting. Additional topics include biohazard awareness.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST103	HIPAA	<p><u>Description:</u> This course covers the uses and disclosures of identifiable health information that are allowed or permitted by the HIPAA Privacy Regulations. This course or portions of it may be fulfilled with an approved internship.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST105	Testing Equipment	<p><u>Description:</u> This course covers how to safely use and operate a variety of ancillary test equipment. Students receive lecture and lab training as well as hands-on experience with actual equipment.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST106	Soldering	<p><u>Description:</u> This course covers most aspects of soldering, a basic requirement in electronic assembly and repair. Types of solder and systems as well as application and removal of solder and good soldering practices are emphasized.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
BMST107	Schematics	<p><u>Description:</u> This course covers the process of drawing schematics/block diagrams, read and plan diagnostic procedures, and use a five-step troubleshooting/servicing format.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST109	Applied Service I	<p><u>Description:</u> This introduction course prepares students to manage and repair shop projects. Projects may include preventive maintenance, installation, testing, calibration, and repair of various types of equipment.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST110	Applied Service II	<p><u>Description:</u> This is a continuance course for students to manage and repair shop projects. Projects may include preventive maintenance, installation, testing, calibration, and repair of various types of equipment.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST119	Medical Equipment Research I	<p><u>Description:</u> This is an group research project meant to build research and presentation skills. Students are required to produce and present six research projects to an audience. Projects subjects may vary from medical equipment, companies or professional associations, among others.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST201	Imaging Systems	<p><u>Description:</u> This course covers several types of imaging processes and the associated physics behind those systems. The class is lecture and lab based. Systems investigated may include ultrasound, x-ray, PET, MRI, and CT scan among others. This course or portions of it may be fulfilled with an approved internship.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST215	Introduction to Medical Terminology	<p><u>Description:</u> This is an introductory course on common medical terms, acronyms, roots, and prefixes associated with the biomedical field.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST217	Biomedical Instrumentation	<p><u>Description:</u> This course is an introduction to the more common transducers and devices used to gather biological signs or values. Students apply the operating principle and use of various transducers and measurement devices and the physical theories they operate on.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST218	Biomedical Equipment	<p><u>Description:</u> This course covers several types of medical equipment: ECG, Pulse Oximeter, NIBP and infusion pumps are some of the types of equipment. The history, use, theory of operation and maintenance issues are also presented. This course or portions of it may be fulfilled with an approved internship.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions  
Career Education**

Course	Title	
BMST219	Medical Equipment Research II	<p><u>Description:</u> This is an independent research project meant to build research and presentation skills. Students are required to produce six research projects to an audience. Project subjects may vary from medical equipment, companies or professional associations, among others. Prior project approval from the instructor is required.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BMST220	Biomedical Engineering Applications	<p><u>Description:</u> During this course students are exposed to a lab setting meant to simulate an actual working environment. Students may intake, service, repair or evaluate medical or other types of equipment. Equipment may be provided by the class or public; students perform as closely as possible to a daily BMET routine. This course or portions of it may be fulfilled with an approved internship.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD103	BVP Safety Principles	<p><u>Description:</u> This course is an introduction to the safety practices common to the broadcast and video production environment.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD110	Characteristics of Sound	<p><u>Description:</u> This course is an introduction to the physical nature of sound and how the ear translates it from a physical phenomenon to a sensory one. Topics include waveform characteristics, reflection, diffraction, frequency response, phase, loudness levels, sound-pressure levels, thresholds, and perceptions.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD111	Master Control Operations I	<p><u>Description:</u> This course is an introduction to the operation of all signal delivery system components used to feed audio and video signals to the program feed. This is one of three classes (Broad 111, Broad 138, and Broad 139) that prepare students for the Society of Broadcast Engineers (SBE) Certified Television Operator exam.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD120	Intro to Digital Audio Recording	<p><u>Description:</u> This course provides training in the operation of digital audio workstations and the application of the editing concepts in audio production projects.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD121	Production Process Theory	<p><u>Description:</u> This course introduces students to the production process: theory, planning, and the application of sound project planning, identification of the responsibilities of various jobs within the production unit is also included.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD124	Basic Audio Equipment	<p><u>Description:</u> This course introduces and explores basic audio tools including pickup, monitoring, distribution, routing, and manipulation devices.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
BROAD131	Intro to Studio and Field Production	<p><u>Description:</u> This course introduces basic equipment and basic skills used for video production in the studio and in the field. Students learn about cameras, lighting instruments, and audio equipment and the skills needed to complete production projects.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD135	Employment Preparation	<p><u>Description:</u> This course is designed for students to use publications, interviews and internet research, and other sources to gather facts about wages, hours, and working conditions to develop career goals. Students also write cover letters, resumes, and portfolios.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD136	Principles of Lighting	<p><u>Description:</u> This course introduces students to lighting theory and techniques with emphasis on the most commonly used lighting instruments and accessories, light grids, dimmer boards, and control systems. Practical applications include light set up for productions.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD137	Basic Digital Video Editing	<p><u>Description:</u> This course introduces students to digital video editing concepts and techniques.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD138	Control Room Equipment I	<p><u>Description:</u> This course examines the equipment used in studio and master control environments and allows students to investigate the equipment interconnections. Students practice the operational skills necessary to set up, adjust and operate various record and playback hardware under broadcast operational conditions. Instruction and training will help prepare students to pass the SBE CTO exam.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD139	Broadcast Station Operations	<p><u>Description:</u> This course instructs students about broadcast station structure and organization, and investigates the role and function of various station departments and FCC requirements for broadcast stations. Information and concepts are applied in operations activities.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD142	Program Editing	<p><u>Description:</u> This course introduces students to audio and video editing methods. Practical applications include correcting recorded flaws and timing errors while editing pre-recorded material. Students perform to edit quality test standards.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD143	Basic Maintenance & Troubleshooting	<p><u>Description:</u> This course explores preventative maintenance methods and strategies, and students receive training in the use of electronic measuring devices, meters, and scopes. Soldering, splicing, and making cable connections are included.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
BROAD151	DC Electronics Theory	<p><u>Description:</u> This course introduces students to the study of direct-current electronic theory through a series of lectures and class discussions that are designed to be enjoyable, understandable, and practical. Topics covered include electrical terms, circuit components electricity and magnetism, series and parallel circuits, Ohm's law, energy and power, and DC circuits.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD152	AC Electronics Theory	<p><u>Description:</u> This course introduces students to the study of alternating current electronic theory through a series of lectures and class discussions designed to be engaging, understandable, and practical. Topics covered include characteristics of AC waveforms, capacitive and inductive reactance, transformers, impedance, resonant circuits, and active devices.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD153	Basic Electronics Lab	<p><u>Description:</u> This course consists of lab activities designed to prepare students for lectures and enhance understanding of the principles learned in Broad 151 and 152. Activities include reading assignments, guided experimentation with DC and AC circuits, the use of test equipment and tools, and a series of simple projects to develop soldering skills and understanding of circuits and circuit diagrams.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD170	Remote/Robotic Camera Systems	<p><u>Description:</u> This course introduces students to remote and robotic camera operations. Students will be prepared to take the Federal exam for sUAS certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD205	Receivers and Transmitters	<p><u>Description:</u> This course builds on basic electronic concepts from core engineering courses to cover the principles and applications of various types of modulation, transmitters, receivers, power distribution systems, and grounding.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD207	Advanced Editing Projects	<p><u>Description:</u> This course requires students to conduct and complete an advanced digital editing project that meets content quality and delivery standards.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD208	Content Delivery Systems	<p><u>Description:</u> This course investigates and applies various methods of content delivery, including ATSC, live streaming, video on demand, and video over IP systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD211	Networking for Video and Audio	<p><u>Description:</u> This course covers basic concepts of computer networking and applies them to audio and video systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
BROAD212	Audio/Video Pre-Production Applications	<p><u>Description:</u> This course challenges students to put elements of pre-production planning into practice. Including: Program proposals, scripting, show formats, roles of crew, data gathering, mark-sheets, show guest invitations and release forms, and basic script writing for VO's and teleprompter presentation, by helping plan and produce studio and field programs. Students will also be introduced to pre production meetings with clients (when available) to create a finished product based on the clients needs.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD214	Audio/Video Studio and Field Production	<p><u>Description:</u> This course challenges students to take a lead roll in producing programs for viewing. These productions include high school football, basketball (in season), studio panel shows or other designated topics. Students will also learn terminology for directing aforementioned programs, and will begin to direct shows.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD216	Audio/Video Post-Production Applications	<p><u>Description:</u> This course is a continuation of the Pre-Production and Studio and Field Production classes. Students will produce, shoot, and edit digital video projects as assigned. Provided opportunities to create their own personal digital video project. Students will meet with clients (when applicable) to evaluate the progress towards the process message desired by the client.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD217	Audio Engineering	<p><u>Description:</u> This course explores audio measurements and standards by testing audio equipment under broadcast conditions. Headroom and distortion parameters are discussed. Practical applications include system design and installation of fixed and portable audio systems. Audio engineer duties are also discussed.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD220	Production Capstone I	<p><u>Description:</u> This course challenges students to show their skill, knowledge and mastery by fully producing, directing, and posting (when applicable) 2 panel shows using knowledge and skills gained in previous core and advanced classes. Project proposals must be approved by the instructor. The instructor provides guidance throughout the production process.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD222	Production Capstone II	<p><u>Description:</u> This course challenges students to show their skill, knowledge and mastery by fully producing, directing, and posting (when applicable) 2 non-fiction ENG stories. ENG stories must be approved by the instructor before producing, and may be story ideas that the student has been assigned by industry outlets, and has the potential of being used on industry news and panel shows.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD224	Production Capstone III	<p><u>Description:</u> This course challenges students to demonstrate their skill, knowledge and mastery by fully producing, directing, and posting a digital video of their choice using knowledge and skills gained in previous core and advanced classes. Students, working under the guidance of the instructor, will be encouraged to produce a least one video (mini documentary, ENG story, music video, or scripted short feature) worthy of entry into NATAS and other award-recognition companies. The content must be approved by the instructor prior to the pre production process.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD226	Video Engineering	<p><u>Description:</u> This course explores the design, installation, maintenance, and operation of video equipment systems in support of master control operations, studio operations, and field production.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
BROAD243	Master Control Operations II	<p><u>Description:</u> This course provides instruction on the operation of all signal delivery system components used to send audio and video signals to the program feed. Students will also monitor and meet all television signal standards and perform as the master control operator.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD266	Field Production	<p><u>Description:</u> This course is designed to develop advanced field production skills necessary to complete remote projects. Included are site surveying, planning, set up and lighting of different venues while using single or multiple cameras.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD273	Video Graphics Applications	<p><u>Description:</u> This course is an introduction to graphics devices and their applications in live studio and field production. Emphasis is on standard character generator functions and on motion graphics generators.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD278	Technical Directing	<p><u>Description:</u> This course introduces students to video switchers, video routing systems, and video manipulation devices commonly used in production. Other areas of emphasis include the technical director duties and responsibilities, the use of keys, chroma keys, and other special effects.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD280	Emerging Technologies	<p><u>Description:</u> This course examines advances in audio and visual imaging. Emerging technologies are presented and explored.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD285	Practicum I	<p><u>Description:</u> In this course the faculty assists students in selecting an approved practicum related to television engineering. Student responsibilities include the submission of a formal report of no less than 500 words or, with instructor approval, a formal class presentation of no less than 15 minutes.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD288	Practicum IV	<p><u>Description:</u> In this course the faculty assists students in selecting an approved practicum related to video production. Student responsibilities include the submission of a formal report of no less than 500 words or, with instructor approval, a formal class presentation of no less than 15 minutes.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BROAD289	Practicum V	<p><u>Description:</u> In this course the faculty assists students in selecting an approved practicum related to television operations. Student responsibilities include the submission of a formal report of no less than 500 words or, with instructor approval, a formal class presentation of no less than 15 minutes.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
BROAD290	Practicum VI	<p><u>Description:</u> In this course the faculty assists students in selecting an approved practicum related to audio production. Student responsibilities include the submission of a formal report of no less than 500 words or, with instructor approval, a formal class presentation of no less than 15 minutes.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 0   <u>Field-base experience</u> 120  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BUS102	Business Communications	<p><u>Description:</u> This course focuses on business communication, students apply the principles of ethical and effective communication to the creation of letters, memos, e-mails, and written and oral reports for a variety of business situations. Planning, organizing, composing, and revising business documents using word processing software for written documents and presentation-graphics software to create and deliver professional-level oral reports are emphasized. This course is designed for students who already have college-level writing skills and the ability to type is recommended</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 50   <u>Guided practice</u> 0   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BUS&101	Introduction to Business	<p><u>Description:</u> Dynamics and competitive business world are explored through the study of topics including economic systems, forms of business ownership, social responsibility and ethics, entrepreneurship, marketing, management, organizational design, finance, banking and securities markets</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 50   <u>Guided practice</u> 0   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BUS&201	Business Law	<p><u>Description:</u> An introduction to the American legal system and the functions of law in a business environment; legal reasoning and the process of resolving disputes in society; a preliminary analysis of contractual arrangements and business association in the business community</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 50   <u>Guided practice</u> 0   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT101	Carpentry Math	<p><u>Description:</u> This course is an introduction to basic math concepts and their applications to the carpentry industry. Linear, board, and square foot measurements and using formulas to calculate material requirements and costs are emphasized.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 0   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT102	Safety Principles	<p><u>Description:</u> This course is an introduction to the safety concerns and procedures used in the construction field. Students apply approved construction site safety and health procedures, use personal protection gear, and safety use hand and power tools.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT103	Prints and Plans	<p><u>Description:</u> This course is an introduction to residential blueprint reading with emphasis on plan types, dimension lines, scaling prints, and the symbols and abbreviations common to a variety of construction plans.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT104	Construction Materials	<p><u>Description:</u> The selection and installation of various types of construction materials is emphasized. Students identify the types and sizes of lumber, the use of fasteners in carpentry, and the installation of hardware.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CARPT105	Tools and Equipment	<p><u>Description:</u> The proper use and care of measuring, layout and hand tools is emphasized.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT106	Power Tools	<p><u>Description:</u> This course is an introduction to the proper use and care of portable, stationary, electric and pneumatic equipment.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT107	Optical Instruments	<p><u>Description:</u> This course is an introduction to the use of various transits and levels used in the construction industry.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT108	Plot Plans and Building Layout	<p><u>Description:</u> The interpretation of architectural plans and their application at the construction site is emphasized. Topics include the principles, equipment and methods used to perform the site layout tasks. The process of distance measurement as well leveling for site layout is also presented.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT109	Introduction to Framing	<p><u>Description:</u> This course is an introduction to the procedures used to layout and frame walls and ceilings including roughing-in door and window openings, constructing corners and partition T's, bracing walls and ceilings, and applying sheathing.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT110	Foundation	<p><u>Description:</u> This course is an introduction to the materials and methods used to construct concrete forms and foundations including various reinforcement methods such as re-bar and welded-wire fabric.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT111	Foundation Footings	<p><u>Description:</u> In this course, the correct and accurate placement of footings and piers are emphasized.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT112	Foundation Walls	<p><u>Description:</u> This course is an introduction to the methods used to build, align and establish concrete grades in forms. Materials calculation is also included.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CARPT201	Floor Systems	<p><u>Description:</u> This course is an introduction to the variety of floor types: requirements, assembly, and the advantages and disadvantages of each. Practical applications include the installation and finishing of hardwood floors, laminate/engineered floors and tile.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT202	Wall and Ceiling Construction	<p><u>Description:</u> Students demonstrate how to frame walls and ceilings according to federal, state, and local requirements.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT203	Stairs	<p><u>Description:</u> This course is an introduction to the design and construction of residential and commercial stair systems. Topics include stair design factor, building code requirements, stair layout, cutting, installation and various tread/riser installations.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT204	Introduction to Roofing	<p><u>Description:</u> This course is an introduction to the types of roofs including the layout of rafters for a variety of roof types: gable, hip, valley intersections. Both stick-built and truss-built roofs are included.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT205	Roof Construction	<p><u>Description:</u> Practical applications using conventional using conventional methods used for sheathing and exterior siding.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT206	Introduction to Exterior Finish Methods	<p><u>Description:</u> This course is an introduction to the materials and methods used for sheathing and exterior siding.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT207	Exterior Doors and Windows	<p><u>Description:</u> This course is an introduction to methods used to install a variety of windows, skylights, and exterior doors. The installation of weather-stripping and locks is also included.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT208	Siding	<p><u>Description:</u> In this course, the types of exterior siding, surface covering systems, and the equipment used to apply them are emphasized.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
CARPT209	Introduction to Interior Finish Methods	<p><u>Description:</u> This course is an introduction to the types of interior systems, materials, and hardware commonly used in residential and commercial construction. The development of estimating skills to determine the cost of materials is also introduced.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT210	Interior Floors, Walls and Ceilings	<p><u>Description:</u> This course emphasizes surface preparation and application methods that meet federal, state, and local requirements. Also included are methods used to protect the interior of a structure against natural and man-made elements.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT211	Interior Doors and Windows	<p><u>Description:</u> Proper sequences used to set doors and install trim and hardware for doors and windows is emphasized in this course.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT213	Employment Preparation	<p><u>Description:</u> This course is an introduction to the basic methods of job searching, resume writing and job interviewing.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT292	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course is Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider. *INSTRUCTOR APPROVAL REQUIRED</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 60  <u>Prerequisites:</u> INSTR APP REQ    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARPT297	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course is Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider. *INSTRUCTOR APPROVAL REQUIRED</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30  <u>Prerequisites:</u> INSTR APP REQ    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS101	Intro Fundamentals to Culinary Arts	<p><u>Description:</u> This course is an introduction to the social, historical and cultural forces that have affected the culinary, baking and pastry professions</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
CARTS104	Customer Service	<p><u>Description:</u> This course is an introduction to table service principles with an emphasis on the physical aspects of table service: types of table service, table settings, and restaurant/dining room setup. Wine, beer, coffee, tea and non-alcoholic beverage service is also presented.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS105	Garde Manger I	<p><u>Description:</u> This course introduces students to the preparation methods of cold foods including salads and salad dressings, cold appetizers and buffet items, and vegetable and fruit decorations</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS106	Breakfast Methods	<p><u>Description:</u> This course includes both theory and lab applications in breakfast preparation with an emphasis on the organization and maintenance of a smooth workflow on the breakfast line. Food preparation areas include eggs, quick breads, meat and potatoes, grains, fruit plates and breakfast beverages.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS111	Introduction to Baking	<p><u>Description:</u> This course is an introduction to quick doughs, yeast products, and the basic preparation methods used with pies, breads and cookies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS112	Advanced Cooking Techniques	<p><u>Description:</u> Students demonstrate how to interact professionally with customers and co-workers in order to provide quality service in a variety of situations. Emphasis is on the meaning of service, the identification of customers' needs and the development of strategies to solve customer problems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS150	Cooking Techniques	<p><u>Description:</u> This course covers the identification and use of a variety of products including vegetables, fruits, herbs, nuts, grains, dry goods, prepared goods, dairy products and spices. This is also an introduction to theory and cooking techniques in product tasting, stock production, stews, broths, and advanced soups, along with starches such as potatoes, grains, rice and pasta. Timing, station organization and culinary French terminology are also presented.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS151	Cooking Techniques II	<p><u>Description:</u> Students receive instruction and practice in advanced cooking methods used to simultaneously prepare vegetables, pastas, starches, proteins and contemporary sauces. Protein cookery methods, both moist and dry, are presented. Also included are culinary French terminology, station organization, plate presentation, and product tasting and evaluation.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS152	Introduction to Food Truck	<p><u>Description:</u> This class will concentrate on licensing requirements, preparing for and operating the food truck including marketing strategies. Emphasis is on the development of a comprehensive business plan.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
CARTS153	Mobile Food Operations	<p><u>Description:</u> This class will concentrate on the safe and sanitary operation of a mobile food truck.</p> <p><u>Credits:</u> 6   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS154	SERVSAFE Sanitation	<p><u>Description:</u> This course focuses on food production practices that are governed by changing federal and state regulations. Content includes the prevention of food-borne illness, HACCP procedures, facility sanitation, and guidelines for safe food preparation, storage and reheating. Students take the National Restaurant Association ServSafe examination in this course</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS155	TBD	<p><u>Description:</u></p> <p><u>Credits:</u>      <u>Course Length:</u> Weeks      Contact Hours: <u>Theory</u>   <u>Guided practice</u>   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS201	Menu Development	<p><u>Description:</u> The creation of menus from the perspective of concept, clarity, cost, price and efficiency is the focus of this course. Topics to be introduced include menu descriptions, layout, design and pricing.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS202	Protein Identification/Utilization	<p><u>Description:</u> This is an introduction to a variety of meats, poultry and seafood used in a food service operation. Students identify, select, and prepare various types of meat, poultry and fish/shellfish.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS204	Pastries and Plated Deserts	<p><u>Description:</u> The preparation and service of a variety of hot and cold desserts is emphasized in this course. Students prepare frozen and individually plated desserts for functions and banquets. The development of a dessert menu emphasizing variety is a focus of the course.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS211	Student Practical	<p><u>Description:</u> This course prepares students to provide formal service in a variety of elegant settings. Emphasis is on food preparation, service and plate presentation that reflect artistry and style.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS213	Wines/Spirits	<p><u>Description:</u> This course is an introduction to the serving of alcoholic beverages and their appropriate pairing with menu items. Students review the procedures for purchasing alcoholic beverages and apply those skills when planning, budgeting and managing bar service.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 40   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CARTS250	Catering/Banquet..	<p><u>Description:</u> This course is an introduction to the catering and banquet industry with emphasis on the requirements needed to start an operation and manage its daily operations. Students develop and understanding of the organization and equipment needed.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS252	Regional Cuisines of North America	<p><u>Description:</u> This course Regional cuisine explores the use of indigenous ingredients in the preparation of traditional and contemporary North American specialties. Students prepare, taste, serve, and evaluate traditional regional dishes.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS253	Sustainability/Organic Foods	<p><u>Description:</u> This course incorporates the study of sustainable best-practices emphasizing resource conservation, agro ecology and essential business skills/abilities. Students implement theoretical classroom concepts in the kitchen and through experiential learning opportunities.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS254	Modern Bread Techniques	<p><u>Description:</u> In this course students will learn the details of mixing, fermenting, shaping, and baking bread in this essential introductory course. The course covers baker's math, ingredient selection and function, how mixing affects fermentation, and other bread-baking fundamentals.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS255	Culinary Trends	<p><u>Description:</u> This course introduces students to current culinary trends, including a variety of preparation methods. Topics include adaptation of native/regional ingredients and preparation methods to developing trends in contemporary cuisine.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS256	Intro to Management	<p><u>Description:</u> This course is an introduction to the various management topics as they relate to food service management: leadership, training, motivation, delegation, problem-solving, decision-making and conflict resolution.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS257	Culinary Flavor Profiles	<p><u>Description:</u> This course covers the important cooking concept of combining and balancing flavors. Flavor profiles encompass the analysis of what contributes to the flavor of the products that we eat and the development of flavors that will work in a wide variety of products.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS258	Garde Manger II	<p><u>Description:</u> This course is a continuation of the concepts introduced in CARTS 105; students prepare cold foods including salads, salad dressings, cold appetizers, buffet items, as well as vegetable and fruit decorations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
CARTS291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20-260 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTRUCTOR APPROVAL <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS292	Independent Project I	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project emphasis on integration of classroom learning based on prior course work and should result in the achievement of advanced skills in completion of independent project I.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTRUCTOR APPROVAL <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS293	Independent Project II	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project emphasis on integration of classroom learning based on prior course work and should result in the achievement of advanced skills in completion of independent project II.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTRUCTOR APPROVAL <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS294	Independent Project III	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project emphasis on integration of classroom learning based on prior course work and should result in the achievement of advanced skills in completion of independent project III.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTRUCTOR APPROVAL <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CARTS296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTRUCTOR APPROVAL <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET121	Statics & Mechanics of Materials	<p><u>Description:</u> A fundamental course in the mechanics of rigid bodies in static equilibrium conditions. Solves practical engineering problems involving the loads carried by structural components using Static principles, vector notation and precalculus for mathematical modeling. Teaches principles and their limitations within the context of Engineering applications and the engineering design process.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET122	Building Information Modeling	<p><u>Description:</u> Concepts of collaborative design and workflow theory, intelligent modeling, cost estimation, construction phasing, operation and maintenance, lean project management are applied to civil structural designs.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET131	Hydrological Engineering	<p><u>Description:</u> Urban water infrastructure theory and planning for distribution, collection, and treatment systems are discussed. Engineering computations are applied for design.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CEET132	Civil Infrastructure Design	<p><u>Description:</u> Concepts of environmental impact assessments, LID, urban water quality and flow control mitigation, permit documentation</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET141	GIS for Asset Management	<p><u>Description:</u> Geospatial analysis for civil and environmental applications, including asset management and maintenance, are discussed. Technical skills of data types, attributes, query building, route optimization, watershed and steep slope analysis are developed.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET142	Applied Surveying	<p><u>Description:</u> Land measurement techniques for construction, including site layout and topographical studies. Computer processing of points into modeled surfaces and alignments are also examined.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET231	Projects I	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET232	Projects II	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET251	Soil Mechanics	<p><u>Description:</u> Applications of soil mechanics in design and construction, including soil classification, testing, erosion control, compaction, saturation, as well as analysis of basic foundation and retaining wall design.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET252	Structural Design	<p><u>Description:</u> Introduces the principals of section area properties for basic structural types, such as trusses, beams and columns. Sustainable design issues including material selection and life cycle.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET260	Advanced CAD Operations	<p><u>Description:</u> CAD systems, including 3D concepts, are used to produce engineering drawings using layers, masks, and groups. Symbols and x-references are applied.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CEET261	Civil & Environmental Site Design	<p><u>Description:</u> Basic corridor designs, pipe networks and retention/detention swales and ponds are modeled. Grading, design speeds, corridor assemblies, catch points, profiles and alignments</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET296	Work Based Learning Experience	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CEET297	Work Based Learning Seminar	<p><u>Description:</u> Students enroll in the work-based learning seminar in order to receive an orientation to the work-based learning experience. Faculty meet with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA114	Introduction to the Health Care Profession	<p><u>Description:</u> This course is an introduction to the basic concepts of the certified medical assistant profession with emphasis on professional behaviors as they relate to the patient-physician-medical assistant relationship.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA150	Medical Office Clinical Applications I	<p><u>Description:</u> This course focuses on the principles of medical office clinical procedures including preparing a patient for assisting a physician with examinations, procedures, and components of patient history. Covers patient charting, vital signs, sterile setups, universal blood precautions and methods of asepsis and sterilization. Topics also include techniques in patient interviewing and education. Lab provides the opportunity for practice proficiency in procedures.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 150</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA151	Medical Office Clinical Applications II	<p><u>Description:</u> This course is a continuation of Medical Office Clinical Applications I, covering assisting with other medical specialties, electro-cardiology, pulmonary function tests, emergency preparedness, nutrition and health, geriatrics and rehabilitation/therapy.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 150</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA152	Medical Office Laboratory Procedures	<p><u>Description:</u> Introduction to specimen collection and processing. Students perform basic CLIA waived (1988) hematology, chemistry and immunology testing; microscopic urine tests including gram smears and hcg; basic culture techniques and blood typing. Introduction to equipment use and maintenance, re-agent storage and handling, quality control measures and lab safety.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA153	Human Diseases and Pharmacology	<p><u>Description:</u> This course provides instruction in the principles of pharmacology for medical assistants. Course content includes preparing and verifying proper dosages of medication for administration, updating medication lists utilizing an electronic medical record system, using techniques to help explain medication treatment plans to patients to ensure patient understanding and compliance.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CMA154	Practicum	<p><u>Description:</u> This course is a supervised medical assistant experience in a health care facility. The course provides students with the opportunity to apply knowledge and skill in performing administrative and clinical procedures and in developing professional attitudes for interacting with other healthcare professionals and consumers.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 150  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA155	Medical Assistant Exam Review	<p><u>Description:</u> This course is a preparation to review the entire Medical Assisting program in preparation for the national Certified Medical Assistant examination.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMA156	Job Readiness & Preparation	<p><u>Description:</u> This course focuses on preparation for an externship and job search by drafting resumes, cover letters and professional portfolios. Additionally, students will participate in mock interviews and understand the importance of networking.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMST&220	Public Speaking	<p><u>Description:</u> Introduction to the rhetoric of speech and the preparation and delivery of speech in an extemporaneous style, including ethical research methods, basic rhetoric and critical analysis, and organization of various types of presentations. Two to four speaking assignments are required, plus regular quizzes, peer review and written examination. Online resources will be integrated.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM113	CNC Programming	<p><u>Description:</u> This course introduces the student to programming using standard EIA code (G and M codes). The student will produce new programs and edit existing programs manually (without CAD/CAM)</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM114	CNC Troubleshooting	<p><u>Description:</u> This course presents program and hardware problems to the student. Included are ATC arm failures, program errors, coordinate system setting errors, tool setting errors, and power system failures, and how to recover from them.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CNCM113 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM126	CNC Mill & Lathe Operations & Set-Up	<p><u>Description:</u> This class will be a combination and replacement of the existing CNCM 110 CNC Mill 1 and CNCM 119 Lathe 1 classes. It will introduce students to use of CNC machines in manual mode. The class will introduce students to set up including tooling, fixturing and work coordinate systems. Students will learn to maintain, set up and operate CNC Machines safely.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM127	Blueprint Reading & GD&T	<p><u>Description:</u> This is a combined class of Blueprint Reading MACH 119 and Geometric Dimensioning and Tolerancing (GD&amp;T) MACH 118.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
CNCM203	CNC Mill II	<p><u>Description:</u> Students set up and run the CNC Mill from power on to shut down using programs they have written and tooling they have selected</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CNCM113, CNCM114 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM211	CNC Lathe II	<p><u>Description:</u> Students set up and run the CNC Lathe from power on to shut down using programs they have written and tooling they have selected</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM215	Computer-Aided Manufacturing	<p><u>Description:</u> In this course, students use CAM software to program parts from engineering drawings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CNCM113, CNCM114 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
	Computer-Aided Manufacturing CAM I	<p><u>Description:</u> In this course, students use CAM software to program parts from engineering drawings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNCM218	CMM Programming	<p><u>Description:</u> This is a new class that will introduce students to the inspection process for machined parts.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST201	Cisco Network Fundamentals	<p><u>Description:</u> The Cisco Networking Academy consists of four blocks. The course is an introduction to the skills and information needed to design, build, and maintain small to medium-size networks. Introducing the basic internetworking fundamentals.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST202	Cisco Routing Protocols and Concepts	<p><u>Description:</u> This is the second block of the Cisco Networking Academy. The course is designed to introduce students to the skills and information needed to design, build, and maintain small to medium-size networks. Students are introduced to routing theory and router technologies</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST205	Fundamentals of Linux	<p><u>Description:</u> This is an introductory course to the Linux environment including file system navigation, file permissions, command line interface, text editor, command shells, and basic network use. The versatility of Linux explored using a small platform computer. ...</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CNST207	Server II	<p><u>Description:</u> Server operating systems are the foundation for computer network administration both locally and in the cloud. This course gives the learner an in-depth knowledge of Windows Server identity-related services, including Active Directory, user and group accounts, Group Policy, Active Directory Certificate Services, and advanced identity solutions such as Active Directory Federation Services and Active Directory Rights Management Services. The course helps prepare the learner for one of the three exams required to obtain the Microsoft Certified Solutions Associate (MCSA).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> CNST218 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST209	Server III	<p><u>Description:</u> Server operating systems are the foundation for computer network administration both locally and in the cloud. This course gives the learner an in-depth knowledge of Windows Server networking services including TCP/IP, DNS, DHCP, IPAM, remote access, and helps prepare the learner for one of the three exams required to obtain the Microsoft Certified Solutions Associate (MCSA).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> CNST207, CNST218 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST212	Cisco LAN Switching and Wireless	<p><u>Description:</u> This is the third block of the Cisco Networking Academy. The course is designed to introduce students to the skills and information needed to design, build, and maintain small to medium-size networks. Students are introduced to advanced routing and switching</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST213	Cisco - Accessing the WAN	<p><u>Description:</u> This is the fourth block of the Cisco Networking Academy. The course is designed to introduce students to the skills and information needed to design, build, and maintain small to medium-size networks. Students will be introduced to the advanced Cisco networking utilizing project based learning</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST214	Cyber Security	<p><u>Description:</u> The Cybersecurity Essentials course covers foundational knowledge in all aspects of security in the cyber world, including information security, systems security, network security, mobile security, physical security, ethics and laws. It builds students' skills in related technologies, procedures, defense and mitigation techniques used in protecting businesses</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST216	Scripting	<p><u>Description:</u> Scripting helps system administrators and power-users rapidly automate tasks that manage operating systems (Linux, macOS, and Windows) and processes. This course introduces the learner to scripting environments, techniques and troubleshooting. Emphasis is given to hands on practice.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST218	Server I	<p><u>Description:</u> Server operating systems are the foundation for computer network administration both locally and in the cloud. This course gives you the skills you need to install and configure a Windows Server operating system and helps prepare the learner for one of the three exams required to obtain the Microsoft Certified Solutions Associate (MCSA).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CNST220	Cloud Services	<p><u>Description:</u> This course covers the fundamentals of building IT infrastructure on the AWS platform. Students learn how to optimize the AWS Cloud by understanding how AWS services fit into cloud-based solutions. In addition, students explore AWS Cloud best practices and design patterns for architecting optimal IT solutions on AWS, and build a variety of infrastructures.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
CS&141	Computer Science 1 Java	<p><u>Description:</u> This is an advanced course for Visual Basic.NET, an object-oriented, event-driven language that is a subset of the Visual Studio.NET environment. It is designed to provide programmers familiar with the basic concepts and functionality of Visual Basic.NET with the tools to create more robust application programs.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR101	Security Professional Practices	<p><u>Description:</u> Learn about industry security standards and legal liability. This course familiarizes students to ethical considerations in decision making. Learn how to balance confidentiality, integrity, and availability of data without obstructing organizational productivity. Explore what can be done to encourage the ethical use of IT resources among users. Discuss what can be done to implement a strong security program to prevent cyber attacks.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR102	Operating System Fundamentals	<p><u>Description:</u> Introduction to fundamental information technology essential to managing desktop operating systems. Includes client operating system installations, applying security practices, management, troubleshooting, managing files and folders, and devices.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR103	Database/ SQL Fundamentals	<p><u>Description:</u> This course will focus on the fundamentals of database systems. Students will study the basics of a database, design, and administration fundamentals. Students will perform data definition, manipulation, and queries using basic SQL. This course introduces students to the structure of data and database systems, their vulnerabilities to cyber-attacks, and the proper techniques required to protect these systems from damage.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR104	IT Systems I	<p><u>Description:</u> Provides a foundation in hardware, software, basic networking, safety, and customer service skills. Acquire the essential skills and information to install, configure, optimize, troubleshoot and repair, upgrade and perform preventive maintenance of computers, digital devices, and operating systems. This is the first course in a series of two to prepare for the CompTIA A+ certification. Passing a professional IT certification requires many additional hours of study before and after the course lecture. Expect to spend a significant number of hours studying</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR105	IT Systems II	<p><u>Description:</u> This course introduces students to installation, configuration and upgrading, diagnosing and troubleshooting, preventive maintenance, virtualization and cloud concepts. This is the second course in a series of two to prepare for the CompTIA A+ certification. Passing a professional IT certification requires many additional hours of study before and after the course lecture. Expect to spend a significant number of hours studying before you take a CompTIA or any other IT professional certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR106	Virtual Computing	<p><u>Description:</u> Introduction to Virtual Computing environments such as Oracle Virtual Box, VMware Workstation, Microsoft Hyper-V, VMware vSphere, and basics of Data Center Virtualization.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR102 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR107	Network Fundamentals I	<p><u>Description:</u> Introduction to entry-level knowledge of computer networks and topologies. Covers concepts regarding Ethernet, Transmission Control Protocol (TCP), Internet Protocol (IP), Open System Interconnection Model (OSI), and Information Technology Infrastructure Library (ITIL). This is the first course in a series of two to prepare for CompTIA Network+ certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CYBR108	Network Fundamentals II	<p><u>Description:</u> Continues building a foundation coverage of unified communications, mobile, cloud, and virtualization technologies. Configure static routing, access control, and biometric access control. Introduces network tools and different types of network communication. This is the second course in a series of two to prepare for the CompTIA Network+ certification. Passing a professional IT certification requires many additional hours of study before and after the course lecture. Expect to spend a significant number of hours studying before you take a</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR107 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR109	Windows Server Administration	<p><u>Description:</u> Learn the fundamentals of Windows server through hands on activities. Install, tune, maintain, and update server software. Provides a foundation on roles and features such as Active Directory, Hyper-V, remote access, storage and printers.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR102 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR201	Information Security I	<p><u>Description:</u> Provides a foundation in network security including risk management, knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy. Analyze and protect networks from malicious attacks and breaches of confidentiality. Identify attack and vulnerability types, and manage auditing and logging. This is the first course in a series of two to prepare for the CompTIA Security+ certification. Passing a professional IT certification requires many additional hours of study before and after the course lecture.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR202	Information Security II	<p><u>Description:</u> Continues building a foundation in network security. Learn theory and concepts, cryptography, encryption algorithms, communication and remote access, policy and incident response. This is the second course in a series of two to prepare for the CompTIA Security+ certification. Passing a professional IT certification requires many additional hours of study before and after the course lecture. Expect to spend a significant number of hours studying before you take a CompTIA or any other IT professional certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR203	Advanced Operating Systems I	<p><u>Description:</u> Introduction to the network operating system. Discussions include core hardware and software configurations, file systems, command-line basics, and system administration.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR109 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR204	Advanced Operating Systems II	<p><u>Description:</u> Emphasis on real-world security troubleshooting techniques using Linux or other current operating system. Fundamental hands-on practice with emphasis on how to deploy operating system components securely.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR203 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR205	Mobile/Wireless Security	<p><u>Description:</u> Evaluate the security weaknesses of built-in and third-party applications. Learn about platform encryption and manipulate apps to circumvent client-side security techniques. Use mobile application analysis tools to identify deficiencies in mobile app network traffic, file system storage, and inter-app communication channels.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR108, CYBR201 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR206	Attack Vectors	<p><u>Description:</u> Explore techniques used by hackers to gain unauthorized access to, assault, and exploit a device or network. Attack vectors help unauthorized elements to exploit the vulnerabilities in the system or network, including the human element. Topics include network traffic signatures, configuration of network appliances, cryptography, intrusion detection systems, and network defense tools.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR203, CYBR204 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
CYBR207	Network Attack Mitigation/ Defense	<p><u>Description:</u> Acquire mitigation and defense skills using adversarial tactics, techniques, and procedures. Focus is on firewall design and management, VPNs, Internet security, policies, and ongoing security management. Students are introduced to web security and hardening the network infrastructure. Students will learn how to develop and implement security and network management policies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR203, CYBR204 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR208	Network Scripting	<p><u>Description:</u> This course provides fundamentals and skills to use scripting for automation and administration of servers and network systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CYBR204 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CYBR292	Independent Project	<p><u>Description:</u> This course allows a student to participate in an independent study group to strengthen existing skills needed for certifications.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Prior Coursework <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DATA101	Database Design and SQL	<p><u>Description:</u> In this course, students will be using SQL Server Express, Vertebelos, and other data modeling tools, students recognize the concepts and theory of database management systems (DBMS), including the analysis and design of relational database systems, modeling business and scientific problems and normalizing relationships in tables</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DATA102	Advanced SQL	<p><u>Description:</u> This course provides a solid foundation of the SQL programming language that enables students to build, query and manipulate databases. Working in SQL Server database throughout this course, students compare the ANSI/ISO standard with the SQL implementation of this database product.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> DATA101 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DATA104	Excel for Analytics	<p><u>Description:</u> In this course, students will learn how to perform data analysis using Excel's most popular features. You will learn how to create pivot tables from a range with rows and columns in Excel and see their ability to summarize data in flexible ways, enabling quick exploration of data and producing valuable insights from the accumulated data.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DATA205	Business Data Analytics I - SQL Server Administration	<p><u>Description:</u> This course introduces the student to Database administration including database creation, maintenance, backup, recovery, and user account administration.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> DATA104 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DATA206	Business Data Analytics II- Intro to Business Intelligence	<p><u>Description:</u> This course focuses on how Business Intelligence is the application of software technologies that enables business users to make better and faster decisions based on enterprise data. In this course, you are introduced to Data Warehousing and creating Business Intelligence solutions. You learn how to build and integrate Microsoft tools into a comprehensive business solution in order to achieve competitive advantage</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> DATA104 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DATA207	Business Data Analytics III - Visualization	<p><u>Description:</u> This course will introduce students to the field of data visualization. Students will learn basic visualization design and evaluation principles, and learn how to acquire, parse, and analyze large datasets. Students will also learn techniques for visualizing multivariate, temporal, text-based, geospatial, hierarchical, and network/graph-based data.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB101	Introduction to Dental Lab Technology	<p><u>Description:</u> This course is an introduction to basic concepts of the dental laboratory industry: terminology, identification, weights and measures, health &amp; safety practices, and the use of dental tools/machinery.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Must pass entrance requirement <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB102	Dental Anatomy I	<p><u>Description:</u> This course is an introduction to tooth tissues and edentulous anatomy. The student will also learn tooth morphology and annotation.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB103	Dental Materials I	<p><u>Description:</u> This course is an introduction to the various materials used in the first year of the dental laboratory program.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB104	Denture Processes I	<p><u>Description:</u> This course is designed to provide students with an introduction and practice in the first laboratory processes involved in denture construction. The student will evaluate preliminary and final edentulous impressions; construct custom trays, baseplates and occlusal rims.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB105	Denture Processes II	<p><u>Description:</u> This course is an introduction to the articulation, tooth selection, and arrangement of denture teeth, Festooning through deflasking, selective grinding, and the fabrication of the students first complete denture.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB106	Dental Anatomy II	<p><u>Description:</u> This course is an introduction to the skeletal and muscular anatomy of the head and oral cavity. The student will also learn about the temporomandibular joint and how it functions.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB107	Denture Processes III	<p><u>Description:</u> This course introduces the student to the fabrication techniques of an immediate denture, denture repairs, relines &amp; rebases.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DENLB108	Denture Processes IV	<p><u>Description:</u> This course introduces the student to advanced concepts of esthetic tooth arrangement techniques that produce high quality dentures that enhance the age, sex, and personality of the individual patient.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB110	Introduction to Orthodontics	<p><u>Description:</u> This course is an introduction to the various classifications of mal-occlusion, the fundamentals of wire bending, soldering, and orthodontic study models.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB111	Ortho Appliances - Fixed	<p><u>Description:</u> This course introduces the student to the fabrication of fixed orthodontic holding appliances that are temporarily cemented in the mouth by the dentist.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB112	Ortho Appliances - Removable	<p><u>Description:</u> This course introduces the student to the fabrication of removable orthodontic appliances that maintain tooth position and promote arch development. In addition the student will learn various repair techniques on these appliances.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB120	Removable Partial Dentures I	<p><u>Description:</u> This course is an introduction to removable partial dentures. The student will learn the various classifications, design theory, survey techniques, and components for removable partial denture construction. In addition, the student will learn digital scanning and design techniques</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB121	Removable Partial Dentures II	<p><u>Description:</u> This course is the step by step process of preparing the master cast for partial denture construction. The student will learn model block out, duplication, refractory cast production, design transfer, wax up, and sprucing through finishing. The student will then fabricate a Class I RPD framework.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB122	Removable Partial Dentures III	<p><u>Description:</u> The student will build on the knowledge gained in DENLB 120 and 121 by fabricating a metal lingual bar, Kennedy bar, palatal strap, and closed horseshoe removable partial denture framework.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB123	Removable Partial Dentures IV	<p><u>Description:</u> In this course the student will set teeth on an upper and lower removable partial denture fabricated in DENLB 122. They will then process with an acrylic base and finish. In addition, the student will learn reline, repair, and rebase techniques for removable partial denture frameworks.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DENLB124	Advanced Dentures	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of making an advanced denture using their basic learning skills.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB125	Advanced Orthodontics	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of making an orthodontic appliance using their basic learning skills.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB126	Advanced RPDs	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of making an advanced Removable Partial Denture using their basic learning skills.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB201	Tooth Morphology Practicum	<p><u>Description:</u> This course is designed to provide the student with a practical study of the individual teeth. Students will draw the individual teeth to scale from the line manual. The student will also learn to build up tooth form with various colors of waxes to recognize how the anatomy of the natural tooth relates to each other and the overall form of the tooth.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB202	Dental Materials II	<p><u>Description:</u> This course introduces the student to materials that are used in fixed restorations. Students will be introduced to the basics of chemistry by learning about metallurgy and their chemical and physical properties. Additionally, the student will gain an understanding of weights, measures, and calculations, processing of alloys, metal treatment and torch techniques as well as metal sensitivities. The student will then be introduced to porcelain, its chemical composition, properties, application, and manufacturing.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB203	Fixed Prosthodontics I	<p><u>Description:</u> This course introduces the student to the theory and practice of fabricating individual metal crowns. The student will learn the steps involved in fabricating gold inlays, onlays, &amp; crowns.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB204	Principles of Occlusion	<p><u>Description:</u> This course is designed to provide the student with an introduction to the principles of occlusion, including the anatomical structures of the oral cavity, the determinants of occlusal morphology, misaligned teeth versus ideal teeth and the physiology of mandibular movements as they relate to the fabrication of dental restorations.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB205	Fixed Prosthodontics II	<p><u>Description:</u> This course is designed to provide the step-by-step procedures in fabricating metal bridges, post-soldering, fabricating provisionals, &amp; fabrication of reduction copings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DENLB206	Ceramics I	<p><u>Description:</u> An introduction to the theory and practice of fabricating fixed porcelain prosthesis. The student will learn about the history of ceramics with old technologies as well as new technologies such as layering a Zirconia coping, Emax, and titanium copings. The student will fabricate modelwork for their ceramic units.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB207	Understructure Design	<p><u>Description:</u> This course is an introduction to the understructure design for porcelain fused to metal crowns, waxing, and porcelain margin cut back, investing, &amp; finishing the alloy for preparation for porcelain.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB208	Ethics, Jurisprudence and Laboratory Management	<p><u>Description:</u> This course is designed to provide the student with the history of the dental profession, the legal obligations of the dental technician under State Dental Practice Acts, ethical responsibilities of the technician towards the dental profession, and the fundamentals of the day to day operation of a dental laboratory.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB209	Ceramics II	<p><u>Description:</u> This course will assist the student in following the step by step processes in the application of porcelain to metal understructure. The student will also learn about color in dentistry and taking shades.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB211	Ceramics III	<p><u>Description:</u> This course will assist the student in following the step by step processes in the fabrication of Emax pressable porcelain crowns &amp; veneers.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB212	Computer Aided Design/Computer Aided Manufacturing	<p><u>Description:</u> This course is an introduction to the theory and practice of fabricating dental prosthetics digitally with an understanding of the various systems available as it pertains to open and closed architecture. Students will also learn a general understanding about material selection for the final prostheses. They will gain an understanding by digitally manipulating and morphing teeth, importing and exporting stl. digital files, nesting and computer aided manufacturing of digital design fabrications. The student will by computer aided design and manufacturing of individual copings and full wax units.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB213	Advanced Technologies	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of an advanced project using two of their basic learning skills.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB214	Advanced Crown and Bridge	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of an advanced project using their basic learning skills.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DENLB215	Advanced Dental Ceramics	<p><u>Description:</u> In this course students will apply the theoretical knowledge and their experience with the step-by-step process of an advanced project using two their basic learning skills.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB296	Work-based Learning Seminar	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DENLB297	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Students enroll in the work-based learning seminar in order to receive an orientation to the work-based learning experience. Faculty meets with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 90 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL100	Basic Electrical Systems	<p><u>Description:</u> The course is an introduction to the fundamentals of electricity and its application in the diesel and heavy equipment industry. The uses of specialty equipment to troubleshoot and repair are included with emphasis on industry safety requirements and the use of protective devices. Concurrent enrollment: DIESL 112, DIESL 113, DIESL 114 or instructor permission.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL105	Introduction to Diesel Technology	<p><u>Description:</u> This course is an introduction to the diesel industry with emphasis on occupational safety principles and WISHA and Department of Ecology guidelines. Concurrent enrollment: DIESL 106, 107, 108, 109 and 110 or instructor permission.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL106	Engine Construction	<p><u>Description:</u> This course is an introduction to basic engine theory and operation and their application to the maintenance and repair of gasoline and diesel engine systems common to heavy equipment. Concurrent enrollment: DIESL 105, 107, 108, 109 and 110 or instructor permission.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL107	Engine Systems	<p><u>Description:</u> This course is a continuation of the concepts introduced in DIESL 106, students learn to identify engine systems and their component parts. Concurrent enrollment: DIESL 105, 106, 108, 109 and 110 or instructor permission.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL108	Engine Reassembly	<p><u>Description:</u> In this course perform procedures for overhauling heavy-duty diesel engine including disassembly, cleaning and inspection, adjustments, and reassembly. Concurrent enrollment: DIESL 105, 106, 107, 109 and 110 or instructor permission.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DIESL109	Fuel Systems	<p><u>Description:</u> This course is focused on the operating principles of pneumatic brakes including ABS, roll stability, and collision avoidance are presented. Concurrent enrollment: DIESL 104, 105, 106, 107, 108, and 109 or instructor permission.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL110	Introduction to Air Brakes	<p><u>Description:</u> This course introduces the operating principles of pneumatic brakes, which includes: ABS, roll stability, and collision avoidance</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL112	Electrical Systems Application	<p><u>Description:</u> This course is focused on the practical applications include working with cranking circuits, type A &amp; B charging circuits, conventional and electronic spark ignition, component operation, testing and industry-required repairs. Concurrent enrollment: DIESL 100, 113, 114 or instructor permission</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL113	Electronic Engine Systems	<p><u>Description:</u> This course introduces testing of common input and output electronic components and to use specialty tools and equipment used for code retrieval; service processes and repair are introduced. Concurrent enrollment: DIESL 100, 112, 114 or instructor permission.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL114	Mobile Air Conditioning Systems	<p><u>Description:</u> This course introduces the EPA 609 requirements with emphasis on the achievement of certification. Component identification, operation, testing, and repair methods to meet industry regulations are included. Concurrent enrollment: DIESL 100, 112, 113, or instructor permission.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL115	Introduction to Power Trains	<p><u>Description:</u> This course is an introduction to the Power Trains Program. Emphasis is given to shop and tool safety, and the fundamentals of precision measurements and fasteners. Concurrent enrollment: DIESL 117, 118, 119, 120, 121, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL117	Automated Manual Transmission Service	<p><u>Description:</u> This course introduces the design characteristics, operation and basic troubleshooting of automated manual transmissions. Concurrent enrollment: DIESL 115, 118, 119, 120, 121, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL118	Clutch Service	<p><u>Description:</u> This course focuses on the fundamentals of medium and heavy duty clutch operation, diagnosis of various symptoms and causes of clutch failures and provide remedies to prevent future failures. Concurrent enrollment: DIESL 115, 117, 119, 120, 121, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DIESL119	Automatic Transmission Service	<p><u>Description:</u> The course focuses on the fundamental understanding of automatic and power shift transmissions and torque converters including the basics of operation, design characteristics and failure analysis of both hydro-mechanical and electronically controlled units. Concurrent enrollment: DIESL 115, 117, 118, 120, 121, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL120	Driveline Service	<p><u>Description:</u> This course focuses on the fundamental understanding of the principles of operation, maintenance procedures, and analysis of vibrations for driveline systems. Concurrent enrollment: DIESL115, 117, 118, 119, 121, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL121	Differentials/Final Drive	<p><u>Description:</u> This course focuses on the fundamental differential/final drive system service including disassembly, failure analysis, and reassembly to O.E.M. specifications, . The various styles, applications, and operation of mechanical final drives used in construction and agricultural equipment are also included. Concurrent enrollment: DIESL: 115, 117, 118, 119, 120, 122, 123 or instructor permission.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL122	Wheel End Service	<p><u>Description:</u> This course focuses on the correct inspection and installation procedures for standard and unitized wheel ends used on heavy duty trucks</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL123	Service Manual Transmissions	<p><u>Description:</u> This course focuses on the fundamental transmission service on single and twin countershaft transmissions including disassembly, failure analysis, preventive remedies, and reassembly to OEM specifications. Concurrent enrollment: DIESL 115, 117, 118, 119, 120, 121, 122 or instructor permission.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL130	Basic Hydraulics	<p><u>Description:</u> This course is an introduction to hydraulic/pneumatic theory, component design, and service practices for hydraulic systems. This includes instruction in pumps, motors, valves, safety, seals, cylinders, and filters. Instruction is facilitated by use of simulations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL131	Hydraulics II	<p><u>Description:</u> In this course diagnose and test a variety of hydraulic components and systems. To develop and refine skills in the repair and maintenance of hydraulic systems in truck ad heavy equipment. Instruction is enhanced through use of simulation.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL132	Steering Systems	<p><u>Description:</u> This course focuses on the role and operation of steering system components in trucks and heavy equipment and their relationship to brake and suspension systems. Students develop and refine skills in the repair and maintenance of steering systems. The major emphasis will be inspection and repair methods for steering system components.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DIESL133	Suspension Systems	<p><u>Description:</u> This course focuses on the role and operation of suspension system components in trucks and heavy equipment and their relationship to brake and steering systems. Students develop and refine skills in the repair and maintenance of suspension systems. The major emphasis will be inspection and repair methods for suspension system components.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL155	Basic Vehicle Services	<p><u>Description:</u> In this course, emphasis is on theory and shop practices required to maintain, troubleshoot, and repair equipment encountered in the industry. To follow and apply proper procedures and standards to perform A-B-C, inspections, Preventive Maintenance Inspections (PMI) and Department of Transportation (DOT) inspections.</p> <p><u>Credits:</u> 8 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 140 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL206	Advanced Service Applications	<p><u>Description:</u> This course is an application of gained knowledge of various systems, the relationship between systems, their components, and the procedures for providing service to engines and fuel systems, power trains, hydraulic systems, electrical systems, air conditioning and refrigeration systems, and the procedures for performing periodic maintenance.</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL208	Advanced Service Techniques	<p><u>Description:</u> This course focuses on applying and demonstrating skills and capabilities to inspect (troubleshoot, analyze/diagnose, test), remove, and repair or replace components or systems within manufacturer's specifications. Service and preventive maintenance techniques are applied to the following systems: engines and fuel systems, power trains, hydraulic systems, electrical systems, air conditioning, and refrigeration systems.</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 390  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL292	Independent Projects	<p><u>Description:</u> This course is an independent study in special projects to give students additional training in a specific area selected by the instructor. Emphasis is on individual student needs to improve or expand skills in a variety of areas.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL293	Independent Projects II	<p><u>Description:</u> This course is an independent study in special projects to give students additional training in a specific area selected by the instructor. Emphasis is on individual student needs to improve or expand skills in a variety of areas.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIESL296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course is Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 390  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DIGIT102	Image Editing	<p><u>Description:</u> In this course, students will explore the composition method using Photoshop along with technical information to enhance, alter and transform photographic images</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT103	Graphic Generation	<p><u>Description:</u> In this course, students will explore the composition method using Photoshop along with technical information to enhance, alter and transform photographic images</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT105	Digital Imaging	<p><u>Description:</u> In this course, students will explore the composition method in photography along with the technical information to use a DSLR camera to its full potential.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT106	Mobile Storytelling	<p><u>Description:</u> Students will explore common storytelling structures and character interactions to create scripted material and unscripted material for mobile device production.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT107	Mobile Production I	<p><u>Description:</u> Students will use standard video production processes with a mobile phone to acquire video and audio content.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT108	Mobile Postproduction & Editing I	<p><u>Description:</u> Students will perform standard audio and editing to assemble mobile footage distributable for digital format.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT121	Pre Production Process	<p><u>Description:</u> This course examines the framework for pre-production processes for digital media. Students learn to plan media productions and create scripts for various media. Emphasis on the requirements of the planning stage, from logistics to regulations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT126	Production Process	<p><u>Description:</u> This course focuses on production process using the common tools found in studio, on field ENG's, and Narrative film style productions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DIGIT127	Post Production Process	<p><u>Description:</u> This course focuses on post-production process using the common tools found in a digital editing environment</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT130	Production Editing I	<p><u>Description:</u> This course focuses on the post-production editing process using the common processes found in a digital editing environment</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT131	Production Editing II	<p><u>Description:</u> In this course, students will dive deeper into post-production editing process using the common tools found in a digital editing environment</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT132	Digital Media - Video	<p><u>Description:</u> In the digital media-video course, student will explore the technology, language and engineering that supports the creative process</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT141	Compositing I	<p><u>Description:</u> This course focuses on the foundation of the composition method using a graphics and animation program.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT142	Compositing II	<p><u>Description:</u> In this course, students will explore the gathering process for the composition method using graphic design programs, cameras, scanners, cell phones and tablets</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT143	Digital Media - Animation	<p><u>Description:</u> In this course, students will explore 2 dimensional animations, looking at composition, geometric imagery and physical action</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT145	Digital Media - Audio	<p><u>Description:</u> This course focuses on the audio related to the video post production process</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DIGIT152	VR Model Foundation	<p><u>Description:</u> Students will explore the methods used to create 3D Models for use in VR and Real Time Engines, UV Mapping and Polygon reduction techniques.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT153	Design of Film and Television Model	<p><u>Description:</u> Students will use the modeling method of Maya, focusing on the production of film and television animation model, especially the production of a realistic organism. Focus on the wiring method of animation model to the product level.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT154	Vray Indoor Rendering	<p><u>Description:</u> Students will explore the Vray rendering engine and learn how to use Vray Lights, Materials and Global Illumination techniques and tweaks to produce an interior render.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT155	3D Printing Technology	<p><u>Description:</u> Students will learn about the different types of 3D Printing technology, the materials used and the workflow to download, import, slice and print a 3D model.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT210	Pre-Production Project I	<p><u>Description:</u> In the pre-production project I course, students will design, develop, script and plan a digital media project</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT211	Production Process Project I	<p><u>Description:</u> In the production process project I course, students will edit digital elements together into a finished project with meaning and aesthetics</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT212	Post-Production Project I	<p><u>Description:</u> In the post-production project I course, students will edit digital elements together into a finished project with meaning and aesthetics</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT220	Pre-Production Project II	<p><u>Description:</u> In the pre-production project II course, students will design, develop, script and plan a digital media project</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
DIGIT221	Production Process Project II	<p><u>Description:</u> In the production process project II course, students will design, develop, script and plan a digital media project</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DIGIT222	Post-Production Project II	<p><u>Description:</u> In the post-production project II course, students will edit digital elements together into a finished project with meaning and aesthetics</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA110	Introduction to Dental Assisting	<p><u>Description:</u> This course is an introduction to the dental assisting profession including the role of the dental assistant in the dental office, legal and ethical considerations, HIPPA regulation, and dental equipment and terminology. Prerequisite: Must be admitted into the Dental Assisting program</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA111	Infection Control	<p><u>Description:</u> This course is an introduction to microbiology, and the application of standard infection control practices including aseptic techniques in the dental office. Infection control, hazardous waste management and safety standards are emphasized: Must be admitted into the Dental Assisting core program</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA112	Biomedical Sciences	<p><u>Description:</u> This course is an introduction to the biomedical sciences and their application to the dental assisting industry: anatomy and physiology, embryology, histology, and morphology. Prerequisite: Must be admitted into the Dental Assisting core program</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA114	Dental Sciences I	<p><u>Description:</u> In this course students are introduced to the fundamentals of oral pathology, pediatric dentistry, nutrition, and pharmacology. Prerequisite: Must be admitted into the Dental Assisting core program</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA120	Introduction to Chairside Assisting	<p><u>Description:</u> In this course students are introduced to the fundamentals of chairside assisting including patient management, assessment of the patient's medical health history, medical emergencies, and student's role in patient care</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA121	Chairside Assisting I	<p><u>Description:</u> This is an introduction course that focuses on the fundamentals of chairside assisting including recording dental chart information, instrument transfer, maintaining the operating field, coronal polish, apply dental sealants, and the skills necessary to assist in the delivery of dental services to patients in a pre-clinical environment</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DNTA122	Dental Materials I	<p><u>Description:</u> This course is an introduction to fixed and removable prosthodontics with instruction in the physical properties and manipulation of dental materials used in diagnostic and prosthetic procedures. Fabrication of study models and the manipulation gypsum products are emphasized</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA124	HIV/AIDS Training	<p><u>Description:</u> This is a mandated HIV/AIDS training course, Approved by Washington State Department of Health following the requirements of the WAC 296-823-099-18055.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA127	Office Administration	<p><u>Description:</u> This course focuses on the basic business administration skills, necessary to manage a dental office. Customer service, appointment scheduling, patient files, record management, maintaining an inventory system, and familiarization with dental software programs are included. The use of mathematics to maintain records and accounts is emphasized</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA128	Dental Sciences II	<p><u>Description:</u> An introduction to various dental sciences to include; dental radiography, preventive health care, selected specialty procedure, dental dam, and restorative procedures. An advanced chairside assisting course related to coronal polish, fluoride, and selected procedures</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Completion of all previous courses <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA130	Dental Sciences III	<p><u>Description:</u> This course is a continuation of the various dental sciences to include; dental anesthesia cavity classifications and rotary instruments</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA131	Chairside Assisting II	<p><u>Description:</u> This course is a continuation of the concepts introduced in DNTA 121, students learn to process new patients, chart information, and prepare rotary instruments. Students learn more advanced chairside skills including identification of hand instruments and tray set-ups</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA134	Chairside Assisting III	<p><u>Description:</u> In this course, students learn to apply dental dams and prepare anesthetics. Prerequisite: Successful completion of the first trimester</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA139	Restorative Services I	<p><u>Description:</u> This course is an introduction to the materials and techniques used for the usage of common restorative materials and cavity classifications. Students learn to place and remove matrix and wedges. This course is an introduction to the materials and techniques used to place temporary restorations</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DNTA144	Dental Radiology	<p><u>Description:</u> An advanced course in dental radiography. Students apply both theory and practical applications in the area of production radiation including the taking and processing of dental x-rays. Content also covers digital radiography, quality assessment, and technique errors. Students will mount and evaluate full mouth series of radiographs using the paralleling and bisecting techniques. Radiographs will be exposed on manikins and patients</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA146	Chairside Assisting IV	<p><u>Description:</u> This is an advanced chairside assisting course related to restorative procedures, and selected specialty procedures</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA147	Dental Materials II	<p><u>Description:</u> In this course, students learn advanced techniques in fixed and removable prosthodontics, including the manipulation of final impression materials, fabrication of a variety of provisional crowns, and the cementation of fixed appliances</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA150	Dental Sciences IV	<p><u>Description:</u> This is a introduction course, to the specialties of oral surgery and orthodontics. This course will include background, procedures and instrumentation</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Completion of 128 130 131 134 139 144 146 147 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA151	Clinical Experience I	<p><u>Description:</u> Students are assigned to off campus dental offices in the community or the Bates Dental Clinic. Clinical assignments are designed to enhance students' competence in performing dental assisting functions with emphasis on chairside assisting, radiograph technique, patient management skills, and professionalism. General Dentistry is emphasized.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 150  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA152	Dental Materials III	<p><u>Description:</u> This course has emphasis on the fabrication of a variety of provisional crowns as well as defining and describing aspects of cosmetic dentistry</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA153	Office Administration Applications	<p><u>Description:</u> In this course, students learn the basic business administration skills necessary to manage a dental office. Financial systems to include employee records management will be introduced. The use of mathematics to maintain records and accounts is emphasized. Interview techniques will be reviewed and resumes will be prepared.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTA162	Clinical Experience II	<p><u>Description:</u> In the Clinical Experience II course, students will apply the skills from DNTA 151, into their clinical practice to perfect their skills in performing dental assisting functions including expanded functions. General Dentistry is emphasized. Weekly seminars are held to evaluate and review clinical applications</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 90  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DNTA165	Clinical Experience III	<p><u>Description:</u> In the Clinical Experience III course, students will apply the skills obtained from DNTA 151 and DNTA 162, into their clinical practice to perfect their skills in performing dental assisting functions including expanded functions. General Dentistry or Specialty Dentistry is emphasized. Weekly seminars are held to evaluate and review clinical applications</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU101	Asepsis, Infection, Hazard Control	<p><u>Description:</u> In this course students will learn appropriate application of infection prevention and control train in safety procedures including OSHA/WSHA and infection control compliance for Denturists offices and laboratories. This includes a special emphasis on the materials, hazardous materials, interpreting MSDS's, equipment, and procedures mandated in the dental environment for protection of staff and patients from infection by infectious disease organisms. Students also complete the State of Washington "Aids Awareness Course."10</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU102	Biological Concepts	<p><u>Description:</u> This course focuses on cell biology, microbiology, developmental embryology, and histology with an emphasis on the oral cavity</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU103	Introduction to Complete Denture Prosthodontics	<p><u>Description:</u> This course covers the basic anatomy of the residual ridge and surrounding structures as well as primary and final impressions of these ridges using the proper materials and trays. Impressions are poured and trimmed with proper materials and techniques</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU104	Baseplates and Occlusion Rims	<p><u>Description:</u> This course covers fabricate base plates and occlusal rims using various materials in preparation for tooth setting</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU105	Tooth Selection and Set I	<p><u>Description:</u> This course covers proper tooth selection and ordering techniques and then start their required lab set ups</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU106	Dental Materials I	<p><u>Description:</u> This course covers various dental gypsum and impression material</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU107	Denture Techniques	<p><u>Description:</u> This course covers the wax up, processing, and other lab steps needed to supply a proper prosthesis for a patient</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
DNTU108	Complete Denture Fabrication I	<p><u>Description:</u> In the complete denture fabrication I practical lab, students develop and apply the proper techniques in set up, processing and polishing an acrylic RPD (flipper)</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU109	Dental Office Management I	<p><u>Description:</u> In the dental office management I clinical lab, students identify proper patient record keeping. In addition, individual policy and informational hand outs are completed in preparation for actual clinical cases</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU110	Head Anatomy and Physiology I	<p><u>Description:</u> This course introduction to the anatomy and physiology of the head, neck, temporomandibular joint, muscles, nerves, blood vessels, lymphatic system, skeletal system, digestive system, and dental anatomy related to sinuses, glands, teeth, periodontal structures, and other oral structures</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU111	Tooth Selection and Set II	<p><u>Description:</u> This course continues DNTU 105 with further required lab set up</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU112	Medical Emergencies	<p><u>Description:</u> This course focuses on first aid and CPR procedures in simulated situations. This includes the provider CPR/first aid course. Health histories are taken and analyzed for information important to needed patient care</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU114	Clinical Denture Fabrication II	<p><u>Description:</u> This course is a continuance of DNTU108, students will apply techniques previously learned in DNTU 108 and work on real patient cases when available</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU115	Partial Dental Casts	<p><u>Description:</u> This course introduces students to area of removable partial dentures including theory, clinical classification and evaluation</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU116	Framework Design -RFD	<p><u>Description:</u> In this course students survey study models and design practical cases</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DNTU117	Dental Office Management II	<p><u>Description:</u> In this course students perform proper scheduling, billing and HIPPA privacy requirements on actual cases</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU118	Clinical Denture Procedures I	<p><u>Description:</u> This practical clinical denture procedures I course, students will prepare proper room set up and tear down procedures for clinical cases along with clinical instrument processing. All clinical aspects of assigned pt cases are accomplished</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU119	Dental Impressions Procedures I	<p><u>Description:</u> In the practical dental impressions procedures I clinical experience, students will perform impressions on patient cases assigned by instructors</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU120	Head Anatomy and Physiology II	<p><u>Description:</u> This course completes the remaining anatomical systems not covered in DNTU 110</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU121	Tooth Selection and Set III	<p><u>Description:</u> This practical lab course complete their required set ups of cross-bite cases and a timed 20 degree</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU123	Complete Denture Repair I	<p><u>Description:</u> In this course students complete denture repairs on clinical cases</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU124	RPD Frames Fabrication	<p><u>Description:</u> This course requires students to complete cast designs on paper, student continues to survey and design cases 8-15 on lab models</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU125	Oral Pathology	<p><u>Description:</u> This course is the continuance of the introduction Oral Pathology I, students will apply prior skills, and theory to fulfill the oral pathology studies</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DNTU126	Clinical Denture Procedures II	<p><u>Description:</u> This course is a practical learning experience to learn proper room set up and tear down procedures for clinical cases along with clinical instrument processing. Actual patients are treated during this course toward their total of 10</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 0   <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU127	Dental Impressions Procedures II	<p><u>Description:</u> In this course students perform impressions, bite registrations and proper mounting on clinical cases assigned during this semester</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU128	Fabrication Clinical II	<p><u>Description:</u> In this practical lab experience students complete the required clinical case lab work assigned to them this semester</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 0   <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU129	Polish Methods - RPD Frames	<p><u>Description:</u> In this course students follow proper techniques to block-out and duplicate cases prior to waxing up RPDs. Then students will observe how finished frameworks are tried into the mouth</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU131	Wax Patterns - Partial	<p><u>Description:</u> In this course students perform framework wax ups on assigned practical cases</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU132	Teeth Arrangement - RPD	<p><u>Description:</u> In this course students set teeth in partials opposing dentures, other RPDs or natural teeth, as well as completing the RAP lab practical case</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU135	Introduction to Oral Pathology I	<p><u>Description:</u> This course is an introduction to Oral Pathology</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 0   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU136	Clinical Denture Procedures III	<p><u>Description:</u> In the clinical denture procedures III practical lab experience, requires students perform the necessary clinical work on assigned patient cases</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 0   <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
DNTU138	Fabrication Clinical III	<p><u>Description:</u> The fabrication clinical III lab, is required work for their clinical cases assigned to them this semester</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> <u>Guided practice</u> <u>Field-base experience</u> 60  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU139	Dental Office Management III	<p><u>Description:</u> In this course students will apply professional office management skills pertaining to proper scheduling, billing and HIPPA privacy requirements on actual cases.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU201	Complete Denture Repair II	<p><u>Description:</u> In the complete denture repair II practical lab course, students practice the proper techniques used to accomplish complex repairs on dentures</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU203	RPD Repair Methods	<p><u>Description:</u> In this course students apply skills in the lab utilizing techniques unique to partial denture repair/relines</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU204	Dental Office Management IV	<p><u>Description:</u> In the dental office management IV course, students will complete their record treatment documentation on their clinical cases and transfer any unfinished cases. State laws dealing with records are discussed</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU205	Denture Adjustments	<p><u>Description:</u> In this course students perform post-insertion adjustments of their clinical cases as needed</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU206	Ethics and Jurisprudence	<p><u>Description:</u> In this course, federal and State laws are discussed as they relate to licensing. Ethics pertaining to a licensed healthcare professional are discussed</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU207	Malocclusions	<p><u>Description:</u> In this course students study different occlusal schemes and perform face-bow remounts and occlusal corrections of clinical cases where needed</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
DNTU208	Clinical Denture Procedures IV	<p><u>Description:</u> In this clinical denture labIV course students continue to complete their clinical cases and are given opportunities to practice unique, specialized techniques found in industry</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU210	Geriatric Patient Needs	<p><u>Description:</u> In this course students specifically focus on the geriatric patient needs by identifying the many unique requirements, both physically and psychologically</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU211	Fabrication Clinical IV	<p><u>Description:</u> In the fabrication clinical IV course students will complete the lab portions required clinical cases assigned to them this semester.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU212	Alternative RPD Systems	<p><u>Description:</u> In this course students will research the history of implants and the numerous systems available for us</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU213	Implant/Precision Attachment	<p><u>Description:</u> Implant/Precision Attachment</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU214	Advanced Special Services	<p><u>Description:</u> This course provides students the opportunity to research and seek further into the an area of study that has increased their interest in previous courses. This course also prepares students for the Com. Denture final exam.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU215	Advanced Dental Appliances	<p><u>Description:</u> In this course students discuss and when available work on advanced cases such as gasket retained dentures, swing –lock and dual-path RPDs. If and when other rem. appliances become part of the denturist scope of practice, bleaching trays, nightguards and bruxing appliances will be taught in this course</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU220	Dental Office Management V	<p><u>Description:</u> In the dental office management V clinical lab, students will complete their record treatment documentation on their clinical cases including scheduling both clinic appointments and required lab time. State laws dealing with records are discussed and the State on-line jurisprudence exam is taken prior to Board application</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
DNTU222	Fabrication Clinical V	<p><u>Description:</u> In the fabrication clinical V course, students are to complete the lab portions of required clinical cases assigned to them this semester.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU223	Dental Office Management VI	<p><u>Description:</u> In this course students complete their record treatment documentation on their clinical cases and transfer any unfinished cases. State laws dealing with records are discussed and the State on-line jurisprudence exam is taken prior to Board application</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU229	Clinical Denture Procedures V	<p><u>Description:</u> The clinical denture procedures V clinical lab course, is a continuance for students to complete their 10 required clinical cases and are given opportunities to practice unique, specialized techniques found in industry</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 90</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU233	Finish Methods RPD	<p><u>Description:</u> This course is final review of all previous lab and clinical cases is accomplished and then the RPD final exam is taken.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
DNTU296	Work-Based Learning	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE204	Early Childhood Practicum II	<p><u>Description:</u> Students spend time in early learning settings practicing and developing teaching skills, planning/implementing/evaluating children's activities and participating in curriculum planning. Students will observe children using the Ages and Stages Questionnaire (ASQ). Students will schedule and conduct family conferences with their on-site supervisor to practice skills in communicating with families. This practical field experience is based on children ages birth through 3 years old.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE207	Professionalism	<p><u>Description:</u> The application of the profession's code of ethics and advocacy for children and families is emphasized. Students/Candidates also develop a professional portfolio and create a resource file of professional publications and organizations. (Birth to age 8)</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE210	Early Childhood Practicum III	<p><u>Description:</u> Students spend time in a early learning settings practicing and developing teaching skills, planning/implementing/evaluating children's activities and participating in curriculum planning. Students will observe children using the Ages and Stages Questionnaire (ASQ). Students will schedule and conduct family conferences with their on-site supervisor to practice skills in communicating with families. This practical field experience is based on children ages 3 years to 8 years old.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
ECE211	Emotional and Social Development	<p><u>Description:</u> Demonstrate knowledge of factors that affect the healthy emotional and social development of children, the support of children's self concept, effects of an individual's temperament on adult/child and child/child relationships, social/emotional milestones, and activities that support pro-social behavior.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE212	Cognitive Development	<p><u>Description:</u> Students will demonstrate knowledge of learning styles; identify milestones in development of cognitive skills, and create/demonstrate/evaluate cognitive development activities. Students will develop tools to support developmentally appropriate practices (DAP) and culturally, linguistically, and ability diverse (CLAD) children. Students will practice using inquiry methods in the development of science, technology, engineering and mathematical activities to encourage cognitive development.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE213	Creative Experience - Art & Movement	<p><u>Description:</u> This course addresses the importance of high quality and meaningful creative expression across the early childhood curriculum. Students will develop teaching strategies to support creativity, plan and implement developmentally appropriate creative activities, and explore the development of art in young children birth to age 8.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECE296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. *INSTRUCTOR APPROVAL REQUIRED</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 360  <u>Prerequisites:</u> INSTR APP REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&105	Intro to Early Childhood Education	<p><u>Description:</u> Explore the foundations of early childhood education. Examine theories defining the field, issues and trends, best practices, and program models. Observe children, professionals, and programs in action (Birth to age 8).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 0 <u>Field-base experience</u> 30  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&107	Health, Nutrition and Safety	<p><u>Description:</u> Develop knowledge and skills to ensure good health, nutrition and safety of children in group care and educational programs for age's birth to eight. Recognize the signs of abuse and neglect, responsibilities for mandated reporting, and available community programs.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&120	Practicum - Nurturing Relationships	<p><u>Description:</u> In an early learning setting apply best practice for engaging in nurturing relationships with children. Focus on keeping children healthy and safe while promoting growth and development. (Birth to age 8)</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 60  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&132	Infant and Toddler Care	<p><u>Description:</u> Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver, relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care (Birth to 3 years of age).</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 30  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ECED&134	Family Child Care	<p><u>Description:</u> Learn the basics of home/family child care program management. Topics include: licensing requirements; business management; relationship building; health, safety, &amp; nutrition; guiding behavior and; promoting growth &amp; development. (Birth to grade 6)</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&136	School Age Care	<p><u>Description:</u> Develop skills to provide developmentally appropriate and culturally relevant activities and care, specifically: preparing the environment, implementing curriculum, building relationships, guiding academic/social skill development, and community outreach.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&139	Administration of EL	<p><u>Description:</u> Develop administrative skills required to develop, open, operate, manage, and assess early childhood education and care programs. Explore techniques and resources available for Washington State licensing and NAEYC standard compliance (Birth to grade 6).</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&160	Curriculum Development	<p><u>Description:</u> Investigate learning theory, program planning, and tools for curriculum development promoting language, fine/gross motor, social-emotional, cognitive and creative skills and growth in young children (Birth to age 8).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&170	Environments for Young Children	<p><u>Description:</u> Design, evaluate, and improve indoor and outdoor environments which ensure quality learning, nurturing experiences, and optimize the development of young children (Birth to age 8).</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&180	Language & Literacy Development	<p><u>Description:</u> Develop teaching strategies for language acquisition and literacy skill development at each developmental stage (birth-age 8) through the four interrelated areas of speaking, listening, writing, and reading.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECED&190	Observation and Assessment	<p><u>Description:</u> Collect and record observation of and assessment data on young children in order to plan for and support the child, family and community. Practice reflection techniques, summarizing conclusions and communicating findings</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECON&201	Microeconomics	<p><u>Description:</u> This course focuses on the theory of the market systems as a method of allocating resources and distributing income and products. Analysis of current problems including government regulation, subsidies, monopoly and taxation</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ECON&202	Macroeconomics	<p><u>Description:</u> 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: ECON&amp; 201, MATH 098, and ENGL&amp; 101 is recommended.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS101	Introduction to Electronics	<p><u>Description:</u> This course provides students with knowledge of fundamental electronic systems, quantities, units, and engineering and scientific notation used in the field of electronics. The course provides relevance to circuits and applications and delivers the material via a systems approach combined with electronic theory. Complex arithmetic is not required for this course.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS102	DC Circuits	<p><u>Description:</u> This course provides students with knowledge of ohms law, energy, power, series and parallel circuits, and magnetism and electromagnetism. The course provides relevance to circuits and applications and delivers the material via a systems approach combined with electronic theory. Complex arithmetic is not required for this course.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS104	Analog Circuits I	<p><u>Description:</u> This course provides students with knowledge and application of diodes and transistors. The course provides relevance to circuits and applications and delivers the material via a systems approach combined with electronic theory. Complex arithmetic is not required for this course</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS105	Analog Circuits II	<p><u>Description:</u> This course provides students with knowledge and application of operational amplifiers and measurement and control devices and circuits. The course provides relevance to circuits and applications and delivers the material via a systems approach combined with electronic theory. Complex arithmetic is not required for this course</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS108	CET Certification Preparation	<p><u>Description:</u> This course enhances the skills and knowledge of electronics technicians and students in electronics to a level commensurate with success on the Associate Level Certified Electronics Technician exam</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS201	Telecommunications Network C..	<p><u>Description:</u> This course provides students with the skills necessary to take and pass industry certification exam for Network Cabling Specialist. Students train in termination, testing and troubleshooting copper based network to include twisted pair and coaxial cabling systems. Instruction includes lecture and lab on various pin, jack and termination block configurations. All construction and testing will conform to industry standards and specifications</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS202	Fiber Optics	<p><u>Description:</u> Applications of fiber optics, including telecommunications, CATV and computer networks, focusing on the technology, the components and their installation are covered in this course. Students utilize fiber specific equipment to learn and apply the fiber technology and perform fiber termination and testing</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ECS203	FCC Licensure Prep I	<p><u>Description:</u> Students prepare for Element 1 of the General Radiotelephone Operator License as issued through the Federal Communications Commission. Element 1 exam consists primarily of basic radio law and operating practices questions. Student s who pass Element 1 will receive their Marine Radio Operators Permit</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS204	FCC Licensure Prep II	<p><u>Description:</u> Students prepare for Element 3 of the General Radiotelephone Operators License as issued through the Federal Communications Commission. This exam consists of radio, electronic circuits, signals and emissions questions. Students who pass Elements 1 and 3 will receive the GROL License. Students must have knowledge in electronics and electronic communications as a prerequisite to the class</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS205	Wireless/ RF Communications	<p><u>Description:</u> This course provides overview of wireless applications, advantages and disadvantages of wireless systems. Introduction to wireless data transmission techniques and standards overview. Simplified, but in-depth look at antennas and their role in successful implementation of a wireless data communications system</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS206	Wireless Personal Area Networks	<p><u>Description:</u> Personal, short distance area wireless networks for interconnecting devices centered around a workspace or home is explored. WPANs address wireless networking and mobile computing devices such as PC's, PDA's, peripherals, cell phones, pagers and consumer electronics. Short range wireless data communications technologies including, infrared, Bluetooth, and ZigBee, RFid, WiMedia and Ultra wide band are introduced</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS207	Wireless Local Area Networks	<p><u>Description:</u> This course examines the fundamentals of various 802.11 wireless standards including frequency bands, bandwidth, data rate, and applications. Topics include WLAN components such as NICs, access points, standards, operations and modulation technologies used to enable communication between devices in a limited area</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS208	Wireless Broadband Networks	<p><u>Description:</u> The fundamentals of medium and long range wireless communications from infrared free-space optics to WiMax, cellular and satellite technologies are covered in this class. Additional technologies studied include local multipoint and multichannel multipoint distribution services used in high speed Internet access, multimedia file transfer, remote access to local area networks and telephone services</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS210	Introduction to RF Communications	<p><u>Description:</u> Students are introduced to wireless RF communications concepts such as radio wave propagation, wavelength, frequency, bandwidth, and signal analysis</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS211	Amplitude Modulation	<p><u>Description:</u> Amplitude modulation principles are introduced to RF communications systems. Studies focus on fundamentals of AM transmitters and receivers including measurements with oscilloscope and spectrum analyzer</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ECS212	Single Sideband and Frequency Modulation	<p><u>Description:</u> Single sideband and frequency modulation principles are introduced to RF communications systems. Studies include principles of modulation, demodulation, transmitters and receivers</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 30   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS213	Transmission Lines and Antennas	<p><u>Description:</u> No communications system is complete without a media to transmit information. Types of transmission lines discussed are twisted pair, coaxial, ladder line, and waveguides. Curriculum includes principles of electromagnetic propagation, antenna theory, RF radiation and safety</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS214	Microwave, Telephony, and Cellular	<p><u>Description:</u> This course focus is on microwave, radar communications systems, circuits and transmission methods. Students learn how land line telephone and cell phone systems work. Additional wireless telephony operations to include AMPS, PCS, CDMA, GSM and TDMA</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS215	Data and Networking Fundamentals	<p><u>Description:</u> Studies include basics of data communications and networking fundamentals and topologies, networking hardware and media, LAN's, MAN's and WANs, the seven-layer OSI model and its application, Internet protocol (IP) and MAC addressing concepts, and additional protocols such as TCP, UDP, DHCP and ARP</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS216	Advanced Communication Principles	<p><u>Description:</u> Communications technologies change and advance to meet the desires of an information hungry society. Technologies such as global positioning systems (GPS), fiber optic and laser technology are just some of the methods used to deliver information such as data, video and more which are introduced in this course</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS230	Telecommunications Lab	<p><u>Description:</u> Students are introduced to telecommunication systems describing the circuits and components contained, including telephone, cellular, and satellite systems and processes. Students will utilize a laptop computer, and a computer aided instruction online platform to complete training.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 0   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS231	Radio Communications Lab	<p><u>Description:</u> This lab class teaches the theory of operation, troubleshooting, and repair of standard AM/FM broadcast band receivers and AM/SSB/NBFM communications transceivers. Students will utilize laptop computer, computer aided instruction online platform, electronic experiment cards and industry recognized test equipment to complete training.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 0   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS232	Microwave Fundamentals Lab	<p><u>Description:</u> Students are introduced to microwave systems, waveguide theory, microwave devices and antennas. Students will utilize laptop computer, computer aided instruction online platform, electronic experiment cards, antennas, waveguide and reflectors, and industry recognized test equipment to complete training.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 0   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
ECS233	Signals Processing Lab	<p><u>Description:</u> This lab class teaches the theory of operation, troubleshooting, and repair of various signal processing and modulation techniques to include Time Division Multiplexing, Pulse Code Modulation, Frequency Division Multiplexing, Frequency Shifty Keying Modulation and Phase Shift Keying Modulation. Students will utilize laptop computer, computer aided instruction online platform, electronic experiment cards and industry recognized test equipment to complete training.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS249	Job Search and Preparation	<p><u>Description:</u> This course his course is a practical guide to resume preparation and job search. Students will complete various job preparation/job search assignments including a descriptive summary, resumes, cover letter, performance planner, and review questions likely to be asked at an interview.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS290	Independent Study I	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the acheivement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 3-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20-100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS291	Independent Study II	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the acheivement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 3-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 60-100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECS296	Work Based Learning Experience	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1-9 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EDUC&115	Child Development	<p><u>Description:</u> Build a functional understanding of the foundation of child development, prenatal to early adolescence. Observe and document physical, social, emotional and cognitive development of children, reflective of cross cultural and global perspectives.(Birth to age 8)</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EDUC&130	Guiding Behavior	<p><u>Description:</u> Examine the principles and theories promoting social competence in young children and creating safe learning environments. Develop skills promoting effective interactions, providing positive individual guidance, and enhancing group experiences.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EDUC&136	School Age Care	<p><u>Description:</u> Develop skills to provided developmentally appropriate and culturally relevant activities and care, specifically: preparing the environment, implementing curriculum, building relationships, guiding academic/social skill development, and community outreach.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
EDUC&150	Child, Family and Community	<p><u>Description:</u> Integrate the family and community contexts in which a child develops. Explore cultures and demographics of families in society, community resources, strategies for involving families in the education of their child, and tools for effective communication.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 30 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EDUC&203	Exceptional Child	<p><u>Description:</u> An introductory course in understanding educational programs and state and federal laws regarding the education of children with special needs. Working with the child, family, and supportive community/educational agencies and the implications of the American's with Disabilities Act (ADA) for Early Education Programs is also included. (Birth to age 8).</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST101	Electrical Safety	<p><u>Description:</u> This course is an introduction to safety practices required when working in the electronic equipment environment. It also provides electrical safety for high power devices and safety in electronics assembly and working in the electronic equipment industry.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST102	Applied Math	<p><u>Description:</u> This course is an introduction to mathematical theory and applications as they relate to the electronic circuits and the electronic equipment field. The math involves algebra, trigonometry, complex numbers, and number systems such as engineering notation.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST103	Electronics Principles I	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic DC electronic circuits. Basic DC principles, principles of electricity, components, circuit measurements, electronic equipment such as oscilloscopes, multimeters, waveform generators, and DC power supplies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST104	DC Electronics	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic DC electronic circuits with the use of electronic measurement and lab procedures. Topics include Ohm's law, series and parallel circuits, circuit analysis techniques, and magnetism. We use MultiSim software as part of the lab assignments along with using proto board to build DC circuits</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST105	AC ELECTRONICS	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic AC electronic circuits with the use of electronic measurement and lab procedures. Topics include measurement of AC circuits, inductors and transformers, RL circuits, capacitors, RC circuits, RLC circuits, and frequency response and passive filters. Lab assignments include building AC circuits using function generators with passive components and using simulation software to build circuits</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST106	RLC CIRCUITS	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of the reactance of the inductor and the capacitor in the AC circuit. Introduction to vectors, complex numbers, resistive-inductive, resistive-capacitive, and resistive-inductive-capacitive circuits. It also covers inductive-capacitive circuit and resonance circuits.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
EEST107	Electronics Principles II	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic AC electronic circuits as it applies to Ohm's Law and the understanding of basic transformer operation. Topics include measurement of AC circuits, inductors and transformers, RL circuits, capacitors, RC circuits, RLC circuits, and frequency response, and passive filters. This course also covers RL and RC circuit for pulse response and time constants.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST108	Electronic Devices I	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic amplifiers and transistors. Topics include diodes, operation and biasing circuits, BJT amplifiers including types of amplifiers, Class A and B amplifiers, FET amplifiers including JFET, MOSFET, CMOS amplifiers.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST109	Electronic Devices II	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of basic electronic devices: such as Diodes, Transistors, SCR, Triac, and FET. Other devices such as operational amplifiers, active filters, oscillators, switching circuits, voltage regulators, thyristors are also covered.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST110	Introduction to Programmable Logic Controllers	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of programmable logic controllers with emphasis on applying and using ladder logic programming. Topics include hardware components, number systems, fundamentals of logic, basic PLC programming using ladder logic, timer &amp; counter instructions, control instructions, data manipulation &amp; math instructions, sequencer &amp; shift register instructions. Lab includes using Allen-Bradley MicroLogicx 1000 to build ladder logic programs to perform basic tasks.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST206	Emerging Technologies	<p><u>Description:</u> This course is an introduction and an exploration of emerging technology for example; the internet of things, augmented reality, brain interfaces, microchip implant, magnetic refrigeration, wireless charging, among others. Course content may vary according to technology advances. Students will choose their topic of interest for a research and presentation project.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST207	Introduction to Networking	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of networking including IP addressing, network architectures, layers, and protocols.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST208	Introduction to Embedded Controllers	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of embedded controllers using PIC or other processors and C programming language.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST210	Capstone Project	<p><u>Description:</u> This course offers students an opportunity to work on a final project that is a culmination of the theory presented during the student time in the program. The project is determined by both the instructor and student and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
EEST221	Electronic Principles -RFID	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of RFID Technology. Topics include RFID system lifecycle, frequency ranges, antennas, tags and interrogators and applications</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST222	Introduction to Fiber Optic Communications	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of Fiber Optics, Electronic Communications and basic antenna systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST223	Introduction to Digital Systems	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of digital systems including number systems, Boolean algebra, combinational logic, and digital logic.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST224	Introduction to Wireless Communications	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of Wireless Communications including modulation techniques, error correcting codes, cellular systems, and wireless LAN.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
EEST225	Introduction to Microprocessors	<p><u>Description:</u> This course is an introduction to the theory and fundamentals of Microprocessors including digital signal processing and conversion methods.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON101	Introduction to Electrical Construction	<p><u>Description:</u> This course is an introduction to the Electrical Construction field. Occupationally specific safety guidelines and standards are emphasized</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON102	Applied Physical Science	<p><u>Description:</u> Introduction to the physical sciences as they apply to the electrical field: electrical theory, Ohms law and the relation of current, resistance and voltage</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON103	Hand and Power Tools	<p><u>Description:</u> Students are introduced to tools, equipment and processes common to the electrical industry. The safe operation and care of hand and power tools is emphasized</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ELCON104	Electrical Service Installation	<p><u>Description:</u> Students install basic service components. Students will install load centers, over current protection devices and terminate wires</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON105	Electrical Components	<p><u>Description:</u> Students select the proper size load centers, conductor sizes for the load centers and select the proper size over current protective devices needed</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON106	Introduction to Residential Wiring	<p><u>Description:</u> This is an introduction to the field of residential wiring methods, materials and basic techniques needed for residential wiring</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON107	National Electric Code	<p><u>Description:</u> The national electric code and its application to the safe installation of electrical conductors, devices and utilization equipment</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON108	NFPA 70E Standards	<p><u>Description:</u> This course offers a comprehensive study of NFPA 70E Standards and its safety application to the electrical field</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON109	Residential Design	<p><u>Description:</u> Practical application of National and regional electrical codes as they apply to residential buildings</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON110	Residential Wiring Techniques	<p><u>Description:</u> This is a continuation of ELCON 106 learned concepts. An advanced class on residential wiring techniques such as advanced planning, conductor sizing, special tool usage, the electrical bidding permitting process</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON111	Systems Troubleshooting	<p><u>Description:</u> In this course students apply basic troubleshooting techniques used in residential buildings</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ELCON112	Introduction to Blueprint Reading	<p><u>Description:</u> This course introduces students to basic concepts of blueprint reading with emphasis on terminology, symbols, and lines commonly found on electrical schematics and plans</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON113	Blueprint Reading Applications	<p><u>Description:</u> A continuation of the concepts introduced in ELCON 112, students learn to interpret prints found in a set of construction drawings and understand their relationship to various electrical installations</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON114	New Residential Technologies	<p><u>Description:</u> At the completion of this course students will learn about applying the NEC to Photovoltaic Designs and the basic principles of wireless components, Energy Management systems, and Green Wiring practices in Residential installations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON201	Specialty Tools	<p><u>Description:</u> Students operate common electrical field specialty tools including a variety of power tools, testing and measurement equipment, and commercial and industrial equipment</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON202	Commercial Wiring	<p><u>Description:</u> This course is an introduction to Commercial wiring</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON203	Commercial Codes and Regulations	<p><u>Description:</u> Students learn the basic national and local electrical codes pertaining to commercial buildings.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON204	Commercial Material Identification	<p><u>Description:</u> This course is an introduction to commercial specific construction materials</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON205	Commercial Installation	<p><u>Description:</u> Installation standards specific to commercial buildings</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ELCON206	Industrial Wiring	<p><u>Description:</u> This course is an introduction to the field of Industrial wiring</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON207	Industrial Material Identification	<p><u>Description:</u> This course introduces students to industrial specific construction materials</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON208	Industrial Installation	<p><u>Description:</u> This course is an introduction to Installation standards specific to industrial standards</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON209	Industrial Hazards	<p><u>Description:</u> Students are introduced to industrial specific safety hazards and techniques to avoid them</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON210	Motors and Controllers	<p><u>Description:</u> Introduction to electrical motors and the various ways motors are started, stopped and controlled for electrical installations</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON211	Project Estimation	<p><u>Description:</u> Basics of jobsite estimation including material estimation, labor and time management</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON212	Control Circuits	<p><u>Description:</u> Students replicate how and why various ways motors can be controlled.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON213	Motors and Controllers Applications	<p><u>Description:</u> In this course students replicate techniques to build wire and troubleshoot various motors</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ELCON214	Transformers	<p><u>Description:</u> Students follow basic knowledge of electrical transformers, why they are needed, how to install them and basic working knowledge of electrical transformation</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON215	Advanced Motor Controls	<p><u>Description:</u> This course covers advanced techniques to motor control such as variable frequency drives and programmable logic.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON216	New Technology Commercial	<p><u>Description:</u> At the completion of this course students will be able to apply the NEC to Photovoltaic Designs and the basic principles of wireless components, Energy Management systems, and Green Wiring practices in Commercial installations.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON220	Advanced Projects I	<p><u>Description:</u> Students have the opportunity to work independently on an electrical construction project that is determined by both the instructor and student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 10 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 200 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON221	Advanced Projects II	<p><u>Description:</u> Students have the opportunity to work independently on an electrical construction project that is determined by both the instructor and student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 10 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 200 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON222	Advanced Projects III	<p><u>Description:</u> Students have the opportunity to work independently on an electrical construction project that is determined by both the instructor and student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 10 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 200 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ELCON223	Advanced Projects IV	<p><u>Description:</u> Students have the opportunity to work independently on an electrical construction project that is determined by both the instructor and student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 10 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 200 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGL&101	English Composition I	<p><u>Description:</u> An expository written communication course emphasizing critical thought, reflective reading, and information literacy with attention to rules and conventions of standard American English.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
ENGL&235	Technical Writing	<p><u>Description:</u> Advanced written communication for technical and business purposes based on higher level researching of technical information, organizing data, and writing abstracts, studies and detailed business communications. Requires a formal report using prescribed guidelines, including front and back matter</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR191	Engineering Technology Study Lab I	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the first quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. College navigation topics, including financial aid, workforce funding, childcare, library services. Soft skill topics of "coping with pressure" and "decision making".</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR192	Engineering Technology Study Lab II	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the second quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. Create a social media profile that is geared towards employment. Soft skill topics of "drive for excellent results" and "cooperative teamwork"</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR191 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR193	Engineering Technology Study Lab III	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the third quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. Cover letters, resume, and related employment documents prepared. Complete mock interviews and receive feedback. Soft skill topics of "initiative" and "flexibility".</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR192 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR194	Engineering Technology Study Lab IV	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the fourth quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. Apply for internships, attend local networking or online gatherings. Participate in industry related discussions either through discussion groups or social media. Soft skill topics of "influential communication" and "continuous learning".</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR193 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR195	Engineering Technology Study Lab V	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the fifth quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. Complete applications to transfer colleges or employers. Soft skill topics of "decision-making" and "strategic vision".</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR194 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR196	Engineering Technology Study Lab VI	<p><u>Description:</u> Students meet with their cohort once a week in a lab setting for personalized support from instructors to complete contextualized projects spanning the sixth quarter's engineering coursework. Additional career preparation training and resources will be provided as students progress toward graduation. Use feedback and finalize resumes, cover letters, polished social media presence. Soft skill topics of "planning and organizing" and "integrity and respect".</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR195 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR&111	Engineering Graphics I	<p><u>Description:</u> This course is designed for students enrolled in an engineering program who need to learn the basic concepts of engineering graphics. Topics include two dimensional CAD use of lettering, scale, geometric construction, drawing layout, orthographic or multiview drawings and dimensioning. This course also introduces the concepts of 3-D Computer aided Drafting (CAD) solid modeling design and its application to engineering drawing.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ENGR&112	Engineering Graphics II	<p><u>Description:</u> This course is an introduction to basic dimensioning techniques using mechanical orthographic, architectural plans, and civil plat drawings. Students will create manufacturing and construction drawings using industry level dimensioning techniques relating to mechanical architectural and civil disciplines applying ASME and AIA standards. This course also introduces the concepts of 2D and 3D Computer Aided Design (CAD) and its application to engineering drawing. AMATH 170 (as pre or corequisite), ENGR&amp; 111 (as a pre or corequisite), or instructor permission.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGR&214	Statics	<p><u>Description:</u> A fundamental course in the mechanics of rigid bodies in static equilibrium conditions. Solves practical engineering problems involving the loads carried by structural components using Static principles, vector notation and calculus for mathematical modeling. Teaches principles and their limitations within the context of Engineering applications and the engineering design process. Students must take MATH&amp;153 (as pre or corequisite), PHYS&amp;223 (as a pre or corequisite), or instructor permission.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> Physics&amp;122 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETECH103	AC Circuits	<p><u>Description:</u> This course provides students with knowledge of alternating current and voltage, capacitors. Capacitive circuits, inductors, inductive circuits, resonance, transformers and reactive circuits. The course provides relevance to circuits and applications and delivers the material via a systems approach combined with electronic theory. Complex arithmetic is not required for this course.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETECH105	Digital Circuits	<p><u>Description:</u> This course provides students with knowledge and application of digital principles and circuits. The purpose of the course is to teach principles of digital electronics. The material covers a variety of topics including Boolean algebra, basic gates, logic circuits, flip-flops, registers, arithmetic circuits, counters, interfacing with analog devices, and computer memory. Complex arithmetic is not required for this course</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETECH106	Microcontrollers	<p><u>Description:</u> The course is an introduction to the fundamentals of microcontroller-based systems, including applications, architecture, number systems, and languages</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC120	CAD Design Applications	<p><u>Description:</u> Students use Autodesk Revit Architectural Fundamentals to produce engineering drawings. Emphasis is placed on understanding the purpose of building information (BIM), creating levels, using 3D modeling with walls, curtains, windows, and doors. This course streamlines the design process through the use of a central 3D model, where changes made in one view update across all the views.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC121	Technical Communications with Lab	<p><u>Description:</u> A study written and oral communication techniques to develop necessary skills to write and plan technical formatted documents. Students will learn skills to write resume and cover letters. This course emphasizes on the skills employees demand in today's workforce such as thinking, listening, composing, revising and editing. This course features an engaging learning style where student use real-world models and write-to-learn activities to expand oral presentations and research based projects.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC128	Electrical Math	<p><u>Description:</u> This course focuses on electronic formulas and solutions. Resistance of wires, types, and sizes are applied to voltage drop calculations, transformers, and meter movements. The course focuses on both DC and AC theories including the atom structure, energy sources, Ohm's Law, Kirchhoff's laws, network theorems, magnetism, electromagnetism, alternating voltage and current, and reactivate components. Laboratory application assignments will be completed using simulations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ETRIC147	Code Applications	<p><u>Description:</u> comprehensive overview of the latest National Electrical Codes recognized by the industry. The primary function of the purpose of the NEC codes to safeguard people and property against electrical hazards. This course covers branch circuits and feeders, load calculations, electrical services, conductors and overcurrent protection, grounding and wiring methods, and the wiring materials, raceways and boxes, motors, generators, and transformers.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC148	Electrical Systems with Simulation	<p><u>Description:</u> Commercial project development, design team concepts are emphasized. Basic power devices, circuiting layout, overcurrent devices, raceways, and luminaries are covered. Transmission lines, distribution voltage systems, load characteristics, short-circuit calculations, and load demands are discussed.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC234	CAD Design Applications	<p><u>Description:</u> CAD is used to draw electrical diagrams and schedules. Students learn how to read floor plans, plot plans, elevations, power, lighting plans and make changes as necessary. Interpretation of symbols, notes, and legends are learned.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> ETRIC225 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC249	Project Management	<p><u>Description:</u> This course covers elements of management as related to electrical engineering projects, responsibilities of project managers, on-site representatives, engineers and inspectors; the concepts of developing the project team approach. Students should be able to perform planning and scheduling tasks related to construction contracts, and the various functions of the project process.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC250	Senior Project	<p><u>Description:</u> Electrical engineering system planning, analysis and creative design, problems formulation, recognition of need, design constraints and requirements, feasibility assessment, and design of electrical engineering systems. Oral presentations and written report are required. Project I and II aim to broaden student's concepts of engineering planning, analysis design with emphasis on the design process. The objective of this course is to formulate analyze and solve electrical engineering problems through creative thinking, engineering education and using the principles of technical and professional practices. Students will apply the foundational knowledge and skills form the science and engineering principles.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0..</p>
ETRIC251	Physics for Engineers with Lab	<p><u>Description:</u> Topics covered include basic electricity, electromagnetism, oscillations, vectors, motion, magnetism, energy and force. A hybrid course that requires face-to-face weekly meetings with instructor to measure student progress in a laboratory environment.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC260	Advanced CAD Operations	<p><u>Description:</u> CAD systems, including 3D concepts, are used to produce engineering drawings using layers, masks, and groups. symbols and x-references are applied.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0 <u>Prerequisites:</u> ENGR&amp;111, ENGR&amp;112 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC291	Practical Applications	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20-360 <u>Field-base experience</u> 0 <u>Prerequisites:</u> None <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
ETRIC296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> None <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ETRIC297	Work-Based Learning Seminar	<p><u>Description:</u> Students enroll in a work-based learning seminar min order to receive an orientation to the work-based learning experience. Faculty meet with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM101	Safety Principles	<p><u>Description:</u> This course is an introduction to the safety practices and procedures as required by state and federal standards for building maintenance</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM102	Fundamentals of Electricity	<p><u>Description:</u> This course is an introduction to the fundamentals of electricity and their application to the building maintenance industry: Ohm's law, basic circuitry fundamentals, electrical troubleshooting and the National Electrical Codes are studied</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM103	Electrical Service	<p><u>Description:</u> Students troubleshoot, test, maintain, and repair electrical services within a building. Electric motors, controls, PLCs, and test equipment are studied</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM104	Introduction to Blueprint Reading	<p><u>Description:</u> Students read, interpret, and create graphic drawings including building and machine blueprints, technical sketching, and working drawings. Trade math is also studied</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM105	Engineering Drawings	<p><u>Description:</u> A continuation of the concepts introduced in FACM 104, students creates commercial plans: plot, floor, elevation, sections, and plan details</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM106	Introduction to Hydraulics/Pneumatics	<p><u>Description:</u> This course is an introduction to basic fluid power, and the application of hydraulic principles to the building maintenance field. Hydraulic systems, circuits, and efficiency are studied</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
FACM107	Machine Components	<p><u>Description:</u> This course is an introduction to industrial maintenance of machine components including predictive and preventive maintenance, lubrication requirements, vibration analysis, and close tolerance dimensioning</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM108	Mechanical and Machine Maintenance	<p><u>Description:</u> Students follow processes used to maintain centrifugal, rotary, and reciprocating pumps, gears, and compressors, and other mechanical devices. Maintenance scheduling, computerized maintenance management systems and computer-generated repair strategies are studied</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM109	Tools and Equipment	<p><u>Description:</u> This course is an introduction to the tools and equipment used in the building maintenance occupation. The safe use, maintenance, and storage of a variety of tools and equipment are emphasized. Stationary, hand, and power tools are used</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM111	Building Maintenance and Repair Methods	<p><u>Description:</u> The maintenance, repair, and minor remodeling techniques for structures and the non-mechanical elements of a building complex are emphasized. Doors, windows, stairs, walls, siding, roofing and all other aspects of building maintenance are discussed</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM112	Basic Refrigeration	<p><u>Description:</u> This course is an introduction to basic refrigeration cycles and components. Mechanical compression systems, absorption systems and troubleshooting techniques are discussed</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM113	Introduction to Building Maintenance	<p><u>Description:</u> Students are introduced to the basic maintenance and repair methods used in the building maintenance profession</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM121	Grounds Keeping	<p><u>Description:</u> Students select and use proper equipment for maintaining turf, shrubs, and plants. Irrigation system design, installation and repair, basic asphalt and concrete maintenance are studied</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM122	HVAC Systems	<p><u>Description:</u> This course is an introduction to the fundamentals of heating and air conditioning systems with emphasis on the adjustment of air flow, indoor air quality, troubleshooting of minor problems, and preventive maintenance methods are studied</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
FACM140	Boiler Operations and Certifications	<p><u>Description:</u> This course is an introduction to the basic principles of low and high-pressure steam boiler systems with emphasis on routine operation, maintenance, and emergency procedures. Upon successful completion of the coursework, students may test for certification as a Class V Boiler Operator/Fireman</p> <p><u>Credits:</u> 12 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 180 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM143	Advanced Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student to be viable and industry related. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM144	Advanced Boiler Operations	<p><u>Description:</u> Students follow advanced boiler methods of low and high-pressure steam boiler systems with emphasis on routine operation, maintenance, and emergency procedures. Upon successful completion of the coursework, students may test for certification as a Class IV Boiler Operator/Fireman</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM221	Small Business Planning	<p><u>Description:</u> Students review light residential and commercial design and remodeling methods including the bidding process. Energy auditing, building code requirements, deconstruction, sustainable retrofit and updates to the building environment are researched</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM222	Introduction to Remodeling	<p><u>Description:</u> Students review light residential and commercial design and remodeling methods including the bidding process. Energy auditing, building code requirements, retrofit, and updating the built environment are researched</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM230	Computers in Industry	<p><u>Description:</u> Students are introduced to the use of computers in maintenance management with the use of basic computer programs</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM231	Computer Applications	<p><u>Description:</u> Students create preventive maintenance schedules using a spreadsheet application with mainstream applications utilized by maintenance technicians. Students use common programs for research, cost analysis, scheduling, tracking and reporting. They also use common computer applications to communicate, build, and share maintenance-related coursework</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM292	Independent Project I	<p><u>Description:</u> The independent project I course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
FACM293	Independent Project II	<p><u>Description:</u> The independent project II course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM294	Independent Project III	<p><u>Description:</u> The independent project III course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM296	Work-Based Learning Experience I	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FACM297	Work-Based Learning Experience II	<p><u>Description:</u> This course provides a work-based learning experience with an instructor-approved employer in student's program of study. Emphasis is placed on integration of classroom learning with related work experience. Specific learning outcomes need to be agreed upon in a written agreement between student, instructor, and participating employer. Upon completion, students should be able to evaluate their career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> INSTR PERM REQ <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES101	Orientation to Fire Service	<p><u>Description:</u> This course is an introduction to the history, evolution, organization, and traditions of the fire service</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES102	Firefighter Safety	<p><u>Description:</u> This course provides a foundation of knowledge regarding the significant risks associated with the fire service and a look at the common causes of injuries and death faced by today's firefighter. This course also provides students information on the various personal protective equipment available to firefighters, and principles of Critical Incident Stress Management</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES103	Fire Service Applications I	<p><u>Description:</u> In this course students apply the theory presented in lecture/lab and demonstrates performance standards</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES104	Physical Fitness I	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
FIRES105	Introduction to Fire Science	<p><u>Description:</u> This course introduces students to the science of fire: the exothermic oxidation of a combustible substance, fire behavior and suppression methods and how ventilation affects the growth of fire</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES101, FIRES102, FIRES103, FIRES104, FIRES106 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES106	Fire Hose and Appliances	<p><u>Description:</u> This course introduces students to the care, maintenance, and use of fire hose, hose tools, and associated appliances. Students also identify the key components of municipal and rural water supply systems</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES107	Fire Service Applications II	<p><u>Description:</u> Students apply the theory presented in lecture/lab and demonstrate performance standards</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES101, FIRES102, FIRES103, FIRES104, FIRES106 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES108	Physical Fitness II	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES101, FIRES102, FIRES103, FIRES104, FIRES106 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES109	Ladders	<p><u>Description:</u> This course covers the various types of portable and mounted ladders used in the fire service. Students' identify the uses of ladders on the fire scene, various methods for placement, and maintenance of ladders while suppression operations are in progress</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES101, FIRES102, FIRES103, FIRES104, FIRES106 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES110	Intermediate Fire Service	<p><u>Description:</u> During this lesson, students identify how common building materials and construction methods are impacted by fire, how to force entry into a structure or structural components, how to apply loss control knowledge and practices, and how to properly select, use, and correctly maintain portable fire extinguishers</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES105, FIRES107, FIRES108, FIRES109 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES111	Fires Service Applications III	<p><u>Description:</u> Students apply the theory presented in lecture/lab and demonstrate performance standards</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES105, FIRES107, FIRES108, FIRES109 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES112	Physical Fitness III	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES105, FIRES107, FIRES108, FIRES109 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
FIRES121	Wildland Firefighter	<p><u>Description:</u> This course introduces students to wild land fire behavior, tactics, the 10 standard fire-fighting orders, and the 18 “watch out” situations found in wild-land situations. The course includes elements of S-130 and S-190, and includes an arduous Pack Test and fire shelter deployment which leads to wild-land Red-Card certification</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES105, FIRES107, FIRES108, FIRES109      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES123	Fire Service Applications IV	<p><u>Description:</u> In this course students apply the theory presented in lecture/lab and demonstrates performance standards</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES110, FIRES111, FIRES112, FIRES121, FIRES125      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES124	Physical Fitness IV	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES110, FIRES111, FIRES112, FIRES121, FIRES125      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES125	Fire Vehicle Operations	<p><u>Description:</u> This course provides the Knowledge required for the safe operation and maintenance of emergency vehicles. The proper operation of fire pumps, the roles and responsibilities of the driver/operator, and the theory and principles behind water flow and calculations are included</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES105, FIRES107, FIRES108, FIRES109      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES201	Rescuer Procedures	<p><u>Description:</u> Students identify the techniques used to rescue civilians and fire service personnel in various rescue situations, Thermal imaging principles, and the use and care of ropes and webbing</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES110, FIRES111, FIRES112, FIRES121, FIRES125      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES202	Advanced Fire Service	<p><u>Description:</u> This course describes the role of a Firefighter I in the development and implementation of fire and life safety programs, external and internal communications, and the investigative process of a fire’s cause and origin</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES110, FIRES111, FIRES112, FIRES121, FIRES125      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES203	Fire Service Applications V	<p><u>Description:</u> Students apply the theory presented in lecture/lab and demonstrates performance standards</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES204	Physical Fitness V	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
FIRES206	Employment Preparation	<p><u>Description:</u> Students are introduced to emergency service professionals' career ladder structures. They also apply a variety of job search skills necessary to gain employment in the fire service</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES207	Strategy, Tactics, and Incident Management	<p><u>Description:</u> Students are introduced to the National Fire Protection Association Incident Management System at the intermediate level (NIMS). Fire Ground Tactics and Strategies are also included</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES208	Fires Service Applications VI	<p><u>Description:</u> Students apply the theory presented in lecture/lab and demonstrate performance standards</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES209	Basic Life Support	<p><u>Description:</u> The course is designed to provide a wide variety of healthcare professionals the ability to recognize several life-threatening emergencies, provide CPR, use an AED, and relieve choking in a safe, timely, and effective manner. The course is intended for certified or noncertified, licensed or non-licensed healthcare professionals</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES212	Advanced Firefighter	<p><u>Description:</u> Students are introduced to the minimum requirements established by the National Fire Protection Association for Firefighter II certification. Topics to be presented include IMS, foam ops, and auto extrication</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES213	Physical Fitness VI	<p><u>Description:</u> Throughout their training, students acquire the physical strength and stamina required of the profession. Each physical fitness course builds upon the levels previously achieved by the student</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES215	Hazardous Materials I	<p><u>Description:</u> This course emphasizes the knowledge required to identify NFPA 472 Awareness Level standards for the first responders to hazardous materials incidents. Students define how to use the Emergency Response Guidebook for responders to hazardous materials incidents</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES110, FIRES111, FIRES112, FIRES121, FIRES125 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES216	Hazardous Materials II	<p><u>Description:</u> This course emphasizes the knowledge required to identify NFPA 472 Operations Level standards for the first responders to hazardous materials incidents. Students set up decontamination procedures for responders to hazardous materials incidents</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES123, FIRES124, FIRES201, FIRES202, FIRES215 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
FIRES220	Fire Service Applications VII	<p><u>Description:</u> Students apply the theory presented in lecture/lab and demonstrates performance standard</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES222	Advanced Pump Operations	<p><u>Description:</u> The student studies the proper operation of fire pumps, the theory, and principles behind water flow and calculations that are applied on the fire ground. Also taught are drafting and fire pump testing as well as foam operations. Completion of Fire Vehicle Operations and Advanced Pump Operations qualify the student to attain IFSAC certification for Driver Operator Pumper</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES225	Emergency Medical Technician (EMT)	<p><u>Description:</u> This course prepares students to meet the requirements for employment as an EMT-B. It adheres to the U.S. Department of Transportation Guidelines and the Washington State Department of Social and Health Services standards</p> <p><u>Credits:</u> 14 <u>Course Length:</u> 11 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> FIRES203, FIRES204, FIRES206, FIRES207, FIRES208, FIRES216 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES230	Fire Protection Strategies and Tactics	<p><u>Description:</u> This course examines strategies decision and tactical operations guiding students through the process of problem identification and solution response.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES231	Fire Protection Systems	<p><u>Description:</u> This course familiarizes fire service and other interested personnel with the types, arrangements, and operating principles of systems to address fire detection and alarm systems, smoke management systems, water supply, fire pumps, automatic sprinkler systems, standpipe and hose systems, special extinguishing systems, and portable fire extinguishers.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES232	Fire Protection Hydraulics	<p><u>Description:</u> This course provides basic foundational topics in fire department hydraulics, explaining how and why water is discharged from nozzles at the correct pressures to effectively fight fires</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES233	Building Construction	<p><u>Description:</u> This course emphasizes the impact that and understanding of the principles of building construction has on firefighting strategy.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES234	Codes and Inspections	<p><u>Description:</u> This course educates students about the principles and techniques of fire prevention and life-style inspection and code compliance.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
FIRES240	Fire Instructor	<p><u>Description:</u> Students are introduced to the National Fire Protection Association Standard #1041 “Professional Qualifications for Fire Service Instructors” at the Instructor I level</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES241	Fire Safety Office	<p><u>Description:</u> Students are introduced to health and safety issues of the Fire Service. Included are risk management; workplace safety; and health, wellness, and safety program</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES242	Fire Officer I	<p><u>Description:</u> Students are introduced to the National Fire Protection Association standard 1021 Standard for Fire Officer Professional Qualifications, for Fire Officer I. Organizational Structure, Leadership and Supervision is also included</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
FIRES243	Fire Officer II	<p><u>Description:</u> Students are introduced to the National Fire Protection Association standard 1021 Standard for Fire Officer Professional Qualifications, for Fire Officer II. Human Resources Management, Fire Origin and Cause Determination is also included</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR110	Introduction to Hearing Professions	<p><u>Description:</u> This course focuses on the role of professionals dealing with hearing healthcare and the role of the hearing aid specialist within the healthcare system. Students investigate the different work settings and delivery models that are available in their desired work community</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR111	Safety Practices	<p><u>Description:</u> This course introduces universal and personal safety hygiene in the hearing clinic as well as state required 4 hours of AIDS/HIV training and blood borne pathogens. Students are expected to comply with personal and universal precautions in the educational and clinical settings.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR112	Acoustics	<p><u>Description:</u> Students learn the basics of sound production and sound amplification as it applies to human hearing and the manipulation of sound to improve hearing.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR113	Hearing Assessment I	<p><u>Description:</u> Students identify key components of patient centered case history and practiced in the classroom setting. Basics of otoscopy and standard pure tone testing are demonstrated and practiced in the classroom</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
HEAR120	Anatomy and Physiology	<p><u>Description:</u> Normal anatomy and physiology of the human ear and related structures are discussed as it pertains to hearing.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR121	Instrumentation	<p><u>Description:</u> This course is designed to introduce the student to the different equipment and tools that are used in the industry and state requirements for maintenance and calibration.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR122	Hearing Assessment II	<p><u>Description:</u> Prerequisite: Hearing Assessment I; Student will continue to refine techniques learned in Hearing Assessment I. Speech audiometry with effective masking and tympanometry will be demonstrated and practiced in the lab setting.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR130	Disorders of the Auditory System	<p><u>Description:</u> Common medical pathologies that affect the ear and hearing are described and discussed with emphasis on otologic conditions that require medical referral by state and federal law</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR131	Hearing Aids I	<p><u>Description:</u> The history of hearing aids and the development of technology and hearing aid components are discussed. Students learn how different hearing aid technologies can affect patient outcomes. Techniques for making impressions for custom ear molds and hearing aid shells are introduced</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR132	Audiometric Interpretation I	<p><u>Description:</u> Students practice how to read, record, and explain results of audiometric testing in both professional and lay language. The emphasis is on degree, nature and configuration of hearing thresholds as they appear on the audiogram and how the relationship to the speech signals. The initial process of patient specific recommendations to solve communication difficulties are introduced in this course</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR210	Hearing Assessment III	<p><u>Description:</u> This course is a continuation of Hearing Assessment II. Comprehensive analysis of the decision making process is used to choose appropriate test protocols, interpret results and apply analysis to the recommendation, selection, fit and follow-up of the hearing aids</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR211	Aural Rehabilitation I	<p><u>Description:</u> This course introduces the concepts of hearing impairment, hearing handicap, and hearing disability. Variables such as co-existing medical conditions, psychological adjustment, cultural values, socio-economic status, and disability are discussed</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
HEAR212	Business Aspects I	<p><u>Description:</u> This course introduces the different methods of hearing aid distribution, from the holding companies, vendors, retail and private dispensing offices. Students will be exposed to different sales philosophies and the ever changing industry</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR213	Clinical I	<p><u>Description:</u> In this course the student will shadow professionals in the field, in the Bates Hearing Clinic, and will begin to interact with patients under direct supervision of the instructor. Activities will depend upon the patient and student needs.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 90</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR220	Hearing Aid Evaluation	<p><u>Description:</u> In this course the student will practice all test procedures needed to recommend, select and dispense a hearing aid. At minimum variables such as patient communication style, hearing loss, degree of perceived handicap, motivation and patient expectations will be considered</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR221	Audiometric Interpretation II	<p><u>Description:</u> In this course the student will begin to analyze consistency of test results for validity. A variety of counseling and assessment tools to educate and the potential hearing aid patient/family/friends will be introduced and practiced in the lab and during clinical hours.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR222	Hearing Aids II	<p><u>Description:</u> A continuation of Hearing Aids I, this course focus is on the electroacoustic analysis of hearing aids, basic programming and verification of hearing aid fit using real ear measures</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR223	Clinical II	<p><u>Description:</u> All testing performed In Clinical I are continued with the addition of speech audiometry, tympanometry, and other special tests at the in-house hearing clinic or in a work based learning opportunity</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 90</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR230	Hearing Aid Service and Repair	<p><u>Description:</u> This course concentrates on the maintenance of a functioning hearing aid as well as troubleshooting a non-functioning or distorted hearing aid, programmable solutions, acoustic modifications, and minor office repairs are demonstrated and practiced both in the classroom setting and in the clinical setting</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR231	Aural Rehabilitation II	<p><u>Description:</u> This class focuses on different validation strategies and counseling tools for the hearing aid user. The student will explore implantable hearing devices and assistive listening devices</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 30</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
HEAR232	Business Aspects II	<p><u>Description:</u> Seminar in business trends, third party payees, legislation and changes in state legislation will be examined and discussed. Student will apply for licensure and familiarize themselves to Washington state Department of Hearing and Speech.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HEAR233	Clinical III	<p><u>Description:</u> Clinical III is a continuation of Clinical II. All skills are applied in a full service hearing aid clinic with direct or indirect supervision</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC101	HVAC Fundamentals	<p><u>Description:</u> This course is an introduction to the HVAC industry. It will introduce the student to HVAC history, environmental heating and cooling, food preservation, industry opportunities, professional organizations, useful publications, available certifications and what is required of an employee.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC102	Safety	<p><u>Description:</u> This course focuses on Safety following the OSHA and WISHA procedures and regulations are presented. Students complete the Washington State Industrial First Aid/CPR program. The use of personal protection equipment and safe work practices are demonstrated.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u>    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC103	HVAC/R Science	<p><u>Description:</u> This course will cover the importance of the properties of matter, laws of conservation of energy, energy conversion and electrical distribution. Temperature measurement and conversion, thermodynamics, pressures and vacuums are presented.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC104	Tools and Equipment	<p><u>Description:</u> This course focuses on the proper use of hand tools, fasteners, electrical, refrigeration and heating test instrument and servicing equipment.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC105	Refrigerant/ Refrigeration Systems I	<p><u>Description:</u> In this course students study refrigeration system components and operation, refrigeration cycle, compressors, condenser, metering devices and evaporators.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC106	Refrigerant/ Refrigeration Systems II	<p><u>Description:</u> This course is a continuation of the concepts introduced in HVAC105. Students learn refrigerant properties, system piping, accessing sealed systems, refrigerant management, system evacuation and charging.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
HVAC107	HVACR Electrical Systems and Components	<p><u>Description:</u> In this course, students will study basic electricity, power, circuits, electric motors, electrical components, diagrams and controls.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC108	Electrical Troubleshooting	<p><u>Description:</u> In this course, students will apply basic electricity, power, circuits, electric motors, electrical components, diagrams and controls reviewed in HVAC107 troubleshooting electrical problems in the lab.</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC109	Soldering and Brazing Applications	<p><u>Description:</u> In this course, students apply techniques of heat bonding copper tubing and dissimilar materials using soft solder and brazing allows common to the HVAC industry.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC110	Residential HVAC Systems	<p><u>Description:</u> This course is an introduction to unitary systems split systems, and the arrangement, placement and matching of equipment. Students troubleshoot residential cooling and heating equipment.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC111	Light Commercial HVAC Systems	<p><u>Description:</u> This course is a continuation of the concepts introduced in HVAC110, students review unitary and split air conditioning and heating equipment used in light commercial applications. Oil heating equipment is also presented.</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC112	Heat Pump Systems	<p><u>Description:</u> This course is a continuation of the concepts introduced in HVAC110 and HVAC111. This course is an introduction to electric heating equipment, heat pump components, applications and troubleshooting.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC150	Introduction to Tools and Fasteners	<p><u>Description:</u> Introduction to Tools and Fasteners used in the HVAC/R Industry.</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u>   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC151	OSHA 30-hour Construction Industry Outreach Training Program	<p><u>Description:</u> The OSHA 30-hour Construction Industry Outreach Training course is a comprehensive safety program designed for anyone involved in general industry. Specifically devised for foremen, and field supervisors; the program provides complete information on OSHA compliance issues. Upon completion, students will be issued an OSHA 30 card. Additional training in Refrigeration Handling and Safety Practices.</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks      <u>Contact Hours:</u> <u>Theory</u> 30   <u>Guided practice</u>   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
HVAC152	Basic First Aid and CPR	<p><u>Description:</u> This course is designed to provide the basic first aid skills necessary to become a lay responder for varying emergencies, including adult/child/infant CPR with AED. Participants will demonstrate CPR and the use of an automated external defibrillator (AED). Upon successful completion of the course, participants will receive a certificate for Adult/Child/Infant CPR/, AED, Bloodborne Pathogens and First Aid valid for two years.</p> <p><u>Credits:</u> 1   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u>   <u>Field-base experience</u></p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC153	Basic Electricity, Magnetism	<p><u>Description:</u> Basic Electricity, Magnetism</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC154	Types of Electrical Motors and Applications	<p><u>Description:</u> This course introduces students to basic electric motors and their applications in the HVAC/R industry.</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u></p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC155	Motor Controls & Troubleshooting	<p><u>Description:</u> Motor Controls &amp; Troubleshooting</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u></p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC156	Theory of Heat	<p><u>Description:</u> Theory of Heat</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 10   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC157	Introduction to Automatic Controls, Troubleshooting	<p><u>Description:</u> Introduction to Automatic Controls, Troubleshooting</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC158	Indoor Air Quality, Advanced Controls	<p><u>Description:</u> Indoor Air Quality, Advanced Controls</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 20   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC159	Electric & Oil Heat	<p><u>Description:</u> Electric &amp; Oil Heat</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 20   <u>Guided practice</u> 40   <u>Field-base experience</u></p> <p><u>Prerequisites:</u> HVAC150,HVAC151,HVAC152   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
HVAC160	Gas & Hydronic Heat	<p><u>Description:</u> Gas &amp; Hydronic Heat</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC150,HVAC151,HVAC152      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC161	Refrigeration, Oil Chemistry, Management, Recovery	<p><u>Description:</u> Refrigeration, Oil Chemistry, Management, Recovery</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC150,HVAC151,HVAC152      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC162	EPA 608 Universal, Leak Detection, System Evacuation	<p><u>Description:</u> EPA 608 Universal, Leak Detection, System Evacuation</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC150,HVAC151,HVAC152      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC163	Tubing Piping and Brazing	<p><u>Description:</u> Tubing Piping and Brazing</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC164	System Charging	<p><u>Description:</u> System Charging</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC165	Refrigeration System Components	<p><u>Description:</u> Refrigeration System Components</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC206	Basic Metalworking	<p><u>Description:</u> This course focuses on the components, equipment, and operation for sheet metal layout and fabrication.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC207	Basic Layout and Patterns	<p><u>Description:</u> This course is a continuation of the concepts introduced in HVAC213, students fabricate patterns and join them in a line of fittings.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
HVAC208	Fabrication Practices	<p><u>Description:</u> This course is a continuation of the concepts introduced in HVAC213, students fabricate patterns and join them in a line of fittings.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC209	Air Balance and Duct Sizing	<p><u>Description:</u> This course is an introduction to the techniques and procedures used in the residential construction industry to determine proper sizing of HVAC equipment and ducts to meet the requirements for a high-quality, comfortable climate in terms of heating, cooling, humidifying, dehumidifying, ventilation and air cleaning or filtering.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC210	Drafting and Blueprint Reading	<p><u>Description:</u> This course provides students with the basics of preparing plans and orthographic and isometric drawings used to create building blueprints. The identification and application of plumbing, electrical, air conditioning, and refrigeration symbols found on mechanical drawings is emphasized.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC211	Commercial Environmental Systems	<p><u>Description:</u> This course provides students with the knowledge of commercial air conditioning systems, air handlers, accessories, package units and controls.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC212	Chilled Water Systems	<p><u>Description:</u> This course is an introduction to types of chilled water units, purge recovery, compressor arrangement, chiller economizers, oil return systems, and absorption chiller operation.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC213	Hydronic Heating Systems	<p><u>Description:</u> In this course, students identify the uses of common terminal units, types of piping, configuration of multiple systems, motorized controls valves, radiant heating, mixing valves and the circulators used.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC214	Cooling Towers Basics	<p><u>Description:</u> This course focuses on the basic types of cooling towers and cooling tower operation and maintenance.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC215	Introduction to Thermal Storage	<p><u>Description:</u> This introduction course focuses on the basic types of cooling towers and cooling tower operation and maintenance.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
HVAC216	CFC Exam Preparation	<p><u>Description:</u> This course is a precursor to taking the EPA Section 608 Exam. Employee must be certified by the EPA to handle refrigerant under penalty of law. Three types of exam are available: Type I, II, or III. All three require that a core exam also be passed. The minimum requirement for HVAC/R technicians is a Type II.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC217	Commercial Refrigeration	<p><u>Description:</u> In this course, students identify high temperature, medium temperature, and low temperature refrigeration systems, food preservation, various types of systems used, and basic principles of operation.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC218	Installation/Main..	<p><u>Description:</u> This course is an introduction to installation standards, equipment placement, piping procedures, determining the correct charge, planned maintenance and troubleshooting procedures.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC219	AHRI Industry Competency Exam # 1 (ICE)	<p><u>Description:</u> This course is a precursor to taking industry recognized national AHRI Industry Competency Exam (ICE Exam). The three test areas include: Residential Heating and AC, Light Commercial Heating and AC, and Commercial Refrigeration. Completion of one exam of the three exams is required for Support Technician credential and AT Degree.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC220	AHRI Industry Competency Exam # 2 (ICE)	<p><u>Description:</u> This course is a precursor to taking industry recognized national AHRI Industry Competency Exam (ICE Exam). The three test areas include: Residential Heating and AC, Light Commercial Heating and AC, and Commercial Refrigeration. Completion of an additional exam is required of AT Degree.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC221	HVAC/R Industry Math	<p><u>Description:</u> This course is an introduction to the math calculations common to the industry, including algebraic formulas, calculation of angles, areas, and volumes of various geometric shapes and system load calculations.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC251	Load Calculations, Duct Design, Air Balance	<p><u>Description:</u> Load Calculations, Duct Design, Air Balance</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC260	Operating Conditions, Introduction to Drafting	<p><u>Description:</u> Operating Conditions, Introduction to Drafting</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
HVAC261	Special Refrigeration Systems	<p><u>Description:</u> Special Refrigeration Systems</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC262	Heat Pump Systems, Air and Geothermal	<p><u>Description:</u> Heat Pump Systems, Air and Geothermal</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC263	Domestic Appliances	<p><u>Description:</u> Domestic Appliances</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC264	Commercial Refrigeration Systems & Troubleshooting	<p><u>Description:</u> Commercial Refrigeration Systems &amp; Troubleshooting</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC265	Comfort, Psychometrics & Energy Auditing	<p><u>Description:</u> Comfort, Psychometrics &amp; Energy Auditing</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC266	Troubleshooting	<p><u>Description:</u> Troubleshooting</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC267	Chilled Water Systems	<p><u>Description:</u> Chilled Water Systems</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HVAC268	Operating, Maintenance, Troubleshooting Chilled Water Systems	<p><u>Description:</u> Operating, Maintenance, Troubleshooting Chilled Water Systems</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> HVAC 162 &amp; EPA 608 Card      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
IERT101	Introductory Industrial Robotics	<p><u>Description:</u> This course provides an overview of industrial robots, their role in process automation, programming methods, and the technologies robots depend on to perform their functions. Other key elements of this course are end-of-arm tooling, electromechanical systems, fluid power systems, system interfacing, robot vision, and preventative maintenance.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT104	Blue Print Reading	<p><u>Description:</u> This course allows students to achieve competence in reading and sketching technical drawings of parts and assemblies. The basic concept of ANSI and SI metric drafting symbols and standards, terminology, manufacturing process notes, and other technical materials contained in mechanical or CAD drawings are covered extensively.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT106	Introduction to Numeric Controls	<p><u>Description:</u> This course focuses on the concepts and programming of CNC milling and turning machines, but the programming principles may also be applied to many robotics control systems. Coverage of operator panels, symbols, tools, programming codes, and parameters fill-in the gaps between CNC programming and actual operation in a production environment.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT108	Basic Precision Measuring Tools	<p><u>Description:</u> In this course precision manufacturing ultimately relies on the calibrated accuracy of measuring tools, equipment, and systems. This course examines the use of precision mechanical measuring devices, such as micrometers, calipers, height gauges, dial indicators, gauge blocks and sources of measurement error. Optical and laser devices are also explored.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT110	Electricity & Magnetism	<p><u>Description:</u> This course follows those observations through the development of modern electrical theory and how a better understanding of that theory is being used to create intelligent and efficient energy delivery systems. Between the years 1600 and 1800, mankind's knowledge of electricity was limited to observations of electrostatic and magnetic phenomena.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT115	DC Circuit Analysis	<p><u>Description:</u> This course introduces electrical units of measure and how those units are interrelated. It also explores the five basic types of electrical circuits and the rules used to solve for electrical quantities throughout those circuits. All electrical devices and systems are built on a thorough understanding of these circuits.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT118	Fluid Power	<p><u>Description:</u> This course introduces fluid power devices, circuits, and units of measure using a combination of interactive computer graphics and real world systems. Fluid power covers both pneumatics and hydraulics, and fluid power circuits have many characteristics in common with electric circuits.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT120	Alternating Current	<p><u>Description:</u> This course explores the generation of single-phase AC and the specialized components that make it all possible. Alternating current (AC) forms the basis of electric power transmission and distribution throughout the world. Using computer graphics and active systems.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
IERT125	AC Circuit Analysis	<p><u>Description:</u> This course visually and mathematically explores how constantly changing electrical values interact with each other over time. Like DC, AC can be applied to five different types of circuits. AC circuits involve a broader range of components than DC circuits and require a more in-depth mathematical analysis to understand.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT126	Analog Electronics	<p><u>Description:</u> In the analog electronics course, one explores electronic devices and circuits that work with continuously variable physical quantities. This includes semiconductor materials, sensors, transducers, diodes, transistors, thyristors, Op-amps and other linear integrated circuits. Circuits include power supplies, regulators, DC-to-DC converters, amplifiers, oscillators, signal conditioners, phase-locked loops, modulators and mixers.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT128	Polyphase AC Power Generation & Distribution	<p><u>Description:</u> Virtually all of the world's electrical power generation comes from three-phase generators. Having voltages and currents displaced in time requires a more complex circuit analysis than single-phase involving vectors. This course explores polyphase generators, transformers, and power distribution systems using mathematical and graphical analysis, along with specialized test equipment.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT135	Mechanics	<p><u>Description:</u> The physics of classical mechanics are explored in this course along with units of measure and simple machines. A mixture of computer animations and practical experiments bring this subject to life. Mechanical systems are an integral part of automation, where materials must be moved as part of the manufacturing process.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT140	Motors & Control Systems	<p><u>Description:</u> Motors are the backbone of material handling systems. This course examines the operating principles of common DC and AC motors, how they are wired into electrical systems, and common electromechanical control circuits. It then moves on to more sophisticated electronic control using smart motor controllers and VFDs (variable frequency drives).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT145	Construction Practices, The NEC, and UL Guides	<p><u>Description:</u> This course explores the techniques of good panel building for control systems ranging from simple electromechanical motor starters to advanced control using PLCs (Programmable Logic Controllers). Control panels and systems are built to standards established by the NEC (National Electrical Code) and UL (Underwriters Laboratories).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT212	Digital Electronics	<p><u>Description:</u> This course is designed for students seeking employment as electronics technicians. Digital integrated circuits, from basic logic families through FPGAs, are explored through hardware and VHDL software design and implementation.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT215	Programmable Logic Controllers (PLCs)	<p><u>Description:</u> This course focuses on Allen Bradley's popular SLC 500 and MicroLogix controllers using LogixPro and RSLogix 500 software. A smooth transition from ladder diagrams to ladder logic establishes the basis for more sophisticated programming models. Programmable logic controllers are industrial computers designed to replace hard-wired circuits used in past years.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
IERT220	Allen Bradley SLC 500 PLCs	<p><u>Description:</u> This course focuses on Allen Bradley’s SLC 500 programmable logic controllers and the software needed to program them. Students implement real-world scenarios using RSLogix 500, RSLinx and custom hardware modules that interact with the controller. Hardware and software installation round out the training leading to the advanced ControlLogix devices.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT225	Sensors and Transducers	<p><u>Description:</u> Process variables, like temperature, pressure, flow, depth, rotational speed, and object detection depend on sensors and transducers to provide information to the control system. This course explores the operating principles of these devices and how they are implemented in practical control systems.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT230	Programming Methodologies	<p><u>Description:</u> This course introduces Statement Lists, Flowcharting, Finite State Machines, and Venn diagrams as methods of developing efficient, effective programs in a timely manner. Once the program flow is determined, it is translated to the appropriate development software. Programming is a structured science that requires discipline and planning.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT231	PLC Programming Projects	<p><u>Description:</u> In this course the RSLogix 500 simulator is used in class, LogixPro, comes with seven real world interactive programming projects: Door Simulator, Silo Simulator, Traffic Simulator, Batch Simulator, Dual Compressor Simulator, Bottle Line Simulator, and Elevator Simulator. In addition, multiple labs using RSLogix and RSLinx from Rockwell Automation finalize the programming projects.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT238	Embedded Controllers	<p><u>Description:</u> This course focuses on the two main architectures in use today: Harvard and von Neumann. Development boards from Microchip and Freescale Semiconductor provide opportunities to explore brushless DC motor control, touch sensing, LCD displays, Digital Signal Processing, wireless data, and robotics. Microcontrollers embedded in dedicated systems number in the billions.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT240	Industrial Robots using the Fanuc Robotics 200iC	<p><u>Description:</u> This course centers on a FANUC Robotics 200iC industrial robot and covers safety, moving the robot in 3D space, collision detection, Teach Pendant Programming (TPP), and end-of-arm tooling. Students gain an understanding of the controller’s internal data and file structures. Concurrent Enrollment: IERT 241</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT250	Independent Study	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT251	Independent Study	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
IERT255	Instrumentation	<p><u>Description:</u> This course examines the measurement and control of temperature, liquid level, flow rate, pressure, pH, and weight. Process control diagrams, equipment maintenance, smart instrument calibration, documentation, and loop tuning with PID control are offered using equipment from major manufactures. Process control requires the precise monitoring of process variables.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT292	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT293	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
IERT298	Workbased Learning	<p><u>Description:</u> This course is a Work-based learning (WBL) course, which allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.  *INSTRUCTOR APPROVAL REQUIRED</p> <p><u>Credits:</u> 1-13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-390V  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO101	Computer Application Essentials	<p><u>Description:</u> Demonstrate essential skills using core Microsoft Office applications. Create and edit documents using word processing, spreadsheet, presentation, database, email, or other business applications.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u>  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO104	A+ Essentials	<p><u>Description:</u> Provides a foundation in hardware, software, basic networking, safety, and customer service skills. Acquire the essential skills and information to install, configure, optimize, troubleshoot and repair, upgrade and perform preventive maintenance of computers and mobile devices. This is course covers one of two CompTIA A+ certification exams. Passing a professional IT certification requires many addition hours of study before and after the course lecture. Expect to spend a significant number of hours studying before you take a CompTIA or any other IT professional certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u>  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO105	A+ Practical	<p><u>Description:</u> Install, configure and upgrade, diagnose and troubleshoot, perform preventive maintenance, in operating systems, system software, virtualization and cloud concepts. This is course covers one of two CompTIA A+ certification exams. Passing a professional IT certification requires many addition hours of study before and after the course lecture. Expect to spend a significant number of hours studying before you take a CompTIA or any other IT professional certification.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u>  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO120	Client Operating System	<p><u>Description:</u> The focus of this course includes to identify requirements and compatibility related to performing installation, upgrade, configure, mitigate of Windows operating systems. Students perform post-installation configurations, connect to a network, configure firewall and troubleshoot network issues. Hands-on practice includes configuring storage, backup and recovery.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u>  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
INFO121	Virtualization	<p><u>Description:</u> This course provides instruction in virtualization technologies. This course covers hands-on labs with virtualization tools and concepts. Discussion of topics include using virtualization of software defined for data center environments including building virtual networks, implementing clusters, enhancing performance and security challenges. Using Hyper-V, Oracle VirtualBox, VMware or other virtualization platforms are implemented.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO122	User Support Fundamentals	<p><u>Description:</u> This course covers end-user support concepts and practices. Learn how to develop long-term strategies and capacity planning for meeting future computer hardware needs. Discuss how to practice first-class level of customer service ensuring that all customers are treated efficiently and in an appropriate manner. Learn about the kinds of knowledge, skills, and abilities necessary to find employment in the support industry.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> INFO104, INFO105 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO123	Cloud Fundamentals	<p><u>Description:</u> This course covers foundational skills regarding the considerations of adopting cloud services and the Software as a Service (SaaS) cloud model. It provides an overview of cloud computing and services. The focus of this course includes core services, security compliance, privacy, and trust to obtain fundamental skills to manage business cloud services.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO205	Security I	<p><u>Description:</u> The number one concern of computer professionals today continues to be information security. This course covers computer security skills required to identify threats, attacks and vulnerabilities. Hands-on labs include how to use cryptography, security technologies and tools. Learn about risk management, laws and regulations</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO206	Security II	<p><u>Description:</u> This course builds a foundation in network security and practices. Analyze and protect networks from malicious attacks and breaches of confidentiality. Identify attack and vulnerability types, and manage auditing and logging. Examine wireless network security, mobile and embedded device security, access management, and risk mitigation.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> INFO205 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO292	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
INFO296	Work-Based Learning	<p><u>Description:</u> This course is Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.*Instructor Approval Required</p> <p><u>Credits:</u> 1-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 30-120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH117	Measurement Applications	<p><u>Description:</u> Students use precision measuring tools such as micrometers, height gages, calipers, gage blocks, and indicators.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
MACH120	Machine Shop Mathematics II (RI)	<p><u>Description:</u> A continuation of the concepts introduced in MACH 111, students study elementary geometry, trigonometry, and Algebra as they apply to the machine shop.(This course meets the RI-Related Instruction for Computation for the AAS)</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH142	Advanced Machine Shop Applications	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 8 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 160 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH150	Measurement, Materials, & Safety	<p><u>Description:</u> This course is an introduction to the fundamental knowledge of standard steel classification, reading of precision measuring devices, heat treating metals, general shop practices, and inspection techniques in the machine trades. This course is taken concurrently with MACH 155 and MACH 160</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH155	Job Planning, Bench-work, and Layout	<p><u>Description:</u> This class is an introduction to develop the skills for process planning, hand operations such as layout, drilling, reaming, sawing, and machine operations such as bandsaw, drill press, and safety standards. This course is taken concurrently with MACH 150 and MACH 160.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH160	Conventional Machining	<p><u>Description:</u> This class is an introduction to conventional machining the majority of this course will occur in the machining lab practicing the basics of chucking applications, milling and lathe setup, operations, and safety standards.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH166	Conventional Turning	<p><u>Description:</u> This course is a hands on approach to the knowledge of machining operations on the lathe. Students who complete this coursework are eligible to earn the NIMS credential: Turning; Chucking. Prerequisites MACH 150, MACH 155, MACH 160 are required before taking MACH 166</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH167	Conventional Milling	<p><u>Description:</u> This course is a hands on approach to the knowledge of machining operations on the vertical milling machine. Students who complete this coursework are eligible to earn the NIMS credential: Milling</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH168	Surface Grinding	<p><u>Description:</u> This course is a hands on approach to the knowledge of machining operations on the surface grinder.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
MACH224	Computer-Aided Manufacturing CAM II	<p><u>Description:</u> This course provides the student with expanded knowledge of advanced manual machining concepts</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH232	Advanced CNC Machining	<p><u>Description:</u> This course provides the student with advanced practice associated with CNC machine programs</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH292	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen. PREREQUISITE: Instructor permission is required to enroll in this course.</p> <p><u>Credits:</u> 1-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20-100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH293	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen. PREREQUISITE: Instructor permission is required to enroll in this course.</p> <p><u>Credits:</u> 1-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MACH294	Independent Projects	<p><u>Description:</u> This course offers students an opportunity to work independently on a project that is determined by both the instructor and the student. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen. PREREQUISITE: Instructor permission is required to enroll in this course</p> <p><u>Credits:</u> 1-5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK101	Marketing Principles	<p><u>Description:</u> This course introduces the student to the basic components of marketing goods and services with a focus on the following subject matter: basic consumer needs, creating and implementing a marketing strategy and the study of general marketing principles</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK102	Customer Service	<p><u>Description:</u> This course examines the techniques and processes to create a company-wide customer service environment. Students will sharpen their skills in the areas of critical thinking, acquiring and retaining customers, and developing a service-oriented mindset, ensuring customer satisfaction, diffusing unsatisfactory situations and excelling in communication</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK103	Written Business Communication	<p><u>Description:</u> This class focuses on expressing plans, ideas and other business-based communication in written form. Students will demonstrate the ability to communicate through writing to clients, customers and co-workers at all levels</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 15 <u>Guided practice</u> 30 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
MARK104	Business Negotiations and Collaboration	<p><u>Description:</u> This course presents a perspective on how to respond and resolve critical conflict through collaborative negotiations with positive results. Included are a variety of methods to establish rapport, trust and reliability, manage conflict in the negotiation process, and how to handle difficult power tactics</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK105	Information Research and Acquisition	<p><u>Description:</u> The ability to successfully research and acquire relevant information is very important in the competitive world of marketing. This class teaches how to utilize resources and sources to obtain and utilize that information</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 5 <u>Guided practice</u> 10 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK106	Business Concepts	<p><u>Description:</u> A wide array of business concepts are explored in this class including entrepreneurship, organizational systems, finance, marketing, management and international business</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK107	Cross Cultural Communication	<p><u>Description:</u> Students study the concepts of culture and its impact on organizations as they conduct business globally. Topics explored include: intercultural and cross-gender communication, political and economic philosophy, social structure, religion, language and education</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK108	International Trade Practice	<p><u>Description:</u> This course is an introduction to the key business concepts that individuals and businesses must understand to enhance results in international trade</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK109	Economics-Marketing Perspective	<p><u>Description:</u> A study of economics, economic environments, and analysis of the economic factors involving the essentials of demand and supply; competition and monopoly; labor; public policy towards business; and the distribution of income</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK110	Principles of Management and Supervision	<p><u>Description:</u> Basic principles of management and supervision are studied and practiced. Students acquire leadership skills related to working styles, coaching skills, and working effectively with coworkers and subordinates</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK111	Cyber Marketing/E-Commerce	<p><u>Description:</u> This class researches business organizations that market and sell on the Internet and assesses the impact of e-commerce on business and consumers</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
MARK112	Business Law	<p><u>Description:</u> This class is designed as an introduction to the legal system and its impact and functions within the business world. Students will study legal reasoning, the process of resolving disputes and contractual agreements in the business community</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK113	Accounting Principles	<p><u>Description:</u> This course is an introduction to financial accounting principles and management accounting</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK201	Introduction to Leadership Skills and Ethics	<p><u>Description:</u> This course is an introduction to the various skills necessary to become an effective leader whether that role is as a member of a group, team leader, department head, supervisor or manager. This class also explores moral principle, decision making, community standards, corporate, community and personal responsibility</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK202	Introduction to Strategic Marketing	<p><u>Description:</u> This course delves deeper into marketing strategies enabling students to identify and minimize the effect of competitive forces. Organizational strategic planning efforts to communicate products and services are explored</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK203	Introduction to Business Accounting and Finance	<p><u>Description:</u> This course is designed for non-financial managers and introduces the accounting process, key financial documents, ratios and profit analysis</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK204	Introduction to Presentations and Facilitation	<p><u>Description:</u> In this course, students enhance personal presentation skills in a variety of settings, from large groups to small business meetings. Meeting facilitation tactics are introduced and practiced as a part of this course</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK205	Advanced Business Project	<p><u>Description:</u> Students complete independent business projects, such as business or marketing plan development, advertising project development, international marketing project development, advanced project risk analysis assessment, or international marketing research. Requires instructor approval prior to registration</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u></p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK206	Teaming for Success	<p><u>Description:</u> Students apply successful leadership models, analyze personal leadership styles, understand and synergize the dynamics of a team, and aptly empower people to make correct team and organizational decisions</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
MARK207	Introduction to Managing Change	<p><u>Description:</u> This course presents information on how leaders seek out, initiate, support and manage needed change. Concepts explored include the process of change, communication, and building commitment to bring about change within an organization</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK208	Achieving Results Through Influence	<p><u>Description:</u> This course explores how effective leaders achieve results through and with others. Students learn how effective leaders persistently go after goals and measure success in terms of results achieved.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK209	Entrepreneurial Concepts	<p><u>Description:</u> A relevant course looking at ways to start and sustain a small business, students apply techniques on how to maximize limited resources, plan for growth and remain profitable in today's economy. A detailed business plan as an individual project is completed.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK210	Introduction to Project Management	<p><u>Description:</u> Explorations of practical skills that will enable students to better gain control of, and manage all aspects of business-oriented projects and increase team performance</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MARK296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Complete independent marketing projects, such as business or marketing plan development, advertising project development, international marketing project development, advanced risk analysis assessment, or international marketing research. Requires instructor approval prior to registration</p> <p><u>Credits:</u> 1-13V <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> <u>Field-base experience</u> 30-360</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&146	Statistics	<p><u>Description:</u> This course is designed to teach the student counting rules, probability, mean and standard deviation, graphing, confidence intervals, hypothesis testing and regression analysis. Also applications in business, health and technology</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> Placement or MATH098 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET111	Geometric Dimensioning and Tolerancing	<p><u>Description:</u> Tolerance dimensions allow the specification of a range of accuracy for the shape, size and/or position of features of a product. Students apply tolerances as they consider fit between mated parts, how features will be inspected, and how to place tolerance symbols on a drawing using CAD software</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET130	Manufacturing Methods	<p><u>Description:</u> This course focuses on the introduction to mechanical manufacturing methods by which materials are economically processed into different shapes. The overall goal is to develop an understanding of how the functionality, shape, materials and cost of a product influence manufacturing process design.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
MET140	Mechanical Measurements	<p><u>Description:</u> This course is designed to introduce students to the function, operation, and application of common mechanical engineering instruments, measurement principles, and statistical analysis. Major elements of measurement systems, including transduction, signal conditioning, and data recording. Function and operation of digital data acquisition systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET214	Engineering Projects I	<p><u>Description:</u> This course is an independent study in special projects to give students additional training in a specific area selected by the instructor. Emphasis is on individual student needs to improve or expand skills in a variety of areas</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET216	Engineering Projects II	<p><u>Description:</u> This course is an independent study in special projects to give students additional training in a specific area selected by the instructor. Emphasis is on individual student needs to improve or expand skills in a variety of areas</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 100 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET218	Introduction to 3D Modeling	<p><u>Description:</u> This course is an introduction to creating 3D CAD models using feature-based, parametric solid-modeling design; base, boss and cut features using extruded, revolved, simple swept and lofted shapes; capturing design intent using automatic or user-defined geometric and dimensional constraints; detail and assembly drawings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR&amp;111, ENGR&amp;112 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET260	Advanced CAD Operations	<p><u>Description:</u> This is an advanced CAD systems course, including 3D concepts, are used to produce engineering drawings using layers, masks, and groups. symbols and x-references are applied.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGR&amp;111, ENGR&amp;112 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET296	Work-based Learning Experience (alternate course option)	<p><u>Description:</u> Work-based learning (WBL) allows students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of businesses/industries in the area. The learning activity is based on a written agreement with the participating training provider.</p> <p><u>Credits:</u> 1 to 13 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> <u>Guided practice</u> <u>Field-base experience</u> 30-390  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MET297	Work-based Learning Seminar	<p><u>Description:</u> Students enroll in the work-based learning seminar in order to receive an orientation to the work-based learning experience. Faculty meet with the students to provide support and assistance during the experience.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA102	Health and Wellness and the OTA	<p><u>Description:</u> Principles and strategies for managing health and promoting wellness are practiced. Importance of balancing areas of occupation for success in occupational roles are examined and applied</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
OTA103	Functional Movement	<p><u>Description:</u> This course covers basic principles of kinesiology, biomechanics, and associated biological systems related to daily living activities. Techniques for body mechanics, safety and mobility, energy conservation, task simplification are covered. Upper extremity functions for everyday tasks are emphasized</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA104	Therapeutic Use of Self	<p><u>Description:</u> The focus of this course is to explore personal values and cultural attitudes that relate to individual performance, group interactions and therapeutic use of self for the establishment of therapeutic relationships. Group roles, learning styles, leadership, and communication styles will be examined in a variety of ways. Students develop basic skills for observation, interviewing, communicating with their cohort but also with the population we serve. Personality, insights, perceptions and judgments as part of the therapeutic process are covered and addressed to ensure success as occupational therapy practitioners.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u>  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA105	Nervous System Function	<p><u>Description:</u> Basic principles of neurology and associated sensory and cognitive systems related to daily living activities. Deficits in sensory, perceptual and cognitive functioning and effects on occupational performance are examined</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA106	Therapeutic Activities and Performance I	<p><u>Description:</u> This course covers areas of human occupation through analysis of activities of daily living- work, leisure, play and self-care. Students develop an understanding of the nature and value of occupation to support client participation and performance through therapeutic crafts and daily living activities</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA107	Devel. Disabilities - Treatment and Applications	<p><u>Description:</u> This course focuses on students learning about the functional implications of various pediatric diagnoses on areas of occupation: self-care, play, education, and social participation while considering sociocultural and ethical issues when working with children and adolescents and their families. These experiences promote essential critical thinking and clinical reasoning abilities in students as they learn to apply theoretical frames of reference in pediatric occupational therapy and develop assessment skills and intervention plans for children and adolescents with various diagnoses. Lab experiences will be part of the class, and allow students to practice specific occupational therapy assessment measures and intervention techniques for infants, children and adolescents.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0..</p>
OTA108	Applied Experience I - A	<p><u>Description:</u> Students participate in observations and guided practice opportunities for applying OT principles in traditional and nontraditional settings</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA109	Adaptive Technologies	<p><u>Description:</u> Adaptive technology used in occupational therapy setting is explored through laboratory practice and field site visits. Low technology such as prosthetics, positioning equipment and adaptive aides for daily living to more advanced computer technology utilized for environmental control and augmentative communication are covered</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA110	Documentation Skills	<p><u>Description:</u> Students learn about record keeping, progress note writing, and assisting the OT with functional goals and objectives for various OT settings. Overview of terminology of assessment results and treatment plans covered</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
OTA111	Introduction to Occupational Therapy	<p><u>Description:</u> This course provides an overview of the OTA program and the profession and the roles and responsibilities of OT practitioners in health care, community-based settings and school systems. Basic terminology, principles, philosophies and ethics are introduced for a better understanding of occupational therapy, the clients served, and other health care professionals working in the settings. Students gain computer literacy skills and library skills for accessing information about professional issues</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA201	Therapeutic Activities and Performance II	<p><u>Description:</u> More advanced course to develop creative problem-solving, clinical reasoning, and documentation skills through exposure to barriers for safety and independence. Models and theories of occupation are applied and the effects on performance are examined. Students examine universal design principles and environmental modifications for work, home and the community</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA202	Psychosocial Dysfunctions : Treatment and Applications	<p><u>Description:</u> This course focuses on the further development of observation, assessment skills, task analysis and interventions for individuals with psychosocial challenges. Quality of life and meaningful occupations are emphasized. Conditions that lead to psychiatric and social-emotional challenges are examined. Clinical features, medical management and issues impacting OT are covered.</p> <p><u>Credits:</u> 8 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 80 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA203	Applied Experience I - B	<p><u>Description:</u> Students participate in observations and guided practice opportunities for applying OT principles in traditional and nontraditional settings</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA204	Seminar - Applied Mental Health	<p><u>Description:</u> This course focuses on the applied mental health in fieldwork experiences, by articulating the physical components of individual/group function within the context of occupational therapy practice, based on skilled observations. Reflection on the ethical considerations within occupational therapy practice, including use of the AOTA Code of Ethics and Standards of Practice to make informed clinical and employment decision, including strategies for analyzing issues and making decisions to resolve personal and organizational ethical conflicts.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA210	Physical Disabilities - Treatment and Applications	<p><u>Description:</u> Trauma, illness, and other conditions that lead to physical dysfunction are examined. Therapy modalities to maximize independence, safety and participation in meaningful occupation are practiced. This course focuses on the further development of the student's skills in clinical reasoning carrying out the treatment plan Trauma, illness, and other conditions that lead to physical dysfunction are examined. Therapy modalities to maximize independence, safety and participation in meaningful occupation are practiced.</p> <p><u>Credits:</u> 8 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 40 <u>Guided practice</u> 80 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA212	Applied Experience - I - C	<p><u>Description:</u> Students participate in observations and guided practice opportunities for applying OT principles in traditional and nontraditional settings</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA213	Seminar - Applied Physical Rehabilitation	<p><u>Description:</u> This course focuses on the applied physical rehabilitation in fieldwork experiences, by articulating the physical components of individual/group function within the context of occupational therapy practice, based on skilled observations. Reflection on the ethical considerations within occupational therapy practice, including use of the AOTA Code of Ethics and Standards of Practice to make informed clinical and employment decision, including strategies for analyzing issues and making decisions to resolve personal and organizational ethical conflicts.</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0 <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
OTA220	Clinical Fieldwork Level II - Rotation A	<p><u>Description:</u> The first of two eight-week off-campus work experiences in a clinical setting under the supervision of a licensed occupational therapist or a certified occupational therapy assistant. This forty-hour per week rotation is to further develop and practice the skills of an entry-level OTA and must be successfully completed before student is eligible for the national certification examination</p> <p><u>Credits:</u> 11 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 330</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA221	Clinical Fieldwork Level II - Seminar A	<p><u>Description:</u> Discussion and problem-solving of fieldwork experiences and preparation for the national board exam are emphasized</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA222	Clinical Fieldwork Level II - Rotation B	<p><u>Description:</u> The second of two eight-week career experiences working in a clinical setting under the supervision of a licensed occupational therapist or a certified occupational therapy assistant. This forty-hour per week rotation is to further develop and practice the skills of an entry-level OTA and must be successfully completed before student is eligible for the national certification examination</p> <p><u>Credits:</u> 11 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 330</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA223	Clinical Fieldwork Level II - Seminar B	<p><u>Description:</u> Discussion and problem-solving of fieldwork experiences and preparation for the national board exam are emphasized</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA231	OTA and Special Settings	<p><u>Description:</u> This course focuses on the settings which require the OT assistant to be an independent self-starter. Occupational therapy practice with elderly clients in long term care, assisted living and home health care, pediatric clients in school settings, and injured workers in work condition programs are covered.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
OTA232	Professional Issues for the OTA	<p><u>Description:</u> Preparation for fieldwork, certification and employment of the OTA, as well as, workplace issues and job-related responsibilities of OTA are covered. The OTA as a manager, contractor, private practitioner and advocate of occupational therapy services are presented.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR202	Professional Vocational Relationships	<p><u>Description:</u> Students receive an overview of the health professions and the healthcare delivery systems with emphasis on the LPN's role in the health care working environment. Topics include nursing history, trends, disease prevention and wellness promotion, and guidelines for legal and ethical practice. Focus on the nursing process and basic therapeutic communications skills, basic human needs and healthy adjustments are also discussed with an emphasis on cultural, ethnic and religious needs. Students review legal requirements for licensure as a practical nurse. Liability issues related to practice, as well as ethical issues are discussed. Students review the Washington State Administrative Code for the practical nurse and discuss scenarios of how to work within professional boundaries. Students will recognize the need for change in the structured healthcare setting and demonstrate active participation in change.</p> <p>..</p>
PNUR203	Nursing Fundamentals I/Simulation I	<p><u>Description:</u> This course provides the beginning nursing core upon which all subsequent nursing courses are built with an emphasis on people as holistic beings with basic human needs. Included are specific nursing care principles common to all clients. Discussion focuses on identifying the needs of individuals within a family and community environment. Students will be introduced to simulation of enhanced demonstration &amp; mastery of beginning practical nursing concepts and skills.</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
PNUR204	Intro to Med-Surg Nursing	<p><u>Description:</u> This course provides an overview of the care and management of patients with cardiovascular, respiratory diseases. Diseases are studied in relation to etiology, pathophysiology, clinical signs, medical management and geriatric implications. Discussions integrate principles of pharmacology/medication administration, diagnostic testing, and nursing interventions to assist the client's return to maximum levels of function.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> All GEN EDS, CTNA course, Active NAC License <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR220	Nursing Fundamentals II/ Simulation II	<p><u>Description:</u> This course provides advanced practical nursing skills for successful transition into clinical settings. Included are special nursing care principles common to all clients. Discussion focuses on identifying the needs of individuals within a family and community environment. Simulation scenarios become more complex to facilitate higher level practical nursing concepts and skills.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR222	Clinical I/ Simulation III/ Clinical Math	<p><u>Description:</u> Within a variety of clinical settings, students begin to utilize the nursing process to give comprehensive care to a diverse population of clients. Clinical experience is integrated with theory under the guidance of faculty and enables the student to implement skills and apply theory learned in the classroom. Simulation is utilized to augment clinical learning opportunities.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 60  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR223	MED/Surg I	<p><u>Description:</u> This course provides an overview of the care and management of patients with hematologic &amp; immune mediated disorders. Several diseases will be examined in relation to etiology, pathophysiology, clinical signs, medical management and geriatric implications. Discussions integrate principles of pharmacology/medication administration, diagnostic testing, and nursing interventions to assist the client's return to maximum levels of function.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR224	Nursing Math/ Pharmacology	<p><u>Description:</u> This course focus is on the practical nurse's role in medication administration to persons of all ages. Basic concepts, various medication delivery systems, dosage calculation, drug classifications, and nursing implications are presented for the various bodily systems. Safe administration and documentation of medications are presented in the laboratory setting</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR230	Med-Surg II	<p><u>Description:</u> This course provides an overview of the care and management of patients with endocrine, GI, GU and orthopedic disorders. The diseases are studied in relation to etiology, pathophysiology, clinical signs and symptoms, medical management and geriatric implications. Discussions integrate principles of pharmacology/medication administration, diagnostic testing and nursing interventions to assist the client's return to maximum levels of function.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR233	Clinical II/Simulation IV	<p><u>Description:</u> Within a variety of clinical settings, using the experience gained in PNUR222, students continue to utilize the nursing process to give comprehensive care to diverse populations of clients. Clinical experience is correlated with theory under the guidance of faculty and enables the student to implement skills and apply theory to the practice of the practical nurse. Simulation will be utilized to augment clinical learning opportunities and advanced nursing math principles will be introduced.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 60  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR234	Advanced Clinical II/Simulation V/Clinical Math	<p><u>Description:</u> Within a variety of clinical settings, using the experience gained in PNUR233, students continue to utilize the nursing process to give comprehensive care to a diverse population of clients. Clinical experience is correlated with theory under the guidance of faculty and enables students to implement skills and apply theory to the practice of the practical nurse. Simulation will be utilized to augment clinical learning opportunities and advanced nursing math principles will be reinforced.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 60  <u>Prerequisites:</u> PNUR220,PNUR222,PNUR224 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
PNUR235	Newborn/Matern..	<p><u>Description:</u> This course facilitates the application of the nurse process in the care of a developing human, from prenatal to through adolescence milestones to promote optimal individual health and development at any stage of the health continuum. Male &amp; female reproduction, including normal &amp; abnormal pregnancy will also be discussed.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 30 <u>Guided practice</u> 20 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR240	Med-Surg III	<p><u>Description:</u> This course provides an overview of the nursing care concepts related to mental health, neurological and eye and ear disorders. Diseases are studied in relation to etiology, pathophysiology, clinical signs and medical management and geriatric changes. Discussions integrate principles of pharmacology/medication administration, diagnostic testing, and nursing interventions to assist the client's return to maximum levels of function.</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 60 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR241	Clinical III/Simulation VI/Clinical Math	<p><u>Description:</u> Within a variety of clinical settings, using the experience gained in PNUR234, students continue to utilize the nursing process to give comprehensive care to a diverse population of clients. Clinical experience is correlated with theory under the guidance of faculty and enables students to implement skills and apply theory to the practice of practical nursing. Simulation will be utilized to augment clinical learning opportunities and advanced nursing math principles will be reinforced.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 60</p> <p><u>Prerequisites:</u> PNUR222,PNUR233,PNUR234 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR242	Preceptor Experience	<p><u>Description:</u> This course includes an experience with a staff licensed practical nurse as a mentor or preceptor in a selected clinical area for the student's final clinical experience. Students increase skill level from orientation to performing almost independently under the supervision of their mentor.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 0 <u>Field-base experience</u> 120</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR290	Independent Project I	<p><u>Description:</u></p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR295	Independent Project II	<p><u>Description:</u></p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PNUR299	Independent Project III	<p><u>Description:</u></p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW101	Introduction to Power Sports	<p><u>Description:</u> This course provides students with training in workplace human relations, communications, shop safety environmental awareness, tools and equipment, measuring, fasteners, and mechanical and mathematical principles required within the occupation.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
POW102	Power Sports Maintenance	<p><u>Description:</u> This course provides students with training in perform maintenance for a variety of Power Sports vehicles. The skills covered will include checking fluids, adjustments and determining serviceability life of the vehicle</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW105	Brakes Service and Repair	<p><u>Description:</u> This course provides training for the student to learn to service and repair disc and drum brake systems in the Power Sports world. Students will learn a variety of systems and will learn how to make a decision on serviceability of wear items and how to make the proper repair to the brake system. This course provides the theory and service procedures for ABS based systems found on Power Sports vehicles.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW106	Tire Service and Repair	<p><u>Description:</u> This course will provide training in servicing and repairing tires in the power sports industry. This course will train students to determine the serviceability of the tire, determine and make the proper repair to a tire, remove and replace tires and to balance tires. This course will provide students with training on identifying and correcting problems with wheels and wheel bearings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW120	Engines - Failure Analysis	<p><u>Description:</u> Students are introduced to the theory of internal combustion engines and learn how to diagnosis problematic engines and analyze failed engines</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW121	Engine Repair Methods	<p><u>Description:</u> Students learn to correctly disassemble, inspect, and machine engines to return to service. Special emphasis is placed upon the utilization of service manuals and manufacturers' guidelines</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW122	Engine Installation Methods	<p><u>Description:</u> This course will train students in the methods of reassembling internal combustion engines. Students will be taught industry standard methods of lubricating, sealing, torquing internal combustion engines. Students will be taught proper methods of engine break in once engines are put back into service.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW123	Carburetor Service and Repair	<p><u>Description:</u> This course provides training in identifying, cleaning, servicing and tuning carburetors. Specific attention will be paid in this class to classifying carburetor driven faults and to properly balancing and tuning carburetors.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW140	Fundamentals of Electricity	<p><u>Description:</u> This course is an introduction to electrical systems. Students receive electrical and electronic theory, learn to use electrical test equipment, and provide basic electrical systems inspections and service. Students will receive training in the theory and application of the Diagnostic Electrical Rules</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
POW141	Electrical Charging and Starting Systems	<p><u>Description:</u> Students are introduced to the charging and starting systems encountered in various types of motorized vehicles. Special emphasis is placed upon the utilization of service manuals and electrical schematics. Students will be exposed to a variety of troubleshooting techniques including 6 step troubleshooting in both charging and starting systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW142	Ignition Systems	<p><u>Description:</u> Students receive training and practice in servicing and repairing the electrical ignition systems of various types of motorized vehicles. This includes problem identification, diagnostic testing, repair, and rising and collapsing field ignition systems. This course will cover Magneto, CDI and Transistorized ignition systems found on a variety of Power Sports vehicles.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW150	Transmission Service and Repair	<p><u>Description:</u> Students are introduced to transmission theory, service and repair. A wide variety of applications are presented and studied. The students will use practical application to learn to service transmissions.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW151	Drive Train Service and Repair	<p><u>Description:</u> Students receive training in the servicing and repairing of the various modes of transmitting engine power. This includes clutches, gear drive, belt/chain drive systems, and manual starters. Students will receive training in final drive ratios including bevel drive gear sets and differentials.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW154	Computerized System Basics	<p><u>Description:</u> Students receive training computer logic, power and ground circuits. Students will receive training in how a microprocessor works, how scan tools communicate with vehicles and diagnostic strategies for testing computer power and ground circuits.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW155	Electronic Fuel Injection	<p><u>Description:</u> This course will cover in depth study of electronic fuel injection in the power sports industry. Students will study sensor operation and diagnosis; fuel delivery and injector operation and diagnosis; and oxygen sensor operation and diagnosis.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW161	Chassis Service	<p><u>Description:</u> Service/technician students receive shop experience in maintaining or repairing frame and suspension systems including steering systems, wheels/tire assemblies, and suspension systems.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POW162	Advanced Projects	<p><u>Description:</u> This course offers students an opportunity to work on a lab-based project instead of a work-based learning component. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen.</p> <p><u>Credits:</u> 15 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 300 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
POW296	Work Based Learning	<p><u>Description:</u> Work Based Learning (WBL) allows the students to participate in on-the-job training in the field in which they are studying. They apply the skills they have learned in the classroom to specific areas of employment in a variety of business/industries. The learning activity is based on the written agreement with the participating training provider.</p> <p><u>Credits:</u>    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 0    <u>Guided practice</u> 0    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME101	Introduction to Sheet Metal Technology	<p><u>Description:</u> Students are introduced to basic hand tools and machines that are used within the sheet metal shop atmosphere. Students are provided instruction and training in workplace human behaviors and interpersonal skills required within the sheet metal occupation. Attendance, punctuality, self-management skills, classroom, shop participation and employer expectations are emphasized</p> <p><u>Credits:</u> 3    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 10    <u>Guided practice</u> 40    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME103	Fitting Fabrication I	<p><u>Description:</u> Students demonstrate how to fabricate a variety of commonly used heating and air conditioning (HVAC) elbows, Y branches, and transitional fittings. Students assemble fabricated fittings to form a maze and fabricate custom fittings to complete final assembly. This area of the program begins developing students technical reading skills</p> <p><u>Credits:</u> 7    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 20    <u>Guided practice</u> 100    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME105	Materials Technology	<p><u>Description:</u> Students are introduced to and demonstrate how to apply various elements of material handling and transporting goods used in the sheet metal industry. The subjects covered are tying knots, crane signals, creating travel plans and becoming certified for a straight mast forklift operator</p> <p><u>Credits:</u> 3    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 10    <u>Guided practice</u> 40    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME107	Applied Math	<p><u>Description:</u> Students are introduced to and develop the skills to understand and solve mathematical problems that have direct application to the fabrication and cost estimation of sheet metal components. These assignments include the foundational principles of basic mathematics with equations involving fractions, decimals, percentages, practical geometry construction and trigonometry</p> <p><u>Credits:</u> 5    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 20    <u>Guided practice</u> 60    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME112	Fitting Fabrication II	<p><u>Description:</u> Students mastery of fabrication and layout-skills are applied with the completion of the thirty fittings exam. Thirty commonly used components are produced within 30 hours. Students exercise their critical thinking skills as well as the production techniques that they have learned to this point in the program</p> <p><u>Credits:</u> 8    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 20    <u>Guided practice</u> 120    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME120	Introduction to Sheet Metal Technology	<p><u>Description:</u> Introduction to basic hand tools and machines that are used within the sheet metal shop atmosphere.</p> <p><u>Credits:</u> 3    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 10    <u>Guided practice</u> 40    <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME124	Fitting Fabrication	<p><u>Description:</u> fabricate a variety of commonly used heating and air conditioning (HVAC) elbows, "Y" branches, and transitional fittings</p> <p><u>Credits:</u> 4    <u>Course Length:</u> 10 Weeks                      Contact Hours: <u>Theory</u> 20    <u>Guided practice</u> 40    <u>Field-base experience</u></p> <p><u>Prerequisites:</u>    <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
SHME125	Applied Math	<p><u>Description:</u> understand and solve mathematical problems that have direct application to the fabrication and cost estimation of sheet metal components.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME127	Prefabricated Components	<p><u>Description:</u> learn to identify system components and applications</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME128	Materials Handling Technology	<p><u>Description:</u> apply various elements of material handling and transporting goods used in the sheet metal industry.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME129	Wood working Tools	<p><u>Description:</u> to safely use carpentry power tools used for modifying wooden structures</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME130	Carpentry Installation	<p><u>Description:</u> measure, layout and cut wooden elements of the residential structure for installation</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME131	Air Properties Technology	<p><u>Description:</u> properties of air, air handling principles, and HVAC system requirements</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 0 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME132	Duct Installation	<p><u>Description:</u> to install ducting systems, to include main supply ducts, return ducts, wall stacks, and lateral ducts.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME133	Residential Venting Technology	<p><u>Description:</u> determine proper size for, and install a variety of venting examples for home heating and exhaust systems</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
SHME134	Unit Operations	<p><u>Description:</u> HVAC systems used in residential installations. Systems include electric furnaces, heat pumps, and gas furnaces.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME135	Code Principals	<p><u>Description:</u> navigate through various code publications for reverent information pertaining to installation practices for sheet metal</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME136	Gas Pipping Technology	<p><u>Description:</u> select appropriate size pipe, how to cut pipe, and how to use a pipe machine to allow for appropriate fittings</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME137	Duct Design Technology	<p><u>Description:</u> learn how to use a Ductulator® to determine duct sizing.</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME138	Preventive Maintenance	<p><u>Description:</u> to perform basic preventive maintenance procedures on a variety of furnaces and heat pumps.</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME150	Hand Tools and Machines	<p><u>Description:</u> Students learn how to use various specialty hand tools in the shop atmosphere and the proper use of metal cutting shears, bending machines, forming machines, and common power tools. Students learn about circumference rules, framing squares, numerous marking tools, metal cutting shears, and joining tools. Students learn about machines to form complex seams, cleats and locks used in the fabrication and assembly of ventilation fittings.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME151	Safety and Health	<p><u>Description:</u> Students are introduced to the principles of safety and health and hazardous communications as they relate to construction. An introduction to the OSHA/WISHA guidelines, occupational standards are included. Students complete written assignments on these subjects. Students apply various principles in the shop area as they proceed through the program</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME152	Drafting I	<p><u>Description:</u> Students are introduced to basic terminology, drafting lines, labeling and object protection. Students create hand drafted assignments that develop basic, orthographic and isometric views of shapes and sheet metal components. Students develop the skills necessary to visualize and understand common and complex sheet metal components. Students apply triangulation principles and are introduced to parallel line development techniques.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks      Contact Hours: <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>      <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
SHME153	Architectural Sheet Metal	<p><u>Description:</u> Intermediate students are introduced to principles and applications of architectural flashings, coping, gutters, downspouts, louvers, metal siding and conductor heads. Tasks involved design, fabrication and installation of these items using SMACNA Architectural Sheet Metal Standards.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME203	Blueprint Reading Applications	<p><u>Description:</u> Advanced students research information from numerous types of blueprints dealing with all aspects of the construction process. Students are assigned plans and answer questions pertaining to the computer aided designs of highly detailed ventilation systems that are installed in current applications</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME206	Complex Components Fabrication	<p><u>Description:</u> Advanced sheet metal students are challenged to apply advanced principles to design, layout and efficiently fabricate complex HVAC ducting elbows, branches, offsets, tapers and transistors</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME213	Introduction to Blueprint Reading	<p><u>Description:</u> Advanced students are introduced to blueprint organization, terminology, sketching techniques, symbols, and lines. Using the proper techniques, students hand sketch assignments that develop oblique, perspective, isometric and orthographic projections. Students are introduced to different scales of measurements and construction materials. Students learn to interpret various blueprint specifications relating to construction.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME217	Energy Codes	<p><u>Description:</u> Intermediate students are introduced to the Washington State Energy Codes, Uniform Mechanical Codes and International Residential Codes. Open book research is conducted to answer numerous questions about items that directly apply or are associated with the installation or fabrication practices of various sheet metal applications.</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 80 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME250	Drafting II	<p><u>Description:</u> Advanced sheet metal students continue to develop the spatial thinking skills necessary to visualize and understand more complex sheet metal components. Advanced sheet metal students apply principles dealing with parallel line, radial line, triangulation and/or combinations of all three areas of layout.</p> <p><u>Credits:</u> 7 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 100 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME251	Duct Design and Air Balancing Concepts	<p><u>Description:</u> Advanced students are introduced to design and balancing terminology pertaining to this important area of the sheet metal industry. Students use mathematical formulas and computer programs to derive duct design variables such as friction loss, dynamic loss, cubic feet per minute, feet per minute, cross sectional areas, fan pulley sizes, BTUs, duct sizes and round substitutions are calculated for numerous applications.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME252	Field Installation I	<p><u>Description:</u> Students will design horizontal and vertical ductwork systems. Students will install various types of ductwork using different types of hangers in an unconfined field/shop setting. Students will use a manual duct lift in an unconfined field/shop setting.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u></p> <p><u>Prerequisites:</u> SHME103, SHME112, SHME152 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
Career Education**

Course	Title	
SHME253	Field Installation II	<p><u>Description:</u> Students will design horizontal ductwork systems. Students will install various types of ductwork using different types of hangers in a confined field/shop setting. Students will install various types of HVAC units in a confined field/shop setting. Students design and install gas piping in a confined field/shop setting.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 80 <u>Field-base experience</u>  <u>Prerequisites:</u> SHME152, SHME112, SHME252 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SHME254	Commercial Projects	<p><u>Description:</u> During this final stage of training, advanced sheet metal students apply their acquired knowledge of design, layout and fabrication to real world, client projects when these are available. When these types of projects are not available, students will receive assignments from the instructor. This includes handing the project from the beginning working from the client's requirements. This will include but is not limited to the project estimation of materials and shop overhead costs of the finished product or assignment.</p> <p><u>Credits:</u> 6 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 100 <u>Field-base experience</u>  <u>Prerequisites:</u> SHME251, SHME252, SHME253 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT101	Introduction to Information Technology	<p><u>Description:</u> This course provides an overview of basic computer concepts as they apply to MIS professionals. Emphasis is on basic machine architecture including data storage, manipulation, the human-machine interface including the basics of operating systems, algorithms and programming languages</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT102	Programming Fundamentals with JavaScript	<p><u>Description:</u> This course covers core JavaScript language constructs to build a foundation of its syntax. Use values, variables, decision structures, functions, array, strings, HTML form manipulation, cookies, debugging and other techniques.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT121	C-Sharp I	<p><u>Description:</u> In this course, students will develop fundamental concepts and techniques for analysis, design, and implementation of computer programs using an object-oriented language. Includes graphical user interfaces, event driven programming and simple data structures</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT123	Web Programming w/JavaScript	<p><u>Description:</u> In this course, students will design and implement an interactive, data-driven Website. Write JavaScript programs to add useful behavior to web pages. Use and extend popular libraries such as JQuery. Use common JavaScript references to discover and use new APIs and information.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> SOFT102 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT144	Data Structures	<p><u>Description:</u> This course develops students' knowledge in data structures and the associated algorithms. It introduces the concepts and techniques of structuring and operating on Abstract Data Types in problem solving.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CS&amp;141 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT204	Open Source Programming	<p><u>Description:</u> Introduction to computing using Python. Study and create programs that perform various tasks, including text and file manipulation, internet scripting, data structures, testing, and practical problem solving with examples. Covers object-oriented programming and the Python Standard Library</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
SOFT207	Web Application Development	<p><u>Description:</u> This course focuses on common sorting, searching and graph algorithms are used, and the complexity and comparisons among these various techniques are studied. Design and develop user interfaces to collect and present data and information Implement measures to create secure web sites. Create back end database server to host websites. Design and develop pages for a typical web application.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> SOFT123 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT210	Mobile Application Development I	<p><u>Description:</u> This course introduces building applications for mobile devices. The course will use the Android platform. Covers mobile programming principles. Explores application life cycle, user interfaces, data management, memory management and web services.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CS&amp;141 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT211	Mobile Application Development II	<p><u>Description:</u> This course introduces building applications for mobile devices. The course will use the Android platform. Covers mobile programming principles. Explores application life cycle, user interfaces, data management, memory management and web services.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> SOFT211 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOFT290	Capstone Project	<p><u>Description:</u> This course offers students an opportunity to work on a project researching and applying skills and technologies learned. The project should be based on prior course work and should result in the achievement of advanced learning in the subject area chosen</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK101	Safety/First Aid	<p><u>Description:</u> This course is a basic principles of safe driving principles and local and state driving laws with emphasis on the requirements of the Dept. of Transportation, CPR/First Aid and Blood Borne Pathogens instruction to be provided to achieve certification. Also, acceptable workplace behavior, safety practices and health habits training is given</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK102	Introduction to the Trucking Industry	<p><u>Description:</u> This course is an introduction to the trucking industry including occupation terminology and signage; trucking company structure and its operation; and driver responsibilities on the road at pickup/delivery points. The completion of inspection reports, daily/monthly logs, freight bills, waybills, manifests, and state accident reports is also included. Students will learn to use Commercial Carrier Road Atlas, plan destination and return trips</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 20 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK103	Commercial Drivers License (CDL)	<p><u>Description:</u> This preparation course, provides students the opportunity to practice in the simulator, and study the DOL CMV regulations. To prep for the CDL exams and endorsements</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK104	Pre-Trip Requirements	<p><u>Description:</u> This course is an introduction to the pre-trip inspection procedures used in the commercial truck driving industry. Students acquaint themselves with emergency equipment</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions**  
**Career Education**

Course	Title	
TRUCK105	Close Quarters Operation	<p><u>Description:</u> In this course students learn to drive in a close quarter warehouse type facility: hooking, unhooking of trailers, backing up to docks, and maneuvering in close quarters</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK106	Materials/Cargo I	<p><u>Description:</u> This course is an introduction to preventative maintenance techniques, forklift operation methods, loading and unloading of cargo, and selecting appropriate hazardous cargo placards</p> <p><u>Credits:</u> 3   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK107	City/Town Driving	<p><u>Description:</u> In this course students learn to operate trucks in city situations: turns, lane changes, clutching and shifting, weather conditions, and parking</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK108	Freeway/Open Road I	<p><u>Description:</u> In this course students learn to operate trucks in open road situations: freeway driving entrance and exiting, passing vehicles safely, and open road techniques</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 80   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK110	City/Town Driving	<p><u>Description:</u> This course focuses on IN TOWN CMV driving, providing additional training and gain experience in short-haul operations: in-town driving techniques, environmental factors and parking techniques</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK112	Freeway/Open Road II	<p><u>Description:</u> This course provides additional training and gain experience in long-haul operations</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
TRUCK113	Advanced Commercial Driving	<p><u>Description:</u> This course provides the student the opportunity to demonstrate their abilities in professional commercial administrative documentation, perform pre-trip and post-trip duties, meet dispatch requirements and perform fleet operations area activities</p> <p><u>Credits:</u> 4   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 60   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WBAS101	Welding Basics	<p><u>Description:</u> This course is an introduction to industry-standard welding and cutting processes. Safety principles, equipment setup, and the use of tools and materials are presented</p> <p><u>Credits:</u> 8   <u>Course Length:</u> 5 Weeks   <u>Contact Hours:</u> Theory 10   <u>Guided practice</u> 140   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
WEB102	Web Development I	<p><u>Description:</u> In this course, students will be using a text editor, building a strong foundation in HTML, XHTML, and Cascading Style Sheets (CSS) so students can migrate to HTML editors. Students write code integrating CSS right from the start to reinforce concepts and skills learned</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD101	Safety Principles	<p><u>Description:</u> This course is an introduction to the safety practices and procedures common to the welding industry</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD102	Fabrication Plans	<p><u>Description:</u> Students read, interpret and create graphic drawings to complete welding projects</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD103	Pre and Post Welding Activities	<p><u>Description:</u> This course is an introduction to the tools, equipment, and materials used in the layout and fabrication of welding project</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD104	Oxyacetylene Cutting	<p><u>Description:</u> This course is an introduction to the use of oxy/acetylene welding and cutting equipment</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD105	Introduction to Shielded Metal Arc Welding	<p><u>Description:</u> This course is an introduction to the SMAW process with emphasis safety and theory. This class is the beginning in developing eye - hand coordination using fast fill SMAW electrodes on different groove designs and weld positions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD107	Brazing and Soldering	<p><u>Description:</u> Students perform brazing and soldering techniques with emphasis on the changes in the process encountered at various temperatures</p> <p><u>Credits:</u> 1 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD108	Full Penetration Welds - Flat/Horizontal	<p><u>Description:</u> This course is an extension of weld 107, using more advanced welding techniques in the flat and horizontal positions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
WELD109	Full Penetration Welds - Vertical/Overhead	<p><u>Description:</u> This course is an extension of weld 107, using more advanced welding techniques in the vertical and overhead positions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD110	Full Penetration Welds - Open Root	<p><u>Description:</u> This course is an advanced SMAW class using fast freeze electrodes in preparation for pipe welding</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD111	Introduction to Gas Metal Arc Welding	<p><u>Description:</u> Students receive instruction on the GMAW process learning theory, safety, and equipment set up</p> <p><u>Credits:</u> 3 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 40 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD112	Gas Metal Arc Welding - Full Penetration	<p><u>Description:</u> In this course students use hands-on application of the different transfer modes of GMAW on mild steel in all positions</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD113	Gas Metal Arc Welding - Aluminum	<p><u>Description:</u> In this course students use hands-on application of the different transfer modes of GMAW on aluminum in all positions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD114	Introduction to Flux Core Arc Welding	<p><u>Description:</u> Students receive instruction on the FCAW process learning theory, safety and equipment set up</p> <p><u>Credits:</u> 4 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 60 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD115	Flux Core Arc Welding - Full Penetration	<p><u>Description:</u> Students use the hands-on application skill of FCAW in all positions, on mild steel</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD116	Carbon Arc Cutting	<p><u>Description:</u> This course is designed to teach students how to safely use plasma arc and carbon arc cutting techniques</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> Theory 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

Course	Title	
WELD117	Welding Symbols	<p><u>Description:</u> Students learn to read and interpret welding symbols and abbreviations using fabrication plans and drawings common to the welding industry per American welding society.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD201	Introduction to Gas Tungsten Arc Welding	<p><u>Description:</u> This course is an introduction to the gas tungsten arc GTAW welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 10 <u>Guided practice</u> 80 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD202	Gas Tungsten Arc Welding - Full Penetration	<p><u>Description:</u> Students receive instruction on the GTAW process performing fillet and groove welds with various electrodes and filler materials on steel and stainless steel.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD203	Gas Tungsten Arc Welding - Aluminum	<p><u>Description:</u> Students learn to perform GTAW fillet and groove welds on aluminum</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD204	Welding Certification Testing - SMAW	<p><u>Description:</u> This course gives the student certification testing time in SMAW</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD205	Advanced Welding Applications - Pipe/SMAW	<p><u>Description:</u> This course covers the knowledge and skills that apply to welding pipe. Topics include pipe positions, joint geometry, and preparation with emphasis placed on bead application, profile, and weld discontinuities. Students perform SMAW welds to applicable codes on carbon steel pipe with prescribed electrodes in various positions</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD206	Advanced Welding Applications - Pipe/GTAW	<p><u>Description:</u> This course is designed to enhance skills with the GTAW welding process. Topics include setup, joint preparation, and electrode selection with an emphasis on manipulative skills in all welding positions on pipe</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD207	Welding Certification Testing - Flux Core	<p><u>Description:</u> This course gives the student certification testing time in flux cored arc welding (FCAW).</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Contact Hours:</u> <u>Theory</u> 0 <u>Guided practice</u> 100 <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>



Course	Title	
WELD208	Non-destructive Testing	<p><u>Description:</u> This course is an introduction to non-destructive testing methods used to detect discontinuities to help assure standards of quality in welding. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials</p> <p><u>Credits:</u> 2   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 40   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
WELD210	Advanced Welding Applications - Project	<p><u>Description:</u> This course offers the student the opportunity to use the knowledge and skills learned in class and apply them to actual projects or in the work based learning program with no lecture</p> <p><u>Credits:</u> 5   <u>Course Length:</u> 10 Weeks   <u>Contact Hours:</u> <u>Theory</u> 0   <u>Guided practice</u> 100   <u>Field-base experience</u> 0</p> <p><u>Prerequisites:</u>   <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
General Education**

BIOL170	Medical Terminology	<p><u>Description:</u> An introduction to the basic building blocks of medical terminology with an emphasis on word formation and structure</p> <p><u>Credits:</u> 2 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 20 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH092 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BIOL&160	General Biology	<p><u>Description:</u> General Biology is intended to leave the student with an integrated view of the living world. The primary goal of the course is to provide students with exposure to and an appreciation of, basic cellular, molecular, genetic, evolutionary and ecological processes that will assist them in future advanced courses</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH098 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BIOL&175	Human Biology with Lab	<p><u>Description:</u> This human anatomy and physiology course includes a brief overview of the human body for the non-science major. Basics of chemistry and cell structure are introduced and then the major systems of the human body are emphasized.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH092 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BIOL&241	Human Anatomy and Physiology I	<p><u>Description:</u> The first class in a two-quarter sequence in which human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> BIOL&amp;160 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BIOL&242	Human Anatomy and Physiology II	<p><u>Description:</u> This is the second in a two-quarter sequence in which human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> BIOL&amp;241 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
BIOL&260	Microbiology	<p><u>Description:</u> This lab focused course is a survey of the biology of organisms too small to see without a microscope. It emphasizes the development of microscopy and culturing skills necessary to investigate the nutrition, growth, metabolism, isolation and identification of medically important bacteria. Lectures cover the concepts of microbial genetics and classification, infectious disease, immunity and immunization.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 20 <u>Guided practice</u> 60 <u>Field-base experience</u> 0  <u>Prerequisites:</u> BIOL&amp;160 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CHEM&121	General Chemistry	<p><u>Description:</u> Students in this course explore the structure of matter and how it behaves under various conditions in order to better understand the chemical world. Designed for students with little or no chemistry background. Laboratory activities and extended lecture concepts introduce the students to the experimental process.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH098 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CHEM&131	Introduction to Organic/Biochemistry	<p><u>Description:</u> Introduction to organic chemistry and biochemistry includes the study of the nomenclature, structure, reactions and synthesis of organic compounds and biochemistry applications in the nursing fields. The course is primarily intended for those who are interested in the application of the principles of organic chemistry and biochemistry to related areas of science, such as genetics, microbiology, physiology and nutrition.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 30 <u>Guided practice</u> 40 <u>Field-base experience</u> 0  <u>Prerequisites:</u> CHEM&amp;121 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMST&102	Introduction to Mass Media	<p><u>Description:</u> This course critically examines core issues in the relationship between media and society, including news and entertainment media in print, electronic and digital format. Through readings, viewings, research and discussion, we examine the historical, cultural, political and economic contexts of media industries, representations and audiences.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMST&152	Intercultural Communication	<p><u>Description:</u> This course is an introduction to the intercultural communication process and its importance in contemporary society. Students learn about the values and beliefs of a variety of cultures and develop skills to interact with people from those cultures. Emphasis is on acquiring an increased understanding of the relationship between culture and communication.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

CMST&210	Interpersonal Communication	<p><u>Description:</u> This course is designed to increase students' awareness of the value and impact of utilizing improved interpersonal communication skills and strategies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMST&220	Public Speaking	<p><u>Description:</u> Introduction to the rhetoric of speech and the preparation and delivery of speech in an extemporaneous style, including ethical research methods, basic rhetoric and critical analysis, and organization of various types of presentations. Two to four speaking assignments are required, plus regular quizzes, peer review and written examination. Online resources will be integrated.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
CMST&230	Small Group Communications	<p><u>Description:</u> This course is designed to increase students awareness of the value and impact of utilizing improved small group communication skills and strategies.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECON&201	Microeconomics	<p><u>Description:</u> This course focuses on the theory of the market systems as a method of allocating resources and distributing income and products. Analysis of current problems including government regulation, subsidies, monopoly and taxation</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ECON&202	Macroeconomics	<p><u>Description:</u> 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: ECON&amp; 201, MATH 098, and ENGL&amp; 101 is recommended.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGL175	Professional Writing	<p><u>Description:</u> Enables students in career training programs to think logically and clearly and be effective and convincing in their professional and technical writing. It focuses on development of communication skills essential in a variety of forms of professional writing and technical writing.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL090 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGL&101	English Composition I	<p><u>Description:</u> An expository written communication course emphasizing critical thought, reflective reading, and information literacy with attention to rules and conventions of standard American English.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
ENGL&235	Technical Writing	<p><u>Description:</u> Advanced written communication for technical and business purposes based on higher level researching of technical information, organizing data, and writing abstracts, studies and detailed business communications. Requires a formal report using prescribed guidelines, including front and back matter</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HIST101	A History of Science and Technology	<p><u>Description:</u> This course will trace the history of scientific and technological advancements in the western world. Students will be made aware of the evolution in science from a philosophical and historical perspective. Part of the course will focus on the contributions that significant philosophers, scientists and institutions made to knowledge-making. At the same time, emphasis will also be directed toward the contributions of common, everyday artisans and craftsmen to "discovering", creating and recording scientific and technical knowledge.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
HREL111	College and Job Search Success	<p><u>Description:</u> This course is an introduction to employment and life skills that encourage self-awareness, self-confidence, and self-discipline that are necessary for college and self-promotion success. Topics include: self-motivation, personal learning styles, self-management, emotional intelligence, study skills, cover letter and resume writing, and interviewing. Students exercise learned skills by journaling, participating in classroom discussions, creating cover letters and resumes, and participating in mock interviews and other work-related situational role plays.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks <u>Hours:</u> Theory 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0..</p>

**Section 5 | Course Descriptions  
General Education**

MACH120	Machine Shop Mathematics II (RI)	<p><u>Description:</u> A continuation of the concepts introduced in MACH 111, students study elementary geometry, trigonometry, and Algebra as they apply to the machine shop.(This course meets the RI-Related Instruction for Computation for the AAS)</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH171	Technical Math	<p><u>Description:</u> Application of linear and quadratic equations, systems of equations, geometry and trigonometry and vectors and their applications in the technical workplace.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH092 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH172	Business Math	<p><u>Description:</u> Equation solving, exponents, markup, income tax, compound interest, logarithms and finding time, annuities, amortization and business statistics.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH092 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH173	Mathematic Concepts for Child Care/Early Education	<p><u>Description:</u> Mathematics for Early Childhood Educators focuses on the conceptual understanding, connections between and the application of math concepts. Concepts include number systems and computation, geometry, measurement, data analysis, probability and statistics, and problem solving. Emphasis is placed on the ability to communicate mathematical concepts in ways appropriate for young children.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH092 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH174	Math for Allied Health	<p><u>Description:</u> Mathematical concepts for allied health fields including systems of measurement, use of formulas, ratios and proportions in health applications; and basic statistics</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&107	Math in Society	<p><u>Description:</u> Applies mathematics to contemporary issues. Topics include problem solving, statistics, growth models and finance. Other topics will be chosen from the following: logic, voting methods, historical mathematics, graph theory, cryptography, fractals, geometry, measurement, sets</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&141	Precalculus I	<p><u>Description:</u> In this course students solve functions, function operations, rational, polynomial, exponential, logarithmic and linear functions and equation solving, function graphs, matrices and determinants, sequences and series.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&142	Precalculus II	<p><u>Description:</u> Right and oblique triangle trigonometry, circular functions, graphs of trigonometric functions, identities, inverse trig functions, vectors and polar coordinates, and parametric equations</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH098 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&146	Statistics	<p><u>Description:</u> This course is designed to teach the student counting rules, probability, mean and standard deviation, graphing, confidence intervals, hypothesis testing and regression analysis. Also applications in business, health and technology</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> Placement or MATH098 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&151	Calculus	<p><u>Description:</u> Limits and limit laws, continuity, tangents and rates of change, derivatives using definition and differentiation rules for polynomial, exponential, trigonometric, logarithmic and transcendental functions, max/min problems, L'Hospital's rule, Newton's method and antidifferentiation.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

**Section 5 | Course Descriptions  
General Education**

MATH&152	Calculus II	<p><u>Description:</u> Course content includes the Fundamental Theorem of Calculus, definite and indefinite integrals, methods of integration, applications of integration, and improper integrals. The course also includes an introduction to first order differential equations, antiderivatives, definite and indefinite integrals, and methods of integration.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> MATH&amp;151 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
MATH&153	Calculus III	<p><u>Description:</u> Emphasizes the study of infinite sequences and series including power series. Topics include plane analytic geometry, graphing in polar coordinates, and an introduction to vectors.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> MATH&amp;152 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
NUTR&101	Intro to Nutrition	<p><u>Description:</u> Study of human nutrition and health. Topics include digestion, absorption and processing nutrients in the body; chemistry and functions of the major nutrients: carbohydrates, fat, protein; vitamin and mineral functions; food, culture and diet, energy balance, diet and metabolism; fitness and health; nutrition of the life cycle, food safety and local and world hunger issues</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PHYS&221	Engineering Physics I w/LAB	<p><u>Description:</u> Physics for people with an interest in becoming scientists or engineers. Topics covered will be kinematics, dynamics, momentum, and energy. Four hours of lecture and two hours of lab weekly.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGL&amp;101, MATH&amp;151 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PHYS&222	Engineering Physics II w/LAB	<p><u>Description:</u> Topics covered will include electromagnetism, oscillations, and gravitation. Four hours of lecture and two hours of lab weekly.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> PHYS&amp;221, ENGL&amp;101, MATH&amp;152 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PHYS&223	Engineering Physics III w/LAB	<p><u>Description:</u> Topics covered will include waves, fluids, optics, and modern physics.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 40 <u>Guided practice</u> 20 <u>Field-base experience</u> 0  <u>Prerequisites:</u> PHYS&amp;222, ENGL&amp;101, MATH&amp;152 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
POLS&101	Introduction to Political Science	<p><u>Description:</u> This course is an introduction to American government and politics. Students will study the United States Constitution, governmental institutions, the political system, and the regulatory processes embedded within the document. The course format is lecture/discussion.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGL091 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PSYC&100	General Psychology	<p><u>Description:</u> Introductory psychology for people with an interest in all that influences human behavior. Whether planning a career in psychology or gaining insights about yourself and others, you will find this a useful and interesting open enrollment course of study.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
PSYC&200	Lifespan Psychology	<p><u>Description:</u> This course is an introduction to the various states of human development. Emphasis is on the major theories and perspectives and their relationship to the physical, cognitive and psychosocial aspects of development across the lifespan.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> PSYC&amp;100 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>
SOC&101	Introduction to Sociology	<p><u>Description:</u> This course is a general survey of sociology, the scientific study of the group life of humans in their environment. The course introduces the basic principles of social relationships, collective behavior, and human interaction. These principles are applied to the study of culture; race, gender, and class inequality; deviance; law; social institutions; and social change.</p> <p><u>Credits:</u> 5 <u>Course Length:</u> 10 Weeks      Hours: <u>Theory</u> 50 <u>Guided practice</u> 0 <u>Field-base experience</u> 0  <u>Prerequisites:</u> ENGL090 <u>Terms Offered:</u> Fall, Winter, Spring, Summer</p>

## SECTION 6 • REFERENCE GUIDE

### REFERENCE GUIDE

Bates Technical College faculty are required to hold a Washington state professional technical certificate as outlined in the Washington Administrative Code and rules of the State Board for Community and Technical Colleges.

### BOARD OF TRUSTEES

**HEATHER MOSS**

**FLORENCE CHANG**

**CHRISTINA BLOCKER**

**LAYNE BLADOW**

### PRESIDENT

**DR. LIN ZHOU**

PH.D, OREGON STATE

UNIVERSITY

MBA, CITY UNIVERSITY OF

SEATTLE

### VICE PRESIDENT, STUDENT SERVICES/CHIEF STUDENT AFFAIRS OFFICER

**STEVEN ASHPOLE**

MS, CAPELLA UNIVERSITY

BA, UNIVERSITY OF

WASHINGTON

### VICE PRESIDENT, INSTRUCTION

**VALERIE MARTINEZ**

PH.D, UNIVERSITY OF WYOMING

### FULL-TIME FACULTY AND ADMINISTRATION

**ADAMS, SHAWN**

INSTRUCTOR, DENTAL ASSISTANT

AT, BATES TECHNICAL COLLEGE

**AL TAMEEMI, NASER**

INSTRUCTOR, DENTURIST

AAS, BATES TECHNICAL COLLEGE

**ALLEN, SARAH**

EXECUTIVE DIRECTOR OF

FOUNDATION

MA, GONZAGA UNIVERSITY

BA, UNIVERSITY OF

WASHINGTON

**AMUNDSEN, TERESA**

INSTRUCTOR, DENTAL ASSISTING

BS, SOUTHERN ILLINOIS

UNIVERSITY

CERTIFIED DENTAL ASSISTANT

**ANDERSON, TAINA**

INSTRUCTOR, CIVIL

ENGINEERING TECHNOLOGY

MS, UNIVERSITY OF

WASHINGTON

**ANDROY, JIM**

INSTRUCTOR, ELECTRICAL

CONSTRUCTION

AT, BATES TECHNICAL COLLEGE

**ASHER, EMILY**

INSTRUCTOR, MATHEMATICS

MS, PORTLAND STATE

UNIVERSITY

BS, PORTLAND STATE

UNIVERSITY

**ASHER, WILLIAM**

INSTRUCTOR, HIGH SCHOOL

SCIENCE AND GENERAL

EDUCATION

PH.D, OREGON GRADUATE

INSTITUTE

BA, REED COLLEGE

**AUBEL, CHRISTINA**

INSTRUCTOR, CHILD STUDIES

M.ED., LESLEY UNIVERSITY

BA, UNIVERSITY OF

WASHINGTON

**BAKER, NICHOLE**

MANAGER, EARLY CHILDHOOD

PROGRAM

AT, BATES TECHNICAL COLLEGE

CERTIFICATE, CLOVER PARK

TECHNICAL COLLEGE

**BATTISTI, ANDRA**

PRACTICAL NURSING

INSTRUCTOR

BSN, COLLEGE OF LEARNING

**BECK, EILEEN**

INSTRUCTOR, PRACTICAL NURSE

BSN, PACIFIC LUTHERAN

UNIVERSITY

ADN, YAKIMA VALLEY COLLEGE

**BIGELOW, BRYCE**

INSTRUCTOR, PRACTICAL NURSE

BS, UNIVERSITY OF ARIZONA

BA, UNIVERSITY OF NORTH

CAROLINA

**BIRKHOLZ, JANE**

DEAN OF STUDENT SERVICES

PH.D, UNIVERSITY OF NEBRASKA

MS, MANKATO STATE

UNIVERSITY

BA, UNIVERSITY OF WISCONSIN

**BOLAS, JONATHAN**

DIRECTOR OF INSTITUTIONAL  
RESEARCH AND ACCREDITATION  
LIAISON OFFICER  
BA, INDIANA UNIVERSITY  
BS, PENNSYLVANIA STATE  
UNIVERSITY

**BREWER, DANIEL**

INSTRUCTOR, AUTO BODY  
REBUILDING AND REFINISHING  
CERTIFICATIONS: ASE, I-CAR,  
S/PS, GM

**BROCK, KATHLEEN**

INSTRUCTOR, MARKETING &  
BUSINESS MANAGEMENT  
MA, CITY UNIVERSITY  
BS, CITY UNIVERSITY

**BURKES, LESTER**

INSTRUCTOR, DIESEL AND HEAVY  
EQUIPMENT TECHNOLOGY  
MA, UNIVERSITY OF  
WASHINGTON  
BA, UNIVERSITY OF  
WASHINGTON  
AA, PIERCE COLLEGE

**CABEZA, ADAM**

INSTRUCTOR, FIRE SERVICE  
AS, FIRE SERVICE, BROWARD  
COLLEGE

**CARROLL, JASON**

CAREER SPECIALIST  
BA, SOUTHERN ILLINOIS  
UNIVERSITY

**CHASE, PATRICIA**

ADMISSIONS RECRUITER  
M.ED, TRIDENT UNIVERSITY  
BS, SOUTHERN ILLINOIS  
UNIVERSITY

**CLARK, FRANKLIN**

CURRICULUM AND ASSESSMENT  
COORDINATOR  
MA, CONCORDIA UNIVERSITY  
BA, CALIFORNIA STATE  
UNIVERSITY

**CLARK, MICHAEL**

INSTRUCTOR, AUTOMOTIVE  
MECHANIC  
AS, UNIVERSITY TECHNICAL  
INSTITUTE  
ASE CERTIFICATIONS

**CLEARMAN, JOSHUA**

CAMPUS DEAN, ADVANCED  
TECHNOLOGY  
MS, ARIZONA STATE UNIVERSITY  
BS, WASHINGTON STATE  
UNIVERSITY

**CLINE, KATHY**

DEAN OF ALLIED HEALTH  
MSN, WESTERN GOVERNORS  
UNIVERSITY  
BA, WESTERN GOVERNORS  
UNIVERSITY

**CUMMINGS, BETH**

CTC LINK ORG CHANGE  
MANAGEMENT COORDINATOR  
BA, UNIVERSITY OF OREGON  
CERTIFICATION: BLACKBOARD  
LEARNING SYSTEMS  
ADMINISTRATOR

**CUTTING, ARTHUR**

INSTRUCTOR, ELECTRONIC  
EQUIPMENT SERVICE  
TECHNOLOGY/BIOMEDICAL  
EQUIPMENT SERVICE  
TECHNICIAN  
CERTIFIED BROADCAST  
TECHNOLOGIST CERTIFICATE,  
TV/RADIO REPAIR TECHNICIAN,  
BATES TECHNICAL COLLEGE

**DAVIS, CHUCK**

EXECUTIVE DIRECTOR OF  
FACILITIES AND OPERATIONS  
BS, WALLA WALLA UNIVERSITY

**DRIVER, ANGELA**

INSTRUCTOR, I-BEST  
BA, ASHFORD UNIVERSITY

**DRUMMER, NEPHTALIN**

GENERAL SERVICES DIRECTOR  
MBA, WASHINGTON STATE  
UNIVERSITY  
BA, WASHINGTON STATE  
UNIVERSITY

**EBERLE, DANIEL**

COORDINATOR, DISABILITY  
SUPPORT SERVICES/ADVISOR

**EMERSON GLADE, PAULA**

INSTRUCTOR, I-BEST  
MA, UNIVERSITY OF OREGON  
BA, EASTERN ILLINOIS  
UNIVERSITY

**FIELD, JAMES**

CAREER SPECIALIST  
MA, CALIFORNIA STATE  
UNIVERSITY, NORTHRIDGE  
BA, HUMBOLDT STATE  
UNIVERSITY  
AAS-T, BATES TECHNICAL  
COLLEGE

**FIGUEROA, AGNES**

CHIEF INFORMATION  
OFFICER/EXECUTIVE DIRECTOR  
OF INFORMATION TECHNOLOGY  
MS, CAPELLA UNIVERSITY  
BS, UNIVERSITY OF PUERTO RICO

**FINDLEY, BRIDGET**

ACADEMICS INSTRUCTOR,  
ABE/GED  
MA, WESTERN WASHINGTON  
UNIVERSITY  
BA, WESTERN WASHINGTON  
UNIVERSITY

**FORD, KAREN**

INSTRUCTOR, CHILD STUDIES  
BS, OREGON STATE UNIVERSITY

**GERCHACK, DARIN**

DIRECTOR, ENGINEERING, KBTC  
AT, GRAYS HARBOR COLLEGE

**GRAHAM, JUDITH**

INSTRUCTOR, COMPUTER  
SCIENCES  
MS, REGIS UNIVERSITY  
BA, SAINT MARTIN'S UNIVERSITY  
AA, PIERCE COLLEGE  
AAS, PIERCE COLLEGE  
CERTIFICATIONS: OCA, ORACLE  
SOFTWARE

**GROW, PAULA**

INSTRUCTOR, I-BEST  
MS, WESTERN OREGON  
UNIVERSITY  
BS, WESTERN OREGON  
UNIVERSITY

**GUNTER, ROBERT**

INSTRUCTOR, COMMERCIAL  
TRUCK DRIVING CERTIFICATIONS:  
CITY OF TACOMA ACCIDENT  
ANALYSIS & REVIEW; CITY OF  
TACOMA-FIRE AND POLICE  
SPECIAL  
EQUIPMENT; AAMVA  
INSTRUCTOR FOR TRAIN THE  
TRAINER; INSTRUCTOR-FED EX  
GROUND 40-HR STRAIGHT  
TRUCK PROGRAM

**HAMILTON, DEANNE**

EXECUTIVE DIRECTOR AND  
GENERAL MANAGER, KBTC,  
DEAN, INSTRUCTION  
BA, UNIVERSITY OF  
WASHINGTON

**HANSEN, CHRISTOPHER**

OPPORTUNITY GRANT  
COORDINATOR/REENTRY  
NAVIGATOR  
BS, SOUTHERN ILLINOIS  
UNIVERSITY

**HARVEY, MARCUS**

ASSISTANT DEAN  
MBA, COLUMBIA SOUTHERN  
UNIVERSITY  
BS, SOUTHERN ILLINOIS  
UNIVERSITY

**HEATH, REBEKAH**

INSTRUCTOR, PRACTICAL NURSE  
AAS, PRATT COMMUNITY  
COLLEGE  
BS WESTERN GOVERNORS  
UNIVERSITY

**HOVILAND, JENNIFER**

DIRECTOR OF FINANCE

**HSU, FRANKLIN**

INSTRUCTOR, ELECTRONIC  
EQUIPMENT SERVICE  
TECHNICIAN / BIOMEDICAL  
EQUIPMENT SERVICE  
TECHNICIAN  
MS, SOUTHERN ILLINOIS  
UNIVERSITY  
BS, SOUTHERN ILLINOIS  
UNIVERSITY

**JEFFERSON, LEE**

INSTRUCTOR, DIESEL AND HEAVY  
EQUIPMENT

**JOHNSON, LANDON**

INSTRUCTOR, INDUSTRIAL  
ELECTRONICS AND ROBOTICS  
TECHNICIAN  
BS, MARQUETTE UNIVERSITY

**JONES, MARC**

INSTRUCTOR, COMMERCIAL  
TRUCK DRIVING-ENTRY LEVEL

**KANE, PHILLIP**

DIRECTOR, PROGRAMMING AND  
CREATIVE SERVICES, KBTC  
BA, METROPOLITAN STATE  
COLLEGE OF DENVER

**KAUER, JOSEPH**

INSTRUCTOR, CYBERSECURITY  
TECHNOLOGY  
MA, UNIVERSITY OF  
WASHINGTON  
BS, GREEN RIVER COLLEGE

**KEITH, MARY ANN**

INSTRUCTOR, ADMINISTRATIVE  
MEDICAL ASSISTANT MS,  
SOUTHERN ILLINOIS UNIVERSITY  
BS, WESTERN WASHINGTON  
UNIVERSITY CERTIFICATE,  
MEDICAL ASSISTING

**KELLER, LOREEN**

DEAN OF INSTRUCTION  
ED.D, NORTHEASTERN  
UNIVERSITY  
MA, ST. JOHN'S COLLEGE  
BA, UNIVERSITY OF  
WASHINGTON

**KERN, JULIETTE**

ASSISTANT DIRECTOR OF  
STUDENT ACTIVITIES  
BA, UNIVERSITY OF  
WASHINGTON TACOMA  
AA, OLYMPIC COLLEGE



**KNAPP, ROGER**

INSTRUCTOR, CULINARY ARTS  
AA, CULINARY INSTITUTE OF  
AMERICA  
CERTIFICATE, CULINARY ARTS,  
BATES TECHNICAL COLLEGE

**KNOX, WILLIAM**

INSTRUCTOR, WELDING

**KNUDSON, BRIANNE**

MANGER OF INDIVIDUAL GIVING  
BA, PORTLAND STATE  
UNIVERSITY

**LANCASTER, ALICIA**

OTA ACADEMIC FIELDWORK  
COORDINATOR  
BA, UNIVERSITY OF SOUTH  
CAROLINA UPSTATE  
AA, GREENVILLE TECHNICAL  
COLLEGE

**LANDEIS, NANCY CALLAHAN**

INSTRUCTOR, BASIC STUDIES  
MA, PACIFIC LUTHERAN  
UNIVERSITY  
BA, UNIVERSITY OF PUGET  
SOUND  
K-12 WASHINGTON STATE  
TEACHING CERTIFICATE

**LEE, SHEILA**

INSTRUCTOR, COMMUNICATION  
STUDIES AND HUMAN DIVERSITY  
PH.D, WASHINGTON STATE  
UNIVERSITY  
MA, BETHEL UNIVERSITY  
BA, UNIVERSITY OF MINNESOTA  
SCHOOL OF DENTISTRY

**LEENHOUTS, DAVID**

INSTRUCTOR, ELECTRICAL  
CONSTRUCTION  
AAS-T, BATES TECHNICAL  
COLLEGE  
AT, BATES TECHNICAL COLLEGE  
MASTER ELECTRICIAN

**LEONG, MARCI**

INSTRUCTOR, HEARING  
INSTRUMENT TECHNOLOGY  
AU.D, UNIVERSITY OF FLORIDA  
MS, UNIVERSITY OF  
WASHINGTON  
BS, UNIVERSITY OF  
WASHINGTON

**LINDQUIST, CHELSEA**

ASSISTANT DIRECTOR OF  
COMMUNICATIONS AND  
MARKETING  
MA, CHAPMAN UNIVERSITY  
BA, PACIFIC LUTHERAN  
UNIVERSITY

**LLAPITAN, JEFFERY**

INSTRUCTOR, ELECTRICAL  
CONSTRUCTION  
AT, BATES TECHNICAL COLLEGE  
MASTER ELECTRICIAN

**LOSKA, ADRIENNE**

MANAGER, ON AIR  
FUNDRAISING, KBTC  
AA, TACOMA COMMUNITY  
COLLEGE

**LUTHMAN, MARGE**

DIRECTOR –FACULTY,  
OCCUPATIONAL THERAPY  
ASSISTANT  
MS, COLORADO STATE  
UNIVERSITY  
BS, EASTERN KENTUCKY  
UNIVERSITY

**LYON, JOSEPH**

INSTRUCTOR, HEATING,  
VENTILATION, AIR  
CONDITIONING, REFRIGERATION  
TECHNICIAN  
BS, CENTRAL WASHINGTON  
STATE  
AA, GREEN RIVER COMMUNITY  
COLLEGE

**MACKAY, STEVEN**

INSTRUCTOR, SHEET METAL  
TECHNOLOGY  
BA, NATIONAL LABOR COLLEGE  
AAS-T, BATES TECHNICAL  
COLLEGE  
AT, BATES TECHNICAL COLLEGE  
WWSM JATC APPRENTICESHIP  
INSTRUCTOR

**MACKAY, AMY**

INSTRUCTOR, CHILD STUDIES  
MA, LESLEY UNIVERSITY  
BA, UNIVERSITY OF  
WASHINGTON TACOMA

**MCNUTT, DANA**

INSTRUCTOR, BASIC EDUCATION  
FOR ADULTS  
M.ED, UNIVERSITY OF  
WASHINGTON  
BA, THE EVERGREEN STATE  
COLLEGE  
ESA CERTIFICATION, SAINT  
MARTIN'S UNIVERSITY

**MEIER, LISA**

INSTRUCTOR, CHILD STUDIES  
MS, UNIVERSITY OF NORTH  
DAKOTA  
BA, CENTRAL WASHINGTON  
UNIVERSITY

**MEYER, CURT**

INSTRUCTOR, MECHANICAL  
ENGINEERING TECHNOLOGY  
MS, UNIVERSITY OF NEBRASKA-  
LINCOLN  
BS, UNIVERSITY OF NEBRASKA-  
LINCOLN

**MIN, ANDREW**

INSTRUCTOR, OTA  
AT, BATES TECHNICAL COLLEGE

**MINNITTI, LAWRENCE**

MANAGER, FACILITIES AND  
OPERATIONS  
CERTIFICATION: JOURNEYMAN  
MACHINIST/WELDING, BATES  
TECHNICAL COLLEGE

**MORRIS, CYNTHIA**

INSTRUCTOR, CHILD STUDIES  
MA, PACIFIC OAKS COLLEGE  
BA, PACIFIC OAKS COLLEGE

**NELONS, DEE**

DIRECTOR, COLLEGE HEALTH  
AND SAFETY  
BA, OREGON STATE UNIVERSITY

**NELSON, CHRISTINA**

EXECUTIVE DIRECTOR OF  
HUMAN RESOURCES  
MBA, ALVERNIA UNIVERSITY  
BA, ALVERNIA UNIVERSITY

**NETTER, SHARON**

INSTRUCTOR, ADMINISTRATIVE  
OFFICE ASSISTANT  
MS, UNIVERSITY OF ST. FRANCIS  
BS, SOUTHERN ILLINOIS  
UNIVERSITY  
CERTIFICATIONS: MASTER MOS  
INSTRUCTOR,  
CERTIFIED ADMINISTRATIVE  
PROFESSIONAL

**NORMANDEAU, PAT**

INSTRUCTOR, WELDING  
CERTIFIED WELDING EDUCATOR,  
AMERICAN WELDING SOCIETY

**NEWBY, WENDY**

DIRECTOR, ECEAP/CHILD CARE  
MS, WALDEN UNIVERSITY  
BS, MONTANA STATE  
UNIVERSITY-BILLINGS

**OLSON, JEFFERY**

INSTRUCTOR, BARBER  
CERTIFICATE, BARBER/STYLIST,  
BATES TECHNICAL COLLEGE;  
CERTIFIED INTERNATIONAL  
GUEST ARTIST

**OLSON, LIBERTY**

INSTRUCTOR, WELDING  
AA, PORTLAND COMMUNITY  
COLLEGE

**PANTOYA, JOHN**

MANAGER, CORPORATE  
SUPPORT, KBTC  
BS, COLORADO STATE  
UNIVERSITY  
AA, OTERO JUNIOR COLLEGE

**PARKER, BRIAN**

INSTRUCTOR, AUDIO/VISUAL  
TECHNOLOGY AND  
COMMUNICATIONS  
BA, UNIVERSITY OF PUGET  
SOUND

**PAYNTER, DAVID**

INSTRUCTOR, SCIENCE  
MA, WESTERN WASHINGTON  
UNIVERSITY  
BA, PACIFIC LUTHERAN  
UNIVERSITY

**PULIDO, EMILIE**

INSTRUCTOR, GENERAL  
EDUCATION  
BS, PHILIPPINE UNIVERSITY

**QUINTANA, AMANDA**

INSTRUCTOR, I-BEST  
M.ED, UNIVERSITY OF  
WASHINGTON  
BA, PACIFIC LUTHERAN  
UNIVERSITY

**RADONSKI, ANGELA**

INSTRUCTOR, PRACTICAL NURSE  
BA, GRAND CANYON UNIVERSITY

**RAPKOCH, JOAN**

INSTRUCTOR, CHILD STUDIES  
MS, UNIVERSITY OF OREGON  
BS, WESTERN OREGON STATE  
COLLEGE

**RENO, PATTY**

INSTRUCTOR, DENTAL ASSISTING  
CERTIFIED DENTAL ASSISTANT

**ROBARGE, JENNIFER**

INTERIM DIRECTOR OF FINANCE  
MA, WESTERN GOVERNORS  
UNIVERSITY  
BA, UNIVERSITY OF WYOMING

**ROBINSON, ROLAND**

INSTRUCTOR, AUDIO/VISUAL  
TECHNOLOGY AND  
COMMUNICATIONS  
BA, EASTERN WASHINGTON  
UNIVERSITY  
CERTIFIED TELEVISION  
OPERATOR, SBE

**RUSH, JEFFREY**

INSTRUCTOR, DIESEL & HEAVY  
EQUIPMENT MECHANIC  
AA, MT. HOOD COMMUNITY  
COLLEGE

**SAMOYLENKO, PAVEL**

ASSISTANT FINANCIAL AID  
DIRECTOR  
BS, CITY UNIVERSITY OF SEATTLE  
AT, BATES TECHNICAL COLLEGE

**SAMOYLENKO, VLADIMIR**

HR MANAGER  
BA, UNIVERSITY OF  
WASHINGTON

**SANFORD, DANIEL**

INSTRUCTOR, MACHINIST  
AT, BATES TECHNICAL COLLEGE

**SARTORE, MICHAEL**

INSTRUCTOR, DIESEL AND HEAVY  
EQUIPMENT MECHANIC  
HEAVY DUTY MECHANICS  
CERTIFICATE, SOUTH SEATTLE  
COMMUNITY COLLEGE

**SCHAEFER, KURT**

INSTRUCTOR, HISTORY/SOCIAL  
STUDIES  
DOCTORAL CANDIDATE,  
UNIVERSITY OF WASHINGTON  
MA, MICHIGAN STATE  
UNIVERSITY  
BA, ALBION COLLEGE  
4-12 WASHINGTON STATE  
TEACHING CERTIFICATE

**SCHERMAN, ELIZABETH**

INSTRUCTOR,  
COMMUNICATIONS  
PHD, UNIVERSITY OF  
WASHINGTON  
MA, UNIVERSITY OF  
WASHINGTON  
MAT, UNIVERSITY OF PUGET  
SOUND  
BA, PACIFIC LUTHERAN  
UNIVERSITY  
4-12 WASHINGTON STATE  
TEACHING CERTIFICATE

**SHEPARD, DIANE**

COUNSELOR  
MA, CHAPMAN UNIVERSITY  
BA, PACIFIC LUTHERAN  
UNIVERSITY

**SIMS, PETRINA**

PAYROLL MANAGER  
AAS, NORTH SEATTLE

**SIMPSON, PAMELA**

INSTRUCTOR, COMMERCIAL  
TRUCK DRIVING

**SKEEN, DAVID**

INSTRUCTOR, ADVANCED  
TECHNOLOGIES  
AT, BATES TECHNICAL COLLEGE  
CERTIFIED ELECTRONICS  
TECHNICIAN  
ISCET CERTIFICATION  
ADMINISTRATOR

**SMITH, DANIEL**

INSTRUCTOR, CARPENTRY  
MS, UNIVERSITY OF  
WASHINGTON TACOMA  
BS, WESTERN WASHINGTON  
UNIVERSITY

**SMITH, INGRID**

INSTRUCTOR, COMPUTER  
SCIENCES  
CERTIFICATIONS: COMP TIA A+;  
NETWORK+; CIW SITE DESIGNER;  
CIW CERTIFIED INSTRUCTOR;  
MOS

**SNYDER, MARK**

INSTRUCTOR, FIRE SERVICE  
FIRE FIGHTER DIPLOMA, BATES  
TECHNICAL COLLEGE

**SPEELMON, PETER**

INSTRUCTOR,  
COMMUNICATIONS  
AA, CLATSOP COMMUNITY  
COLLEGE  
MA, CENTRAL WASHINGTON  
UNIVERSITY

**SPITZER, MATTHEW**

INSTRUCTOR, POWER SPORTS  
& EQUIPMENT TECHNOLOGY  
AAS, SHORELINE COMMUNITY  
COLLEGE  
ASE CERTIFICATIONS

**STANTON, ROBIN**

COUNSELOR, TECHNICAL HIGH  
SCHOOL  
BA, CENTRAL WASHINGTON  
UNIVERSITY

**STANTON, SHERRI**

DIRECTOR, DEVELOPMENT AND  
MARKETING, KBTC  
BA, UNIVERSITY OF PUGET  
SOUND

**STONE, DIANA**

INSTRUCTOR, CHILD STUDIES  
M.ED, LESLEY COLLEGE  
BS, CITY UNIVERSITY  
AA, PIERCE COLLEGE

**SUCHITE, JOSE**

INSTRUCTOR, ELECTRICAL  
ENGINEERING  
PH.D, OREGON STATE  
UNIVERSITY  
MS, EMBRY-RIDDLE  
AERONAUTICAL UNIVERSITY  
BS, SOUTHERN ILLINOIS  
UNIVERSITY

**SUN, YIFAN**

ASSISTANT DEAN  
M.ED, UNIVERSITY OF  
WASHINGTON  
AS, NANKAI UNIVERSITY

**SWARENS, WILLIAM**

INSTRUCTOR, PRACTICAL NURSE  
MA, GRAND CANYON  
UNIVERSITY  
BSN, GRAND CANYON  
UNIVERSITY

**TORRES, LEXINE**

COUNSELOR, TECHNICAL HIGH  
SCHOOL  
BA, EASTERN WASHINGTON  
UNIVERSITY

**TRAUFLER, ROBERT**

INTERIM DIRECTOR OF  
REGISTRATION/REGISTRAR  
BA, WASHINGTON STATE  
UNIVERSITY

**TRUSSLER, TIMOTHY**

DIRECTOR, ELEARNING AND  
LIBRARY  
BA, SEATTLE PACIFIC UNIVERSITY  
AAS-T, BATES TECHNICAL  
COLLEGE

**UPHOLD, KIMBERLY**

DIRECTOR OF FINANCIAL AID  
MBA, ALVERNIA UNIVERSITY  
BS, ALVERNIA UNIVERSITY

**VALDEZ, VICKI**

DIRECTOR OF FINANCIAL  
SERVICES, KBTC  
BA, UNIVERSITY OF  
WASHINGTON

**VALENZUELA, KATHLEEN**

MANAGER, CONTRACTS AND  
GRANTS

**WEBB, LISA**

INSTRUCTOR, EARLY CHILDHOOD  
EDUCATION  
BA, EVERGREEN STATE COLLEGE  
AA, TACOMA COMMUNITY  
COLLEGE  
AT, BATES TECHNICAL COLLEGE

**WILLIAMS, LEE**

ADMISSIONS RECRUITER  
MS, UNIVERSITY OF ARKANSAS  
BS, EMBRY RIDDLE  
AERONAUTICAL UNIVERSITY  
CERTIFIED PROJECT MANAGER,  
GEORGE WASHINGTON  
UNIVERSITY; MICROSOFT  
CERTIFIED SYSTEMS ENGINEER

**WILLIAMS, TIFFANY**

SOUTH CAMPUS DEAN  
MBA, COLUMBIA SOUTHERN  
UNIVERSITY  
BS, EAST CAROLINA UNIVERSITY

**WITKOE, KENNETH**

INSTRUCTOR, AUDIO/VISUAL  
TECHNOLOGY AND  
COMMUNICATIONS  
AA, MARSHALLTOWN  
COMMUNITY COLLEGE

**WIWEL, BRIAN**

INSTRUCTOR, FIRE SERVICE

**WOOD, MICHAEL**

LIBRARIAN  
MS, UNIVERSITY OF  
WASHINGTON  
BA, THE EVERGREEN STATE  
COLLEGE

**YOUNG, BARRY**

INSTRUCTOR, MACHINIST  
PUGET SOUND CHAPTER  
NATIONAL TOOLING &  
MACHINING ASSOCIATION  
ADVANCED LOCKSMITHING,  
FOLEY-BELSAW INSTITUTE, COMP  
TIA, LIGHTPOINT LEARNING  
SOLUTIONS, JOURNEYMAN  
CERTIFICATION, MACHINIST  
CERTIFICATE OF TRAINING US AIR  
FORCE

**ZYLSTRA-MYTON, KARRIE**

INSTRUCTOR, I-BEST  
M.ED, SEATTLE UNIVERSITY  
BA, WESTERN WASHINGTON  
UNIVERSITY  
TESOL CERTIFICATION, WESTERN  
WASHINGTON UNIVERSITY