



2012 – 2014 ACADEMIC CATALOG





CATALOG CONTENTS

WELCOME.....	1
GETTING STARTED.....	3
Enrollment Information.....	4
Tuition & Fees.....	6
Financial Aid.....	5
General Education Outcomes.....	8
SERVICES FOR STUDENTS.....	9
CAMPUS LIFE.....	14
ACADEMIC POLICIES & RECORDS.....	15
ADDITIONAL PROGRAMS & LEARNING OPTIONS.....	21
High School Programs.....	24
Transitional Studies.....	25
Bachelor Degree Options.....	26
DEGREES & CERTIFICATES.....	27
PROGRAMS OF STUDY.....	33
COURSE DESCRIPTIONS.....	87
ADMINISTRATION & FACULTY.....	147
INDEX.....	151

Lower Columbia College, in Longview, Washington, was founded in 1934 and now serves approximately 5,000 students each quarter. Small class sizes mean LCC students receive lots of individual attention and the chance to really get to know their instructors and classmates.

Longview is located along the Columbia River, with beautiful forests and Mt. St. Helens nearby offering a multitude of outdoor recreational opportunities year round. The Pacific Ocean is just an hour away.

The College offers many different degrees and certificates. Start a bachelor's degree with one of our specialized transfer degrees or focus a general transfer degree on one of more than 40 fields of study. If you are looking for career training, choose from 50 different professional/technical degrees and certificates.



2012 LCC Board of Trustees

Max Anderson, Longview, WA
Registered Investment Advisor

Heidi Heywood, Skomakawa, WA
Private practice attorney — Part-time Superior Court commission and District Court Judge Pro Tem in Wahkiakum County

John Philbrook
Foreman, International Longshore and Warehouse Union Local 21

Steve Vincent, Vice Chair, Longview, WA
Retired business owner; Co-founder of Columbia Analytical Services

Thuy Vo, Chair, Longview, WA
Owner, VO Printers

Our Vision

Our vision is to be a powerful force for improving the quality of life in our community.

Our Mission

The mission of Lower Columbia College is to ensure each learner's personal and professional success, and influence lives in ways that are local, global, traditional, and innovative.

Our Value System

Our campus community expects an environment of integrity, respect, collaboration, cooperation, inclusion, and innovation that fosters personal growth, academic excellence, and accountability.

WELCOME TO LOWER COLUMBIA COLLEGE

Attending Lower Columbia College saves you money and gives you options upon graduation. You can enter the workforce directly after completing some programs, or you can transfer to a university for more education. Students who start at LCC earn GPAs equal to students who begin college studies at a university.

Here's How to Get Started:

1. APPLY FOR ADMISSION

lowercolumbia.edu/applynow

Simply apply for admission online, either at home or by using a computer in the Admissions Center. You will receive an acceptance letter and Student ID number by email once your admissions has been approved.

2. APPLY FOR FINANCIAL AID*

lowercolumbia.edu/finaid

You may qualify for financial assistance to help cover the cost of tuition and fees, books and other expenses. The Free Application for Federal Student Aid (FAFSA) is required and takes just 7 easy steps to complete. Ideally students should complete it as early as possible, but it can be done at any time. More than half of all LCC students receive some form of financial aid, including scholarships, so don't delay.

*High school diploma or GED required, US citizen or eligible non-citizen, Selective Service registration (if required). Low-cost Adult Basic Education classes or GED testing available for students who do not meet these requirements.

3. DETERMINE YOUR PROGRAM

lowercolumbia.edu/careercenter

If you are unsure about your career or educational plans, visit the Career Center where you can take an interest assessment, explore careers, and access career resources. The results will help you choose a program leading to a career field that is right for you. Free career assessment resources are available online.

4. TAKE YOUR PLACEMENT ASSESSMENT*

lowercolumbia.edu/placement

Students do better when they enter college at the right level. Placement testing helps tailor your needs and interests to the right level in English and Math, and helps advisors recommend the best programs and courses.

*Students who plan to earn a degree or certificate at LCC, or who plan to transfer to a university, must complete placement testing before registering for classes.

5. MEET WITH AN ENTRY ADVISOR AND REGISTER

lowercolumbia.edu/advising

Advisors are instrumental in helping students plan for college success. They will evaluate your placement test results, help you select classes, explain the registration process, and register you for the first time to make sure everything goes smoothly.

6. PAY FOR CLASSES

lowercolumbia.edu/payingforcollege

You may opt to pay your tuition in convenient, monthly installments, or defer payment until the week before classes for a small fee. Other payment options include online with a credit card, or in person at the Admissions Center. Normally (except when registering during the summer for fall quarter) you must pay by the Friday after you register. If you are receiving financial aid and have met the priority deadline, your tuition will be paid from your award check and any remaining funds will be mailed directly to you prior to the first day of class.



State Support of Higher Education Students 2012-2013 Academic Year

The State of Washington covers about half the cost of a community college education.

Instructional costs per full time-equivalent resident student are estimated at \$6,282 for the 2012-2013 academic year.

The state provides \$3,065 per full-time equivalent student, and student tuition covers the remainder. The state also provides an average of \$861 in financial aid per resident student.

2012-14 Academic Calendars

2012-13

Fall Quarter

First day of classes	September 17
Veterans' Day Holiday	November 12
Thanksgiving Holiday	November 22-23
Last day of classes	November 30
Final Exams	December 4-6

Winter Quarter

First day of classes	January 7
MLK Day Holiday	January 21
Presidents' Day Holiday	February 18
Last day of classes	March 15
Final Exams	March 19-21

Spring Quarter

First day of classes	April 8
Memorial Day Holiday	May 27
Last day of classes	June 11
Final Exams	June 18-20
Commencement	June 21

2013-14

Fall Quarter

First day of classes	September 23
Veterans' Day Holiday	November 11
Thanksgiving Holiday	November 28-29
Last day of classes	December 6
Final Exams	December 10-12

Winter Quarter

First day of classes	January 6
MLK Day Holiday	January 20
Presidents' Day Holiday	February 17
Last day of classes	March 14
Final Exams	March 18-20

Spring Quarter

First day of classes	April 7
Memorial Day Holiday	May 26
Last day of classes	June 13
Final Exams	June 17-19
Commencement	June 20

About this Catalog

Every effort is made to ensure that the information in this catalog is accurate at the time of publication. Acknowledging that policies, personnel, curricular, funding and legal authority can change, however, Lower Columbia College reserves the right to amend, revise or modify any provision printed in this catalog. Because curricula are regularly reviewed and revised, the College also reserves the right to add or withdraw courses without prior notification.

However, students can rely upon the graduation requirements printed in the catalog that is active when they begin their degree programs, or they may take advantage of later changes to their degree programs. LCC will work with students to provide opportunities for degree completion and will honor discontinued degree requirements for five years after the student begins course work for the degree. For the latest updates and corrections to this catalog, please contact the LCC Entry Center, 360.442.2311, or go to lowercolumbia.edu/catalog

Quick Facts*

Student Profile

- Number of students: 5,772
 - Full-time: 51%; Part-time: 49%
 - Male: 40%; Female: 60%
 - Ethnicity: 77% Caucasian; 23% of color
 - Average Age: 29

Faculty

- Full-time: 64 Part-time: 142

**Based on Fall 2012 data*

Contact Information

Lower Columbia College
The Entry Center
1600 Maple Street, PO Box 3010
Longview, WA 98632

360.442.2311

1.866.900.2311 toll-free

Email: info@lowercolumbia.edu

Website: lowercolumbia.edu

Important Phone Numbers

Bookstore	(360) 442-2240
Cashier	(360) 442-2210
Childcare	(360) 442-2890
Students with Disabilities	(360) 442-2341
Entry Center	(360) 442-2311
Financial Aid	(360) 442-2390
Registration	(360) 442-2370
Running Start	(360) 442-2352
Testing Center	(360) 442-2353
TTY	(360) 442-2344
Veterans	(360) 442-2393
Worker Retraining	(360) 442-2336

Accreditation

Lower Columbia College is accredited by the Northwest Commission on Colleges and Universities, an institutional accrediting body recognized by the Council for Higher Education Accreditation and the Secretary of the U.S. Department of Education.

The Lower Columbia College Nursing Program is approved by the Washington State Nursing Care Quality Assurance Commission and accredited by the National League for Nursing Accrediting Commission. The Lower Columbia College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment.

Admission

info@lowercolumbia.edu 360.442.2311

All new students must apply for admission. Students interested in taking classes at LCC can find helpful information online at lowercolumbia.edu/gettingstarted or on campus at the Admissions Center. The Entry Center staff provides information on enrolling for classes, placement testing, programs and courses, GED testing, and advising.

Certain programs may require special testing or training before enrollment but all students working toward a certificate or degree follow these steps:

1. Complete an Application for Admission online at lowercolumbia.edu/applynow or in the Admissions Center.
2. Students pay a new student fee of \$30 which allows access to any placement testing, advising and registration.
3. Make arrangements for high school transcript(s) to be sent to the Registration Office, Lower Columbia College, 1600 Maple Street, Longview, WA 98632 or registration@lowercolumbia.edu
4. Request that official transcripts from any college previously attended be sent to the Registration Office, Lower Columbia College, 1600 Maple Street, Longview, WA 98632 or registration@lowercolumbia.edu. Complete an evaluation request form at the LCC Registration Office.

Once transcripts are evaluated, the results will be sent to the student and his or her advisor.

LCC mails each student a letter of acceptance and information on how to enroll. International students, see the International Student Admission section in this catalog or lowercolumbia.edu/international for information on admission procedures and programs for international students.

High School and Younger (Special Admissions)

Current high school students may enroll in LCC courses with the approval of their high school principal and an LCC counselor or through the Running Start Program. See the High School Diploma, Running Start, and Tech Prep sections of this catalog for information about enrolling in LCC through these programs. Students younger than high school age should contact the LCC Registrar to begin the special admission process.

International Student Admission

lowercolumbia.edu/international 360.442.2313

International students who are interested in attending Lower Columbia College can request application materials from the International Student Programs Office.

To be eligible for admission, a student must be a high school graduate or equivalent at the time of enrollment, submit a satisfactory TOEFL (Test of English as a Foreign Language) score, show proof of financial security for one year, and give evidence of ability to succeed in studies at LCC. Students may be required to take pre-college English courses before enrolling in transfer level academic classes.

International students must complete at least 12 credit hours per quarter with a minimum GPA of 2.00. Students who fail to meet this requirement, will be subject to dismissal from the College and will be out of status with the Department of Homeland Security. International students must also provide proof of health insurance and repatriation coverage while enrolled at LCC.

Foreign Transcript Credits – Lower Columbia College recognizes academic credits earned at institutions outside of the United States that are equivalent in academic level and nature to work offered at LCC. Students must follow the instructions for evaluation of foreign transcripts found at lowercolumbia.edu/international/admissions. Upon evaluation of the foreign transcript, the student will be notified of credit to be granted. The Registrar makes the final determination on credits to be granted.

Placement Assessment

lowercolumbia.edu/placement 360.442.2311

Students who plan to earn a degree or certificate at LCC, or who plan to transfer to a baccalaureate institution, must take the placement assessments before enrolling. Placement assessments in reading, mathematics, English, and study skills help the student select the right courses to match his or her needs and interests.

LCC uses nationally-normed tests designed for use by community college students. Results and course recommendations are provided immediately upon completion of the testing session. Advisors use these placement results and course recommendations to help students plan their class schedules. Placement recommendations must be followed, although a student may re-test once and can appeal to the Director of Advising and Testing for higher placement.

Placement assessments are offered each weekday and can be arranged through the Entry Center.

Advising

lowercolumbia.edu/advising 360.442.2311

Academic advising is one of Lower Columbia College's most important student services. Students receive information, support, and guidance from individual program and entry advisors while planning their education. Advisors are assigned based on their particular knowledge in the student's stated area of interest or field of study, provide information about general college programs and procedures, plus advice on specific course selection.

All students who plan to earn a degree or certificate at LCC or who plan to transfer to a baccalaureate institution must meet with an advisor before registering for classes each quarter. New student advising appointments are coordinated at the Entry Center.

Returning students contact their program advisors (usually a faculty member) to plan a schedule and receive their quarterly online registration PIN. Assistance with contacting an advisor is available from the Entry Center. Program planners for most majors are available in the Admissions Center and also online at lowercolumbia.edu/programs.

Students not planning to earn a degree or to transfer, may still request help from an advisor through the Entry Center.

Registration

registration@lowercolumbia.edu 360.442.2370

New students must register for classes in person after meeting with an advisor. The Registration Office is located in the Admissions Center. In future quarters, students can register online after meeting with their program advisor and obtaining a quarterly registration PIN.

Registration dates and deadlines are published in the quarterly LCC Class Schedule available online, by mail and on campus before each quarter's registration period begins. Registration at LCC is prioritized so that degree- and certificate-seeking students nearest to graduation, who have met with their faculty advisors, register before newer students. Students should discuss alternative classes with their advisors since some of the classes may fill before their registration time. Online registration is available to continuing students.

To access records and to conduct other business online at lowercolumbia.edu/kiosk, students need a Student ID number and Global PIN. This information is provided by the Registration Office. To access their registration appointment date and time and to register online, students also need a quarterly registration PIN from their advisor.

Students placed in the incorrect English, Human Development, Mathematics and Physical Education classes are allowed to make changes through the tenth day of instruction.

Complete registration details and deadlines are published in the quarterly LCC Class Schedule available online, by mail and on campus.

Purchasing Textbooks & Supplies

lowercolumbia.edu/bookstore 360.442.2240

Lower Columbia College Bookstore, located in the Student Center, sells both textbooks and supplies required for LCC classes. Students can order books online at lowercolumbia.edu/bookstore.

Orientation

360.442.2311

New LCC students participate in a New Student Orientation session that provides tips and strategies for college success. Students learn where to find helpful resources both on campus and on the LCC website. Information is also shared on parking, saving on textbook costs, free tutoring and finding a job. College credit can be earned by completing additional work, such as visiting the library, acquiring a Student ID card and participating in workshops. Students attend a two-hour session before the quarter begins, based on their college program of study. To earn credit they complete additional assignments on their own. Sessions are assigned by the Entry Advisor.

Schedule Changes

Students can change their scheduled classes after registering as follows:

- Online through the third day of each quarter **OR**
- In person by completing a Change of Registration form at the Registration Office by the published deadline.

Students working toward a degree or certificate, must get their advisor's signature on the Change of Registration form. To drop a science lab class, a student must also get the instructor's signature.

Withdrawal

Students may withdraw from some or all of their classes through Friday of the eighth week of the quarter. If the class ends before the end of the quarter, a student may withdraw through the last day of class. If a student stops attending a class without officially withdrawing, he or she will remain on the roster and receive a grade accordingly.

To officially withdraw, a student must obtain a withdrawal form from the Registration Office, consult with the instructor if possible, obtain their advisor's signature (if withdrawing during the first seven weeks), and return the completed form to the Registration Office.

Students who complete the withdrawal procedure will receive a grade of W ("withdrawal") for the course. Students suspected of academic dishonesty may not withdraw from a course to avoid consequences resulting from academic dishonesty until there is a resolution through the student conduct process.

Students who don't attend any classes during the first five instructional days of the quarter, or contact the instructor, may be withdrawn from the class(es). Students withdrawn in this manner will receive a grade of V (instructor-initiated withdrawal) for the course(s).

Students are responsible for understanding the impact of withdrawing on their financial aid. Students are encouraged to review the Financial Aid Handbook or visit the Financial Aid office for information.



Financial Aid

lowercolumbia.edu/finaid

360.442.2390

More than half of LCC students receive some form of financial aid. These funds can be used to pay tuition and fees as well as other expenses such as books, supplies, rent, transportation, and other living expenses.

Who is eligible?

To qualify for Financial Aid a student must:

- Have a high school diploma or GED
- Be a U.S. citizen or eligible non-citizen
- Be registered with Selective Service (if required)

Other eligibility issues may be identified in the application process.

What financial aid is available?

Grants—Grants are need-based aid that generally does not have to be repaid. They include: Federal Pell Grant, Federal Supplemental Education Opportunity Grant (FSEOG), and Washington State Need Grant.

Work-Study Employment—Students can request a work-study job as part of their Financial Aid package. LCC staff will help students determine their eligibility. Students may work on or off campus for up to 19 hours a week while attending school. LCC participates in both the federal and state work-study programs. A limited number of student help jobs are also available. Jobs are posted online at lowercolumbia.edu/hireconnections

Loans—LCC offers Federal Direct Loans and parent (PLUS) loans up to the cost of attendance. The maximum loan amount awarded depends on student need, dependent status, and year in college. Students must complete loan counseling, a master promissory note and submit a loan worksheet. PLUS applicants use a separate loan application. For more information, contact the student loan coordinator at 360.442.2393

Scholarships—Scholarships are awarded to applicants who best meet the criteria for each award. The criteria vary but most are based on academic program, scholastic achievement and/or need. LCC students can apply for multiple scholarships by completing a single online application, called STARS, available at lowercolumbia.edu/scholarships. Applications are generally accepted January through April for the following academic year, but some scholarships may become available later so students should check the website after the initial deadline.

Veterans—Resident veterans who served in a combat zone or who provided direct support to American soldiers in a combat zone may qualify for special tuition rates and other financial aid. Assistance with completing the process to apply for college funds, veteran's health benefits and other help is provided by the Veterans' Affairs Coordinator's office. To get started, veterans need Copy #4 of their DD Form 214, Report of Separation from Active Service. Additional information: lowercolumbia.edu/veterans

WorkFirst Financial Aid—Students who meet certain criteria can receive aid for college through the WorkFirst program. Details are available from the WorkFirst coordinator located in the Admissions Center.

How to apply

Students apply for financial aid online through the LCC website. Computers are available for student use in the Admissions Center. Priority deadlines are set for each quarter to allow 3-6 weeks for an application to be processed. Priority dates are published at lowercolumbia.edu/finaid and in the LCC class schedule.

To receive financial aid, a student **MUST** complete the FAFSA (Free Application for Federal Student Aid).

1. Review "7 Easy Steps to the FAFSA" at lowercolumbia.edu/finaidforms. To complete the application, a student will need:
 - Social Security Number.
 - Income statements, tax or estimated income tax, bank statement. Visit FAFSA to learn more.
 - LCC's federal school code: 003782
2. Follow the instructions at www.fafsa.gov and complete the application.
3. Applicants should check their status at LCC's Financial Aid Portal and upload any requested documents. Do this at lowercolumbia.edu/finaid. The applicant will use their Social Security Number and birth date (mm/dd/yy) to log in the first time.

How to know if aid is awarded

Students will be notified of any financial aid awards through the Financial Aid Portal (see Step 3). Students should read their award notice carefully.

If a student applies for Financial Aid and registers for classes, it is assumed they are accepting the financial aid award. Students who decide not to attend LCC, must notify Financial Aid to cancel their award by Friday of the first week of classes.

The student should also review information about class changes or academic progress that might impact the award.

Maintaining financial aid eligibility

To continue receiving financial aid, students must meet the Satisfactory Academic Progress standards established by the applicable state and federal financial aid programs. Students who fail to meet these standards may be placed on financial aid warning or lose their financial aid. Students can review Satisfactory Academic Progress standards online at lowercolumbia.edu/finaid.

Reinstating financial aid eligibility

If financial aid eligibility was suspended at LCC, a student may request that their financial aid eligibility be reinstated once they have met the standards for reinstatement. Information about the reinstatement process is available in the Financial Aid Office.

Tuition & Fees

registration@lowercolumbia.edu 360.442.2370

Tuition at Lower Columbia College is set by the Washington State Legislature and may change according to the State's budget situation. Find the current tuition and fee information online at lowercolumbia.edu/tuitionandfees or at the LCC Admissions Center.

Residency Classifications

The Washington State Legislature sets requirements and procedures for determining a student's residency classification.

The Registration Office will make an initial determination of residency status from the information provided on the student's Application for Admission and notify those who have been classified as a nonresident at the time of registration.

To request a review of nonresident status or apply for reclassification, the student must submit a complete Residency Questionnaire with the required documentation to the Registrar no more than 30 calendar days after classes begin. It is up to the student to prove residency, and inadequate or erroneous documentation may result in denial of reclassification for that particular quarter.

Resident Students

Washington Resident students must verify that they have lived in Washington for one year and have established residency in the State of Washington, including U.S. Citizenship. If residency cannot be determined at the time of registration, the student will be required to pay non-resident tuition and fees. Complete residency rules are detailed in RCW 28B.15.012.

Students who are not a permanent resident or U.S. Citizen may be eligible for reduced tuition, if they have resided in Washington State for three years immediately prior to receiving a high school diploma and completed the full senior year at a Washington high school or completed the equivalent of a high school diploma. To determine eligibility, contact the LCC Registrar at 360.442.2371.

Oregon Border County Residents

Residents of Oregon Border Counties (Columbia, Clatsop, Multnomah, Washington) for 90 days may qualify for a reduced rate.

US Citizens & INS Permanent Residents

Individuals who have lived in the Washington State for 90 days or more and who are U.S. Citizens or Permanent Residents, as defined by the INS, may qualify for a reduced rate.

Other US Citizens and Foreign Students

Those who are not eligible to pay the "Resident Students," "Oregon Border County Residents," or "U.S. Citizens and INS Permanent Residents" rates, pay the non-resident rate.

Veterans

Veterans of the Desert Storm, Iraqi Freedom and Afghanistan conflicts may be eligible for reduced tuition and fees. For details see lowercolumbia.edu/veterans or visit the Veterans' Office in the Student Center.

Special Audit Rate for Senior Citizens

If space is available after the first class meeting, Washington residents 60 or older may audit up to two classes for \$2.50 per class plus applicable fees. Audit rate applies to credit classes only.

Tuition Waivers

Students may qualify for reduced tuition if they are a:

- Classified state employee or Washington Public Higher Education Employee
- Student seeking a high school diploma
- Student enrolled in more than 18 credits of vocational classes
- Washington National Guard member

For details, contact the Registration Office, 360.442.2370.

Miscellaneous Fees

In addition to tuition, LCC students may be assessed fees based on program and course selections. Current charges are listed in the class schedule and online at lowercolumbia.edu/tuitionandfees.

Apprenticeship: Students enrolled in apprenticeship programs pay per credit and per clock hour fees. They also pay the technology fee, facilities fee, tutoring center fee and fitness center upgrade fee.

Computer Lab: A fee is charged for certain classes identified in the course listing section of the class schedule that require use of a campus computer lab.

Distance Education: A fee is charged for courses that use LCC's Learning Management System, CANVAS or other online system. CANVAS courses are identified in the LCC Class Schedule with the symbol ▽.

Facilities: Quarterly tuition includes a per credit fee for facilities maintenance and college security.

Fitness Center Upgrade: Quarterly tuition includes a per credit fee to fund an upgrade of the campus fitness center.

GED Testing: \$150 for first time on all five. Re-testing: \$30 per test.

High School Diploma: Students taking courses to earn a high school diploma are charged a per credit fee based upon residency status. They also pay the technology fee, facilities fee, tutoring center fee and fitness center upgrade fee.

Lab: Nonrefundable lab fees are collected for certain classes. Where applicable, this fee is shown with class listings in the class schedule.

New Student Fee: All new students are charged a fee to cover the cost of processing their admission application and any necessary placement assessment testing. After two years of non-attendance, this fee will be recharged.

Resident Excess Credit: Quarterly tuition includes an additional per credit charge for 19 or more credits for residents enrolled for over 18 credits.

Running Start: Running Start students will be charged tuition for college credits exceeding 15 in any one quarter (charged at the 1-10 credit tuition rates for 16 credits and above). This does not apply to those enrolled in vocational programs or at Skills Centers.

Technology: Quarterly tuition includes a per credit technology fee. A photo ID card, which serves as your activities card, library card and computer lab card, is issued as part of this fee. The ID card is NOT issued quarterly; it is valid for the duration of the student's time at LCC.

Transcript: A fee is charged for each official transcript requested. Unofficial transcripts can be printed from the kiosk page on the LCC website.

Tutoring Center: Quarterly tuition includes a per credit fee to fund tutoring services available to all LCC students in most courses.

Vocational Excess Credit: Vocational students enrolled for over 18 credits, who meet certain requirements, pay a reduced per credit fee (residents); non-residents enrolled for over 18 credits pay a higher fee on 19 credits or more.

Payment

Tuition and fees can be paid with cash, a check, Visa or MasterCard in person at the Cashier in the Admission Center or online at lowercolumbia.edu/kiosk.

LCC also offers a deferred payment option for a fee and an automatic payment plan which allows a student to pay in monthly installments, interest free. Go to lowercolumbia.edu/payplan for details. Students who have applied for financial aid and completed all requested documents can register and make arrangements to delay tuition payment until their award is processed.

Tuition and fees must be paid by the Friday following the day the student registers for classes. Students who have not paid by that time, will be dropped from their classes unless they have made arrangements to participate in one of the delayed payment options listed above.

Refund of Fees

A refund of fees and tuition will be made to students or to financial aid programs for students who officially withdraw from classes according to the schedule listed below:

- Withdrawal prior to the sixth day of instruction of the quarter – 100%.
- Withdrawal on or after the sixth day of instruction of the quarter and prior to the 20th calendar day of the quarter – 50%.
- Withdrawal on or after the 20th calendar day of the quarter – 0%.

Check the quarterly class schedule for the exact dates. When the college cancels a class, a full refund is made. Fees other than tuition and incidental fees are not refunded. Special refund policies apply to Continuing Education classes; details are in the quarterly LCC Class Schedule.

American Opportunity Tax Credit

The "American Opportunity Tax Credit" provides a tax credit of up to \$2,500 of the cost of tuition and related expenses paid during the taxable year. This tax credit replaces the Hope Scholarships. Under this credit, taxpayers will receive a tax credit based on 100% of the first \$2,000 of tuition and related expenses (including books) paid during the taxable year and 25% of the next \$2,000 of tuition and related expenses paid during the taxable year. Forty percent of the credit would be refundable. This tax credit will be subject to a phase-out for taxpayers whose adjusted gross income exceeds \$80,000 (\$160,000 for married couples filing jointly). To file for the credit, eligible taxpayers can access Form 1098T at lowercolumbia.edu/kiosk.

Opportunity Grants

lowercolumbia.edu/opportunity 360.442.2330

Unemployed or underemployed adults seeking a certificate or degree in a high demand career, may be eligible for help to pay for college expenses under the Opportunity Grant Program. The grant provides individualized support services, along with funding for tuition and fees, books, and/or tools for up to 45 credits.

Eligible students must be a Washington resident, meet income eligibility requirements, and enroll in one of the approved high demand career pathways (see application or web site for full list). Applicants must submit a Free Application for Federal Student Aid (FAFSA) to determine income eligibility but do not need to be awarded financial aid to qualify. For example, students who do not qualify for traditional financial aid for reasons such as default on a previous loan, cancellation of financial aid, or failure to register for selective service, may qualify for an Opportunity Grant.

Applications are available on campus at the Career and Employment Center in the Admissions Center. Individualized support services include: assistance with education planning, financial aid, campus and community resources and skill building.

Worker Retraining

lowercolumbia.edu/workerretraining 360.442.2334

Unemployed adults who have lost a job due to plant closures, downsizing, or other causes; are a displaced homemaker, or have lost a business, may qualify for financial assistance to acquire new job skills and training. The college works with the Employment Security Department and other community agencies to provide services to dislocated workers. Community partners provide a broad array of assistance and can work with companies and employees as they plan for layoffs and downsizing. To be eligible for services, unemployed workers will need to meet certain requirements with layoff notices and/or eligibility for unemployment benefits. LCC offers educational planning, advising, and assistance with admissions, registration, and financial aid processes.

LOWER COLUMBIA COLLEGE CORE THEMES AND OBJECTIVES

Lower Columbia College is accredited by the Northwest Commission on Colleges and Universities (NWCCU). In 2010, the NWCCU adopted new accreditation standards requiring colleges to adopt “Core Themes” and assess progress toward mission fulfillment through each of the themes. On July 20, 2011, Lower Columbia College’s Board of Trustees adopted the following Core Themes and Objectives, which correspond with the College’s Expected College Outcomes:



Core Theme I: Workforce and Economic Development

(College Outcomes: Professional/Technical and Customized Education)

Objective 1: Provide quality professional/technical education for employment, skills enhancement, and career development.

Objective 2: Partner with business, community groups, and other educational entities to provide workforce development and customized programs and services.



Core Theme II: Transfer and Academic Preparation

(College Outcomes: Basic Skills & Pre-College and Transfer)

Objective 1: Ensure that learners who are under prepared for college level studies have access to developmental coursework and bridge opportunities to college level work.

Objective 2: Offer courses and support for students to meet the requirements for transfer from Lower Columbia College.

Objective 3: Provide the support for transfer students to successfully transition to upper division college and university programs.



Core Theme III: Student Access and Support

(College Outcome: Access)

Objective 1: Offer a full array of educational programs and support services to meet the diverse needs of Cowlitz and Wahkiakum counties.

Objective 2: Provide students with the support needed to pursue and achieve their educational goals.



Core Theme IV: Institutional Excellence

(College Outcomes: Community Enrichment and Institutional Excellence)

Objective 1: Demonstrate our commitment to institutional integrity by investing in our campus, students and employees.

Objective 2: Uphold our reputation for high quality and contribute to the value of the community by promoting excellence in our programs, services and activities.

SERVICES FOR STUDENTS & CAMPUS LIFE

At LCC, student support doesn't stop in the classroom. Resources are available to help students from a wide range of educational backgrounds every step of the way. Students are encouraged to check out the many services available on campus. Students also are invited to join in the full life of the campus community by participating in college activities, attending events and getting to know the other students, faculty and staff at LCC.



Advising

lowercolumbia.edu/advising 360.442.2311

The advising program at LCC offers information, support, and guidance from individual program and entry advisors. While students are still responsible for their educational planning, an advisor can help with selecting the right classes for each specific program. Advisors are assigned based on their particular knowledge in the area of interest or field of study. Students who plan to earn a degree or certificate at LCC or to transfer to a baccalaureate institution, must meet with an advisor prior to registering each quarter.

Bookstore

lowercolumbia.edu/bookstore 360.442.2240

Students will find new and used textbooks, reference materials, general supplies, computer software, art and engineering supplies, gifts, LCC signature clothing, other LCC logo items, and much more at the LCC Bookstore, located on the first floor in the Student Center. A book buyback is held during finals week of each quarter. The Bookstore is also open to the public. Check the quarterly class schedule for hours and buyback dates. Students can also order books online at lowercolumbia.edu/bookstore. The Bookstore's primary goal is to serve students and the staff welcomes suggestions about new products and services.

Career and Employment Services

lowercolumbia.edu/careercenter 360.442.2330

The Career Center has multiple resources to assist students, graduates and community members in developing a personalized career/education plan or to find a job. Several tools are available to help students identify careers that best match their interests, skills, and abilities. Online career information resources provide details about job duties, education requirements, working conditions, wages and occupational demand for specific work fields.

Career Specialists are available to help with career planning, exploration, and job search needs. Free workshops are provided on applying for college, Financial Aid applications, effective résumé writing, marketing job skills to potential employers, portfolio development, and resources for dislocated workers and low income adults.

lowercolumbia.edu/hireconnections

Local employers and staff use our free College Central Network program to recruit students, graduates, and community members. Job seekers can post résumé, find work-based learning opportunities, locate internships and search for full and part time jobs on and off campus.



Art Gallery

lowercolumbia.edu/artgallery 360.442.2510

The LCC Art Gallery is a "teaching gallery" that provides students and the community with a wide variety of exhibits, as well as related lectures, workshops, and demonstrations. Featuring the work of Northwest artists, the gallery typically hosts two shows each fall, winter, and spring quarter. An exhibit featuring the works of current students caps the academic year in late spring. Check the website for gallery hours and exhibit information.

Childcare

lowercolumbia.edu/childcare 360.442.2890

Childcare for children 1 month through 6 years of age is available to LCC students, staff and faculty members. Limited enrollment is open to the community at large. In addition to childcare services, Home & Family Life Early Learning Center offers an inclusive Pre-Kindergarten Readiness Program, Monday through Thursday. Student parents must register for Home and Family Life credits. Full-day and half-day rates are available, and DSHS payments accepted. Breakfast, lunch and afternoon snacks provided and USDA approved. The Early Learning Center follows the LCC academic calendar and is open weekdays from 7:45 a.m. until 5:00 p.m.

Computer Labs

lowercolumbia.edu/computerlabs

Lower Columbia College maintains computing facilities equipped with the hardware and software required to support instructional programs, students, faculty, staff, and administration. To use campus computers and to access the Internet and student email, students must create an account username and password at lowercolumbia.edu/myLCC. Wireless Internet access is also available on campus to students with mobile devices.

Counseling

lowercolumbia.edu/counseling 360.442.2311

Lower Columbia College provides counseling services for students, including personal, educational, and career counseling. Students can schedule an appointment with a counselor, call the Entry Center, 442-2311. LCC's counselors are located in the Admissions Center. Individuals needing extensive personal counseling will be referred to services off campus.

Dining

lowercolumbia.edu/cafe

The LCC Cafe, Espresso Kiosk and Encore Concession provide a varied menu for students, staff and the community, including breakfast all day, hot lunch specials, soups, sandwiches, grill items, snacks and beverages. Catering service available. Hours vary according to academic year.

Disability Support Services

lowercolumbia.edu/disability 360.442.2340

Admissions Center, Room 143 TTY 360.442.2344

A student with a documented disability may be eligible for accommodations or assistance through LCC's Disability Support Services office. Lower Columbia College is committed to providing support services to students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990. Disability Support Services coordinates services which may include reasonable accommodations, appropriate auxiliary aids, advising, admission, registration for classes, academic counseling, assistance with applying for financial aid, referrals to agencies, educational and vocational planning, even voter registration. Students are required to provide documentation of disability. To request services or for more information, visit the website, call or stop by the office.

Entry Center

info@lowercolumbia.edu 360.442.2311

The Entry Center provides enrollment information and general help to get started at LCC. New student advising is coordinated through the Entry Center, located in the Admissions Center. Returning students may also request program advisor information at the Entry Center.

Fitness Center & Gym

lowercolumbia.edu/fitnesscenter 360.442.2481

With a balance of free weights, selectorized machines, and aerobic equipment, the Red Devil Fitness Center offers something for everyone. Sign up for a Weight Training, Super Circuit, Zumba or Pilates class to add some 'positive' stress to your hectic schedule. Inhale...Exhale!

LCC is in the process of constructing a beautiful, new Fitness Center. Watch the website for updates and changes in availability of current facilities.



Honors & Recognition

■ PHI THETA KAPPA

lowercolumbia.edu/ptk 360.442.2882
Gamma Tau, the college's chapter of the Phi Theta Kappa international two-year honor society, emphasizes scholarship, leadership, service, and fellowship. Membership is open to all students who have completed 12 credits with a 3.5 GPA or higher. In recent years, Gamma Tau chapter members have been named to the National Dean's List and received Academic All-USA scholarships, among others. The chapter takes students to area conferences, and members volunteer often on campus and in the community.

■ OUTSTANDING STUDENT AWARDS

Each spring, LCC faculty and staff select outstanding students from their respective fields of study and activities for recognition. The students are honored at a reception hosted by the Associated Students of Lower Columbia College.

■ ALL USA ACADEMIC TEAM AWARD

Two Lower Columbia College students are honored each year through the All-USA and All-State Academic Team recognition programs administered by Phi Theta Kappa, international honor society for students attending two-year colleges. State team members are nominated by their community college presidents. Each All-Washington Academic Team member receives a scholarship funded by program sponsors. The state's public baccalaureate institutions and several private colleges also offer scholarships to community college transfers who are award winners.

■ HONORS LISTS

LCC recognizes students achieving notably high grades for any quarter. The President's List honors students earning 12 or more credits with a 3.80 or higher GPA for that quarter. The Dean's List honors those earning 3.25 to 3.79. Students who earn these honors are notified by mail or email and names are released for publication.

Learning Commons

lowercolumbia.edu/learningcommons

The Learning Commons combines Library Services, Self-Paced Learning, eLearning and Tutoring Services. The Learning Commons provides help with studying, research, and specific classes. All these services are located in the Alan Thompson Library Building in the center of the campus.

■ eLearning

lowercolumbia.edu/lcconline 360.442.2520
eLearning exists to support students and instructors who teach and learn online or use technology in the classroom. The eLearning Office, in the Library, room 107 is where users go to get help with CANVAS, Elluminate, Tegrity, and other online systems. Hours of service are posted in the Learning Commons and on the website. Send email to elarning@lowercolumbia.edu.

■ LIBRARY SERVICES

lowercolumbia.edu/library 360.442.2660
Library Services, in the Learning Commons, houses collections of print, media, and electronic materials. The online catalog includes holdings of the LCC Library, Longview Public Library and Kelso Public Library. Students can also find leisure reading paperbacks, media players, quiet study rooms, copy machines and computers. The Library Services website provides access to online databases and guidelines for research. Students may request assistance from librarians by phone, email, IM Chat or in person at the library. Hours of operation are posted on the website and in the Learning Commons.

■ SELF-PACED LEARNING

lowercolumbia.edu/selfpacedlearning 360.442.2570
Self-Paced Learning offers individualized, self-paced courses in basic reading and writing skills, Spanish grammar, and general study skills (test taking, textbook reading, note taking). Students work face-to-face with trained staff in the Learning Commons to learn new skills and/or improve existing skills. Hours of operation are posted in the Learning Commons.

■ TUTORING SERVICES

lowercolumbia.edu/tutoring 360.442.2572
Individual and group tutoring are free to LCC students. Well-qualified tutors help students in most college subjects, and are trained to aid students with mastering subject matter, improving study skills, and developing self-confidence. Tutor Services also provides some online tutoring. For more information, check the website or contact the tutor coordinator.



Multicultural Services

lowercolumbia.edu/multicultural 360.442.2424

Lower Columbia College seeks cultural diversity among the student population and is committed to recruiting and educating students from underrepresented populations at LCC.

The Multicultural Services staff addresses these students' needs and helps them participate in all aspects of student life at LCC by providing culturally-supportive personal guidance, culturally-related programs and activities, vocational and educational exploration, course and program advising, assistance with the financial aid process, and mentoring opportunities. These services are coordinated and provided by the Multicultural Advisor in the Student Support Services Program. Also, the Multicultural Club offers a host of campus activities.

Student Support Services

lowercolumbia.edu/ss 360.442.2420

The Student Support Services program provides academic assistance to help students succeed in college. Students who are First Generation (neither parent has a bachelor's degree), low income, or have a documented disability qualify. This federally-funded TRIO program helps participants become more effective college students, stay in college, graduate on time, and transfer to a baccalaureate institution. Students receive advising, individualized tutoring, and peer mentoring, as well as help selecting a career and transfer school.

Safety & Security/Parking

lowercolumbia.edu/safety 360.442.2911

Lower Columbia College is committed to providing a safe and healthy campus environment. Security personnel patrol buildings and parking lots nearly 24-hours a day. Parking is provided for LCC students on a first-come, first-served basis in the parking lots surrounding the campus. (See parking lot locations on the Lower Columbia College Campus Map.) Students are issued an official parking decal upon payment of registration fees. Students must display the parking decal in their vehicle when parking on campus. To use a designated handicapped parking space, a disabled parking permit issued by the state must be displayed.

Transfer Center

lowercolumbia.edu/transfercenter 360.442.2350

The Transfer Center, located in the Admissions Center, provides information to assist students to make a successful transition to a baccalaureate institution. Help is available to select a transfer college or university, and to complete admission procedures, financial aid applications, and transfer admission requirements. The Transfer Center sponsors van trips to popular transfer colleges and has transfer guides available explaining course transfer equivalencies.

Equal Opportunity, Affirmative Action and Reasonable Accommodation

It is the policy of Lower Columbia College to provide equal opportunity in all facets of education, hiring, and continued employment regardless of sex, race, marital status, creed, color, age, national origin, sexual orientation, veteran status, religious preference, or the presence of any sensory, mental or physical disability.

Lower Columbia College is committed to Affirmative Action. It shall strive to eliminate barriers to equal educational and employment opportunities encountered by these protected group members and to improve opportunities available to underrepresented groups.

Lea esta política en español al:
lowercolumbia.edu/affirmativeaction

The Title IX Equal Opportunity Officer and Section 504 Disability and ADA Coordinator is Lisa Matye Edwards. Her office is in the LCC Admissions Center, Room 159; her telephone number is 360.442.2301.

Prohibition Against Sexual Harassment

Sex discrimination in the form of sexual harassment is a violation of College policy. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education, or

Submission to or rejection of such conduct by an individual is used as the basis for employment or educational decisions affecting such individual, or

Such conduct has the purpose or effect of unreasonably interfering with an individual's work or educational performance or creating an intimidating, hostile or offensive environment.

Contact Lisa Matye Edwards, LCC Admissions Center, Room 159, 360.442.2301 or Nolan Wheeler, Administration Building, Room 122, 360.442.2121 to discuss Sexual Harassment complaints.

Veterans Services

lowercolumbia.edu/veterans 360.442.2346
Lower Columbia College offers U.S. Department of Veterans Affairs (VA) approved educational programs to eligible veterans and eligible dependents of deceased or totally disabled veterans under Title 38 and Title 10, U.S. Code. Eligible veterans qualify for help to process applications for VA educational benefits and receive information on eligibility, pay, and other VA matters. Resident veterans who served, or who provided direct support to American soldiers, in a combat zone may also qualify for special tuition rates and other financial aid.

Combat theater veterans and veterans who provided direct support to forces in a combat theater may be eligible for special tuition rates. Eligibility for these rates is determined by Veterans' Services staff. To qualify, a student must provide a copy of his or her DD Form 214, showing the award of either the Vietnam Service Medal or the Southwest Asia Service Medal.

Veterans Voices

All veterans who served in the Armed Forces and are attending or working at LCC are invited to participate in the Veterans Voices Outreach Group. Veterans decide the agenda for each meeting, including topics such as:

- Navigating the Veteran's Affairs system
- Scholarships available to veterans
- Financial Aid for college
- Understanding the VFW
- Housing assistance
- Making new friends
- Volunteer activities
- Facing re-deployment
- Organizing campus functions
- Making the transition back home

Meetings are confidential. Counseling referral is available.



Associated Students of Lower Columbia College (ASLCC)

lowercolumbia.edu/aslcc 360.442.2441
All students enrolled at LCC, except those enrolled exclusively in non-tuition courses, pay a service and activity fee as part of their tuition and automatically become members of the Associated Students of Lower Columbia College. Pictures are taken and free student identification cards are issued to new students, while returning students are issued a sticker to renew their I.D. cards. A student I.D. card qualifies you for reduced or free admission to events sponsored by the ASLCC, including athletic events, concerts, dances, and theatre productions. A fee is charged for replacing lost or stolen cards.

The ASLCC Executive Council is the student governing body. The Council meets weekly to administer the ASLCC budget, develop committees to deal with LCC campus issues, participate in the college's standing councils and committees, and represent LCC students in legislative issues that affect their education. ASLCC officers are elected each spring quarter.



Athletics (Go Red Devils!)

lowercolumbia.edu/athletics 360.442.2471
Lower Columbia College has one of the most successful and respected athletic programs in the Northwest Athletic Association of Community Colleges (NWAACC). LCC participates in volleyball, women's soccer, men's and women's basketball, softball and baseball. LCC softball teams have won nine NWAACC championships since 1998 and hold more titles than any other team. The LCC baseball team has ten NWAACC titles with appearances in 23 championship games since 1970. The men's basketball team has played in four NWAACC championship games since 2003, claiming the title twice. The women's basketball team is a West Division stalwart, and the volleyball team is also a solid performer with an NWAACC title in its history.

LCC has a great fan base in the community and the teams consistently play in front of large crowds. LCC Athletics also takes pride in performance in the classroom with mandatory study tables and a program GPA that is consistently at or higher than the total campus average. In order to represent LCC in athletics, students must satisfy eligibility requirements outlined in the NWAACC Codebook. Information is available through the Athletics office located in the LCC Student Center. LCC students, faculty and staff get free admission to all home games.

Drama

lowercolumbia.edu/theatre 360.442.2682

The drama program presents one major production each quarter. Center Stage theatre is an intimate 113-seat thrust theatre located in the Rose Center for the Arts on the college campus. Admission to Center Stage productions is free to all students, staff and faculty. Productions include student actors and support personnel as well as members of the community. Auditions are held the first two evenings of each quarter for the play presented that quarter. Participation in productions is open to students, staff and faculty as well as the community. Students cast in the productions or working backstage can receive college credit for their participation. The ASLCC, the Office of Instruction, Act One Drama Club and the LCC Foundation provide financial support for Center Stage productions.

Forensics

lowercolumbia.edu/forensics 360.442.2671

Lower Columbia College has a strong and successful speech and debate program. Thanks to ASLCC funding assistance, members participate in regional and national competitions in both team and individual contests, enjoying success (including national and regional championships) against both two-year and four-year schools. LCC's Forensics program has also established the annual Steelhead and Smelt Classics, which bring competing teams of high school and college students to the campus from throughout the Northwest. The LCC Forensics program is directed by LCC Speech faculty and is affiliated with Phi Rho Pi, the National Forensics Society for 2-year colleges.

Music

lowercolumbia.edu/music 360.442.2680

Lower Columbia College offers many opportunities to study and enjoy music through participation in LCC musical groups. These include the Concert Choir, Symphonic Band, Jazz Vocal Ensemble and Jazz Band, Jam Band, and other groups under the direction of the music faculty. Visiting professionals also present recitals, clinics, and workshops designed to enrich the musical experience at LCC. Top high school musicians from high schools in southwest Washington and northwest Oregon come to LCC each year for special performances.

LCC musicians also assist with area solo and ensemble bands and choral contest operations. Music education majors can get valuable music education career experience (and Cooperative Education credit) working as student interns with local school districts.

Student Handbook

Each fall the ASLCC and the College publish a student handbook. It includes current information on facilities, descriptions and locations of services, registration procedures, schedules and calendars, rights and responsibilities of students, personnel contacts and phone numbers. Copies are available at the Student Activities information desk in the Student Center. It is also posted on the ASLCC Web page.

Student Clubs & Organizations

ASLCC-subsidized organizations and clubs may be formed as special interests develop. Each group must complete an informational application, establish a membership list, and have an advisor. The ASLCC Executive Council also funds activities on campus that are coordinated by committees. Some of the current ASLCC organizations and activities include:

- Associates Students of Lower Columbia College (ASLCC)
- American Sign Language Club
- Anime Club
- Biological Society
- Chemistry Club
- Choir Club
- Drama Club
- Electric Vehicle Club
- English as a Second Language (ESL) Club
- Fencing Club
- Forensics / Debate / Phi Rho Pi Club
- Global Medical Brigade
- Multicultural Club
- Northwest Collegiate Ministries
- Nursing Club
- Phi Theta Kappa
- Pottery
- Salal Review (Literary & Arts)
- Science Fiction Club
- Symphonic & Jazz Band
- Transfer Club
- Veterans Voices
- Welding Club
- Zen Club

Photo & Video Policy

Lower Columbia College takes photographs and videos on campus throughout the year. These images often include students, employees, and guests in classrooms, computer labs, athletic events, and other campus activities. Lower Columbia College reserves the right to use these photographs and videos as part of its publicity and marketing efforts. Those who attend, visit or work at Lower Columbia College do so with the understanding that these photographs and videos might include them and might be used in college publications, newspapers, and other media for publicity purposes.

ACADEMIC POLICIES & RECORDS

While pursuing studies and joining in campus activities, there are things students need to know about LCC's policies on grades and student records, academic and graduation requirements, and rights and responsibilities as a student. Knowing these rules will help students move smoothly through the college system.



Grades & Credits

At Lower Columbia College, students receive both letter and points-per-credit grades. Each credit class is offered for a predetermined number of credits, generally one credit per weekly contact hour of lecture or two weekly hours of laboratory contact. Points, or numerical values, are assigned to letter grades. At the end of each quarter, students receive both a letter grade and its corresponding number of points for each course in which they are enrolled. Courses receiving a grade of P (Pass), W (Withdraw), R (Retake), N (Audit), X (Expunged), I (Incomplete) or V (Instructor-Initiated Withdrawal) are not included in the GPA. Grades and their points are as follows:

A	4.0 points per credit (exceptional performance)
A-	3.7 points per credit
B+	3.3 points per credit
B	3.0 points per credit (above average performance)
B-	2.7 points per credit
C+	2.3 points per credit
C	2.0 points per credit (average performance)
C-	1.7 points per credit
D+	1.3 points per credit
D	1.0 points per credit (minimal performance)
D-	.7 points per credit

Quarter grade point averages, called GPAs, are obtained by separately adding the student's total course credits attempted and the number of points received for those courses. The total grade points earned are divided by the total GPA credit for which the student has enrolled. The resulting figure is the student's grade point average for one quarter. Only credits earned in courses at LCC are used in computing a student's grade point average.

Cumulative grade point averages are found by dividing total grade points earned by total credits attempted. To aid the student in understanding individual progress, mid-quarter grades are available from individual instructors. These are not recorded on a student's permanent record.

Grade Forgiveness

A student returning to LCC after an absence of three or more years is eligible for grade forgiveness after completing at least 24 new credits at LCC, with a cumulative GPA of 2.5 or higher. Forgiveness applies only to courses taken before returning, and students can only use forgiveness once. Students must choose entire quarters (not individual courses) for grade forgiveness. The courses will remain on your transcript, but old grades will be replaced with an "X" for expunged and will not be figured into the GPA. Contact the Registration Office for more information.

Grade Report

Students may view their grades (unofficial transcripts) through the student information kiosk website at lowercolumbia.edu/kiosk, using Student ID Numbers and global PIN (personal identification number) available from the Registration Office. This unofficial transcript can be printed.

Credit for Prior Learning

Advanced Placement – General Examination

Lower Columbia College grants credit for completion of the College Board's Advanced Placement examinations. Advanced Placement is a cooperative educational endeavor between secondary schools and colleges and universities. The program provides motivated high school students with the opportunity to take college-level courses in a high school setting. Students who participate in the program gain college-level skills and may also earn college credit. AP courses are taught by high school teachers, following course guidelines developed and published by the College Board. LCC grants credit in several subject areas for students who have obtained a qualifying score on the College Board Advanced Placement examinations. Exams are given by the Educational Testing Service at locations around the country. Students must submit an official copy of their AP scores to the Registration Office. Upon evaluation of the scores, the student will be notified about acceptable credits. Provisional credit for AP scores will be used for advising purposes. Official credit will be granted once the student has earned 12 credits at LCC and has a cumulative grade point average of 2.75 or higher. See credit chart at: lowercolumbia.edu/ap

College Level Examination Program

Credit will be granted for College Level Examination Program (CLEP) tests with a minimum score equivalent to the 35th percentile for General and Subject examinations. Subject examination credits will be granted as equivalent to credits earned in courses at LCC. Credit for Subject examination will not be granted when students have earned credit in equivalent courses. General examination credits may count toward satisfying distribution requirements for any Associate in Arts—Direct Transfer Agreement or Associate in Science—Transfer degree. Students must submit an official copy of CLEP scores to the Registration Office. Upon evaluation of scores, the student will be notified of acceptable credits. Credit will be granted for Excelsior College Examinations on a case-by-case basis. Provisional credit will be given prior to completion of 12 credits at LCC. Credits will be granted and posted to the student's transcript following completion of required LCC credits. Read the CLEP Acceptance Policy and Exam Score equivalencies at: lowercolumbia.edu/clep

Credit by Challenge

A student may request to challenge a course if he or she has previously taken courses and established a transcript record at LCC and believes that previous experience has provided the competencies essential for passing the course to be challenged. The student must enroll in the course and pay the tuition and fees required. Some courses may not be challenged. Courses and grades resulting from the challenge process will be posted to the student's transcript record at the end of the quarter during which the exam is taken. Forms to challenge a course are available at the Registration Office.

Course Waiver

A student may petition to have a course requirement waived based on prior educational or work experience. The instructor of the course initially evaluates the request to waive a course with final approval by the Vice President of Instruction. At the student's request, the instructor submits a Course Waiver form to the Vice President of Instruction. Once approved by the Vice President, the course is recorded at the end of the student's transcript and labeled as "waived" with the appropriate credits. Waived courses and credits are not included in the student's grade point average. Waived courses may be used to satisfy any graduation requirement but may not be accepted as part of the 24 required credits in residence. Waived courses will not be recorded until a student has earned 12 credits in courses numbered 50 or higher. No fee is charged for Course Waivers. Transferability of waived courses is determined by the receiving institution.

Foreign Transcript Credits

Lower Columbia College recognizes academic credits earned at institutions outside of the United States that are equivalent in academic level and nature to work offered at LCC. Students must follow the instructions for evaluation of foreign transcripts found at lowercolumbia.edu/international/admissions. Upon evaluation of the foreign transcript, the student will be notified of credit to be granted. The Registrar makes the final determination on credits to be granted.

International Baccalaureate Credit

The International Baccalaureate (IB) program is a rigorous, pre-college course of study for high school students, designed to prepare students for liberal arts education at the college level. The term "international" reflects the availability of the program in several countries. The IB program is similar to the College Board Advanced Placement program. IB scores are based on rigorous coursework and a test score. LCC accepts IB credit. Students must submit an official copy of IB scores to the Registration Office. Following evaluation of IB scores, the student will be notified of acceptable credits. For transfer of credit information, a student should consult the Registrar. Final decision on credit granted for IB scores is determined by the Registrar.

Military Service Experience

Credits for military personnel's military school and experiences are granted according to the publications of the American Council on Education. Current editions are on file with the credential evaluator in the Registration Office. Students should submit official copies of their CCAF, SMART or AART certified copy of their transcripts or a copy of their DD 214s to the Registration Office with a Request For Transcript Translation form. The credential evaluator will review the record and translate military credit into Lower Columbia College course numbers and credit values. Final determination on credit granted for military service experience is at the discretion of the Registrar. Courses transferred in as electives will be considered restricted. A student is allowed 15 credits of restricted electives to be counted towards a degree at LCC. NOTE: Some four-year institutions will not accept military credits.

Audit

A student may audit any course for no credit upon payment of tuition and fees. Auditors are not required to take examinations, but may participate in course work. If you want to audit a class, you must register as an auditor. Registered students wishing to change to audit status must follow the procedure for change to audit registration, including obtaining the instructor's written permission.

Senior citizens may audit courses at a reduced rate, on a space-available basis. Contact the Registration Office for details on the Senior Citizens' Waiver Program.

Final Exams

The Final Exam schedule is included in the printed quarterly course schedule and available online at lowercolumbia.edu/kiosk

Evening classes meeting once a week will take their final exam at the regular class time during finals week. Evening classes meeting more than once a week will take the final exam at the regular class time on whichever day during finals week the class agrees upon.

Students are not required to take final exams for more than two classes on a single day. Students may petition the Vice President of Instruction for other final examination arrangements if such a conflict arises, after first contacting the instructor. Exam priorities shall be based on class meeting day order first, then meeting time.

Final exams will be administered on the day designated on the final exam schedule. If a deviation from the scheduled day is desired, approval must be obtained from the Vice President of Instruction. Time changes, unanimously approved by the class, are acceptable.

Full-Time/Part-Time Load

The College considers a full-time course load to be 12 or more credits in a regular quarter and 10 or more credits during summer quarter. Full-time status may be defined differently for other purposes, such as certain financial aid programs or assessment of fees.

Incompletes

An instructor may give a grade of Incomplete (I) if a student satisfactorily completes most but not all of the course objectives. An Incomplete must be completed within one year of when it was given (or less than one year if so specified by the instructor). The final grade will replace the Incomplete on the student's transcript after the instructor submits it. Incompletes not completed within the year may result in an F.

Instructor-Initiated Withdrawal

Students who do not attend any of the class sessions during the first five instructional days of the quarter (i.e., are absent for all of the scheduled class meetings) and do not contact the instructor regarding the absence in person, by phone, or by email, may be administratively withdrawn by the class instructor. In these cases, students will receive a grade of V (vanished) for the course.

Pass/Fail Option

Students may choose the pass/fail grading option through the first 10 days of each quarter. Students must initiate this option by completing a form available in the Registration Office and submitting it to the Registration Office no later than the tenth day of the quarter in which the course is being taken. The decision to enroll on a pass/fail basis may be reversed by notifying the Registration Office in writing by the normal deadline to drop classes. Limitations on courses taken through the student-initiated pass/fail grading option include:

- A maximum of five credits per quarter may be taken pass/fail. A maximum of 15 "Pass" credits may be used toward completion of associate degree requirements.
- Courses taken pass/fail may not be used to satisfy the communications, quantitative skills, Core program, or distribution requirements for any associate degree at Lower Columbia College, except when a pass/fail class is required by a specific program.
- "Pass" grades are not computed in the grade point average.

Students should understand that other institutions may restrict the acceptance of "Pass" grades, or restrict pass/fail grading for major, minor, or professional courses. Some courses are only graded on a pass/fail basis. These courses are designated in the class schedule or college catalog.

Repeating a Course

Students may repeat courses. Normally, all grades for repeated courses are used in calculating the student's grade point average, although the student earns credit toward graduation only once. You may repeat a course and have the original grade disregarded for grade point average calculation. These rules apply:

- A student must request the grade change for a course after the course has been repeated.
- Upon the student's request for removal of an earlier grade, the retake grade will be entered and the original grade removed and replaced with an "R" grade by the Registration staff.
- If a student has taken a course more than once before applying for retake, the student selects which quarter's grade will be removed.
- The retake policy may be used once for any individual course.
- Grade points for any course taken more than once, with the exception of the approved retake course, will be included in the grade point average.

A petition form for course retake requests is available from the Registration Office.

Academic Standards

Academic Standards Committee

The Academic Standards Committee includes faculty from each department, the Vice President for Student Success, and a student representative. The committee acts on student or faculty petitions to waive graduation requirements or to make course substitutions for graduation, and on student appeals of the following:

1. Sanctions imposed on students for alleged arbitrary and capricious application of academic standards; and
2. Application of academic policies or procedures by instructors.

Petition forms are available in the Registration Office and the Office of the Vice President for Student Success. Completed forms should be directed to the Secretary of the Academic Standards Committee, who is the Executive Assistant to the Vice President for Student Success.

Student Academic Grievance Policy

LCC's Academic Grievance Policy protects freedom of expression and protects students from improper, arbitrary or capricious academic evaluation.

If a student believes they have been graded improperly and are unable to informally resolve the situation with the instructor, the student may file a formal grievance with the Vice President for Student Success. More information and a copy of the Student Academic Grievance Policy are available from the Office of Student Success, 360.442.2300 or online.

Academic Warning and Suspension

Poor grades may result in an academic warning that alerts the student to low scholarship status and encourages steps to improve performance. The academic warning and suspension policies are:

- Any student who receives a quarterly GPA below 2.0 for any quarter will be placed on Academic Warning.
- Any student with two consecutive quarterly GPA's less than 2.0 and/or whose cumulative GPA is less than 2.0 will be on Academic Probation and may be required by the college to enroll in College Success or other courses as determined by the College to assist with academic success.
- Any student with three or more consecutive quarterly GPA's less than 2.0 and/or whose cumulative GPA is less than 2.0 is subject to academic suspension of up to three academic quarters. Students who are academically suspended must petition for reinstatement to the Vice President for Student Success at least six weeks prior to the quarter in which the student would like to re-enter the College.

Petition forms are available at the Registration Office and the Office of the Vice President for Student Success. Completed forms should be directed to the Executive Assistant to the Vice President for Student Success. If readmitted, the student must enroll under whatever conditions the Vice President believes will help him or her to succeed.

Graduation & Transfer

Applying for Graduation

To receive a degree from LCC, students must apply for graduation through the Registration Office. Graduation applications are available online at lowercolumbia.edu/graduation and at the Registration Office. A student should consult with an advisor to assure that all course work will be completed by the intended date of graduation, and return the completed application to the Registration Office by the quarterly deadline. It is recommended that students apply for graduation two quarters before they intend to graduate, so that any deficiencies may be identified and corrected. Students may graduate at the end of any quarter.

Commencement exercises are held in June each year. Students who have completed requirements during the past year may participate in the June commencement ceremony. Students eligible to graduate at the end of summer quarter, may—during the preceding spring quarter—apply for spring graduation and participate in Commencement, completing requirements through the Summer Completion Option.

Students may apply for graduation under the graduation requirements in effect at the time they first enrolled, provided the first enrollment year is within five years of the year of graduation.

Transferring Credit

LCC recognizes academic credits earned at other regionally accredited collegiate institutions that are essentially equivalent in academic level and nature to work offered at LCC. Credits earned at other regionally accredited collegiate institutions will become part of the students' LCC permanent records if the student earned a C or better, however, the cumulative GPA will only be calculated using LCC courses. The College subscribes to the Statewide Policy on Inter-College Transfer and Articulation Among Washington Public Colleges and Universities, which is endorsed by the state's public colleges and universities and the State Board for Community and Technical Colleges, and is adopted by the Higher Education Coordinating Board. The policy deals with the rights and responsibilities of students and creates an appeal process in transfer credit disputes.

Reciprocity Between 2-Year Colleges

Washington community and technical colleges (CTCs) offer reciprocity to students transferring within the CTC system who are pursuing the Associate in Arts Direct Transfer Agreement degree or the Associate in Sciences – Transfer degree. Students who completed an individual course that met distribution degree requirements or fulfilled entire areas of their degree requirements at one college will be considered to have met those same requirements if they plan to complete the same degree when they transfer to another community or technical college in Washington. These degree requirements include Communication Skills, Quantitative Skills, and/or Distribution Area requirements. Students must initiate the review process and be prepared to provide necessary documentation. More information is available at the Registration Office.

Transfer Degrees

Washington State colleges and universities and many private colleges and out-of-state institutions recognize graduates of Lower Columbia College who have earned the Associate in Arts-Direct Transfer Agreement degree as satisfying most or all of their general education requirements and will normally grant junior standing on transfer. Details on the LCC transfer degrees begin on page 27. Some colleges require specific course patterns or courses, in addition to the basic Associate in Arts degree. For current information on LCC's transfer agreements with other colleges, go to lowercolumbia.edu/transfercenter or visit the Transfer Center.

Washington 45

A student who completes courses selected from the categories listed below will be able to transfer and apply up to 45 quarter credits toward general education requirement(s) at any other public, and most private, higher education institutions in the state.

First Year Transfer List

- **Communications** (5 credits)—ENGL& 101, ENGL& 102
- **Quantitative and Symbolic Reasoning** (5 credits)—MATH& 107, MATH& 148 or MATH& 151
- **Humanities** (10 credits in two different subject areas or disciplines)—PHIL& 101, MUSC& 105, DRMA& 101, HIST& 116
- **Social Science** (10 credits in two different subject areas or disciplines)—PSYC& 100, SOC& 101, POLS& 101, POLS& 202, HIST& 117
- **Natural Sciences** (10 credits in two different subject areas or disciplines)—BIOL& 100, BIOL& 160 w/ lab, ASTR& 101 with lab, CHEM& 110 with lab, CHEM& 121 with lab, CHEM& 161, CHEM& 162, GEOL& 101 with lab.
- **Additional 5 credits** in a different discipline can be taken from any category listed above.

For transfer purposes, a student must have a minimum grade of C or better (2.0 or above) in each course completed from this list. Students who transfer Washington 45 credits must still meet the transfer institution's admission requirements and eventually satisfy all their general education requirements and their degree requirements in major, minor and professional programs.

Student Records

Official Transcripts

An official transcript is a copy of the student's permanent record, signed by the Director of Enrollment Services/Registrar with the school seal placed over this signature. An unofficial transcript is an unsigned and non-seal-bearing copy of that record. A student may request a transcript in-person, in writing, or online at lowercolumbia.edu/kiosk. A transcript will only be released to the student or to persons authorized in writing by the student. LCC charges a small processing fee for each official transcript requested.

Unofficial Transcripts

See Grade Report on page 15 of this catalog.

Records Confidentiality

To respect the privacy rights of students, certain information is released only with the express written permission of the student. LCC's records release policy complies with state and federal regulations.

Without the written consent of the student, the College shall not permit access to or the release of education records or personally identifiable information, except to:

- (1) College staff, faculty, and students when the information is required within the performance of their responsibilities to the College.
- (2) Federal and state officials in connection with the audit and evaluation of a federally or state-supported education program or with the enforcement of related legal requirements.
- (3) Agencies or individuals requesting information in connection with a student's application for, or receipt of, federal or state financial aid.
- (4) Researchers conducting studies for or on behalf of the College. Such studies will not permit the personal identification of students by other persons.
- (5) Accrediting organizations in order to carry out their accrediting functions.
- (6) Any person or entity designated by judicial order or lawfully issued subpoena, upon condition that the student is notified of all such orders or subpoenas in advance of the compliance therewith.

Directory Information, News and Photos— LCC may release the following for publication without the student's written permission: (1) name, (2) field of study, (3) dates of attendance, full or part-time status, and alumni information, (4) degrees and awards, including academic awards, (5) the name and major of scholarship recipients, (6) the names of graduates of the college, (7) the names and qualifications of students receiving various honors, (8) sport, high school, height and weight of student athletes, (9) the names and activity of students participating in public performance events, and (10) images and pictures taken of students in the course of activities associated with the college.

If you choose to have Lower Columbia College NOT release your directory information, notify the Registrar in writing by using the form available in the Registration Office. You should be aware that asking Lower Columbia College to withhold directory information may prevent other colleges and employers from receiving information that might be to your advantage.

Release of Information in Emergencies— Necessary student information may be released in connection with an emergency and/or to protect the health and safety of a student or other persons. Definition of an "emergency" is left to the Registrar, but must be strictly construed.

GLOBAL SKILLS

Lower Columbia College faculty have developed the following set of Global Skills for all LCC students. This list describes the knowledge, skills and abilities expected of all students earning a credential from LCC. The College regularly evaluates student progress in these areas to help plan improvements and ensure quality across the institution.

Communication

Express ideas and information in writing and speaking in a manner that is clear and appropriate to the audience, and read and listen effectively.

- A. Students will communicate in complete sentences, demonstrating use of grammar, mechanics, and word choice appropriate to context.
- B. Students will develop and express their ideas clearly and reasonably for a unified purpose.
- C. Students will demonstrate comprehension of a wide variety of materials.
- D. Students will use credible evidence to support arguments and conclusions.

Critical Thinking

Apply various techniques and processes using information, data, situations, or other forms of artistic expression, to draw logical, rational, ethical, and coherent conclusions.

- A. Students will identify and define primary problems or issues.
- B. Students will gather relevant and accurate information from a variety of sources and draw valid inferences from that information.
- C. Students will be able to analyze and make judgments in response to problems, issues, and artistic expression using technique or processes appropriate to subject.
- D. Students will propose and/or evaluate solutions based on the criteria of logic, ethical principles, and coherence.

Interpersonal Relations

Interact effectively with individuals and/or within groups.

- A. Students will participate actively, demonstrating commitment to shared tasks.
- B. Students will cooperate with others.
- C. Students will use verbal and non-verbal skills appropriate for the context to enhance collaboration.

Numeracy

Achieve competency with numbers and graphical skills to interpret and communicate quantifiable information, and apply mathematical and statistical skills in practical and abstract contexts.

- A. Students will analyze, interpret and draw valid inferences from graphical and numerical data.
- B. Students will use quantitative skills to arrive at a solution/conclusion.
- C. Students will use quantitative skills to assess the validity of a proposed solution/conclusion.
- D. Students will communicate numerical and mathematical processes using appropriate symbols, language and terminology.

ADDITIONAL PROGRAMS & LEARNING OPTIONS

Not all learning takes place in a traditional classroom. LCC students are recent high school graduates, working parents, adults retraining for new careers and people who need to master precollege studies. That’s why we offer a variety of learning options, including apprenticeships, continuing education, online courses and several high school programs.



Apprenticeship Programs

360.442.2621

Apprenticeship combines employment, education and training in one workforce program. Employers and their employees develop, register and operate apprenticeship programs based on the needs of industry. Registered apprenticeship is governed by the Washington State Apprenticeship and Training Council (WSATC) under the authority of RCW 49.04 and WAC 296-05.

The Department of Labor and Industries Regional Apprenticeship Coordinator for Southwest Washington is located at the Longview L&I Service Office, 900 Ocean Beach Highway, phone (360) 575-6927. The Apprenticeship website is: www.apprenticeship.lni.wa.gov. Employers wishing to develop an apprenticeship program can get help here.

Apprenticeship Training Committees (ATC) run apprenticeship programs for various trades as approved by the WSATC. Acceptance into an apprenticeship program is determined by the program’s selection procedures. Two primary components include provisions for an employer/employee relationship with paid on-the-job training for a specific occupation and at least 144 clock hours of related supplemental (classroom) instruction per year. On-the-job training experiences are conducted under the direct supervision of a qualified journeyman who is affiliated with the apprentice’s trade or program. Classroom instruction provides an opportunity to acquire knowledge and skills that supplement on-the-job training and work experience.

Lower Columbia College is a partner in the Registered Apprentice system and provides or supports the related supplemental classroom instruction when requested by an apprenticeship program. Also, students earning direct credit at LCC through the Career Pathways/Tech Prep program may be eligible to apply those credits toward the supplemental instruction component of a registered apprenticeship program.

LCC’s apprenticeship advisor can refer you to the ATCs for the programs the College supports and provide you with information on applying Tech Prep credit toward an apprenticeship. Once accepted into an apprenticeship program, you may register for approved courses at LCC. Tuition for apprentices taking their required apprenticeship classes at LCC is reduced by 50% under WAC 131.28. Registered apprenticeship is part of the state Workforce Development System. Apprentices may be eligible for training assistance vouchers. Many apprenticeship programs are approved for veteran’s education benefits.

A registered apprentice in a program supported by LCC, or those with questions regarding programs supported by the College, call for information.

Continuing Education

lowercolumbia.edu/ce

360.442.2601

Continuing Education at Lower Columbia College assists individuals and business/industry to meet their personal, professional and corporate education and training needs.

Through Business and Industry Services, LCC offers a variety of services supporting workforce development and customized training. Working with area business, industries and agencies, LCC offers WorkKeys profiling and assessment services to provide employers, employees and job seekers with direct information regarding the skills needed to succeed in various jobs. Employees and job seekers can measure their skills and compare them to skill profiles for specific jobs. Follow-up training using KeyTrain and other tools are available. Skill proficiency is documented with a National Career Readiness Certificate, which can be used to document the level attained for critical work-related job skills.

Support for companies looking for specialized training is also available. LCC frequently works with employers to provide or arrange customized training in a variety of areas, including job-specific Spanish language courses, quality assurance, business computer applications, customer service, and other areas critical to organizational success.

LCC's Community Education program offers a variety of non-credit short-term and online classes, seminars and workshops. Community Education courses are designed for busy adults who want personal enrichment, professional development and/or recreations. No state resources are used for these courses. Classes are held on campus and at churches, retirement centers, and other locations in the community. Community Education courses, fees and registration procedures are listed in the quarterly class schedule.

Cooperative Education

(Credit for Work Experience)

lowercolumbia.edu/workexperience

360.442.2622

Through cooperation between the student, instructor and an employer, one credit can be earned for every 30 hours of work related to a program of study at LCC. Many LCC programs have established Cooperative Education courses (Numbers 288/289). Students may enroll for a maximum of 15 credits toward a degree or certificate program; 1-4 credits of work experience (288) per quarter, plus a one-credit seminar (289) option. Cooperative work experience may be for pay or volunteer work related to your program of study. Work Study jobs may qualify.

Students will be assigned to an instructor in the related field of study to guide them through the work-based learning process. Students will develop learning objectives with the assistance of an LCC instructor and job site supervisor, applying the theories, concepts and methods learned in the classroom to a real job setting. Students also take a one-credit Cooperative Education seminar to build a portfolio or research a work-related topic to help prepare for future employment.

To participate, students need to have completed nine credits of program-related courses and have at least a 2.0 GPA. To enroll, students must have permission from their LCC program instructors and receive entry codes for registration and the required agreements each quarter from the Cooperative Education office. Independent Study (299) credits also count toward the 15-credit maximum.

Cooperative Education Experience Enhances College Studies For LCC Graduates

Castle Rock resident Jamie Drake came to LCC to follow her dream of an Accounting career after several years working in auto licensing. While completing college classes, she gained work experience through a cooperative education internship with the Cowlitz County Auditor's office. Her internship became a year-long temporary position and after graduating with an Associate in Applied Science degree Jamie landed a permanent job at the Cowlitz County Health Department, tracking invoices and grants and doing payroll.



eLearning

lowercolumbia.edu/online 360.442.2520
 Students can take a single online course or complete requirements for a degree from the comfort of home or any location with internet access. LCC continues to expand its online course curriculum with offerings in math, science, the arts, and more. Information about online learning at LCC is available at lowercolumbia.edu/online or send email to elarning@lowercolumbia.edu.

Head Start/Early Childhood Education & Assistance Program

lowercolumbia.edu/headstart 360.442.2800
 Head Start/Early Head Start/ECEAP (Early Childhood Education and Assistance Program) is a federal and state funded comprehensive child and family development program that includes preschool, home visits, health and developmental screening, social service referrals, services to pregnant mothers, infant/toddler programs and parent involvement opportunities. Families must meet federal and state income guidelines to qualify.

Children who are three and four years old attend classes three or four days per week for 3-1/2 hours a day during the school year. A variety of developmentally appropriate learning experiences are provided to foster social, emotional, intellectual and physical growth. Early Head Start serves pregnant women and children birth to three years in three specific models: a weekly home base program, a three day (3 hour) combination program and a full day program for teen parents in collaboration with the Longview School District.

Head Start/Early Head Start/ECEAP support the parents' role as the primary educator of their child, and are encouraged to attend monthly parent meetings, participate on the Policy Council board and volunteer at any of the eight centers throughout Cowlitz County. Parents may register in HOFI 131, 132 and 133 for college credit.

Healthcare Training

lowercolumbia.edu/healthcaretraining 360.442.2602
 Lower Columbia College provides short-term courses for persons interested in training as a caregiver or nursing assistant. For caregivers, a variety of fundamental and continuing education courses are offered under arrangement with the Southwest Washington Agency on Aging. Nursing assistant courses prepare students to take exams to become certified (Nursing Assistant-Certified) as per Washington State requirements.

Individualized Certificate Program (ICP)

lowercolumbia.edu/icp 360.442.2622
 The Individualized Certificate Program offers an opportunity to pursue a custom-designed, work-based learning program that is not available through current apprenticeship or college programs. Students should work closely with the ICP advisor to ensure that courses meet the program requirements. Individual Certificate Program options offered at LCC include:

- Accounting Clerk
- Biology Technician
- Chemical Technician
- Fleet Maintenance
- Hemodialysis Technician Waitlist
- HVAC Maintenance
- Landscape Maintenance
- Legal Office Assistant
- Library Assistant
- Patient Access Representative Waitlist
- Personal Fitness Technician
- Public Works Maintenance
- Pharmacy Technician Waitlist
- Radiology Assistant Waitlist
- Recreational Assistant
- Social Services Advocate Waitlist
- Sterile Process Instrumentation Assistant
- Veterinary Assistant Waitlist
- Wastewater Treatment
- Water Distribution
- Water Treatment
- Weatherization Field Technician

Space is limited so check with the ICP advisor to determine available programs.



Home & Family Life

lowercolumbia.edu/hofi 360.442.2890
 Lower Columbia College Home and Family Life Early Learning Center offers inclusive childcare/preschool for children 1 month through 6 years of age. Full-day and half-day rates are available. DSHS accepted. USDA-approved breakfast, lunch and snacks provided. The Early Learning Center is open weekdays from 7:45 a.m. to 5 p.m. This service is available to LCC students attending classes and/or participating in work-study. LCC staff and faculty may also access the Home and Family Life services. Student parents must register for Home & Family Life credits, choosing from a number of options.

The center also offers a Pre-Kindergarten program, which runs Monday–Thursday from 8:30 a.m. to 12. This program prepares children to enter public school Kindergarten. The Pre-K program is available to children of LCC students/LCC staff and faculty/community.

High School Programs

Career Education Options (CEO)

lowercolumbia.edu/ceo 360.442.2690

Career Education Options is an educational recovery program for young adults who left high school without a diploma. It provides the opportunity to return to school to restart their education and improve career opportunities. Eligible students must be:

- between the ages of 16 and 21
- not currently in high school
- do not have a high school diploma.

Students may have a GED and still be eligible.

All new Career Education Options (CEO) students take daily classes covering student success, career exploration, computer literacy, math, and English. Continuing students take a variety of paths to earn a High School Diploma. Students may take high school level courses that satisfy high school graduation requirements.

They may also earn college credits that meet high school graduation requirements. Students who qualify for enrollment in the CEO program, receive tuition, books, tutoring, and one-on-one help with clarifying educational and career goals.

For more information or to apply, visit the website or call the CEO office.

Career Pathways/Tech Prep

lowercolumbia.edu/techprep 360.442.2610

Tech Prep is a combined high school and college program leading to an associate's degree or apprenticeship certification that provides technical preparation in a selected field of study. High school students may earn free college credit by earning a B or better in a Tech Prep course offered at their school. Check the high school course catalog for specific career-technical education (CTE) courses listed as Tech Prep. Earning Tech Prep credit while in high school gives students a head start on an Associate in Applied Science degree at LCC and may also meet requirements for related instruction in a registered apprenticeship program. Ask the high school CTE instructor or counselor about Tech Prep or contact the Career Pathways Office at LCC.

Educational Talent Search

The Educational Talent Search program at Lower Columbia College serves approximately 500 lower income and first-generation-college students in the Longview and Kelso school districts. The program assists middle school and high school students in their educational transitions through secondary school and into higher education. ETS services are aimed at creating positive opportunities for youth in the academic, social and cultural arenas in order to enhance a sense of belonging, achievement, exploration and competence.

Middle school students participate in workshops, field trips and cultural activities to discover their talents and set up the building blocks for their futures. They match their interests to career options and to college programs that best meet their goals. Students also learn the importance of good grades

and discover strategies of successful students. High school services include college orientation activities, assistance with admission and financial aid applications, college visits and classroom presentations and workshops designed to prepare students for college.

Interested students can find application materials and information at: lowercolumbia.edu/talentsearch.

High School Diploma

lowercolumbia.edu/hsdiploma 360.442.2691

Credit Recovery—Students who wish to take courses at LCC to complete requirements for a high school diploma may enroll in High School Completion courses (listed in the Course Descriptions section of this catalog) or regular courses, as determined by the high school.

Adult High School Diploma—Those who have not completed high school may also work toward a high school diploma at the College. Applicants should evaluate their high school and college transcripts with the help of an LCC counselor. The counselor will identify courses needed to satisfy the requirements for an adult high school diploma from LCC and the State of Washington.

Washington residents who are at least 19 years old may be eligible to enroll for required courses with reduced tuition. Students under the age of 19 may need permission to enroll from their high schools.

General Education Development (GED)

lowercolumbia.edu/ged 360.442.2353

Lower Columbia College is an official GED testing center. Adults who did not finish high school may earn high school credentials by taking this series of five tests. Practice and instruction is also available to help pass the GED test. Students review and receive help with writing skills, social studies, science, reading, literature and arts, mathematics and test taking. Students work individually or in small groups with the assistance of an instructor. Classes are available at LCC and at community locations. For the GED testing schedule and class sites, visit the website or call 360.442.2353.

Running Start

lowercolumbia.edu/runningstart 360.442.2352

About 300 students participate in Running Start at Lower Columbia College each quarter. Through Running Start, qualified high school juniors and seniors may earn both high school and college credits by attending college classes. Eligible students may enroll in a full range of professional/technical and academic courses for university or college transfer. Students attend regular Lower Columbia College classes during the school day, in the evening or online. Upon satisfactory completion of the course requirements, they will receive college credit that is fully transferable to most colleges and universities. These credits also apply to their high school diploma. To be admitted to the Running Start program, a student must place into college-level writing and reading, participate in an orientation and apply by the published deadline. For more information or to apply, a student should contact the Lower Columbia College Running Start Office or their high school counseling office.

Transitional Studies

Adult Basic Education (ABE)

lowercolumbia.edu/abe **360.442.2580**
 For students 16 years or older who need to review or learn basic skills for college entrance, employment, or preparation for the General Education Development (GED) exam, LCC offers non-credit Adult Basic Education classes. These classes are designed to improve basic reading, writing and math skills, with basic computer skill classes also available. Before enrolling in these low-cost Adult Basic Education courses, students take a short appraisal test to ensure placement at the right level of instruction. Classes are available at LCC and at Kelso WorkSource.

Career Education Options (CEO)

See High School Programs on page 24 Career Education Options (CEO).

English as a Second Language (ESL)

lowercolumbia.edu/esl **360.442.2580**
 LCC offers low-cost classes to help non-English-speaking adult immigrants learn English skills. The program emphasizes work and life skills and communication skills including speaking, listening, reading, writing, grammar, citizenship and computers.

Classes also include information on life in the community, civics, cultural topics, and family literacy skills. Before enrolling in classes, students will take a short placement test to determine the appropriate classes. Classes are available days and evenings at LCC and Kelso WorkSource, and various other sites in the community. Courses are listed in the Course Descriptions section of this catalog. Call for more information.

General Education Development (GED)

See High School Programs on page 24 General Education Development (GED).

I-BEST

lowercolumbia.edu/ibest **360.442.2584**

Fast track to a college certificate & job

Many people who want to train for a new career also need to improve their skills in math, reading, and writing to find a job. The Integrated Basic Education & Skills Training (I-BEST) program provides hands-on training for high demand job fields, with an extra instructor to help with reading, writing, math, speaking and listening skills in the same class.

You attend class with the same instructors and the same students to learn job skills and to earn college credit toward a certificate in one of five job fields. Students also spend 2-5 hours each week in study sessions with their classmates where they receive hands-on instruction dedicated to helping them succeed.

I-BEST offerings include classes in Business Technology, Diesel/Heavy Equipment Technology, Early Childhood Education and Manufacturing Occupations.

I-TRANS

lowercolumbia.edu/itrans **360.442.2584**

Fast track to an associate degree

Many students need to improve English and math skills before they qualify to take college-level courses in those subjects. Through the Integrated Transitional Studies (I-TRANS) program at LCC, you can earn college credit in science, humanities, early childhood education or speech while you complete classes in English and math to prepare for college-level courses.

You learn both in one class with two instructors and the same classmates. **You can complete several levels of English or math in a single quarter.** You save time and money because you move more quickly toward your degree in a transfer program or professional-technical career field.



Transforming Lives

Although he was born deaf, Chris Cayton's hearing loss was not discovered until elementary school. Behind from the start, he struggled to catch up but never did. After becoming a father, Chris wanted to build a better life for his son and set a good example. The I-BEST (Integrated Basic Education and Skills Training) program at LCC enabled him to bring his math, reading and writing skills to college level while training for a career in manufacturing and welding at the same time. "I was thriving, a feeling I had never felt before in an educational setting," said Chris. He excelled, earning two degrees and finding top employment with the Plumbers & Steamfitters Union. In January 2013, Chris was one of five Washington community college students recognized with the prestigious Transforming Lives Award presented by the Trustees Association of Community and Technical Colleges.

Bachelor Degree Options

LCC has partnered with several colleges and universities to assist transfer students in completing a baccalaureate degree without relocating.

Bachelor of Science in Nursing (BSN)

After completion of an Associate in Applied Science degree in nursing, LCC graduates have many options for completion of a Bachelor of Science in Nursing (BSN) degree. Lower Columbia College has articulation agreements with Linfield College, St Martin's University, and University of Washington-Bothell, and works closely with Washington State University-Vancouver to assist graduates who plan to complete their BSN.

The articulation agreements spell out the specific courses that meet the receiving institution's requirements so that transferring is easier. LCC program advisors can assist nursing students with selecting the appropriate courses for the institution they plan to attend.

Distance Education Partnerships

lowercolumbia.edu/bachelors

Students can earn a bachelor's degree via Distance Education through LCC's partnerships with universities, including Washington State University, Franklin University, Argosy University, Capella University, Northcentral University, University of Phoenix, Kaplan University, Concordia and City University. Each of these fully-accredited universities will accept your LCC Associate in Arts degree for junior status.

Dual Admission for Transfer Students

Lower Columbia College has established partnerships with some public and private universities in Washington that allow students to be admitted to their transfer institution while completing their associate in arts transfer degree. Dual admission allows students who have identified their baccalaureate degree program of study to work closely with advisors at both LCC and their transfer institution to ensure a smooth transition into upper division studies. Your LCC advisor can provide information about the process for dual admission.

Early Childhood Education

lowercolumbia.edu/bachelors

Through a partnership program between Lower Columbia College and Concordia University, students can earn a baccalaureate degree in Early Childhood Education. Students will complete their first two years of coursework at LCC followed by upper division courses through Concordia offered on three Southwest Washington community college campuses (LCC, Clark College in Vancouver and Centralia Community College). The instructional model will include online, hybrid, and weekend seminars. Upper division coursework is scheduled to begin in the coming year. For additional information and advising assistance with lower division coursework at LCC, visit the website or contact an advisor.

Elementary Education

lowercolumbia.edu/cityu

Lower Columbia College, in partnership with City University of Seattle, offers a program leading to a Bachelor of Arts (BA) in Education and Washington teacher certification.

The BA in Education is designed for those who want a rewarding career in teaching. Students first complete an associate degree, or equivalent credits at LCC; then continue with upper division studies to earn a dual endorsement in elementary education plus mathematics, special education or reading through classes offered on the LCC campus. Graduates are certified to teach kindergarten through eighth grade and selected high school courses in certified areas.

WGU Washington

washington.wgu.edu

WGU Washington is a nonprofit, online university endorsed by the state of Washington to provide flexible, affordable access to quality higher education. Created through a partnership with nationally and regionally accredited Western Governors University, WGU Washington is ideal for busy working adults who want to advance their careers by finishing a college degree or earning an advanced degree. WGU Washington offers bachelor's and master's degrees in Business, Information Technology, Teacher Education, and Health Professions, including Nursing.

For details, visit the WGU Washington website or call 1.877.214.7004.

DEGREES & CERTIFICATES

Lower Columbia College offers many different degree and certificate programs designed to prepare students for advanced studies or to move directly into the workforce. By working closely with baccalaureate institutions and industry partners, LCC has created programs that will help students be successful after completing their education here.



Associate Degrees

GENERAL REQUIREMENTS

- Minimum of 90 transferable credits in courses numbered 100 and above. No more than 6 credits in PHED activity courses; no more than 15 credits in Cooperative Work Experience and/or Independent Study, and no more than 5 credits in performance/skills courses are allowed.
- Maintain a minimum cumulative grade point average of 2.00 on the credits that may be used toward the degree.
- Complete at least two quarters—including the last quarter—at Lower Columbia College.
- Earn at least 24 credits at Lower Columbia College, exclusive of credits by examination.
- Earn no more than 15 pass/fail credits. Pass/fail courses may not be used to meet communication, quantitative skills, core program, or distribution requirements, except when a pass/fail class is required by a specific program.
- Diversity requirement—5 credits. See quarterly schedule for diversity classes. Courses that meet this requirement may also be used toward other graduation requirements.

Transfer Degrees

Lower Columbia College's transfer degrees allow students to complete the first two years of a bachelor's degree. The Major Related Program (MRP) degrees build on these to provide specific preparation to enter bachelor programs. While requirements for LCC graduation and acceptance at a four-year college vary by degree type, field, and college, students must fulfill these general requirements to earn an LCC transfer degree:

■ ASSOCIATE IN ARTS AND SCIENCES (AA)

The program-specific Associate in Arts and Sciences (AA) transfer degree is for students who are sure of the baccalaureate institution they wish to attend. This may be a good option for students who plan to earn a bachelor's degree in a professional field. Students must work closely with their program advisor to design a program that will fulfill the transfer institution's general admission and program entry requirements. Students should expect to have courses evaluated on a course-by-course basis upon transfer to the upper division. The LCC program advisor and the appropriate department chair must approve the intended program, and the student must file an intent to earn this degree when applying for graduation from LCC.

GENERAL DEGREE REQUIREMENTS (AA)

General requirements listed for transfer degrees, plus:

- Communications requirement—15 credits
ENGL& 101 English Composition I, ENGL& 102 Composition II or ENGL& 235 Technical Writing, and SPCH 110 Intro to Public Speaking.
- Other: 70 credits minimum - approved by the program advisor and the appropriate department chair.

■ ASSOCIATE IN ARTS - DIRECT TRANSFER AGREEMENT (AA-DTA)

The Direct Transfer Agreement associate degree, sometimes called the Associate in Arts or Associate in Arts and Sciences degree, is the community college degree designed to transfer to most bachelor of arts degree programs at Washington's four-year institutions.

Degrees structured under the DTA umbrella provide:

- Priority admissions consideration at public universities for most humanities and social science majors ahead of non-degreed transfers.
- Completion of lower division general education requirements.
- Credit for all courses completed within the AA-DTA up to and in some cases beyond 90 credits.
- Opportunity to explore several fields of study through the category of up to 30 credits of elective courses.
- Opportunity to complete prerequisites for a future major.

GENERAL DEGREE REQUIREMENTS (AA-DTA)

- Communications requirement— 15 credits ENGL& 101, ENGL& 102, and SPCH 110 or SPCH 114.
- Quantitative/symbolic reasoning skills requirement— 5 credits. MATH 099 or proficiency, AND one of the following: BUS 206, ENGR& 214 or ENGR& 215; MATH& 107 or higher (excluding MATH& 131); or PHYS& 114, 115, 116, 221, 222, or 223.
- Humanities requirement—15 credits from at least three areas on the Distribution List for Transfer Degrees. No more than 10 credits from any one discipline; no more than 5 credits in performance skills courses; no more than 5 credits in foreign language at the 100 level. Courses may be credited toward no more than one distribution.
- Social Sciences requirement— 15 credits from at least three areas on the Distribution List for Transfer Degrees. No more than 10 credits from any one discipline. Courses may be credited toward no more than one distribution.

- Natural Sciences requirement— 15 credits. Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement.
- Diversity requirement—5 credits. Courses that meet this requirement may also be used toward other graduation requirements and will be designated in course schedules.
- Electives— Of the remaining credits taken to earn 90 credits for the degree, no more than 15 credits may be taken from the Restricted Course List.

MAJOR RELATED PROGRAM DEGREE REQUIREMENTS (MRP)

- The specific courses required in each of the MRP's can be found on pages 29 to 58.
- Major Related Program degrees build on the Associate in Arts Direct Transfer Agreement degree for students in the arts, humanities and social sciences, and the Associate in Sciences Transfer degree for students in engineering and science-based fields. Two-year and four-year colleges work together to create these programs so that LCC graduates can transfer smoothly into the bachelor degree program of their choice.

■ ASSOCIATE IN APPLIED SCIENCE - TRANSFER (AAS-T)

The Associate in Applied Science-Transfer degree is built upon the technical courses required for job preparation but also includes a college-level general education component common in structure for all such degrees. Public and private universities are not required to accept AAS-T degrees. Students must check with their advisor at Lower Columbia College and a representative from the college they plan to attend to determine the specific transfer and admission requirements in their field of study.



■ ASSOCIATE IN SCIENCES – TRANSFER (AS-T)

The Associate in Science–Transfer degree is designed for community and technical college students seeking to major in engineering and science. Degrees structured under the AS-T umbrella provide:

- Priority admissions consideration at public universities for most science and engineering majors ahead of transfer students without a degree.
- Completion of similar lower division general education requirements as first-year and second-year university students in engineering or science-based fields.
- Credit for all courses completed within the AS-T up to 90 credits. In some cases more credits may be accepted.
- Opportunity to complete math and science prerequisites for the chosen major.

There are two AS-T degree options:

- Option One: biological sciences, environmental or resource sciences, chemistry, geology, and earth sciences.
- Option Two: computer science, engineering, physics, and atmospheric sciences.
- For either of these options, you must work closely with your advisor and enroll in courses that meet your transfer institution's requirements.

GENERAL DEGREE REQUIREMENTS (AS-T)

- Issued only to students who have earned a cumulative grade point average of at least 2.0, as calculated by Lower Columbia College.
- Based on 90 quarter hours of transferable credit distributed as follows:
 - General requirements listed for transfer degrees, plus:
 - Communications requirement—ENGL& 101 (5 credits).
 - Mathematics requirement—MATH& 151 and 152 (10 credits).
 - Humanities/Social Sciences requirement—15 credits.
- Pre-major program courses specific to the appropriate track. It is recommended that all sequence courses be completed at one institution.
- Remaining courses specific to the appropriate track—10-15 credits.

Diversity Courses*

- ANTH 109 – American Cultural Diversity
- ANTH& 206 – Cultural Anthropology
- ART& 100 – Art Appreciation
- ART 206 – Arts of the Americas
- ART 207 – Arts of the World
- ART 208 – Arts of the Northwest
- ART 228 – History of Western Art
- BIOL 150 – Human Genetics and Society
- BUS 144 – Management of Human Relations
- BUS 150 – Customer Service/Management
- DRMA& 101 – Introduction to Theatre
- EDUC& 205 – Introduction to Education w/Field Experience
- ENGL 140 – Intro to Women Writers
- ENGL 204 – The Novel (intermittent Diversity course)
- ENGL 205 – Film and Drama Appreciation
- ENGL 245 – Contemporary Literature
- ENGL 280 – Multicultural Literature
- ENVS 150 – Environment and Society
- HIST& 126 – World Civilization I
- HIST& 127 – World Civilization II
- HIST& 128 – World Civilization III
- HIST 205 – History of East Asia
- HIST& 215 – Women in U.S. History
- HUM 104 – Ethics and Cultural Values
- HUM 110 – Introduction to Cultures
- HUM 210 – Myths and Rites
- MUSC& 105 – Music Appreciation
- MUSC 117 – Music Cultures of the World
- MUSC 119 – American Music
- MUSC 209 – The Blues Culture
- SOC& 101 – Introduction to Sociology (Includes WAOL's SOC& 101)
- SOC 225 – Race and Ethnicity
- SPAN& 121 – Spanish I
- SPAN& 122 – Spanish II
- SPAN& 123 – Spanish III
- SPCH 109 – Intercultural Communication
- SPCH 209 – Rhetorical Criticism and Popular Culture

* Courses may be added to this list on a quarterly basis. Check quarterly schedules for diversity course designations.

Distribution List for Transfer Degrees

Humanities

ART& 100 (was ART 110), and ART 101*, 102*, 103*, 106*, 107*, 108*, 111*, 112*, 113*, 151*, 151A*, 151B*, 152A*, 152B*, 153*, 206, 207, 208, 226, 227, 228, 241*, 242*, 243*

DANCE 100*, 105*, 110*

DRMA& 101 (was DRAM 100), and DRMA 106*, 107*, 108*

ENGL 108, 124*, 125*, 126*, 140, 204, 205, 224*, 225*, 226*, 231, 232, 233, 234, 245, 251, 252, 254, 256, 260, 270, 280, and ENGL& 235 (was ENGL/ENGR 220), ENGL& 244 (was 240)

FRCH& 121, 122, 123, (was FREN 101, 102, 103), and FRCH 110 or 114

HIST& 116 (was HIST 106), HIST& 126 (was HIST 116)

HUM (was HUMN) 104, 107, 110, HUM& 116, 117, 118, and HUM 164, 165, 166, 210, 220, 230

MUSC 100, 101, 102, 103, 117, 119, 130*, 134*, 135*, 136, 137, 138, 140*, 144*, 145, 146, 150*, 209, and MUSC& 105 (was MUSC 110)

PHIL& 101 (was PHIL 200), and PHIL 120, 210, 260

SPAN& 121, 122, 123, 221, 222, 223 (was SPAN 101, 102, 103, 201, 202, 203), and SPAN 110 or 114

SPCH 104, 109, 110, 114, 209

(*Performance Skills Courses/max 5 cr.)

Natural Sciences

ANTH& 205 (was ANTH 206)

ASTR& 101** (was ASTR 110)

BIOL& 100**, BIOL& 160**, BIOL& 170 (was BIOL 120), BIOL& 211**, 212**, 213** (was BIOL 201, 202, 203), BIOL& 241** (was BIOL 221), BIOL& 242** (was BIOL 222) and BIOL 109**, 130**, 150**, BIOL& 260** (was BIOL 257)

BUS 206, 207 (was BSAD 206, 207)

CHEM& 110** (was CHEM 105), and CHEM& 121**, 131** (was CHEM 111**, 112**), CHEM& 161**, 162**, 163** (was 151**, 152**, 153**)

ERSI 104** or 105, 109**

ENGR 106, 210

ENVS 150, 215**

GEOG 105**

GEOL 105**, 118**, and GEOL& 101** and 208** (was GEOL 170)

MATH& 107 (was MATH 130), MATH& 132 (was MATH 122), MATH& 148 (was MATH 140), MATH& 151, 152, 153, and MATH 112, 113, 125, 150, 154, 210, 211, 220, 240

OCEA& 101** (was OCNG 140)

PHYS& 100**, and PHYS 101**, 102**, 103**, 210, 251**, 252**, and 253**

PHYS& 100**, PHYS& 114** (was PHYS 101**), 115** (was PHYS 102**), 116** (was PHYS 103**), PHYS 210, PHYS& 221** (was PHYS 251**), 222** (was PHYS 252**), and 223** (was PHYS 253**)

PHSC 108**, 109**

** Lab course

Social Sciences

ANTH 109, ANTH& 206 (was ANTH 207)

BUS& 101 (was BSAD 110), BUS& 201 (was BSAD 251)

CDS 101

CJ& 101 (was ADMJ 186)

ECON 104 and 105 or ECON& 201 (was ECON 205), ECON 105 or ECON& 202 (was ECON 206)

HIST& 117 (was HIST 107), HIST& 127 (was HIST 117), HIST& 128 (was HIST 118), HIST& 136 (was HIST 156), HIST& 137 (was HIST 157), HIST& 215, and HIST 205, 254

POLS 107, and POLS& 101, 202 (was POLS 106), POLS& 203 (was POLS 108)

PSYC& 100 (was PSYC 111), PSYC& 200 (was PSYC 205), PSYC 204, 214, and 220

SOC& 101 (was SOCY 110), 210, and 225

Restricted Course List

ACCT 101, 150, 241, 244, 260

AH—all courses

AMTC—all courses

APPEL—all courses

BLPT—all courses

BUS 104 (was BSAD 104), BUS 119 (was BSAD 190), BUS 165 (was BSAD 115), BUS 259 (was BSAD 111), BUS 294

BTEC—all courses

CDS—all courses except CDS 101

CS—all courses

COLL—all courses

DHET—all courses

DRFT—all courses

ECED 105, 115, 126, 127, 128, 205, 219, 260

ELEC—all courses

ENGL 100, 104

FISC—all courses

HLTH 106

HOFL—all courses

HDEV—all courses

LIB—all courses

MASP—all courses

MATH 105, 106

METC—all courses

MEDA—all courses

MFG—all courses

MUSC 115, 131, 132, 133, 161, 162, 163, 231, 232, 233, 261, 262, 263

NURS—all courses

PMFG—all courses

TECH—100, 170

WELD—all courses

* Performance-based course

** Lab course

Waived courses are subject to the 15-credit maximum.

Professional/Technical Degrees & Certificates

■ ASSOCIATE IN APPLIED SCIENCE (AAS)

This degree is not generally considered a transfer degree, although exceptions may be allowed for certain programs upon approval. AAS degrees provide occupational training that prepares students to enter the workforce with a solid education and specific skills. Representatives from local business and industry help define these degree programs so our graduates meet the standards defined by people in the workforce.

DEGREE REQUIREMENTS (AAS)

Minimum of 90 credits in courses numbered 050 and above, including:

- Communications requirement—5 credits. ENGL 100, ENGL& 101, ENGL& 102, or 110; BUS 119; or SPCH 110.
- Health requirement—2-5 credits. HLTH 100 or 106; NURS 101; or MEDA 161 or 162.
- Quantitative skills requirement—5 credits. MATH 089 or higher or BUS 104.
- Human Relations requirement—2-5 credits. ANTH& 206; BUS 144, BUS 150, or BUS 240; CDS 102 or 215; ECED 119; HDEV 110; NURS 101 or 202; PSYC& 100, PSYC 204, or 214; SOC& 101; or SPCH 104.
- Note: courses that meet Human Relations requirement may also be used to satisfy another requirement of the degree.
- Social Sciences, Natural Sciences, and Humanities requirement—10 credits. At least 5 credits each in two of these three areas.
- Minimum of 45 credits for specific courses identified in the degree program and recommended by the advisor.
- No more than 6 credits in PHED activity courses; no more than 15 credits in Cooperative Work Experience, Tutoring, and/or Independent Study. No more than 15 pass/fail credits. Students must maintain a 2.0 GPA in graded courses.
- Diversity requirement—5 credits. See quarterly schedule for diversity classes. Courses that satisfy this requirement may also be used to satisfy other graduation requirements.

Distribution List for Associate in Applied Science (AAS)

Humanities

All courses from the Distribution List for Transfer Degrees, plus SPCH 110, and ENGL& 102.

Natural Sciences

All courses from the Distribution List for Transfer Degrees, except mathematics courses, plus CHEM& 100, MFG 130, and TECH 100.

Social Sciences

All courses from the Distribution List for Transfer Degrees, plus BUS 144 (was BSAD 126), and HOFL 131, 132, 133.

■ CERTIFICATE OF PROFICIENCY (COP)

This is generally considered a one-year program, although class scheduling may affect the actual length of time required. Specialized occupational courses are combined with requirements in communications, social science/human relations, and quantitative skills to provide a well-rounded experience that prepares you for entry-level work in a chosen field. Since many of the classes meet general education requirements, many students choose to continue and earn an associate degree in the same or similar field.

CERTIFICATE OF PROFICIENCY REQUIREMENTS (COP)

45 credits or more, including:

- Communications requirement—5 credits.
- Quantitative skills requirement—5 credits.
- Social Science/Human Relations requirement—5 credits.

Some programs also have a Natural Sciences and/or Health requirement.

■ CERTIFICATE OF COMPLETION (COC)

This short-term program of occupational training consists of a sequence of courses totaling 1-44 credits. Many students choose to continue earning credits, going on to earn a certificate of proficiency or an associate degree.





Complete the first two years of study towards a bachelor's degree or learn the job skills to move directly into the workforce.

Transfer Degrees

Earn a transfer degree in one of these high demand fields:

Bioengineering and Chemical Engineering	Elementary Education
Business	Mathematics Education
Computer and Electrical Pre-Engineering	Mechanical/Civil/Aeronautical/Industrial Materials Science/Pre-Engineering
Electrical Engineering and Computer Engineering Technology	Mechanical Engineering Technology

Earn a general transfer degree to begin a bachelor's degree in such fields as:

Anthropology	Mathematics
Art	Medical Fields (Preprofessional)
Biological Sciences	<ul style="list-style-type: none"> • Chiropractic • Dental Hygiene • Dentistry • Medicine • Pharmacy • Physical Therapy • Veterinary Medicine
Business	Music
Chemistry	Nursing
Computer Science	Philosophy
Criminal Justice	Physical Education
Drama	Physics
Early Childhood Education	Political Science
Earth Sciences	Psychology
Economics	Sociology
Education	Speech
Engineering	
English	
Environmental Studies	
Geography	
Geology	
History	
Law (Preprofessional)	

Professional/Technical Programs

Prepare for that first job—or a better job—with an Associate in Applied Science degree or specialized certificate from LCC.

Business

Accounting Technology
Business Management
Business Technology (*Legal, medical or general office skills*)
Information Technology Systems
Retail Management

Helping People

Caregiver
Chemical Dependency Studies
Criminal Justice
Early Childhood Education
Elementary Education (*Paraeducator*)
Fire Science Technology
Health Occupations
Medical Assisting
Nursing (RN)
Nursing Assistant

Individualized Certificate Program

Employers help us create a customized job training certificate program for their ideal employee.

Technology

Automotive
Computer-Aided Design
Diesel and Heavy Equipment
Information Technology Systems (*Digital Forensics, Programming, Networking, Web Development, Help Desk*)
Machine Trades
Manufacturing
Welding

Talk with an LCC Entry Advisor about different transfer degree options that let you begin the bachelor's degree you want, or explore different fields. For more information, or to make an appointment, phone 360.442.2311, toll-free 1.866.900.2311 or e-mail entry@lowercolumbia.edu.

PROGRAMS OF STUDY

LCC offers training for careers in many high demand fields, studies to complete the first two years of a bachelor’s degree and classes for professional advancement or personal enrichment. Students should select the field of study that matches their interests and talents. LCC program advisors help students find the degree or certificate program that best fits their education goals.



Accounting

Accounting is a critical business function offering many career opportunities. Learn basic skills for entry-level accounting positions such as accounting technician, accounts payable and accounts receivable in private industry, state and local government, and public accounting. You can also begin studies for a bachelor’s degree by completing transferable accounting courses and general education requirements.

Accounting Technician

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science - Accounting Technician degree, you must complete a minimum of 95 - 96 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

	<u>credits</u>
Communications	
BUS 119 Business Communications or	
ENGL& 101 English Composition I	5
Health	
HLTH 106 Health Today or	
HLTH 100 Occupational Safety and Health	2-3
Human Relations/Social Sciences/Diversity	
BUS 144 Management of Human Relations:DIV	5
Humanities/Natural Sciences	
From distribution list for Professional/Technical degrees	5
Quantitative Skills	
MATH 088/089 Pre-College Math II (or higher)	5

PROGRAM REQUIREMENTS

	<u>credits</u>
ACCT 101 Intro to Accounting Concepts	5
ACCT 150 Payroll Accounting/Business Tax Reporting	5
ACCT& 201 Principles of Accounting I	5
ACCT& 202 Principles of Accounting II	5
ACCT& 203 Principles of Accounting III	5
ACCT 241 Intro to QuickBooks	4
ACCT 244 Individual Income Taxation	5
ACCT 260 Certified Bookkeeper Prep	5
ACCT 288/289 Cooperative Education	5
BUS& 101 Intro to Business or	
ECON& 201 Micro Economics	5
BUS 104 Business Math Applications	5
BUS& 201 Business Law	5
CS 111 Intro to Windows	4
CS 121 Intro to Spreadsheets	5
CS 130 Intro to Database Applications	5
One of the following 5 credit courses may be substituted for ACCT 288/289 with advisor’s permission:	
BUS 150 Customer Service/Management	
ECON& 202 Macro Economics	
SPCH 114 Small Group Communications	
TOTAL CREDITS	95-96

Accounting Technician

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER TO THE EVERGREEN STATE COLLEGE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer Accounting Technician degree, you must complete a minimum of 91 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5

Quantitative Skills	
MATH 112 College Algebra	5

Social Sciences	
BUS& 201 Business Law	5

Humanities/Natural Sciences	
5 cr. each in Natural Sciences and Humanities, chosen from the distribution list	10

Human Relations/Diversity	
BUS 144 Management of Human Relations:DIV	5

PROGRAM REQUIREMENTS

ACCT 101 Intro to Accounting Concepts	5
ACCT 150 Payroll Accounting/Business Tax Reporting	5

ACCT& 201 Principles of Accounting I	5
ACCT& 202 Principles of Accounting II	5

ACCT& 203 Principles of Accounting III	5
ACCT 241 Intro to QuickBooks	4

ACCT 288/289 Cooperative Education	5
BUS 150 Customer Service/Management	5

BTEC 130 Electronic Calculators	2
BTEC 145 Intro to MS Word	3

CS 111 Intro to Windows	4
CS 121 Intro to Spreadsheets	5

CS 130 Intro to Database Applications	5
HLTH 100 Occupational Safety & Health	3

TOTAL CREDITS	91
----------------------	-----------



Anthropology

Anthropology is the study of human biological, cultural and social diversity. With an emphasis upon a comparative perspective, anthropology studies the human condition on a global scale and throughout the course of human history. Within the discipline of anthropology, the four fields of study are biological anthropology (human evolution), cultural anthropology, archaeology and anthropological linguistics. Prepare for advanced studies in anthropology at a baccalaureate institution and eventual employment in government agencies or academic profession. Employment most often requires completion of post-graduate degree.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency <i>and</i> one of the following: BUS 206, ENGR& 214 <i>or</i> ENGR& 215, MATH& 107 (or higher, excluding MATH& 131), <i>or</i> PHYS& 114, 115, 116, 221, 222, or 223	5
---	---

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. HIST& 126 and PHIL& 101 and 5 additional credits from another Humanities discipline are recommended	15
---	----

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. ANTH& 206, HIST& 127, and SOC& 101 are recommended	15
---	----

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement.	15
--	----

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ANTH 109 American Cultural Diversity:DIV. 5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List on the distribution list for transfer degrees.

Recommended Elective Courses

ANTH 109	American Cultural Diversity:DIV	5
ART 207	Arts of the World:DIV	5
ART 227	History of Western Art	5
BIOL 150	Human Genetics & Society:DIV	5
ENVS 150	Environment and Society:DIV	5
SOC 225	Race and Ethnicity:DIV	5
TOTAL CREDITS		90

Art

At LCC, students may select beginning and advanced courses in a variety of artistic media, including drawing, painting, photography, ceramics and pottery. A solid base in studio art combined with art history provides the basic liberal arts foundation essential for those interested in entering an art profession or transferring to complete a bachelor's degree in art.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency *and* one of the following: BUS 206, ENGR& 214 *or* ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223 5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 15 credits in performance/skills courses are allowed. 15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 15 credits from any one discipline. 15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ART& 101 Art Appreciation:DIV 5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List on the distribution list for transfer degrees. 25

Recommended Elective Course List:

ART& 100	Art Appreciation:DIV	5
ART 101	Beginning Drawing	3
ART 106	Basic Design	5
ART 111	Beginning Painting	3
ART 206	Arts of the Americas:DIV	5
ART 207	Arts of the World:DIV	5
ART 208	Arts of the Pacific Northwest	5
ART 226	History of Western Art	5

TOTAL MINIMUM CREDITS 90



Automotive Technology

Modern automobiles are complex machines requiring service technicians who are highly skilled and knowledgeable about mechanical, electrical, and electronic systems. The Automotive Technology program provides a strong combination of classroom theory and hands-on practice, with courses based on competencies established by the National Automotive Technician Education Foundation (NATEF). The LCC Automotive Technology program is certified by NATEF, a branch of the National Institute for Automotive Service Excellence (ASE).

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Automotive Technology degree, you must complete a minimum of 115-129 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		credits
ENGL 110	Industrial Communications (recommended)	5
Health		
HLTH 100	Occupational Safety and Health	3
Quantitative Skills		
MATH 088/089	Pre-College Math II (or higher) (MATH 106 Industrial Mathematics recommended)	5
Human Relations/Social Sciences/Diversity		
BUS 144	Management of Human Relations:DIV (recommended)	5
Natural Sciences		
TECH 100	Advanced Principles of Technology (recommended)	5
PROGRAM REQUIREMENTS		
AMTC 100	Essentials of Mechanics	5
AMTC 101	Electrical Systems I	5
AMTC 102	Electrical Systems II	10
AMTC 104	Vehicle Climate Control	6
AMTC 111	Hydraulic Brakes	5
AMTC 112	Advanced Brakes	3
AMTC 121	Gas Engines I	5
AMTC 122	Gas Engines II	10
AMTC 201	Fuels and Emissions	10
AMTC 202	Computerized Engine Controls	10
AMTC 215	Suspension and Alignment	8
AMTC 216	Automatic Transmission	8
AMTC 217	Power Trains	6
Electives	Select from list below	1-15
TOTAL CREDITS		115-129

Electives

The following is a list of suggested courses: ACCT 101 (5 cr.), BUS& 101 (5 cr.), CS 110 (3 cr.), DHET 216 (5 cr.), WELD 151 (1-6 cr.), WELD 152 (1-10 cr.), WELD 221 (10 cr.)

Biological Sciences

The biological sciences study living organisms and fundamental life processes that form the basis for careers in healthcare, research, teaching and related fields. Begin studies toward a bachelor's degree in general or molecular biology, botany, ecology, fisheries, genetics, marine science, soil science, wildlife management or zoology.

■ ASSOCIATE IN SCIENCES – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		credits
ENGL& 101	English Composition I	5

Quantitative/Symbolic Reasoning Skills

MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5

Humanities/Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ENV5 150 Environment and Society:DIV

5

PRE-MAJOR REQUIREMENTS

* It is recommended that sequence courses be completed at one institution.

BIOL& 211*	Majors Biology Cellular	5
BIOL& 212*	Majors Biology Animal	5
BIOL& 213*	Majors Biology Plant	5
CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163 *	General Chemistry w/Lab III	5
CHEM& 261*	Organic Chemistry w/Lab I	5
CHEM& 262*	Organic Chemistry w/Lab II	5
MATH 210	Elements of Statistics or	
MATH& 153*	Calculus III	5

Electives

Sufficient additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor approved credits. MATH 113 and MATH 150 are recommended for students needing the courses prior to MATH& 151.

Other recommended electives:

BIOL 130	Biodiversity and the Pacific NW	5
BIOL& 260	Microbiology	5
CHEM& 263*	Organic Chemistry w/Lab III	5

TOTAL MINIMUM CREDITS 90

Business

The field of business encompasses a wide range of studies, activities, and career opportunities. Business skills are required in every type of organization and every industry. Whether organizations are public or private, government or non-profit, they need skilled professionals who can plan, manage, market, and monitor operations.

■ ASSOCIATE IN BUSINESS – DIRECT TRANSFER AGREEMENT / MAJOR RELATED PROGRAM

The Associate in Business degree program is designed for students planning to transfer to a university program in Washington. Management, accounting, marketing, finance, operations management, and human resources are some of the specializations available for those pursuing advanced studies.

Notes to students

- You will need to have early contact with an advisor at the potential transfer institution regarding specific course choices in each area (Humanities, Social Science and Business Law or Introduction to Law) and for the electives.
- It is up to you to check with the transfer institution regarding requirements for overall minimum GPA, a higher GPA in a selected subset of courses, or a specific minimum grade in one or more courses such as math or English.

DEGREE REQUIREMENTS

To earn an Associate in Business-DTA/MRP degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5

Note 1: To meet the current EWU requirements, the second English Composition course must be equivalent to EWU's English 201 College Composition: Analysis, Research, and Documentation

Quantitative/Symbolic Reasoning Skills		<u>credits</u>
MATH& 148	Business Calculus	5
one of the following 5 credit courses:		
MATH 125	Finite Mathematics	
MATH 150	Precalculus	
MATH& 151	Calculus I	
or a higher level math that includes calculus as a prerequisite. Intermediate Algebra proficiency required		5

Humanities

From the distribution list for transfer degrees. Selected from at least two disciplines. No more than 10 credits per discipline area. No more than 5 credits in world languages. No more than 5 credits in foreign language at the 100 level. No more than 5 credits of performance/skills classes are allowed

Note 2: Students intending the international business major should consult their potential transfer institutions regarding the level of world language required for

admission to the major. Five credits in world languages may apply to the Humanities requirement.

Note 3: Students are encouraged to include a speech or oral communication course (not small group communication).

Social Science

ECON& 201 Micro Economics *and* ECON& 202 Macro Economics *and* an additional 5 credits of Social Science from the distribution list for transfer degrees

Natural Sciences

BUS 206 Statistical Methods *and* 10 additional credits in physical, biological *and/or* earth science, including at least one lab course, from the distribution list for transfer degrees. No more than 10 credits allowed in any one discipline

Note 4: Students intending the manufacturing management major at WWU should consult WWU regarding the selection of natural science courses required for admission to the major.

*It is recommended that sequence courses be completed at one institution.

Business Courses

ACCT& 201*	Principles of Accounting I	5
ACCT& 202*	Principles of Accounting II	5
ACCT& 203*	Principles of Accounting III	5
BUS& 201	Business Law	5

Universities with a lower division Business Law requirement: UW (all campuses), WSU (all campuses), EWU, CWU, WWU, Gonzaga, SMU, SPU, Whitworth.

The following institutions do not require a lower division Business Law course and agree to accept the course taken as part of this degree as a lower division elective, but generally not as an equivalent to the course required at the upper division: Heritage, Pacific Lutheran University, Seattle University, and Walla Walla University.

Note 5: International students who completed a business law course specific to their home country must take a business law course at a U.S. institution in order to demonstrate proficiency in U.S. business law.

TOTAL MINIMUM CREDITS 90

Electives

5 credits of non-business electives except as noted below:

Note 6: Five institutions have requirements for admission to the major that go beyond those specified above. Students can meet these requirements by careful selection of the elective University Course Equivalent to:

- WSU (all campuses): Management Information Systems MIS 250
- Gonzaga: Management Information Systems BMIS 235
- PLU: Computer Applications CSCE 120, either an equivalent course or skills test
- SPU: Spreadsheets (BUS 1700), either an equivalent course or skills test
- WWU: Introduction to Business Computer Systems MIS 220 (for transfer students entering fall 2014)

Business Management

■ ASSOCIATE IN APPLIED SCIENCE

Entry-level supervisory and management positions require people with a strong foundation in general business, accounting, economics, and computers. The Business Management AAS degree is also designed for people interested in starting a business or preparing for advancement opportunities.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Business Management degree, you must complete a minimum of 90 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communications	5

Health		
HLTH 106	Health Today or	
HLTH 100	Occupational Safety and Health	2-3

Quantitative Skills		
BUS 104	Business Math Applications or	
MATH 088/089	Pre-College Math II (or higher)	5

Human Relations/Social Sciences/Diversity		
BUS 144	Management of Human Relations:DIV	5

Humanities/Natural Sciences		
Choose 5 credits from the distribution list for Professional/Technical degrees. SPCH 110 Intro to Public Speaking is recommended.		
		5

PROGRAM REQUIREMENTS

		<u>credits</u>
ACCT 101	Intro to Accounting Concepts or	
ACCT& 201	Principles of Accounting I	5
BUS& 101	Introduction to Business	5
BUS 150	Customer Service/Mgmt: DIV	5
BUS 165	Salesmanship	5
BUS& 201	Business Law	5
BUS 240	Principles of Supervision	5
BUS 244	Human Resource Management	5
BUS 245	Principles of Management	5
BUS 259	Start/Managing a Small Business	5
BUS 264	Principles of Marketing	5
BUS 294	Career Success	2
CS 121	Introduction to Spreadsheets	5
ECON 105	Introduction to Economics or	
ECON& 201	Micro Economics	5

Electives
See advisor for approved elective list. Courses in ACCT, BUS, BTEC, CS, and/or SPCH 110 are recommended. If SPCH 110 is used to meet the Humanities requirement, it may not be counted as an elective. 5-6

TOTAL CREDITS 90

Business Management

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER TO THE EVERGREEN STATE COLLEGE

The Associate in Applied Science-Transfer degree in Business Management is designed to prepare students for entry-level management positions, as well as meet the requirements for transfer to The Evergreen State College.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Business Management - Transfer degree, you must complete a minimum of 90 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL 102	Composition II	5

Health		
HLTH 100	Occupational Safety and Health	3

Quantitative Skills		
MATH 112	College Algebra	5

Human Relations/Diversity		
BUS 144	Management of Human Relations:DIV	5

Humanities		
From the distribution list for Professional/Technical degrees		
		5

Social Sciences		
BUS 201&	Business Law	5
ECON 105	Intro to Economics or	
ECON& 201	Micro Economics	5

Natural Sciences		
From the distribution list for Professional/Technical degrees		
		5

PROGRAM REQUIREMENTS

ACCT& 201	Principles of Accounting I	5
BUS& 101	Introduction to Business	5
BUS 150	Customer Service/Mgmt: DIV	5
BUS 165	Salesmanship	5
BUS 240	Principles of Supervision	5
BUS 245	Principles of Management	5
BUS 259	Start/Managing a Small Business	5
BUS 264	Principles of Marketing	5
CS 121	Introduction to Spreadsheets	5

TOTAL CREDITS 90

General Business

■ CERTIFICATE OF PROFICIENCY

The General Business Certificate Program prepares students for entry-level employment in a variety of business support positions. The program generally can be completed within one academic year. Students may enter the program in the fall, winter or spring quarter.

CERTIFICATE REQUIREMENTS

To earn a General Business Certificate of Proficiency, you must complete a minimum of 45 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communication	5
Quantitative Skills		
BUS 104	Business Mathematics or	5
MATH 088/089	Pre-College Math II (or higher)	
Human Relations/Social Sciences		
BUS 144	Management of Human Relations	5
PROGRAM REQUIREMENTS		
ACCT 101	Intro to Accounting Concepts	5
BTEC 146	PowerPoint Fundamentals	1
BTEC 149	Internet Fundamentals	1
BUS& 101	Introduction to Business	5
BUS 150	Customer Service/Management	5
BUS 165	Salesmanship	5
CS 110	Intro to Microcomputer Apps	3
CS 121	Intro to Spreadsheets	5
TOTAL CREDITS		45

Retail Management

■ CERTIFICATE OF PROFICIENCY

The Retail Management Certificate of Proficiency prepares current and future retail employees for success in the fast-paced retail industry. Students develop an understanding of the scope and requirements of a management position in a retail business. To stay competitive, grocery stores, department stores, specialty retailers, and 'eTailers' need skilled people. LCC's Retail Management certificate program was developed with, and is endorsed by, the Western Association of Food Chains (WAFC). Certificate graduates may continue their studies by applying certificate course work towards the AAS degree in Business Management.

CERTIFICATE REQUIREMENTS

To earn a Retail Management Certificate of Proficiency, you must complete a minimum of 48 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communications	5
Quantitative Skills		
BUS 104	Business Mathematics or	5
MATH 088/089	Pre-College Math II (or higher)	
Human Relations/Social Sciences/Diversity		
BUS 144	Management of Human Relations	5

PROGRAM REQUIREMENTS

ACCT 101	Intro to Accounting Concepts	5
BUS 159	Principles of Retailing	5
BUS 244	Human Resource Management	5
BUS 245	Principles of Management	5
BUS 264	Principles of Marketing	5
CS 110	Intro Microcomputer Applications	3
SPCH 110	Intro to Public Speaking	5

TOTAL CREDITS 48

■ CERTIFICATE OF COMPLETION

Some colleges offering WAFC-endorsed Retail Management Certificates utilize courses with fewer credits than the comparable LCC course. If you have started a Retail Management Certificate with these colleges, you may obtain a Certificate of Completion from LCC by transferring in courses in the content areas listed below, with the following provisions:

- A maximum of six of the ten content areas may be satisfied with transfer courses (i.e., four of the content areas must be completed at LCC, 18 credits minimum);
- Courses transferred in must equate to at least 3 quarter credits per content area;
- After transfer evaluation, students completing all requirements but having fewer than 45 quarter credits will receive a Certificate of Completion.

Program advisors can explain options to students wishing to transfer in credits.

CERTIFICATE REQUIREMENTS

To earn a Retail Management Certificate of Completion, you must complete a minimum of 36 credits.

CONTENT AREAS

Business Communication
 Business Mathematics
 Leadership and Human Relations
 Microcomputer Applications
 Oral Communications (Business or Speech)
 Bookkeeping or General Accounting
 Introduction to Management
 Marketing Management
 Human Resources Management
 Retail Management & Merchandising

TOTAL CREDITS 36

Business Technology

Administrative Assistant

Administrative professionals are responsible for managing communication and information using computer application software. Additional tasks would include customer service, document and project management, scheduling, and operating office equipment. Administrative professionals must also be able to collaborate and communicate effectively.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Administrative Assistant degree, you must complete a minimum of 90 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

	<u>credits</u>
Communications	
ENGL& 101 English Composition I	5
Health	
HLTH 100 Occupational Safety and Health	3
Quantitative Skills	
BUS 104 Business Math Applications	5
Human Relations/Social Sciences/Diversity	
BUS 144 Management of Human Relations:DIV or	
BUS 150 Customer Service:DIV	5
Humanities/Natural Sciences	
Choose from the distribution list for Professional/Technical degree	5
PROGRAM REQUIREMENTS	
ACCT 101 Intro to Accounting Concepts	5
BUS& 101 Introduction to Business	5
BUS 119 Business Communications	5
BTEC 104 Intro to Business Technology	5
BTEC 106 Proofreading Skills	2
BTEC 111 Intermediate Word Processing	5
BTEC 112 Advanced Word Processing	5
BTEC 125 Filing	3
BTEC 130 Electronic Calculators	2
BTEC 147 Desktop Publishing	3
BTEC 148 Intro to Outlook	2
BTEC 260 Office Procedures	5
BTEC 294 Career Success	2
CS 111 Intro to Windows	4
CS 121 Introduction to Spreadsheets	5
CS 130 Introductory Database Applications	5
Electives	
Choose from ACCT, BUS, BTEC, or CS	4
TOTAL CREDITS	90

Administrative Support

Administrative support professionals are responsible for performing and coordinating a wide range of activities, managing information flow, providing excellent customer service, and operating and maintaining a wide variety of office equipment. Organizations in a wide variety of industries-including the health care field and medical offices-rely on skilled administrative support staff to keep operations running efficiently and effectively.

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn an Administrative Support Certificate of Proficiency, you must complete a minimum of 48 credits and pass each course listed in the program requirements with a C or above. The credits must include the following:

	<u>credits</u>
Communications	
ENGL& 101 English Composition I or	
BUS 119 Business Communications	5
Quantitative Skills	
BUS 104 Business Math Applications or	
MATH 088/089 Pre-College Math II (or higher)	5
Human Relations/Social Sciences	
BUS 144 Management of Human Relations or	
BUS 150 Customer Service/Management	5
PROGRAM REQUIREMENTS:	
BTEC 101 Basic Word Processing/Formatting	5
BTEC 104 Intro to Business Technology	5
BTEC 106 Proofreading Skills	2
BTEC 111 Intermediate Word Processing	5
BTEC 112 Advanced Word Processing	5
BTEC 125 Filing	1
BTEC 130 Electronic Calculators	1
BTEC 148 Intro to Outlook	2
BTEC 260 Office Procedures	5
BTEC 294 Career Success	2
TOTAL CREDITS	48

Basic Office Skills II

This shorter Certificate of Completion (COC) will encourage retention through completion, as well as give students a set of milestones to proceed through their education. Upon completion of the COC, students can choose to continue further and work towards completion of the Certificate of Proficiency (COP) and further onto an Associate's degree. Successfully achieving this shorter certificate will give students a few employable skills early on in their educational journey and increase their motivation to continue.

■ CERTIFICATE OF COMPLETION

CERTIFICATE REQUIREMENTS

To earn a Basic Office Skills II Certificate of Completion, you must complete a minimum of 19 credits. The credits must include the following:

		<u>credits</u>
BTEC 101	Basic Word Processing/Formatting	5
BTEC 104	Intro to Business Technology	5
BTEC 111	Intermediate Word Processing	5
BTEC 125	Filing	1
BTEC 130	Electronic Calculators	1
BTEC 148	Intro to Outlook	2
TOTAL CREDITS		19

Note: BTEC 100 Computer Keyboarding may be necessary before being accepted into the program depending on level of competency in word processing and other computer skills.



Medical Administrative Support

Administrative support professionals are responsible for performing and coordinating a wide range of activities, managing information flow, providing excellent customer service, and operating and maintaining a wide variety of office equipment. Organizations in a wide variety of industries, including the health care field and medical offices—rely on skilled administrative support staff to keep operations running efficiently and effectively.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To qualify for an Associate in Applied Science – Medical Administrative Support degree, you must complete a minimum of 90 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

		<u>credits</u>
Communications		
ENGL& 101	English Composition I	5
Health		
HLTH 100	Occupational Safety and Health	3
Quantitative Skills		
BUS 104	Business Math Applications	5
Human Relations/Social Sciences/Diversity		
BUS 144	Management of Human Relations:DIV or	
BUS 150	Customer Service:DIV	5
Humanities/Natural Sciences		
Choose from the distribution list for Professional/Technical degree		5

PROGRAM REQUIREMENTS:

ACCT 101	Intro to Accounting Concepts	5
BUS 119	Business Communications	5
BTEC 104	Intro to Business Technology	5
BTEC 106	Proofreading Skills	2
BTEC 111	Intermediate Word Processing	5
BTEC 112	Advanced Word Processing	5
BTEC 125	Filing	3
BTEC 130	Electronic Calculators	1
BTEC 148	Intro to Outlook	2
BTEC 164	Legal Aspects of the Medical Office	2
		<u>credits</u>
BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedures	3
BTEC 173	Computers in the Medical Office	3
BTEC 181	Medical Terminology I or	
MEDA 101	Medical Vocabulary I	3
BTEC 182	Medical Terminology II or	
MEDA 102	Medical Vocabulary II	3
BTEC 294	Career Success	2
CS 121	Introduction to Spreadsheets	5
CS 130	Introductory Database Applications	5
Electives		
Choose from ACCT, BUS, BTEC, or CS		5
TOTAL CREDITS		90

Medical Billing & Coding Specialist

Administrative support professionals are responsible for performing and coordinating a wide range of activities, managing information flow, providing excellent customer service, and operating and maintaining a wide variety of office equipment. Organizations in a wide variety of industries, including the health care field and medical offices—rely on skilled administrative support staff to keep operations running efficiently and effectively.

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Medical Billing & Coding Specialist Certificate of Proficiency, you must complete a minimum of 63-65 credits and pass each course listed in program requirements with a C or above. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communications	5
Quantitative Skills		
BUS 104	Business Math Applications	5
Human Relations/Social Science		
BUS 144	Management of Human Relations or	
BUS 150	Customer Service/Management	5

PROGRAM REQUIREMENTS:

BIOL& 170	Human Biology or	
MEDA 120	Survey of Human A & P	5
BTEC 104	Intro to Business Technology or	
CS 110	Intro to Microcomputer Apps	5-3
BTEC 130	Electronic Calculators	1
BTEC 161	Intro to ICD-10 Coding, Part I	5
BTEC 162	Intro to ICD-10 Coding, Part II	5
BTEC 163	Intro to Basic CPT Coding	5
BTEC 164	Legal Aspects of Medical Office	2
BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedures	3
BTEC 173	Computers in the Medical Office	3
BTEC 181	Medical Terminology I or	
MEDA 101	Medical Vocabulary	3
BTEC 182	Medical Terminology II or	
MEDA 102	Medical Vocabulary	3
BTEC 294	Career Success	2
CS 121	Intro to Spreadsheets/Excel	5

TOTAL CREDITS **63-65**

Medical Reception

Administrative support professionals are responsible for performing and coordinating a wide range of activities, managing information flow, providing excellent customer service, and operating and maintaining a wide variety of office equipment. Organizations in a wide variety of industries, including the health care field and medical offices—rely on skilled administrative support staff to keep operations running efficiently and effectively.

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Medical Reception Certificate of Proficiency, you must complete a minimum of 47 credits and pass each course listed in program requirements with a C or better. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communications	5
Quantitative Skills		
BUS 104	Business Math Applications or	
MATH 088/089	Pre-College Math II	5
Human Relations/Social Science		
BUS 144	Management of Human Relations or	
BUS 150	Customer Service/Management	5

PROGRAM REQUIREMENTS:

BTEC 101	Basic Word Processing	5
BTEC 104	Intro to Business Technology	5
BTEC 106	Proofreading Skills	2
BTEC 111	Intermediate Word Processing	5
BTEC 125	Filing	3
BTEC 130	Electronic Calculators	1
BTEC 171	Medical Reception Procedures	3
BTEC 181	Medical Terminology I or	
MEDA 101	Medical Vocabulary I	3
BTEC 182	Medical Terminology II or	
MEDA 102	Medical Vocabulary II	3
BTEC 294	Career Success	2

TOTAL CREDITS **47**

Chemical Dependency Studies

The Chemical Dependency Studies program provides courses to meet the educational requirements of the State WAC 246-811-030 for licensure of Chemical Dependency Professional (CDP). The curriculum includes the understanding of the following topics specific to alcohol and drug addiction treatment of individuals: Pharmacological actions of alcohol and other drugs; treatment methods; record keeping and case management; cultural diversity; health issues; community resources; individual and group counseling; relapse prevention; working with specific groups, such as youth and families; and professional and ethical responsibilities.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Chemical Dependency Studies degree, you must complete a minimum of 91 - 96 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
Health	
HLTH 100 Occupational Safety and Health	3
Quantitative Skills	
MATH 098/099 Pre-College Math III (or higher)	5
Human Relations/Social Science	
PSYC& 100 General Psychology	5
Natural Sciences	
Choose from the following: BIOL& 100 Survey of Biology (5 cr.), or BIOL& 170 Human Biology (5 cr.), or BIOL& 241 Human A & P I (6 cr.), or BIOL& 242 Human A & P II (6 cr.), or CHEM& 100 Preparatory Chemistry (5 cr.), or NUTR& 121 Nutrition (5 cr.)	5-6
Diversity	
Choose SOC& 101 Intro to Sociology:DIV or SPCH 109 Intercultural Communications:DIV	5

PROGRAM REQUIREMENTS:

CDS 101*	Intro to Addictions and Chem Depend	5
CDS 102*	Intro to Theories/Counsel CDC	3
CDS 107	Adolescent Dev Issues and Chem Depend	3
CDS 110*	Alcohol/Drug Pathophysiology and Pharmacology	3
CDS 111*	Record Keeping and Case Mgmt	3
CDS 113	Treatment Principles of Chem Depend	3
CDS 121*	Legal & Ethical Issues in Chem Dep Studies	3
CDS 201	Dynamics of the Family and Chem Depend	3
CDS 202	Chem Dep Counseling with Diverse Populations	3
CDS 203	Relapse Prevention and Intervention	3
CDS 215*	Group Counseling: Theories/Applic.	3
CDS 220	Co-Occurring Disorders	3
CDS 288	Cooperative Work Experience	10
CDS 289*	Cooperative Seminars	2
PSYC& 200	Lifespan Psychology	5
Choose 2 of the following (6 or 8 cr.)		
CDS 105	Chem Depend/Domestic Violence	3
CDS 106	Prevention/Intervention Specialist	3
CDS 108	Running School-Based Support Groups	3
PSYC& 220	Abnormal Psychology	5
(PSYC& 220 not offered every quarter. Check with advisor.)		
Electives		
Choose one of the following:		
CDS 105 (3 cr.) or 106 (3 cr.) or 108 (3 cr.) or PSYC& 220 (5 cr.)		3-5

TOTAL CREDITS

91-96

*These CDS courses must be completed along with the Math, English, Psychology, Natural Science requirements to be eligible for your field work credits.



Chemistry

Chemistry explores matter and the basic properties and processes that surround us. Prepare for advanced studies and to work in a laboratory, manufacturing, research, management, environmental services and related fields. Analysts and technicians assist scientists in general lab work or process control. Students can also specialize in chemistry education.

■ ASSOCIATE IN SCIENCES – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

	<u>credits</u>
Communications	
ENGL& 101 English Composition I	5
Quantitative/Symbolic Reasoning Skills	
MATH& 151* Calculus I	5
MATH& 152* Calculus II	5
Humanities/Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science	15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example:
SOC& 101 – Introduction to Sociology:DIV

5

Electives

Sufficient additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor approved credits
Recommended 5 credit courses:

5

CHEM 231	Quantitative Analysis
MATH 220	Linear Algebra
MATH 240	Differential Equations

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
MATH 210	Elements of Statistics or	
MATH& 153*	Calculus III	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5
CHEM& 261*	Organic Chemistry w/Lab I	5
CHEM& 262*	Organic Chemistry w/Lab II	5
CHEM& 263*	Organic Chemistry w/Lab III	5

TOTAL MINIMUM CREDITS 90



Computer Aided Design

Skills developed in LCC's Computer Aided Design (CAD) program can be applied in many fields including architectural, civil, mechanical, construction, and electrical/electronic design. Graduates may work as drafters or in support of engineers using CAD software to prepare technical drawings and plans. The Certificate of Proficiency program includes additional studies in other aspects of design and manufacturing.

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Computer Aided Design Certificate of Proficiency, you must complete a minimum of 45 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL 100	College-Ready English II or	
ENGL& 101	English Composition I or	
ENGL 110	Industrial Communications	5
Quantitative Skills		
MATH 088/089	Pre-College Math II or higher	5
Human Relations/Social Science		
BUS 144	Management of Human Relations (recommended)	5
Health		
HLTH 100	Occupational Safety and Health	3

PROGRAM REQUIREMENTS

DRFT 107	Technical Graphics	3
DRFT 210	Advanced Technical Graphics	3
DRFT 252	Advanced Computer Aided Drafting	3
DRFT 260	Survey of Civil & Architectural Drafting	3
MFG 115	Manufacturing Processes	5
MFG 130	Materials Science	5
TECH 100	Principles of Technology	5
TOTAL CREDITS		45

■ CERTIFICATE OF COMPLETION

CERTIFICATE REQUIREMENTS

To earn a Computer Aided Design Certificate of Completion, you must complete a minimum of 17 credits. The credits must include the following:

		<u>credits</u>
DRFT 107	Technical Graphics	3
DRFT 210	Advanced Technical Graphics	3
DRFT 252	Advanced Computer Aided Drafting	3
DRFT 260	Survey of Civil and Architectural Graphics	3
MFG 115	Manufacturing Processes or	
MFG 130	Materials Science	5
TOTAL CREDITS		17

Computer Science

Begin studies toward a Bachelor of Science degree in Computer Science. For the AS-T degree in Computer Science, various courses are offered such as calculus, physics, and computer science. A student can also take individual course in areas of interest to deepen knowledge and understanding.

■ ASSOCIATE IN SCIENCES – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. Universities may expect certain minimal grades in various courses in order to certify into their computer science programs. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
Quantitative/Symbolic Reasoning Skills		
MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5

Humanities and Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science in a different discipline

Lab Based Science Course

Such as biology, chemistry, etc. Confer with advisor and the transfer university for acceptable courses

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CS 170	Computer Programming	5
CS 270	Data Structures I	5
CS 275	Object-Orientated Prg in Java	5
CS 280	Advanced Data Structures	5
MATH& 153*	Calculus III	5
MATH 215	Discrete Structures	5
MATH 220	Linear Algebra	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

At least 5 additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor approved credits.

Note: WSU requires additional course work. Please contact WSU advisor for details.

TOTAL MINIMUM CREDITS 90

Criminal Justice

Modern law enforcement is a highly competitive career field. The more education you have, the better your chance of employment and advancement. Prepare for entry-level employment in law enforcement agencies and in some correctional facilities. People working within those areas can use the program to enhance their skills.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
MATH 099 or proficiency <i>and</i> one of the following: BUS 206, ENGR& 214, ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223	
	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed	
	15
Natural Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement	
	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	
	15
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV	
	5
Electives	
See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List	
	25

Recommended Elective Course List:

CJ 100	Basic Law Enforcement	5
CJ& 101	Intro to Criminal Justice	5
CJ& 110	Criminal Law	5
CJ 154	The American Legal System	5
CJ 181	Report Writing for Law Enforcement	3
CJ 183	Administration of Justice	5
CJ 185	Community Policing	5
CJ 260	Physical Evidence/Criminalistics	5
CJ 286	Criminal Law Administration	5

TOTAL MINIMUM CREDITS 90

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Criminal Justice degree, you must complete a minimum of 94 - 96 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking	5
Health	
HLTH 106 Health Today	2
Quantitative Skills	
MATH 088/089 Pre-College Math II or higher	5
Human Relations/ Social Sciences	
PSYC& 100 General Psychology	5
Humanities /Natural Sciences	
See the distribution list for Professional/Technical degrees for Humanities and Natural Science classes that meet this requirement	
	5
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV	
	5

PROGRAM REQUIREMENTS

BUS& 201	Business Law	5
CJ& 101*	Introduction to Criminal Justice	5
CJ& 110*	Criminal Law	5
CJ 154*	The American Legal System	5
CJ 181	Report Writing for Law Enforcement	3
CJ 183*	The Administration of Justice	5
CJ 260*	Physical Evidence & Criminalistics	5
CS 110	Introduction to Microcomputer Apps	3
POLS& 202	American Government	5
POLS 220	The Law and Social Issues	5

Electives
See advisor 11-13

TOTAL CREDITS 94-96

Note: Full-time law enforcement officers who have completed the training commission curriculum and are enrolled in the Criminal Justice program may waive three of the courses marked with asterisks (*) and substitute CJ 100 – Basic Law Enforcement for three courses. The training commission curriculum consists of 450 hours of classroom instruction.

Diesel/Heavy Equipment Technology

Heavy Equipment Preventative Maintenance

The Heavy Equipment Preventative Maintenance program prepares students for careers in any industry that utilizes trucks, excavators, bulldozers, vessels or any other industrial equipment utilizing diesel power, hydraulics or other mechanical power transmission devices. This certificate is a shorter route to entry-level jobs.

■ ASSOCIATE IN APPLIED SCIENCE

The Diesel/Heavy Equipment Technology program prepares students for careers in any industry that utilizes trucks, heavy equipment, vessels or any other industrial equipment utilizing diesel power, hydraulics or other mechanical power transmission devices. Some of the many different areas of graduate employment include trucking firms, heavy equipment dealerships, logging companies, railroads, tug boats, industrial maintenance and sales.

With a strong emphasis on fluid power, LCC's Diesel/Heavy Equipment Technology program is one of few accepted for membership in the National Fluid Power Association.

Students may enter the program any quarter and may transfer to pursue a bachelor's degree in Diesel Power at several baccalaureate institutions.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science - Diesel/Heavy Equipment degree, you must complete a minimum of 120 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

	<u>credits</u>
Communications Choose from ENGL 100, 110 ENGL& 101, 102, BUS 119, or SPCH 110. (ENGL 110 Industrial Communications recommended)	5
Health HLTH 100 Occupational Safety and Health	3
Quantitative Skills MATH 088/089 Pre-College Math II or higher (MATH 106 Industrial Mathematics recommended)	5
Human Relations/Social Science BUS 144 Management of Human Relations:DIV recommended. BUS 144 satisfies the Human Relations, Social Science, and Diversity requirements for this degree	5
Natural Sciences See Distribution List for Professional/Technical degrees. TECH 100 Advanced Principles of Technology or MFG 130 Materials Science recommended	5

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

PROGRAM REQUIREMENTS

DHET 100*	Essentials of Mechanics	5
DHET 101	Electrical Systems I	5
DHET 102	Electrical Systems II	10
DHET 104	Vehicle Climate Control	6
DHET 111	Hydraulic Brakes	5
DHET 115	Air Brake Systems	5
DHET 125	Heavy Duty Chassis Maintenance	5
DHET 141	Hydraulics I	4
DHET 142	Hydraulics II	6
DHET 210	Diesel Engine Rebuild	16
DHET 215	Heavy Duty Engine Performance	15
DHET 220	Heavy Duty Power Trains	10
DHET 230	Advanced Shop Practices	5

*Program advisor may recommend substituting COLL 100 (College Success) if student has basic mechanical experience.

TOTAL CREDITS **120**

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Heavy Equipment Preventative Maintenance Certificate of Proficiency, you must complete a minimum of 60 credits. The credits must include the following:

	<u>credits</u>
Communications ENGL 110 Industrial Communications	5
Quantitative Skills MATH 078/079 Pre-College Math I or higher	5
Human Relations/Social Science BUS 144 Management of Human Relations (recommended)	5
PROGRAM REQUIREMENTS Any DHET courses approved by the program advisor	45
TOTAL CREDITS	60

Drama

Dramatic experience provides insights into the complex motivation for human behavior. Students interested in acting can complete an associate degree or begin studies to transfer to a baccalaureate program. Drama courses can also be an important supplement for those who plan to major in the humanities or social sciences.

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency **and** one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits in any one discipline. No more than 5 credits in performance/skills courses are allowed

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC, SOC, and POLS are recommended disciplines

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: DRMA& 101 – Introduction to Theatre:DIV

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

Recommended Elective Course List:

DRMA& 101	Introduction to Theatre:DIV	5
DRMA 106/7/8	Intro to Acting I, II, III	5 ea
DRMA 206/7/8	Acting I, II, III	5 ea
DRMA 116/7/8	Stage Crafts I, II, III	5 ea
DRMA 119	Intro to Theatre Design & Tech	5
DRMA 196/7/8	Rehearsal & Performance I,II,III	5 ea
DRMA 296/7/8	Rehearsal & performance IV,V,VI	5 ea

TOTAL MINIMUM CREDITS 90



Early Childhood Education

This is a full-time program that provides the student with both academic coursework and preschool and public school experience necessary to become a beginning teacher of children ages birth to 5 years. The program allows the student to experience working with young children and their mentor teachers. The program includes teaching methods in reading and language arts, mathematics, science, social studies, children's literature and materials, and expressive arts. The foundation for the methods classes are theory classes, with emphasis placed on educational foundations, child development and psychology, nutrition, families, communities, schools and other agencies

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 *or* ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits in any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC, SOC, and POLS are recommended disciplines

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math or Engineering courses. ANTH& 205 and BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: EDUC& 205 Intro to Education w/Field Experience:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

ECED 110	Basics of Childcare	2
ECED 119	Guidance Tech for Young Children	3
ECED 130	Intro to Early Childhood Ed	3
ECED 215	ECED Curriculum Development	3
ECED 216	Family Systems	3
EDUC& 203	Exceptional Child	3
EDUC& 205	Intro to Education w/Field Exp.	5
EDUC 215	Classroom Management	3

TOTAL MINIMUM CREDITS 90

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Early Childhood Education degree, you must complete a minimum of 92 - 94 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II or	
SPCH 110 Intro to Public Speaking	5

Health

HLTH 100 Occupational Safety & Health

3

Quantitative Skills

MATH 098/099 Pre-College Math III or higher **or**
BUS 104 Business Math Applications

5

Human Relations/Social Sciences

PSYC& 100 General Psychology

5

PSYC& 200 Lifespan Psychology

5

Humanities/Natural Sciences

Selected from the distribution list for Professional/ Technical degrees

5

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: EDUC& 205 Intro to Education w/Field Experience:DIV

5

PROGRAM REQUIREMENTS

ECED 115	Health, Safety, Nutrition	3
ECED 127/128	Practicum II/III	9
ECED 130	Intro to Early Childhood Education	3
ECED& 180	Language/Literacy/Development	3
ECED& 190	Observation/Assessment	3
ECED 204	Music and Movement	3
ECED 215	ECED Curriculum Development	3
ECED 219	Math, Science, Computers	3
ECED 220	Arts and Crafts for Young Children	3
ECED 260	Practicum IV	9
EDUC& 114	Child Development	3
EDUC& 130	Guiding Behavior	3
EDUC& 150	Child/Family/Community	3
EDUC& 203	Exceptional Child	3

Electives

See advisor

3-5

TOTAL CREDITS 92-94

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Applied Science - Transfer – Early Childhood Education degree, you must complete a minimum of 100 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking	5

Quantitative Skills

MATH& 131	Math for Elementary Education I	5
MATH& 132	Math for Elementary Education II	5

Humanities

DRMA& 101	Intro to Theatre	5
MUSC 100	Fundamentals of Music	5

Natural Sciences

Must be a Natural Science with lab course. Choose one of the following: BIOL 109 Energy and Life **or** ERSI 109 Intro to Earth Sciences **or** PHSC 109 Energy and Matter:Physical Sciences

		5
--	--	---

Social Science

PSYC& 100	General Psychology	5
PSYC& 200	Lifespan Psychology	5

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: EDUC& 205 Intro to Education w/Field Exp:DIV

PROGRAM REQUIREMENTS

50 credits required from the following specified critical content areas: (a minimum of 3-5 credits from each area)

Child Development & Learning-Typical & Atypical

ECED 130	Intro to Early Childhood Education	3
EDUC& 114	Child Development	3
EDUC& 203	Exceptional Child	3

Child Guidance

ECED 119	Guidance Techniques	3
----------	---------------------	---

Family & Community Relationships

ECED 216	Family Systems	3
----------	----------------	---

Diversity, Inclusion, Multicultural

EDUC& 205	Intro to Education with Field Experience	3
-----------	--	---

Health, Safety, and Nutrition

ECED 115	Health, Safety, Nutrition	3
----------	---------------------------	---

Observation, Assessment and Evaluation

ECED 126	Practicum I	3
ECED 127	Practicum II	3

Professionalism

ECED 209	ECED Mentor Development	1
ECED 215	ECED Curriculum Development	3

Practicum/Field Experience

(300 hours minimum suggested)		
ECED 128	Practicum III	3
ECED 260	Practicum IV	9

Curriculum Development & Implementation

ECED 109	Literature & Language Development	3
ECED 219	Math, Science, and Computers	3
ECED 220	Arts & Crafts for Young Children	3

TOTAL CREDITS **100**

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

for students transferring to the Concordia University program

DEGREE REQUIREMENTS

To earn an Associate in Applied Science - Transfer – Early Childhood Education degree to Concordia University, you must complete a minimum of 92 - 99 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
SPCH 110	Intro to Public Speaking	5

Quantitative Skills

College level Math course. See advisor for options

		5
--	--	---

Humanities

Choose from: ART 206, 207, 208, 226, 227, 228, ENGL 204, 205, 234, 240, 245, 251, 252, 254, 256, 260, 270, HIST& 116, 126, HUM 110, 116, 117, 118, 164, 165, 166, 210, 230, or PHIL& 101. Foreign language courses not applicable to the Humanities requirement at Concordia U

		10
--	--	----

Natural Sciences

From the distribution list for transfer degrees. Must have one 5 credit class with lab

		10
--	--	----

Social Science

PSYC& 100	General Psychology	5
	5 credits of U.S. History or Sociology	5

Human Relations

Choose from: ANTH& 206, BUS 144, 150, 240, CDS 102, 215, ECED 119, HDEV 110, PSYC 204, 214, SOC& 101, or SPCH 104

		2-5
--	--	-----

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: BUS 144 Management of Human Relations:DIV

		5
--	--	---

Education Requirements 41 – 45 credits:

ECED 109	Literature & Language Development	3
ECED 119	Guidance Techniques	3
ECED 126	Practicum I	3
ECED 127	Practicum II	3
ECED 128	Practicum III	3
ECED 130	Intro to Early Childhood Education	3
ECED 204	Music & Movement	3
ECED 215	ECED Curriculum Development	3
ECED 216	Family Systems	3
ECED 220	Arts & Crafts for Young Children	3
ECED 260	Practicum IV	5-9
EDUC& 114	Child Development	3
EDUC& 203	Exceptional Child	3

Physical Education 4 credits:	
PHED 152/252 Personalized Fitness or	4
HLTH 106 Health Today and	2
Any college level PHED activity course	2
TOTAL CREDITS	92-99

Early Childhood Education – Infant/Toddler

■ CERTIFICATE OF COMPLETION

LCC's Early Childhood Infant/Toddler Certificate of Completion program allows students to earn a one-year certificate with an emphasis on the competencies necessary to work with infants, toddlers and families as outlined in the Washington State Core Competencies for Early Care and Education Professionals. All courses meet the current STARS criteria. This certificate addresses specific infant/toddler competencies in the following content areas: Child Growth & Development, Curriculum and Learning Environment, Ongoing Measurement of Child Progress, Families and Community Partnerships, Health, Safety and Nutrition, Supportive Interactions, Program Planning and Development, and Professional Development and Leadership.

CERTIFICATE REQUIREMENTS

To earn An Early Childhood Infant/Toddler Certificate of Completion, you must complete a minimum of 44 credits. The credits must include the following:

PROGRAM REQUIREMENTS

	<u>credits</u>
ECED 106 Infant/Toddler Soc & Emotional Dev	1
ECED 107 Infant/Toddler Hlthy Physical Dev	1
ECED 108 Infant/Toddler Responsive Learning Environments	1
ECED 110 Basics of Childcare	2
ECED 115 Health, Safety, and Nutrition	3
ECED 127 Practicum II	3
ECED 130 Intro to Early Childhood Education	3
ECED 132 Infant and Toddler Care	3
ECED 186 Social-Emotional Growth & Socialization	3
ECED 187 Cognitive & Language Development	3
ECED 188 Group Care for Infants/Toddlers	3
ECED& 190 Observation/Assessment	3
ECED 204 Music & Movement	3
ECED 220 Arts & Crafts	3
EDUC& 114 Child Development	3
EDUC& 130 Guiding Behavior	3
HLTH 100 Occupational Safety and Health	3
TOTAL CREDITS	44

Early Childhood Education – Level I

■ CERTIFICATE OF COMPLETION

LCC's Early Childhood Education Certificate of Completion programs allow you to earn basic credentials for job opportunities quickly, then build on them for higher level credentials and job opportunities. The courses for the Level I certificate are completed in the first quarter of the program, Level II in the second quarter, and Level III in the third. All credits may be applied to the AAS Degree in Early Childhood Education.

CERTIFICATE REQUIREMENTS

To earn An Early Childhood Education-Level I Certificate of Completion, you must complete a minimum of 14 credits. The credits must include the following:

PROGRAM REQUIREMENTS

		<u>credits</u>
ECED 110 Basics of Childcare		2
ECED 115 Health, Safety, and Nutrition		3
ECED& 190 Observation/Assessment		3
EDUC& 114 Child Development		3
HLTH 100 Occupational Safety and Health		3
TOTAL CREDITS		14

Early Childhood Education – Level II

■ CERTIFICATE OF COMPLETION

CERTIFICATE REQUIREMENTS

To earn An Early Childhood Education-Level II Certificate of Completion, you must complete a minimum of 29 credits. The credits must include the following:

PROGRAM REQUIREMENTS

		<u>credits</u>
ECED 110 Basics of Childcare		2
ECED 115 Health, Safety, and Nutrition		3
ECED 127 Practicum II		3
ECED 130 Intro to Early Childhood Education		3
ECED& 190 Observation/Assessment		3
ECED 204 Music & Movement		3
ECED 220 Arts & Crafts		3
EDUC& 114 Child Development		3
EDUC& 130 Guiding Behavior		3
HLTH 100 Occupational Safety and Health		3
TOTAL CREDITS		29

Early Childhood Education – Level III

■ CERTIFICATE OF COMPLETION

CERTIFICATE REQUIREMENTS

To earn An Early Childhood Education-Level III Certificate of Completion, you must complete a minimum of 43 credits. The credits must include the following:

PROGRAM REQUIREMENTS

		<u>credits</u>
ECED 110 Basics of Childcare		2
ECED 115 Health, Safety, and Nutrition		3
ECED 127 Practicum II		3
ECED 128 Practicum III		3
ECED 130 Intro to Early Childhood Education		3
ECED& 180 Language/Literacy/Development		3
ECED& 190 Observation/Assessment		3
ECED 204 Music & Movement		3
ECED 219 Math, Science, and Computers		3
ECED 220 Arts & Crafts		3
EDUC& 114 Child Development		3
EDUC& 130 Guiding Behavior		3
ENGL 100 College-Ready English II or		
ENGL& 101 English Composition I		5
HLTH 100 Occupational Safety and Health		3
TOTAL CREDITS		43

Earth Sciences

Knowledge about the planet we inhabit, the surrounding universe and the natural forces that impact our world adds value to our daily lives and provides the basis for interesting careers in a broad range of disciplines: astronomy, geology, meteorology and oceanography. Begin studies for an advanced degree leading to positions with government agencies or private industry as an independent consultant, teacher, or researcher.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency *and* one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 115, 221, 222, or 223. MATH 112 College Algebra is highly recommended

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. Drawing or photography recommended

15



Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPAN& 121 – Intro to Spanish I:DIV.

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Natural Science and/or Elective Courses

*It is recommended that sequence courses be completed at one institution.

ASTR& 101	Intro to Astronomy	5
BIOL 130	Biodiversity of Pacific Northwest	5
CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
ERSI 104	Introduction to Earth Sciences	5
GEOL& 101	Intro to Physical Geology	5
GEOL 118	Historical Geology	5
OCEA& 101	Intro to Oceanography	5
MATH 112 through MATH 150 are highly recommended.		

TOTAL MINIMUM CREDITS 90

■ ASSOCIATE IN SCIENCE – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
Quantitative/Symbolic Reasoning Skills		
MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5

Humanities and Social Sciences

Selected from at least three disciplines from the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPAN& 121 – Introduction to Spanish I:DIV 5

PRE-MAJOR REQUIREMENTS: 50 CREDITS

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163 *	General Chemistry w/Lab III	5
ERSI 104	Intro to Earth Sciences	5
GEOL& 101	Intro Physical Geography	5
OCEA& 101	Intro to Oceanography or	
GEOL 118	Historical Geology	5
MATH& 153*	Calculus III or	
MATH 210	Elements of Statistics	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

At least 10 additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor approved credits.

Recommended electives:

MATH 113	Trigonometry	5
MATH 150	Pre-calculus	5
ASTR& 101	Intro to Astronomy	5
OCEA& 101	Intro to Oceanography	5

TOTAL MINIMUM CREDITS 90

Economics

Study the use of resources in relation to the production and distribution of wealth. Economics is important for those interested in a career in business, law, finance, government service and social service. Prepare to transfer to a baccalaureate institution in a variety of fields of study.

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

The credits must include the following:

Communications	credits
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency **and** one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223 5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed 15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC, SOC, and POLS are recommended 15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 Introduction to Sociology:DIV 5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List on the distribution list for transfer degrees 25

Recommended Elective Course List:

ACCT& 201	Principles of Accounting I	5
ACCT& 202	Principles of Accounting II	5
ECON 105	Introduction to Economics	5
ECON& 201	Micro Economics	5
ECON& 202	Macro Economics	5
HIST& 137	U.S. History 2	5
MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
POLS& 202	American Government	5
POLS& 203	International Relations	5
PSYC& 100	General Psychology	5

TOTAL MINIMUM CREDITS 90

Education

Secondary

If you want to teach — at the elementary or high school level — begin your studies to complete a bachelor’s degree in general education or a specific subject area.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications

	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 *or* ENGR& 215, MATH& 107 or higher (excluding MATH& 131), PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. ART& 100, MUSC 100 and PHIL& 101 recommended.

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. ANTH& 205 and BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. ANTH 109, PSYC& 100, and SOC& 101 recommended

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: EDUC& 205 Intro to Education w/Field Experience:DIV

5

Electives

Students should begin taking courses in at least two subject areas in which they intend to teach. Some baccalaureate institutions require 3 credits of PHED. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

ECED 216	Family Systems	3
EDUC& 114	Child Development	5
EDUC 115	Education and the Law	5
EDUC 119	Curriculum & Instruction	5
EDUC& 205	Intro to Education w/Field Exp	5
EDUC 206	Course Org & Curriculum Dev	3
EDUC 214	Instructional Strategies	3
EDUC 215	Classroom Management	3
PSYC& 200	Lifespan Psychology	5

TOTAL MINIMUM CREDITS 90

Elementary Education

The Associate in Elementary Education Direct Transfer Agreement/Major Related Program degree provides the first two years of training needed for a bachelor’s in Elementary Education and Teaching Certificate.

Options are available to assist you in transferring into programs offered by Eastern Washington State University; Western Washington State University, and Washington State University Vancouver.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT/MAJOR RELATED PROGRAM

DEGREE REQUIREMENTS

To earn an Associate in Elementary Education-DTA/MRP degree, you must complete a minimum of 90 transferable credits. Only coursework in which an individual receives a grade of C (2.0) or higher or a grade of pass on a pass-fail system of grading shall be counted toward the course work required for the approved endorsement program. Minimum grade-point average requirements are established by each institution. (Meeting the requirement does not guarantee admission.) A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications

	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5

Quantitative/Symbolic Reasoning Skills

MATH& 107	Math in Society	5
MATH& 131	Math for Elementary Education I	5
MATH& 132	Math for Elementary Education II (MATH 098/099 Pre-College Math III proficiency is required.)	5

Humanities

SPCH 110 Intro to Public Speaking **and** 10 credits from the following list recommended: art, music, literature, or drama/theater. The 15 credits must be from at least three different disciplines from the distribution list for transfer degrees

15

Social Science

Selected from at least three disciplines from the distribution list for transfer degrees. 5 credits from HIST& 116, 117, 127, or 128 **and** HIST& 136 or 137 **and** 10 additional credits from the following list: Economics, Political Science, Psychology, or additional History. **Note:** WSU, CWU, & SM require PSYC& 200 Lifespan Psychology 20

Natural Sciences

5 credits of Biological Science **and** 5 credits of Geology or Earth Science **and** 5 credits of Chemistry or Physics. Two of the above courses must be with lab 15

OTHER REQUIREMENTS:

- The baccalaureate institutions will accept 5 quarter credits of education-specific professional introduction coursework, if the coursework meets the following Washington endorsement competencies for Elementary Teachers:
 - An exploration of the historical, philosophical and social aspects of elementary education.
 - An evaluation from the field site supervisor observing the student’s work with children.
 - Awareness of the certification process in the state of Washington.
- A minimum of 30 hours of K-8 classroom experience must be included during the degree program.
- 5 credits in gender/culture coursework from the Diversity course list. This would count towards electives.
- Students should be able to demonstrate computer literacy in software programs including word processing, PowerPoint, spreadsheets, and be proficient on the Internet, CS 110 does not have to be taken. These skills may be demonstrated through a portfolio of files gathered during their education course work.
- Although not required for this degree, students must take the WEST-B in order to apply to teacher preparation programs.

Electives

15 additional college-level courses so that total earned is at least 90 credits. Select electives from content courses (e.g. Social Science, Humanities, Sciences, Mathematics) designed to meet endorsement competencies and/or academic majors. Additional credits for field experience or practice may count toward electives in this degree.

TOTAL MINIMUM CREDITS 90

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT TO CITY UNIVERSITY

for students transferring to the City University Elementary Education program

DEGREE REQUIREMENTS

To qualify for an Associate in Arts degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications

	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 English Composition	5
SPCH 110 Intro to Public Speaking	5

(These credits also meet City U’s Humanities requirements.)

Quantitative/Symbolic Reasoning Skills

MATH& 131 **and** MATH& 107 **or** MATH 112 **or** MATH& 132 **or** MATH 210. Prior to enrolling in these courses, mastery of MATH 098/099 Pre-College Math III must be demonstrated through examination or completion of MATH 098/099 with a grade of C or better. (These credits also meet City U’s Natural Science/Math requirements.) 10

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed 15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC& 100 **and** PSYC& 200 **and** HIST& 126, 127, 128, 136 or 137 **and** 5 more credits from a different discipline 20

Natural Sciences

One Life Science with lab **and** one Physical Science with lab **and** one other Natural Science. Natural Science courses shall be from three different disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. EDUC& 205 Intro to Education w/Field Experience:DIV recommended 5

Electives

See advisor for approved list of electives. SOC& 101 Intro to Sociology recommended as one of the elective courses 10

Program

EDUC& 205 Intro to Education w/Field Experience:DIV 5

Academic Content Area

Including courses already listed, are required in one of the following areas: Humanities, Social Science, and Natural Science/Math 30

TOTAL MINIMUM CREDITS 90

Other Pre-requisites:

- Cumulative (transfer) GPA of at least 2.0
- Minimum of 80 hours of supervised work with children during the past three years
- Passing scores on the Washington Educators Skills Test-Basic (WEST-B) www.west.nesinc.com
- Computer Literacy – basic word processing, Internet skills, send/receive email.

**■ ASSOCIATE IN ARTS –
DIRECT TRANSFER AGREEMENT
(WITH PARA EDUCATOR CERTIFICATION)**

Prepares students to work as Para Educators/Instructional Assistants in a K-12 system providing academic and social support to students. This degree program also meets all criteria for and prepares students to transfer to a teaching certification program in the State of Washington.

DEGREE REQUIREMENTS

To earn an Associate in Arts - Direct Transfer Agreement degree, you must complete a minimum of 92 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5
Quantitative/Symbolic Reasoning Skills		
MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223. MATH& 132 recommended		
		5
Humanities		
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits in any one discipline. No more than 5 credits in performance skills courses are allowed. ART& 100, ENGL 260, HUM 164 and MUSC 100 are recommended courses		
		15
Social Sciences		
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC& 100, 200, HIST& 136, 137, POLS& 202 or POLS 107 are recommended courses		
		20
Natural Sciences		
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement		
		15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: EDUC& 205 Education w/Field Experience:DIV

5

ADDITIONAL REQUIREMENTS:

		<u>credits</u>
CS 110	Intro to Microcomputer Apps	3
EDUC 115	Education and the Law	3
EDUC 119	Curriculum and Instruction	2
EDUC& 203	Exceptional Child	3
EDUC& 205	Intro to Education w/Field Exp:DIV	5
EDUC 214	Instructional Strategies	3
EDUC 215	Classroom Management	3
TOTAL MINIMUM CREDITS		92

Note: The WEST-B test is required for admission to any Washington college or university education program. It is important that you make arrangements to take the test before the end of your final quarter at LCC.

**■ ASSOCIATE IN ARTS –
DIRECT TRANSFER AGREEMENT
for students transferring to the WSU Vancouver Elementary
Education Program**

DEGREE REQUIREMENTS

To earn this Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.5. See NOTES on page 2 for specific WSU-V requirements. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5
Quantitative/Symbolic Reasoning Skills		
MATH& 131	Math for Elementary Education I	5
MATH& 132	Math for Elementary Education II	5
Prior to enrolling in these courses, mastery of Pre-College Math III must be demonstrated through examination or completion of MATH 099 with a grade of C or better		
Humanities		
MUSC 100 Fundamentals of Music is required unless the student can successfully challenge the course. In addition to MUSC 100, the student must choose two classes from different disciplines on the Humanities distribution list for transfer degrees. If MUSC 100 is successfully challenged, complete 15 credits from three different disciplines on the Humanities distribution list for transfer degrees		
		15

Social Sciences

Select courses from 3 different disciplines from the following list: PSYC& 100, 200, ECON 105, ECON& 201, 202, HIST& 137, POLS& 202

Natural Sciences

Students must take four science classes as follows: one Life Science **and** one Physical Science **and** one Natural Science with lab **and** one Natural Science. Courses shall be from three different disciplines. BIOL& 100 is strongly recommended. Only the following science classes can transfer to WSU-V College of Education: Physical Science classes: ASTR& 101, CHEM& 110, 121, 131, 161, 162, 163, ERSI 104 or 105, ERSI 109, GEOG 105, GEOL 105, 118, GEOL& 208, NUTR& 101, OCEA& 101, PHSC 109, PHYS& 100, PHYS& 114, 115, 116, and PHYS 210. Life Science classes: ANTH& 205, BIOL& 100, BIOL& 160, 211, 212, 213, 241, 242, BIOL 150. Lab courses/ minimum 5 credits.

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: EDUC& 205 Education w/Field Experience:DIV

Electives

See advisor for approved list of electives. EDUC& 205 Education w/Field Experience and HIST& 136 U.S. History 1 are recommended

TOTAL MINIMUM CREDITS

20+
20+
5
10
90

Paraeducator

■ CERTIFICATE OF PROFICIENCY

Prepare for entry-level employment with school districts with this certificate program of introductory courses. Students pursuing an apprenticeship program should contact an advisor for appropriate course offerings. By taking additional paraeducator preparation courses, you may also certify as a paraeducator, qualifying for employment by a school district, assisting certified teachers in classroom duties.

CERTIFICATE REQUIREMENTS

To earn a Paraeducator Certificate of Proficiency, you must complete a minimum of 45-47 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL 100	College Ready English II or	
ENGL& 101	English Composition I	5
Quantitative Skills		
MATH 098/099	Pre-College Math III or	
MATH& 131	Math for Elementary Education I	5
Human Relations/Social Science		
PSYC& 100	General Psychology	5
Electives		
3 or 5 credits from the following list:		
ART& 100	Art Appreciation	5
ECED 204	Music & Movement/Young Child	3
ECED 220	Arts and Crafts/Young Children	3
MUSC 100	Fundamentals of Music	5

PROGRAM REQUIREMENTS

CS 110	Intro to Microcomputer Apps	3
EDUC 115	Education and the Law	3
EDUC 119	Curriculum and Instruction	2
EDUC& 203	Exceptional Child	3
EDUC& 205	Intro to Education w/Field Exp	5
EDUC 214	Instructional Strategies	3
EDUC 215	Classroom Management	3
PSYC& 200	Lifespan Psychology	5

TOTAL MINIMUM CREDITS 45-47



Engineering

Complete basic background studies for transfer to a bachelor's degree program in engineering disciplines, including aeronautical, chemical, civil, computer, electrical, manufacturing and mechanical engineering. Careers may be found in research, development, design, operations management, teaching, sales and consulting.

■ ASSOCIATE IN SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5

Quantitative/Symbolic Reasoning Skills	
MATH& 151* Calculus I	5
MATH& 152* Calculus II	5

Humanities and Social Sciences	
Selected from at least three disciplines from the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science. ECON& 201 or ECON& 202 recommended for meeting Social Science requirement	15

Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV	5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CS 270	Data Structures I	5
MATH& 153*	Calculus III	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

30 additional college-level credits to meet the 90 credit minimum. These remaining credits must include program advisor help based on the requirements at the baccalaureate institution the student plans to attend.

Recommended electives:

BIOL& 211	Majors Biology Cellular	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
ENGL& 235	Technical Writing	5
ENGR& 121*	Engineering Graphics I	1 - 3
ENGR& 122*	Engineering Graphics II	1 - 3
ENGR& 123*	Engineering Graphics III	1 - 3
MATH 220	Linear Algebra	5
MATH 240	Differential Equations	5
TOTAL MINIMUM CREDITS		90

Bioengineering and Chemical Pre-Engineering

■ ASSOCIATE IN SCIENCE – TRANSFER/MAJOR RELATED PROGRAM

DEGREE REQUIREMENTS

To earn an Associate in Bioengineering and Chemical Pre-Engineering degree, you must complete a minimum of 90 credits in transferable courses with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5

Quantitative/Symbolic Reasoning Skills	
MATH& 151* Calculus I	5
MATH& 152* Calculus II	5
MATH& 153* Calculus III	5
MATH 240 Differential Equations	5

Humanities/Social Science	
Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science from the distribution list for transfer degrees. ECON& 201 or 202 recommended	15

Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV	5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
CHEM& 261*	Organic Chemistry w/Lab I	5
BIOL& 211*	Majors Biology Cellular or	
CHEM& 262*	Organic Chemistry w/Lab II	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

5 credits minimum – select electives with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

BIOL& 211*	Majors Biology Cellular	5
BIOL& 212*	Majors Biology Animal	5
CHEM& 262*	Organic Chemistry w/Lab II	5
CHEM& 263*	Organic Chemistry w/Lab III	5
CS 170	Computer Programming	5
ENGL& 235	Technical Writing	5
ENGR& 204	Electrical Circuits	5
ENGR& 224	Thermodynamics	5
MATH 154*	Calculus IV	3
MATH 220	Linear Algebra	5

TOTAL MINIMUM CREDITS 90

Computer and Electrical Pre-Engineering

■ ASSOCIATE IN SCIENCE – TRANSFER/MAJOR RELATED PROGRAM

Complete basic background studies for transfer to a bachelor’s degree program in computer and electrical engineering disciplines. Careers may be found in research, development, design, operations management, teaching, sales and consulting.

DEGREE REQUIREMENTS

To earn an Associate in Computer and Electrical Pre-Engineering degree, you must complete a minimum of 91 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
Quantitative/Symbolic Reasoning Skills		
MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5
MATH& 153*	Calculus III	5
MATH 220	Linear Algebra	5
MATH 240	Differential Equations	5

Humanities/Social Science

Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science from the distribution list for transfer degrees. ECON& 201 or 202 recommended 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: SOC& 101 – Intro to Sociology:DIV 5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CS 170	Computer Programming	5
CS 270	Data Structures I	5
CS 281	Digital Design	6
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5
ENGR& 204	Electrical Circuits	5

Electives

5 credits minimum – select electives appropriate for your intended major and intended baccalaureate institution.

BIOL& 211	Majors Biology Cellular	5
CHEM& 162*	General Chemistry 2/Lab II	5
ENGL& 235	Technical Writing	5
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 224	Thermodynamics	5
MATH 154*	Calculus IV	3

TOTAL MINIMUM CREDITS 91

Mechanical/Civil/Aeronautical/Industrial/Materials Science Engineering

■ ASSOCIATE IN SCIENCE – TRANSFER/MAJOR RELATED PROGRAM

Complete basic background studies for transfer to a bachelor’s degree program in engineering disciplines. Careers may be found in research, development, design, operations management, teaching, sales and consulting.

DEGREE REQUIREMENTS

To earn an Associate in Mechanical/Civil/Aeronautical/Industrial/Materials Science Engineering-AS-T Other Engineer/MRP degree, you must complete a minimum of 90 credits in transferable courses with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
Quantitative/Symbolic Reasoning Skills		
MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5
MATH& 153*	Calculus III	5
MATH 220	Linear Algebra	5
MATH 240	Differential Equations	5

Humanities/Social Science

Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science from the distribution list for transfer degrees. Economics recommended 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV 5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 225	Mechanics of Materials	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

5 credits minimum – select electives appropriate for your intended major and intended baccalaureate institution.

CS 170	Computer Programming	5
CHEM& 163*	General Chemistry w/Lab III	5
ENGL& 235	Technical Writing	5
ENGR 106	Engineering Problems	5
ENGR& 121*	Engineering Graphics I	1-3
ENGR& 122*	Engineering Graphics II	1-3
ENGR& 123*	Engineering Graphics III	1-3
ENGR& 204	Electrical Circuits	5
ENGR& 224	Thermodynamics	5
MATH 154*	Calculus IV	3

TOTAL MINIMUM CREDITS 90

Mechanical Engineering Technology

**■ ASSOCIATE IN SCIENCE –
TRANSFER/MAJOR RELATED PROGRAM**

Chemistry explores matter and the basic properties and processes that surround us. This program begins preparation for teaching High School or Middle School chemistry.

DEGREE REQUIREMENTS

To earn an Associate in Mechanical Engineering Technology-AS-T in MET/MRP degree, you must complete a minimum of 91 credits in transferable courses with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
Quantitative/Symbolic Reasoning Skill		
MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5
MATH& 153*	Calculus III or	
MATH 210	Elements of Statistics	5
Humanities/Social Science		
Minimum 5 credits in Humanities <i>and</i> minimum 5 credits in Social Science <i>and</i> 5 additional credits in either Humanities or Social Science from the distribution list for transfer degrees		15
Diversity		
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV		5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
CS 170	Fundamentals of Computer Program	5
ENGL& 235	Technical Writing	5
ENGR& 121*	Engineering Graphics I	3
ENGR& 122*	Engineering Graphics II	3
and		
PHYS& 114*	General Physics I w/Lab	5
PHYS& 115*	General Physics II w/Lab	5
PHYS& 116*	General Physics III w/Lab	5

or		
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5
(Physics 221, 222, 223 preferred)		

Electives

20 credits minimum. Choose as appropriate for intended major and intended baccalaureate institution:

ECON& 201	Micro Economics	5
ECON& 202	Macro Economics	5
ENGR& 123*	Engineering Graphics III	5
ENGR& 214	Statics	5
ENGR& 215	Dynamics	5
ENGR& 225	Mechanics of Materials	5
MATH& 153*	Calculus III or	
MATH 210	Elements of Statistics	5
SPCH 110	Intro to Public Speaking	5

TOTAL MINIMUM CREDITS 91

English

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

Courses in composition, creative writing and literature teach essential skills for clear written communication and provide insight into past and present cultures across the world. Prepare for transfer to a bachelor’s degree program leading to possible careers in professional writing, journalism, teaching and related fields.

DEGREE REQUIREMENTS

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5
Quantitative/Symbolic Reasoning Skills		
MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223		
		5
Humanities		
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed		
		15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

ENGL 108	Introduction to Literature	5
ENGL 140	Intro to Women Writers:DIV	5
ENGL 231	Creative Writing	5
ENGL 232	Creative Writing	5
ENGL 233	Creative Writing	5
ENGL 245	Contemporary Literature:DIV	5

TOTAL MINIMUM CREDITS **90**



Environmental Science

■ ASSOCIATE IN SCIENCES – TRANSFER

Today's environmental problems call for people who are educated in more than one discipline, highly trained in scientific and technical skills, and aware of the ecological, political, economic, and social dimensions of environmental decisions. The Associate in Science-Transfer (AS-T) degree in Environmental Science provides a foundation in basic physical, biological, and social sciences, and also addresses the human element in environmental issues. This curriculum prepares students to transfer and complete a BS or BA in an Environmental Science field for subsequent graduate study in MS, PhD, and law degree programs and careers in government agencies or the private sector.

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	credits
ENGL& 101 English Composition I	5

Quantitative/Symbolic Reasoning Skills

MATH& 151* Calculus I	5
MATH& 152* Calculus II	5

Humanities and Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ENVS 150 – Environment and Society:DIV

5

PRE-MAJOR REQUIREMENTS:

* It is recommended that sequence courses be completed at one institution.

BIOL& 211*	Majors Biology Cellular	5
BIOL& 212*	Majors Biology Animal	5
BIOL& 213*	Majors Biology Plant	5
CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
ENVS 150	Environment and Society	5
ENVS 215	Environmental Issues	5
MATH& 153*	Calculus III or	
MATH 210	Elements of Statistics	5

Electives

15 credits - These remaining credits must include program advisor approved credits.

Recommended Elective Course List:

BIOL 130	Biodiversity of the Pacific Northwest	5
BIOL& 260	Microbiology	5
GEOG 105	Physical Geography	5
GEOL 118	Historical Geology	5
GEOL& 208	Geology of Pacific Northwest	5
OCEA& 101	Intro to Oceanography	5

TOTAL MINIMUM CREDITS 90

Fire Science

Prepare for occupations and advancement in modern fire service with LCC's Fire Science Technology program. The program includes fire suppression, fire investigation, fire prevention, emergency medical and rescue services, and hazardous materials emergency response. The program correlates classroom, laboratory, and clinical field experience in public and private fire organizations.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Fire Science degree, you must complete a minimum of 91-92 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications	credits
ENGL& 101 English Composition I or	
ENGL 110 Industrial Communication	5

Quantitative Skills

MATH 088/089 Pre-College Math II or higher or	
MATH 106 Industrial Mathematics	5

Human Relations/Social Science/Diversity

BUS 144 Management of Human Relations:DIV	5
---	---

Health

HLTH 100 Occupational Safety and Health	3
---	---

Natural Science

CHEM& 100 Preparatory Chemistry or	
PHYS& 100 Physics: Non-Science Majors	5

Electives*

8 - 9 credits - Choose from:

FISC 170 Emergency Medical Technician I	8
---	---

or

FISC 129 Emergency Incident Management	3
--	---

and

FISC 220 Wildland Fire Fighter II	3
-----------------------------------	---

and

FISC 224 Fire Service Instructor I	3
------------------------------------	---

*Elective credits may be waived for EMT training. See advisor.

PROGRAM REQUIREMENTS:

FISC 101	Introduction to Fire Protection	3
FISC 105	Fundamentals of Fire Prevention	3
FISC 109	Fire Service Safety	3
FISC 110	Fire Science I	3
FISC 111	Basic Fire Fighting Skills	10
FISC 125	Fire Service Rescue	5
FISC 205	Fire Invgtn/Cause Determination	3
FISC 206	Hazardous Materials	3
FISC 207	Fire App. & Pumping Equipment	3
FISC 210	Building Constr for Fire Protection	3
FISC 215	Fixed Systems & Extinguishers	3
FISC 255	Fire Fighting Tactics and Strategy	3
FISC 288	Cooperative Education	14
FISC 289	Coop Education Seminar	1

TOTAL CREDITS **91-92**

Fire Inspector**■ CERTIFICATE OF COMPLETION**

The Fire Inspector Certificate of Completion program is designed to prepare students for occupations and advancement in modern fire service, including fire prevention, fire code enforcement, engine company fire inspections and other programs. The program correlates classroom, laboratory, and clinical field experience in public and private fire organization.

CERTIFICATE REQUIREMENTS

To earn a Fire Science-Fire Inspector Certificate of Completion, you must complete a minimum of 18 credits. The credits must include the following:

	<u>credits</u>	
FISC 105	Fire Prevention	3
FISC 110	Fire Science I	3
FISC 206	Hazardous Materials	3
FISC 210	Bldg. Construction/Fire Protection	3
FISC 215	Fixed Systems & Extinguishers	3
FISC 288/289	Cooperative Education	3
TOTAL CREDITS	18	

Fire Investigator**■ CERTIFICATE OF COMPLETION****CERTIFICATE REQUIREMENTS**

To earn a Fire Science-Fire Investigator Certificate of Completion, you must complete a minimum of 15 credits. The credits must include the following:

	<u>credits</u>	
FISC 110	Fire Science I	3
FISC 205	Fire Invest. & Cause Determination	3
FISC 206	Hazardous Materials	3
FISC 210	Bldg. Construction/Fire Protection	3
FISC 288/289	Cooperative Education	3
TOTAL CREDITS	15	

Fire Prevention Specialist**■ CERTIFICATE OF PROFICIENCY****CERTIFICATE REQUIREMENTS**

To earn a Fire Science — Fire Prevention Specialist Certificate of Proficiency, you must complete a minimum of 50 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
SPCH 110	Intro to Public Speaking	5

Quantitative Skills

MATH 088/089	Pre-College Math II or higher or	
MATH 106	Industrial Mathematics	5

Human Relations/Social Science

BUS 144	Management of Human Relations	5
---------	-------------------------------	---

PROGRAM REQUIREMENTS:

FISC 101	Introduction to Fire Protection	3
FISC 105	Fundamentals of Fire Prevention	3
FISC 110	Fire Science I	3
FISC 205	Fire Invgtn/Cause Determination	3
FISC 206	Hazardous Materials	3
FISC 210	Building Constr for Fire Protection	3
FISC 215	Fixed Systems & Extinguishers	3
FISC 288	Cooperative Education	8
FISC 289	Coop Education Seminar	1

TOTAL CREDITS **50**

Public Education Specialist**■ CERTIFICATE OF COMPLETION**

The Fire Science Public Education Specialist Certificate of Completion program is designed to prepare students for occupations and advancement in modern fire service, including public fire safety education specialist, public information officer and other programs. The program correlates classroom, laboratory, and clinical field experience in public and private fire organization.

CERTIFICATE REQUIREMENTS

To earn a Fire Science-Public Education Specialist Certificate of Completion, you must complete a minimum of 17 credits. The credits must include the following:

	<u>credits</u>	
FISC 101	Intro to Fire Protection	3
FISC 105	Fire Prevention	3
FISC 110	Fire Science I	3
FISC 288/289	Cooperative Education	3
SPCH 110	Intro to Public Speaking	5

TOTAL CREDITS **17**

Geography

Knowledge about the planet we inhabit, the surrounding universe and the natural forces that impact our world adds value to our daily lives and provides the basis for interesting careers in a broad range of disciplines: astronomy, geology, meteorology and oceanography. Begin studies for an advanced degree leading to positions with government agencies or private industry as an independent consultant, teacher of researcher.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts – Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking <i>or</i>	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223. MATH 210 is highly recommended	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	15
Natural Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement	15
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ANTH& 206 – Cultural Anthropology:DIV	5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

ANTH& 206	Cultural Anthropology:DIV	5
BIOL 130	Biodiversity of the Pacific NW	5
CS 110	Intro to Microcomputer Applications	3
ENVS 150	Environment and Society:DIV	5
GEOG 105	Physical Geography	5
GEOL& 101	Intro Physical Geology	5
GEOL& 208	Geology of the Pacific Northwest	5
MATH 210	Elements of Statistics	5
OCEA& 101	Introduction to Oceanography	5
SOC& 101	Introduction to Sociology:DIV	5
SPAN& 121	Spanish I:DIV	

TOTAL MINIMUM CREDITS **90**

Geology

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts – Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking <i>or</i>	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
MATH 099 or proficiency <i>and</i> one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223. MATH 112 is highly recommended	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. Drawing or photography is highly recommended	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPAN& 121 – Intro to Spanish I:DIV 5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List 25

Recommended Elective Course List:

*It is recommended that sequence courses be completed at one institution.

ASTR& 101	Introduction to Astronomy	5
BIOL 130	Biodiversity of Pacific Northwest	5
CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
ERSI 104	Introduction to Earth Sciences	5
GEOL& 101	Intro Physical Geology	5
OCEA& 101	Introduction to Oceanography	5

MATH 112 through MATH 150 are highly recommended.

TOTAL MINIMUM CREDITS 90



■ ASSOCIATE IN SCIENCES – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Sciences – Transfer degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5

Quantitative/Symbolic Reasoning Skills	
MATH& 151* Calculus I	5
MATH& 152* Calculus II	5

Humanities and Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science 15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPAN& 121 – Intro to Spanish I:DIV 5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chem w/Lab I	5
CHEM& 162*	General Chem w/Lab II	5
CHEM& 163*	General Chem w/Lab III	5
GEOL 118	Historical Geology	5
MATH& 153*	Calculus III or	
MATH 210	Statistics	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List 20+

Recommended Elective Course List:

ERSI 104	Introduction to Earth Sciences	5
GEOL& 208	Geology of Pacific NW	5
OCEA& 101	Introduction to Oceanography	5

MATH 112 through MATH 150 are highly recommended.

TOTAL MINIMUM CREDITS 90

History

The study of history provides an opportunity to explain the development of human societies over time through examination of the records (cultural, economic, political and scientific) of past generations. Transfer studies leading to a bachelor's degree prepares you for government service, legal fields, education and other research careers.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. 5 credits of a foreign language recommended	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. ECON, HIST, POLS and SOC are recommended courses	15
Natural Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological, and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement	15
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: HIST& 215 – Women in U.S. History:DIV	5
Electives	
See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List	25

Recommended Elective Course List:

HIST& 126	World Civilizations I	5
HIST& 127	World Civilizations II	5
HIST& 128	World Civilizations III	5
HIST& 136	U.S. History 1	5
HIST& 137	U.S. History 2	5
HIST& 215	Women in U.S. History:DIV	5
HIST 254	History of WA & Pacific NW	5

TOTAL MINIMUM CREDITS 90

Individualized Certificate Program

■ CERTIFICATE OF PROFICIENCY

The Individualized Certificate Program (ICP) offers an opportunity to pursue a custom-designed worksite-based learning program that is not available through current apprenticeship or college programs.

CERTIFICATE REQUIREMENTS

To earn an Individualized Certificate Program Certificate of Proficiency, you must complete a minimum of 45 credits. Remedial courses (numbered under 100) except for Math, do not count towards the 45 credits needed for the certificate.

A site needs to be developed for each individualized program. You will be interviewed and selected by an employer. The location and your selection of a work site will have an impact on how long it takes to complete your certificate. Your work-based learning experience depends upon the available sites.

College level courses are transferable into the ICP or if you decide to pursue further education, the credits you have earned may be applied toward a degree program.

Additional classes depend upon the occupation in which you are training. The ICP Program Manager will assist you in developing a tentative schedule.

Each program has specific requirements; examples are:

Communications	<u>credits</u>
ENGL 100 College-Ready English II or	
ENGL& 101 English Composition I	5

Quantitative Skills

Dependent on the certificate: MATH 078/079 Pre-College Math I or MATH 088/089 Pre-College Math II or higher or MATH 105 Math for Health Sciences	5
--	---

Human Relations/Social Science

BUS 144 Management of Human Relations or	
BUS 150 Customer Service/Management (recommended)	5

ADDITIONAL REQUIREMENTS:

HLTH 100 Occupational Safety & Health	3
ICP 288 Cooperative Work Experience	3-17
ICP 289 Employment Portfolio	1
ICP 291 ICP Seminar	2

PROGRAM REQUIREMENTS:

See ICP program manager for a list of required program courses.

Information Technology Systems

■ ASSOCIATE IN APPLIED SCIENCE

Qualify for entry-level employment as a computer support specialist, utilizing skills in networking, programming, and applications support by successfully completing program requirements and select areas of emphasis.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Information Technology Systems degree, you must complete a minimum of 91 - 99 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Note: Some courses have prerequisites, check catalog description.

Communications		<u>credits</u>
ENGL& 101	English Composition I	5

Health		<u>credits</u>
HLTH 100	Occupational Safety and Health	3

Quantitative Skills		<u>credits</u>
MATH 098/099	Pre-College Math III or higher (excluding MATH& 131/132)	5

Human Relations/Social Science/Diversity		<u>credits</u>
BUS 144	Management of Human Relations:DIV or	
SOC& 101	Intro to Sociology:DIV	5

Humanities/Natural Sciences		<u>credits</u>
CS 170	Fundamentals of Computer Programming	5

PROGRAM REQUIREMENTS

CS 100	Intro to Information Systems	5
CS 102	Intro to Internet Theory, App, and Web Page Design	5
CS 121	Introduction to Spreadsheets	5
CS 130	Introductory Database Apps	5
CS 144	Principles of PC Operating Systems	5
CS 211	Networking Basics	5
CS 245	Computer Configuration and Maint.	6
CS 260	Intro to Network Security or	
CS 264	Computer Forensics	5
CS 288/289	Cooperative Education	2

Electives

Complete the requirements for any two of the Certificate of Completion programs listed on page 69. Combined minimum credits required 25-33

TOTAL CREDITS 91-99

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

Qualify for entry-level employment as a computer support specialist, utilizing skills in networking, programming, and applications support by successfully completing program requirements and select areas of emphasis. This degree has some transferability to certain universities. Students should contact a university advisor to confirm details and acceptance.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer - Information Technology Systems degree, you must complete a minimum of 91 - 99 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5

Health		<u>credits</u>
HLTH 100	Occupational Safety & Health	3

Quantitative Skills		<u>credits</u>
MATH 112	College Algebra or higher (excluding MATH& 131/132)	5

Human Relations/Social Science/Diversity		<u>credits</u>
BUS 144	Management of Human Relations:DIV or	
SOC& 101	Intro to Sociology:DIV	5

Humanities/Natural Sciences		<u>credits</u>
CS 170	Fundamentals of Computer Programming	5

PROGRAM REQUIREMENTS

CS 100	Intro to Information Systems	5
CS 102	Intro to Internet Theory, App, and Web Page Design	5
CS 121	Introduction to Spreadsheets	5
CS 130	Introductory Database Apps	5
CS 144	Principles of PC Operating Systems	5
CS 211	Networking Basics	5
CS 260	Intro to Network Security or	
CS 264	Computer Forensics	5
CS 245	Computer Configuration and Maintenance	6
CS 288/289	Cooperative Education	2

Electives

Complete the requirements for any two of the Certificate of Completion programs listed on page 69. Combined minimum credits required 25-33

TOTAL CREDITS 91-99

■ CERTIFICATE OF COMPLETION

These certificates are part of the Information Technology AAS degree. Many of the courses listed have prerequisite course requirements. Students intending to complete as a stand-alone certificate should have prior course work or experience in the Information Technology field. See advisor for information or course catalog for list of prerequisites for each course.

Digital Forensics

CERTIFICATE REQUIREMENTS		<u>credits</u>
CS 250	Digital Forensics and the Law	4
CS 251	Digital forensics Incidence Response	5
CS 252	Collection and Exam of Digital Evidence	5
CS 253	Digital Forensics for Live and Mobile Systems	4
TOTAL CREDITS		18

Help Desk Technician

CERTIFICATE REQUIREMENTS		<u>credits</u>
BTEC 145	Intro to MS Word	5
BTEC 148	Intro to Outlook	2
BUS 150	Customer Service/Management	5
TOTAL CREDITS		12

Networking

CERTIFICATE REQUIREMENTS		<u>credits</u>
CS 212	Local Area Networks: Theory and Apps	5
CS 213	Local Area Networks: Theory and Apps	5
CS 249	Advanced Operating Systems	5
TOTAL CREDITS		15

Programming

CERTIFICATE REQUIREMENTS		<u>credits</u>
CS 175	Event-Driven Programming	5
CS 270	Data Structures I	5
CS 275	Object-Oriented Prog. in Java	5
TOTAL CREDITS		15

Web Development

CERTIFICATE REQUIREMENTS		<u>credits</u>
ART 162	Beginning Photoshop Design	3
CS 175	Event-Driven Programming or	
CS 275	Object-Oriented Prog. in Java	5
CS 230	Database Development	5
TOTAL CREDITS		13



Pre-Law

Law careers can be built upon interests in accounting, corporate management, public administration, politics, criminal investigation, as well as legal practice. Most law schools do not require specific undergraduate programs, but recommend courses appropriate for the baccalaureate degree of the student's choice. Pre-law students should have the ability to read, write, and speak English well, a critical understanding of human values and institutions, and the creative power to think.

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

MATH 099 or proficiency and one of the following: BUS 206, ENGR& 214 *or* ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline. PSYC and SOC are recommended courses

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Intro to Sociology:DIV

5

Electives

25 credits - See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List.

Recommended Elective Course List:

BUS& 201	Business Law	5
CJ 154	The American Legal System	5
CJ 286	Criminal Law Administration	5
POLS& 101	Intro Political Science	5
POLS 220	The Law and Social Issues	5
PSYC 204	Applied Psychology	5
SOC& 101	Introduction to Sociology:DIV	5

TOTAL MINIMUM CREDITS 90



Machine Trades

Prepare for a job as a machinist, millwright, and tool and die maker, or another occupation related to manufacturing through LCC's Machine Trades program. Graduates may work as advanced apprentice machinists, machine operators, or programmers.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Machine Trades degree, you must complete a minimum of 99 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL& 110	Industrial Communications is recommended	5
Health		
HLTH 100	Occupational Safety & Health	3
Quantitative Skills		
MATH 088/089	Pre-College Math II or higher or	
MATH 106	Industrial Mathematics (recommended)	5
Human Relations/ Social Science		
BUS 144	Management of Human Relations is recommended	5

Humanities /Natural Sciences

From the distribution list for Professional/Technical degrees. MFG 130 Materials Science is recommended 5

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: BUS 144 – Management of Human Relations:DIV 5

PROGRAM REQUIREMENTS

BLPT 150	Machinists Blueprint Reading	5
MASP 112	Machine Shop II	10
MASP 113	Machine Shop III	10
MASP 204	CNC Machining Center Fundamentals	3
MASP 205	CNC Turning Center Fundamentals	3
MASP 221	CNC Milling	10
MASP 222	CNC Turning	10
MASP 223	Advanced CNC Processes	6
MFG 115	Manufacturing Processes	5
MFG 230	Computer Integrated Manufacturing	4
MASP 107	Machining for Related Occupations	
and/or		
MASP 111	Machine Shop I for a combined total of 10 credits.	10
TOTAL CREDITS		99

Computer Numerical Control

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Computer Numerical Control – Certificate of Proficiency, you must complete a minimum of 68 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL& 110	Industrial Communications is recommended	5
Health		
HLTH 100	Occupational Safety & Health	3
Quantitative Skills		
MATH 088/089	Pre-College Math II or higher (MATH 106 Industrial Mathematics recommended)	5
Human Relations/ Social Science		
BUS 144	Management of Human Relations is recommended	5

PROGRAM REQUIREMENTS

BLPT 150	Machinists Blueprint Reading	5
MASP 204	CNC Machining Center Fundamentals	3
MASP 205	CNC Turning Center Fundamentals	3
MASP 221	CNC Milling	10
MASP 222	CNC Turning	10
MFG 115	Manufacturing Processes	5
MFG 230	Computer Integrated Manufacturing	4
MASP 107	Machining for Related Occupations	
and/or		
MASP 111	Machine Shop I for a combined total of 10 credits.	10
TOTAL CREDITS		68

Machinist

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Machinist – Certificate of Proficiency, you must complete a minimum of 74 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL& 110	Industrial Communications is recommended	5
Health		
HLTH 100	Occupational Safety & Health	3
Quantitative Skills		
MATH 088/089	Pre-College Math II or higher (MATH 106 Industrial Mathematics recommended)	5
Human Relations/ Social Science		
BUS 144	Management of Human Relations is recommended	5

PROGRAM REQUIREMENTS

BLPT 150	Machinists Blueprint Reading	5
MASP 112	Machine Shop II	10
MASP 113	Machine Shop III	10
MASP 114	Machine Shop IV	10
MFG 115	Manufacturing Processes	5
WELD 152	Intro to Arc Welding	6
MASP 107	Machining for Related Occupations	
and/or		
MASP 111	Machine Shop I for a combined total of 10 credits.	10
TOTAL CREDITS		74

Advanced Manufacturing Technology

Manufacturing industries are in need of skilled production operators and technicians with up-to-date, 21st century skills. Industries that make products from metal, plastics, wood and other materials, as well as those producing solar panels, biofuels, energy, petrochemicals, pharmaceuticals, food, semiconductors, and a host of other traditional and 'green' products need employees capable of running and servicing sophisticated machinery. In addition, workers in these industries must understand and practice principles aimed at maintaining safety, improving quality, eliminating waste, and reducing or eliminating the impact of operations on the environment.

■ ASSOCIATE IN APPLIED SCIENCE

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Advanced Manufacturing Technology degree, you must complete a minimum of 95 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

	<u>credits</u>
Communications	
ENGL 100 College Ready English II or	
ENGL& 101 English Composition I or	
ENGL 110 Industrial Communications (ENGL 110 recommended)	5
Health	
HLTH 100 Occupational Safety & Health	3
Quantitative Skills	
MATH 088/089 Pre-College Math II or higher (MATH 106 recommended)	5
Human Relations/Social Science	
BUS 144 Management of Human Relations:DIV	5
Natural Sciences	
From the distribution list for Professional/Technical degrees. MFG 130 Materials Science is recommended	5
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: BUS 144 Management of Human Relations:DIV	5

PROGRAM REQUIREMENTS

BLPT 150	Machinists Blueprint Reading or	5
BLPT 160	Blueprint Reading for Welders	3
CS 110	Intro to Microcomputer Apps	3
MASP 107	Machining for Related Occupations and/or	
MASP 111	Machine Shop	10
MFG 115	Manufacturing Processes	5
MFG 120	Quality Assurance	4
MFG 140	Industrial Hydraulics	4
MFG 230	Computer Integrated Manf	4
PMFG 110	Industrial Maint Fundamentals	5
PMFG 150	Elec/Electronic Fundamentals	6
PMFG 151	Process Control Equipment	5
PMFG 152	Process Control Systems	5
PMFG 201	Electrical Control Equipment	3
PMFG 202	Electric Motors	2
PMFG 210	Adv Industrial Maintenance	5
WELD 105	Related Welding I	6

TOTAL CREDITS 95

Fundamentals of Manufacturing

■ CERTIFICATE OF COMPLETION

Manufacturing companies are looking for employees who understand basic manufacturing processes and can work safely and efficiently in a production environment. The Fundamentals of Manufacturing certificate provides the basic skills needed for many entry-level manufacturing jobs.

CERTIFICATE REQUIREMENTS

To earn a Fundamentals of Manufacturing Certificate of Completion, you must complete a minimum of 24-28 credits. The credits must include the following:

	<u>credits</u>
HLTH 100 Occupational Safety and Health or	
MFG 105 Industrial Safety	3
MFG 115 Manufacturing Processes	5
16-20 credits from the following list:	
MATH 078/079 Pre-College Math I or higher	5
MASP 107 Machining for Related Occupations and/or	
MASP 111 Machine Shop I	10
MFG 120 Quality Assurance	4
MFG 140 Industrial Hydraulics	4
MFG 205 Work Teams in Industry	3
PMFG 110 Industrial Maintenance	5
WELD 105 Related Welding I	6
TOTAL CREDITS 24-28	

Manufacturing Occupations

■ CERTIFICATE OF PROFICIENCY

A strong foundation in production, machining, and welding processes provides access to many jobs in industries that utilize machine tools machine tools and fabrication processes to produce goods. The Manufacturing Occupations Certificate of Proficiency also provides courses that can be applied to more specialized degrees and certificates, allowing graduates to add to their skills as they advance in their careers.

CERTIFICATE REQUIREMENTS

To earn a Manufacturing Occupations Certificate of Proficiency, you must complete a minimum of 47 - 49 credits. The credits must include the following:

Communications	<u>credits</u>
ENGL 100 English Fundamentals or	
ENGL& 101 English Composition I or	
ENGL 110 Industrial Communications (ENGL 110 recommended)	5
Health	
HLTH 100 Occupational Safety & Health or	
MFG 105 Industrial Safety	3
Quantitative Skills	
MATH 088/089 Pre-College Math II or higher (MATH 106 recommended)	5
Human Relations/Social Science	
BUS 144 Management of Human Relations	5
PROGRAM REQUIREMENTS	
BLPT 150 Machinists Blueprint Reading or	
BLPT 160 Blueprint Reading for Welders	5
Take one of the following:	
DRFT 107 Technical Graphics	3
MFG 130 Materials Science	5
MFG 230 Computer Integrated Manf.	4
TECH 100 Advanced Principles of Tech	5
WELD 158 Welding Theory/Fabrication	5
MASP 107 Machining for Related Occupations and/or	
MASP 111 Machine Shop I	10
(Complete 10 credits of MASP 111 and/or a combination of MASP 111 & 107 to equal 10 credits).	
MFG 115 Manufacturing Processes	5
WELD 105 Related Welding I	6
TOTAL CREDITS	47-49

Process Manufacturing

■ CERTIFICATE OF PROFICIENCY

The Process Manufacturing Certificate of Proficiency is designed to prepare production operators for industries using high technology equipment and processes. Producers of coated steel, biofuels, energy, petrochemicals, pulp and paper, pharmaceuticals, food, and dimensional lumber, are some of the industries that use automation to control production processes.

CERTIFICATE REQUIREMENTS

To earn a Process Manufacturing Certificate of Proficiency, you must complete a minimum of 60 credits. The credits must include the following:

Communications	<u>credits</u>
ENGL 100 English Fundamentals or	
ENGL& 101 English Composition I or	
ENGL 110 Industrial Communications (ENGL 110 recommended)	5
Health	
HLTH 100 Occupational Safety & Health or	
MFG 105 Industrial Safety	3
Quantitative Skills	
MATH 088/089 Pre-College Math II or higher (MATH 106 recommended)	5
Human Relations/Social Science	
BUS 144 Management of Human Relations	5
PROGRAM REQUIREMENTS	
CS 110 Intro to Microcomputer Apps	3
MFG 120 Quality Assurance	4
MFG 140 Industrial Hydraulics	4
PMFG 110 Industrial Maintenance	5
PMFG 150 Electrical/Electronic fundamentals	5
PMFG 151 Process Control Equipment	6
PMFG 152 Process Control Systems	5
PMFG 201 Electrical Control Equipment	3
PMFG 202 Electric Motors	2
PMFG 210 Advanced Industrial Maintenance	5
TOTAL CREDITS	60



Math

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

Mathematics is the language of science and a powerful mechanism for describing the world around us. A mathematics degree at Lower Columbia College prepares students for bachelor's programs in areas such as mathematics, statistics, or math education.

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking <i>or</i>	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

Intermediate algebra is a prerequisite: BUS 206, ENGR& 214 *or* ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological, and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

*It is recommended that sequence courses be completed at one institution.

MATH& 151*	Calculus I	5
MATH& 152*	Calculus II	5
MATH& 153*	Calculus III	5
MATH 154*	Calculus IV	3
MATH 210	Elements of Statistics	5
MATH 215	Discrete Structures	5
MATH 220	Linear Algebra	5
MATH 240	Differential Equations	5
TOTAL MINIMUM CREDITS		90

Associate in Math Education

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT/MAJOR RELATED PROGRAM

DEGREE REQUIREMENTS

To earn an Associate in Math Education degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5

Quantitative/Symbolic Reasoning Skills

MATH& 151* Calculus I (must be proficient in MATH 098/099 Pre-College Math III)

5

Humanities

SPCH 110 Intro to Public Speaking *and* an additional 10 credits from the distribution list for transfer degrees. No more than 10 credits from any one discipline. No more than 5 credits in foreign language at the 100 level. No more than 5 credits of performance classes are allowed

15-20

Social Science

PSYC& 100 General Psychology *and* an additional 10 credits from the distribution list for transfer degrees. No more than 10 credits allowed from any one discipline

15-20

Natural Science

MATH& 152* Calculus II *and* 10 credits of science from Physics, Chemistry, Geology, or Biology from the distribution list for transfer degrees. Shall include at least one lab course

15-20

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Other Requirements:

* It is recommended that sequence courses be completed at one institution.

EDUC& 205	Intro to Education with Field Exp.	5
MATH& 153*	Calculus III	5
MATH 154*	Calculus IV	3
MATH 220	Linear Algebra	5

If additional credits are required, the remainder shall be fully transferable as defined by the receiving institution.

TOTAL MINIMUM CREDITS 90

Medical Assisting

■ ASSOCIATE IN APPLIED SCIENCE

Students develop knowledge and skills necessary for employment in clinical and administrative-support areas of medical clinics. See Learning Outcomes for details.

The Lower Columbia College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). This assures the highest standards in a medical assisting curriculum and qualifies the successful graduate to sit for the national Certified Medical Assistant (CMA) exam administered by the American Association of Medical Assistants (AAMA).

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Medical Assisting degree, you must complete a minimum of 90 credits. For any course to count toward this degree, a grade of C or better is required. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
BUS 119	Business Communications and	
ENG& 102	Composition II	5

Health

(MEDA 161 and MEDA 162 listed under Program Requirements fulfill this requirement) 3-4

Quantitative Skills

MATH 105	Mathematics for Health Sciences	5
----------	---------------------------------	---

Human Relations/Social Science

PSYC& 100	General Psychology	
(counts for Human Relations and Social Science)		5

Natural Sciences/Humanities

from the distribution list for Professional/Technical degrees 5

Diversity

From the Diversity course list. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: ART& 100 Art Appreciation:DIV 5

Note: MATH 105, AH 104, 114, and BTEC 101 must be completed prior to enrolling in MEDA 120 and MEDA 161.

PROGRAM REQUIREMENTS

AH 104	Healthcare Foundations	2
AH 114	Healthcare Communication Skills	2
BTEC 101	Basic Word Processing/Formatting	5
BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedure	3
BTEC 173	Computers in the Medical Office	3
MEDA 101	Medical Vocabulary I or	
BTEC 181	Medical Terminology I	3
MEDA 102	Medical Vocabulary II or	
BTEC 182	Medical Terminology II	3
MEDA 120	Survey of Human A & P	5
MEDA 122	Law & Ethics for the Medical Office	2
MEDA 145	Medical Lab Procedures	6
MEDA 161	Exam Room Procedures I	4
MEDA 162	Exam Room Procedures II	3
MEDA 165	Meds in MEDA & Diseases	5
MEDA 190	MEDA to Preceptorship	5
MEDA 195	Medical Assisting Seminar	1

Electives

Choose courses numbered 100 or above from the distribution list for Professional/Technical degrees 5

TOTAL CREDITS **90**

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Medical Assisting Certificate of Proficiency, you must complete a minimum of 70 credits. For any course to count toward this certificate, a grade of C or better is required. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I or	
BUS 119	Business Communications	5

Quantitative Skills

MATH 105	Mathematics for Health Sciences	5
----------	---------------------------------	---

Human Relations/Social Science

PSYC& 100	General Psychology	5
-----------	--------------------	---

Note: MATH 105, AH 104, 114, and BTEC 101 all with a grade of C or better must be completed before spring quarter prior to MEDA 120 and MEDA 161.

PROGRAM REQUIREMENTS

AH 104	Healthcare Foundations	2
AH 114	Healthcare Communication Skills	2
BTEC 101	Basic Word Processing/Formatting	5
BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedure	3
BTEC 173	Computers in the Medical Office	3
MEDA 101	Medical Vocabulary I or	
BTEC 181	Medical Terminology I	3
MEDA 102	Medical Vocabulary II or	
BTEC 182	Medical Terminology II	3
MEDA 120	Survey of Human A & P	5
MEDA 122	Law & Ethics for the Medical Office	2
MEDA 145	Medical Lab Procedures	6
MEDA 161	Exam Room Procedures I	4
MEDA 162	Exam Room Procedures II	3
MEDA 165	Meds in MEDA & Diseases	5
MEDA 190	MEDA to Preceptorship	5
MEDA 195	Medical Assisting Seminar	1

TOTAL CREDITS **70**

Medical Fields - Preprofessional

Careers in medical professions require several years of advanced study. Medical coursework is rigorous and entry into professional schools is very competitive. Students planning a career in any of the medical fields listed below can begin their studies at LCC and gain a solid foundation in the basic sciences required in those fields. A number of medical schools also require a foreign language.

■ ASSOCIATE IN ARTS AND SCIENCES

- Pre-Chiropractic
- Pre-Pharmacy
- Pre-Dental Hygiene
- Pre-Physical Therapy
- Pre-Dentistry
- Pre-Veterinary Medicine
- Pre-Medicine

Music

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

The music program is designed to serve both those planning to major in music and the general college student. Those who intend to major in this field and seek employment in education or performance are expected to participate in an ensemble and to take private lessons.

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5
Quantitative/Symbolic Reasoning Skills		
Intermediate algebra is a prerequisite: BUS 206, ENGR& 214 <i>or</i> ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223		
		5
Humanities		
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed		
		15
Social Sciences		
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline		
		15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees, including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: MUSC& 105 – Music Appreciation:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

MUSC 100	Fundamentals of Music	5
MUSC 101	Theory and Musicianship	5
MUSC& 105	Music Appreciation:DIV	5
MUSC 111	Ear Training	1
MUSC 117	Music Cultures of the World:DIV	1-5
MUSC 119	American Music:DIV	5
MUSC 136	Early Music History	5
MUSC 137	Baroque-Classical Music	5
MUSC 138	Modern Music History	5
MUSC 209	The Blues Culture:DIV	5

TOTAL CREDITS 90



Nursing

The LCC Nursing Program is committed to providing excellence in nursing education, which encompasses holistic caring, respect for individuality and diversity, accountability and responsibility, critical thinking, and clinical expertise. The nursing program is approved by the Washington State Nursing Care Quality Assurance Commission and the associate degree program is accredited by the National League for Nursing Accrediting Commission.

Registered Nurse

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER (TRADITIONAL CAMPUS-BASED PROGRAM)

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer Registered Nurse degree, you must complete a minimum of 122 credits. For any course to count toward this degree, a grade of C or better is required. The credits must include the following:

	<u>credits</u>
Communications	
ENGL& 101 English Composition I	5
Quantitative Skills	
MATH 210 Elements of Statistics	5
Social Sciences	
PSYC& 100 General Psychology	5
Natural Sciences	
BIOL& 241 Human A & P 1	5
Health	
NURS 101 Nursing Foundations	5

Diversity

From the Diversity course list. Diversity courses are listed in the quarterly schedule identified by 'DIV' attached to the course title. Example: SOC& 101 Intro to Sociology:DIV 5

Note: MATH210, PSYC&100 and BIOL&241 must be completed prior to applying to the nursing program. Because nursing admission is competitive, it is advisable to complete all prerequisite and supportive courses prior to applying.

PROGRAM REQUIREMENTS

AH 104	Healthcare Foundations	2
AH 114	Healthcare Communication Skills	2
AH 230	Mgmt. Issues in Healthcare	1
BIOL& 242	Human A & P 2	6
BIOL& 260	Microbiology	5
CHEM& 121	Intro to Chemistry	5
NURS 102	Basic Nursing I	5
NURS 103	Basic Nursing II	5
NURS 104	Family Nursing	5
NURS 111	Nursing Foundations-Clinical	5
NURS 112	Basic Nursing I - Clinical	5
NURS 113	Basic Nursing II - Clinical	5
NURS 114	Basic Nursing III - Clinical	5
NURS 201	Adv. Comprehensive Nursing I	5
NURS 202	Adv. Comprehensive Nursing II	5
NURS 203	Adv. Comprehensive Nursing III	5
NURS 221	Adv. Comp. Nursing I - Clinical	5
NURS 222	Adv. Comp. Nursing II - Clinical	5
NURS 223	Adv. Comp. Nursing III - Clinical	5
PSYC& 200	Lifespan Psychology	5

TOTAL CREDITS **122**



Registered Nurse-LPN2RN-Campus Based (REQUIRES LPN LICENSE)

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer Registered Nurse LPN2RN degree, you must complete a minimum of 122-124 credits. For any course to count toward this degree, a grade of C or better is required. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5

Quantitative Skills		<u>credits</u>
MATH 210	Elements of Statistics	5

Social Sciences		<u>credits</u>
PSYC& 100	General Psychology	5

Natural Sciences		<u>credits</u>
BIOL& 241	Human A & P 1	6

Health
PN license issued by another state is accepted as fulfillment of the Health requirement.

Diversity
From the Diversity course list. Diversity courses are listed in the quarterly schedule identified by 'DIV' attached to the course title. Example: SOC& 101 Intro to Sociology:DIV

		5
--	--	---

Note: To be considered for admission to the LPN2RN level of the nursing program, the student must have graduated from a state board of nursing approved PN program and hold a current PN license. Accepted PN license is equivalent to 44 credits (NURS 101, 102, 103, 104, 111, 112, 113, 114 and AH 104, and AH 114). All non-nursing courses (except AH 209 and AH 230) must be completed with a grade of C or higher prior to applying for nursing program admission.

PROGRAM REQUIREMENTS

AH 230	Mgmt. Issues in Healthcare	1
BIOL& 242	Human A & P 2	6
BIOL& 260	Microbiology	5
CHEM& 121	Intro to Chemistry	5
NURS 201	Adv. Comprehensive Nursing I	5
NURS 202	Adv. Comprehensive Nursing II	5
NURS 203	Adv. Comprehensive Nursing III	5
NURS 209*	Nursing Success	2
NURS 221	Adv. Comp. Nursing I - Clinical	5
NURS 222	Adv. Comp. Nursing II - Clinical	5
NURS 223	Adv. Comp. Nursing III - Clinical	5
PSYC& 200	Lifespan Psychology	5

*not required for recent LCC graduates; see advisor.

TOTAL CREDITS **122-124**

Registered Nurse-LPN2RN-eLearning (REQUIRES LPN LICENSE)

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer Registered Nurse LPN2RN eLearning degree, you must complete a minimum of 126 credits. For any course to count toward this degree, a grade of C or better is required. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5

Quantitative Skills		<u>credits</u>
MATH 210	Elements of Statistics	5

Social Sciences		<u>credits</u>
PSYC& 100	General Psychology	5

Natural Sciences		<u>credits</u>
BIOL& 241	Human A & P 1	6

Health
PN license issued by another state is accepted as fulfillment of the Health requirement.

Diversity
From the Diversity course list. Diversity courses are listed in the quarterly schedule indicated by 'DIV' attached to the course title. Example: SOC& 101 Intro to Sociology:DIV

		5
--	--	---

Note: To be considered for admission to the LPN2RN level of the nursing program, the student must have graduated from a state board of nursing approved PN program and hold a current PN license. Accepted PN license is equivalent to 44 credits (NURS 101, 102, 103, 104, 111, 112, 113, 114 and AH 104, and AH 114). All non-nursing courses (except AH 209 and AH 230) must be completed with a grade of C or higher prior to applying for nursing program admission. BIOL& 241, BIOL& 242, BIOL& 260, CHEM& 121,, ENGL& 101, MATH 210, PSYC& 100 and PSYC& 200 must be completed with a grade of C or higher prior to applying for the LPN2RN Program.

PROGRAM REQUIREMENTS

BIOL& 242	Human A & P 2	6
BIOL& 260	Microbiology	5
CHEM& 121	Intro to Chemistry	5
NURS 240	Management of Care	3
NURS 241	Safe, Effective Care Environment	3
NURS 242	Health Throughout the Lifespan	3
NURS 243	Behavioral Health	3
NURS 244	Physiological Health I	3
NURS 245	Physiological Health II	3
NURS 246	Skills Laboratory	2
NURS 247	Clinical Practicum	10
NURS 248	Advanced Clinical Practicum	5
PSYC& 200	Lifespan Psychology	5

TOTAL CREDITS **126**

Registered Nurse-Rone Rural Outreach Nursing Education

■ ASSOCIATE IN APPLIED SCIENCE – TRANSFER

DEGREE REQUIREMENTS

To earn an Associate in Applied Science – Transfer Registered Nurse - RONE degree, you must complete a minimum of 126 credits. For any course to count toward this degree, a grade of C or better is required. The credits must include the following:

		<u>credits</u>
Communications		
ENGL& 101	English Composition I	5
Quantitative Skills		
MATH 210	Elements of Statistics	5
Social Sciences		
PSYC& 100	General Psychology	5
Natural Sciences		
BIOL& 241	Human A & P 1	6
Health		
NURS 101	Nursing Foundations	5
Diversity		
From the Diversity course list. Diversity courses are listed in the quarterly schedule indicated by 'DIV' attached to the course title. Example: SOC& 101 Intro to Sociology:DIV		5

Note: MATH 210, PSYC& 100 and BIOL& 241 must be completed prior to applying to the nursing program. Because nursing admission is so competitive, it is advisable to complete prerequisite and supportive courses prior to applying.

PROGRAM REQUIREMENTS

AH 104	Healthcare Foundations	2
AH 114	Healthcare Communication Skills	2
BIOL& 242	Human A & P 2	6
BIOL& 260	Microbiology	5
CHEM& 121	Intro to Chemistry	5
NURS 102	Basic Nursing I	5
NURS 103	Basic Nursing II	5
NURS 104	Family Nursing	5
NURS 111	Nursing Foundations-Clinical	5
NURS 112	Basic Nursing I – Clinical	5
NURS 113	Basic Nursing II – Clinical	5
NURS 114	Basic Nursing III – Clinical	5
NURS 240	Management of Care	3
NURS 241	Safe, Effective Care Environment	3
NURS 242	Health Throughout the Lifespan	3
NURS 243	Behavioral Health	3
NURS 244	Physiological Health I	3
NURS 245	Physiological Health II	3
NURS 246	Skills Laboratory	2
NURS 247	Clinical Practicum	10
NURS 248	Advanced Clinical Practicum	5
PSYC& 200	Lifespan Psychology	5
TOTAL CREDITS		126

Nursing Assistant

■ CERTIFICATE OF COMPLETION

The Nursing Assistant Certificate provides the content and experiences for students to achieve mastery of the state-defined competencies required to assist in giving basic nursing care to residents/clients under the supervision of a licensed nurse.

CERTIFICATE REQUIREMENTS

To earn a Nursing Assistant – Certificate of Completion, you must complete a minimum of 8 credits. The credits must include the following:

PROGRAM REQUIREMENTS

NURS 090	Nursing Assistant	8
TOTAL CREDITS		8

Notes:

- Nursing 090 is open to all students.
- This course meets Washington Department of Social and Health Service's requirements as an approved Nursing Assistant course. Students who successfully complete this course are eligible to take Washington State written and skills tests to become an NA-C.

Practical Nurse

■ CERTIFICATE OF PROFICIENCY

CERTIFICATE REQUIREMENTS

To earn a Practical Nurse – Certificate of Proficiency, you must complete a minimum of 81 credits. The credits must include the following:

		<u>credits</u>
Communications		
ENGL& 101	English Composition I	5
Quantitative Skills		
MATH 210	Elements of Statistics	5
Social Sciences		
PSYC& 100	General Psychology	5
Natural Sciences		
BIOL& 241	Human A & P 1	6
Health		
NURS 101	Nursing Foundations	5

Note: MATH210, PSCY&100 and BIOL&241 must be completed prior to applying to the nursing program. Because nursing admission is competitive, it is advisable to complete all prerequisite and supportive courses prior to applying.

PROGRAM REQUIREMENTS

AH 104	Healthcare Foundations	2
AH 114	Healthcare Communication Skills	2
BIOL& 242	Human A & P 2	6
BIOL& 260	Microbiology	5
NURS 102	Basic Nursing I	5
NURS 103	Basic Nursing II	5
NURS 104	Family Nursing	5
NURS 111	Nursing Foundations-Clinical	5
NURS 112	Basic Nursing I - Clinical	5
NURS 113	Basic Nursing II - Clinical	5
NURS 114	Basic Nursing III - Clinical	5
PSYC& 200	Lifespan Psychology	5
TOTAL CREDITS		81

Philosophy

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

The field of philosophy focuses on methods and systems of reasoning, critical examination of philosophic answers to questions of values and obligations, and justification of ethical beliefs. Begin studies for transfer to a baccalaureate institution to complete an advanced degree. Possible career fields include research, consulting and education.

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

Intermediate algebra is a prerequisite: BUS 206, ENGR& 214 **or** ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological, and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

PHIL& 101	Intro to Philosophy	5
PHIL 120	Critical Reasoning	5
PHIL 210	Ethics	5
PHIL 260	Philosophy of Religion	5
PSYC& 100	General Psychology	5
SOC& 101	Intro to Sociology	5

TOTAL MINIMUM CREDITS **90**



Physical Education

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

Prepare for careers in fitness, coaching, health promotion, exercise science and athletic training. After earning a bachelor’s degree, graduates can work in community services, leisure activities, therapeutic recreation, program supervision and commercial recreation.

DEGREE REQUIREMENTS

To earn an Associate in Arts - Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications		<u>credits</u>
ENGL& 101	English Composition I	5
ENGL& 102	Composition II	5
SPCH 110	Intro to Public Speaking or	
SPCH 114	Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

Intermediate algebra is a prerequisite: BUS 206, ENGR& 214 or ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 2235

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological, and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by ‘DIV’ attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV. Electives: 25 credits - See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

5

Recommended Elective Course List:

HLTH 100	Occupational Safety & Health	3
HLTH 106	Health Today	2
NUTR& 101	Nutrition	5
PHED 120/220	Cross Training	4
PHED 126/226	Aerobic Exercise	2-4
PHED 128/228	Weight Training	2-4
PHED 145	Softball Coaching Theory	3
PHED 152/252	Personalized Fitness	2-4
PHED 171	Prevention & Care-Athletic Injuries	3

TOTAL MINIMUM CREDITS 90



Physics

■ ASSOCIATE IN SCIENCES – TRANSFER

A bachelor's degree in physics is an excellent preparation for advanced study in astronomy and astrophysics, atmospheric science, biophysics, chemical physics, computer science and engineering. Students can complete the first two years of studies toward a bachelor's degree and can also specialize in physics education. Professional careers include research positions with government, universities and private industrial laboratories, observatories and science museums.

DEGREE REQUIREMENTS

To earn an Associate in Sciences - Transfer degree, you must complete a minimum of 90 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	credits
ENGL& 101 English Composition I	5

Quantitative/Symbolic Reasoning Skills	credits
MATH& 151* Calculus I	5
MATH& 152* Calculus II	5

Humanities/Social Sciences	credits
Selected from at least three disciplines on the distribution list for transfer degrees. A minimum of 5 credits in Humanities, and a minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science	15

Diversity	credits
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV	5

PRE-MAJOR REQUIREMENTS:

*It is recommended that sequence courses be completed at one institution.

CHEM& 161*	General Chemistry w/Lab I	5
MATH& 153*	Calculus III	5
MATH 154*	Calculus IV	3
MATH 220	Linear Algebra	5
PHYS& 221*	Engr Physics I w/Lab	5
PHYS& 222*	Engr Physics II w/Lab	5
PHYS& 223*	Engr Physics III w/Lab	5

Remaining credits: 27 credits - These remaining credits must include program advisor approved credits and should be based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.

Recommended courses:

ASTR& 101	Intro to Astronomy	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
CHEM& 261*	Organic Chemistry w/Lab I	5
CHEM& 262*	Organic Chemistry w/Lab II	5
CS 170	Fundamentals of Computer Prog	5
MATH 240	Differential Equations	5

TOTAL MINIMUM CREDITS 90

Political Science

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

The study of political science concentrates on the philosophy, structure and function of government. Career opportunities exist in law, private business, public administration, nonprofit organizations and teaching. Complete studies to transfer to earn a bachelor's degree.

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

The credits must include the following:

Communications	credits
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

Intermediate algebra is a prerequisite – BUS 206, ENGR& 214 OR ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223	5
---	---

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed	15
--	----

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	15
---	----

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement	15
---	----

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

POLS& 101	Intro to Political Science	5
POLS 107	Comparative Government	5
POLS& 202	American Government	5
POLS& 203	International Relations	5
POLS 220	The Law and Social Issues	5

TOTAL MINIMUM CREDITS 90

Psychology

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

Work as a guidance counselor, clinical psychologist, social worker or educator after earning your bachelor's degree. Psychology courses also supplement majors in health sciences, social sciences, business and law. Degree Requirements

To earn an Associate in Arts-Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5

Quantitative/Symbolic Reasoning Skills

Intermediate algebra is a prerequisite – BUS 206, ENGR& 214, ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223

5

Humanities

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed

15

Social Sciences

Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline

15

Natural Sciences

Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement

15

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV

5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List

25

Recommended Elective Course List:

ANTH& 206	Cultural Anthropology	5
PSYC& 100	General Psychology	5
PSYC& 200	Lifespan Psychology	5
PSYC 204	Applied Psychology	5
PSYC 214	Psychology of Adjustment	5
PSYC& 220	Abnormal Psychology	5
SOC& 101	Intro to Sociology	5

TOTAL MINIMUM CREDITS 90



Sociology

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

Study the origin, development, organization and functioning of human society as you prepare for a career in social work, public opinion research, public relations, guidance counseling, education, personnel relations or community planning. Complete a two-year degree or studies to transfer to earn a bachelor's degree.

DEGREE REQUIREMENTS

To earn an Associate in Arts Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
Intermediate algebra is a prerequisite — BUS 206, ENGR& 214 OR ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	15
Natural Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement	15
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 — Introduction to Sociology:DIV	5
Electives	
See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List	25

Recommended Elective Course List:

ART 207	Arts of the World:DIV	5
PSYC& 100	General Psychology	5
SOC 210	Human Sexuality:CPSTN	5
SOC 225	Race and Ethnicity:DIV	5
SPCH 104	Interpersonal Communication	5
TOTAL MINIMUM CREDITS		90

Speech

■ ASSOCIATE IN ARTS – DIRECT TRANSFER AGREEMENT

The speech program provides general education courses that assist students in improving communication skills and their understanding of communication. Credit and advanced skills may also be earned by participating in LCC's Program for intercollegiate debate competition.

DEGREE REQUIREMENTS

To earn an Associate in Arts - Direct Transfer Agreement degree, you must complete a minimum of 90 transferable credits in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 102 Composition II	5
SPCH 110 Intro to Public Speaking or	
SPCH 114 Small Group Communication	5
Quantitative/Symbolic Reasoning Skills	
Intermediate algebra is a prerequisite — BUS 206, ENGR& 214 OR ENGR& 215, MATH& 107 or higher (excluding MATH& 131), or PHYS& 114, 115, 116, 221, 222, or 223	5
Humanities	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed	15
Social Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees. No more than 10 credits from any one discipline	15
Natural Sciences	
Selected from at least three disciplines on the distribution list for transfer degrees including 5 credits of lab courses. At least 10 credits must be in physical, biological, and/or earth sciences. No more than 10 credits from any one discipline and no more than 5 credits from Math and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement	15
Diversity	
From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPCH 109 — Intercultural Communication:DIV	5

Electives

See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List 25

Recommended Elective Course List:

ENGL 231	Creative Writing	5
PSYC& 100	Intro to Psychology	5
SPCH 104	Interpersonal Communication	5
SPCH 109	Intercultural Communication:DIV	5
SPCH 136, 137, 138, 236, 237, 238	Intercollegiate Debate	2 ea.
If not used for Communication requirement:		
SPCH 110	Intro to Public Speaking or	5
SPCH 114	Small Group Communication	5
TOTAL MINIMUM CREDITS		90

Technology

■ ASSOCIATE IN TECHNOLOGY – DIRECT TRANSFER AGREEMENT/MAJOR RELATED PROGRAM

This program is applicable to students planning to prepare for industrial/mechanical technologies and mechanical/electrical/computer engineering technology majors at Central Washington University (CWU), Eastern Washington University (EWU) and Western Washington University (WWU). The various technology options are manufacturing, electronics, design and construction, and technology education. This is a non-ABET program leading to a BS in Technology.

DEGREE REQUIREMENTS

To earn an Associate in Technology DTA/MRP degree, you must complete a minimum of 91 transferable credits with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area. The credits must include the following:

Communications	<u>credits</u>
ENGL& 101 English Composition I	5
ENGL& 235 Technical Writing	5

Quantitative/Symbolic Reasoning Skills

MATH 150 Pre-Calculus	5
MATH 215 Discrete Structures	5

Humanities

SPCH 110 Introduction to Public Speaking *and* 10 credits selected from the Humanities distribution list for transfer degrees. At least one class must be in a field other than speech and no more than 5 credits may be in a world language. No more than 5 credits in performance/skills class 15

Social Sciences

Selected from at least two disciplines from the distribution list for transfer degrees, no more than 10 credits in a single discipline 15

Natural Sciences

PHYS& 114*	General Physics I w/Lab	5
CHEM& 161	General Chemistry with Lab	5
CS 170	Fundamentals of Computer Programming	5

Technology

ENGR& 121*	Engineering Graphics I	3
ENGR& 122*	Engineering Graphics II	3

Diversity

from the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SOC& 101 – Introduction to Sociology:DIV 5

Electives

Select courses appropriate for intended major and intended bachelor's institutions. A maximum of 10 credits may be in college-level courses as defined by the community college and the remainder shall be fully transferable as defined by the receiving institution 20

Recommended Elective Courses

PHYS& 115*	General Physics II w/Lab	5
PHYS& 116*	General Physics III w/Lab	5
TOTAL MINIMUM CREDITS		91



Welding

■ ASSOCIATE IN APPLIED SCIENCE

Prepare for the state commercial welding examination or qualify for welding jobs in manufacturing, maintenance, or instruction through LCC's welding program.

DEGREE REQUIREMENTS

To earn an Associate in Applied Science - Welding degree, you must complete a minimum of 94 credits with a cumulative grade point average (GPA) of at least 2.0 in the program requirements. The credits must include the following:

Communications		<u>credits</u>
ENGL 110	Industrial Communications (recommended)	5
Health		
HLTH 100	Occupational Safety and Health	3
Quantitative Skills		
MATH 106	Industrial Mathematics recommended	5
Human Relations/Social Sciences		
BUS 144	Management of Human Relations:DIV recommended	5
Humanities/Natural Sciences		
MFG 130	Materials Science <i>or</i>	
TECH 100	Advanced Principles of Technology	5

Diversity

From the Diversity course list. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: BUS 144 Management of Human Relations:DIV

PROGRAM REQUIREMENTS

BLPT 160	Blueprint Reading for Welders	5
CS 110	Intro to Microcomputer Applications	3
WELD 151	Intro to Oxy-Acetylene	6
WELD 152	Intro to Arc Welding	10
WELD 158	Welding Theory & Fabrication	5
WELD 221	Wire Machine	10
WELD 222	Advanced Wire Machine	6
WELD 254	Arc Welding	10
WELD 255	Advanced Welding Processes	6
WELD 256	Advanced Welding Application	10
WELD 070/075	Welding Certification	
TOTAL CREDITS		94

■ CERTIFICATE OF PROFICIENCY

The welding certificate program helps prepare the student for employment in manufacturing or maintenance.

CERTIFICATE REQUIREMENTS

To earn a Welding Certificate of Proficiency, you must complete a minimum of 57 credits. The credits must include the following:

Communications		<u>credits</u>
ENGL 110	Industrial Communications	5
Health		
HLTH 100	Occupational Safety and Health	3
Quantitative Skills		
MATH 106	Industrial Mathematics	5
Human Relations, Social Sciences		
BUS 144	Management of Human Relations:DIV	5
PROGRAM REQUIREMENTS		
BLPT 160	Blueprint Reading for Welders	5
CS 110	Intro to Microcomputer Applications	3
WELD 151	Intro to Oxy-Acetylene	6
WELD 152	Intro to Arc Welding	10
WELD 158	Welding Theory & Fabrication	5
WELD 221	Wire Machine	10
TOTAL CREDITS		57



COURSE DESCRIPTIONS

From accounting to welding, LCC offers a wide range of classes to help students achieve professional success and personal enrichment. The college may add classes for new programs or to update current programs during the year. Visit our web site at lowercolumbia.edu or check the quarterly class schedule publication for the most up-to-date course offerings.



Symbols used in course description

Symbol Definition

H	Course meets distribution credit in Humanities.
HA	Course meets distribution credit in Humanities only for AAS and AAS-T degrees.
SS	Course meets distribution credit in Social Science.
SSA	Course meets distribution credit in Social Science only for AAS and AAS-T degrees.
NS	Course meets distribution credit in Natural Sciences.
NSA	Course meets distribution credit in Natural Sciences only for AAS and AAS-T degrees.
NSL	**Course meets distribution credits in Natural Sciences as a lab course.
P	*Course meets distribution credits as a performance based course.
&	Course is part of the Washington Community Colleges' Common Course Numbering system.
F	Course usually offered Fall Quarter.
W	Course usually offered Winter Quarter.
Sp	Course usually offered Spring Quarter.
S	Course usually offered Summer Quarter.

Adult Basic Education (ABE)

ABE 010 F,W,Sp,S 1-20 credits **Beginning ABE Literacy Reading-Level 1**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

ABE 011 F,W,Sp,S 1-20 credits **Beginning ABE Literacy Writing-Level 1**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE writing course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

ABE 012 F,W,Sp,S 1-20 credits **Beginning ABE Literacy Math-Level 1**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE integrated math course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

ABE 013 F,W,Sp,S 1-20 credits **Beginning ABE Literacy Reading & Writing Level 1**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE integrated reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

**ABE 014 F,W,Sp,S 1-20 credits
Beginning ABE Literacy Integrated-Level 1**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

**ABE 015 F,W,Sp,S 1-20 credits
Beginning ABE Literacy Computer Technology & Job Readiness-1**

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE and survival ESL technology and job readiness course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

**ABE 016 F,W,Sp,S 1-20 credits
Beginning ABE Literacy-Spanish Integrated-Level 1**

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social, and workplace environments in a Beginning Literacy Level ABE integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

**ABE 020 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Reading-Level 2**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Basic Education reading course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 021 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Writing-Level 2**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in a Beginning Basic Education writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 022 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Math-Level 2**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Beginning Basic Education math course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 023 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Reading & Writing-Level 2**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Beginning Basic Education integrated reading and writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 024 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Integrated-Level 2**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Beginning Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 025 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education Computer Technology & Job Readiness-2**

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a Beginning Basic Education Level 2 technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 026 F,W,Sp,S 1-20 credits
ABE Beginning Basic Education-Spanish Integrated-Level 2**

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social and workplace environments in an ABE Beginning Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 201 to 210, or instructor permission.

**ABE 030 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Reading-Level 3**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Intermediate Basic Education reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 211 to 220, or instructor permission.

**ABE 031 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Writing-Level 3**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Intermediate Basic Education writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

**ABE 032 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Math-Level 3**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Intermediate Basic Education math course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 033 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Reading & Writing-Level 3

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Intermediate Basic Education integrated reading and writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 034 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Integrated-Level 3

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Intermediate Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 035 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Computer Technology & Job Readiness-3

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a Low Intermediate Basic Education Level 3 ABE technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 036 F,W,Sp,S 1-20 credits
ABE Low Intermediate Basic Education Spanish Integrated-Level 3

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social and workplace environments in an ABE Low Intermediate Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 040 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Reading-Level 4

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 041 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Writing-Level 4

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 042 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Math-Level 4

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education math course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 043 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Reading & Writing-Level 4

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education integrated reading and writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 044 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Integrated-Level 4

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 045 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education Computer Technology & Job Readiness-4

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a High Intermediate Basic Education Level 4 ABE technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 046 F,W,Sp,S 1-20 credits
ABE High Intermediate Basic Education-Spanish Integrated-Level 4

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social, and workplace environments in an ABE High Intermediate Basic Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 050 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Reading-Level 5

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Adult Secondary Education reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 051 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Writing-
Level 5**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Adult Secondary Education writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 052 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Math-Level 5**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Adult Secondary Education math course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 053 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Reading &
Writing-Level 5**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Adult Secondary Education integrated reading and writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 054 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Integrated-
Level 5**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE Low Adult Secondary Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 055 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Computer Technology
& Job Readiness-5**

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a Low Adult Secondary Education Level 5 ABE technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 056 F,W,Sp,S 1-20 credits
ABE Low Adult Secondary Education Spanish
Integrated-Level 5**

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social and workplace environments in an ABE Low Adult Secondary Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 236 to 245, or instructor permission.

**ABE 060 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Reading-
Level 6**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 246 to 255, or instructor permission.

**ABE 061 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Writing-
Level 6**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

**ABE 062 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Math-Level
6**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education math course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

**ABE 063 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Reading &
Writing-Level 6**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education integrated reading and writing course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

**ABE 064 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education
Integrated-Level 6**

Strengthen basic academic skills in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

**ABE 065 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Computer
Technology & Job Readiness-6**

Strengthen English communication skills in order to enhance their personal, social, and workplace environments in a High Adult Secondary Education Level 6 ABE technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

ABE 066 F,W,Sp,S 1-20 credits
ABE High Adult Secondary Education Spanish Integrated-Level 6

Strengthen basic academic skills for native Spanish speakers in order to enhance their personal, social, and workplace environments in an ABE High Adult Secondary Education integrated course (integrating reading, writing, math, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS Appraisal score of 246 to 255, or instructor permission.

ABE 070 F,W,Sp,S 1-20 credits
Educational Interview-ABE

Develop and monitor a personal plan of action to reach personal, educational, and workplace goals through an orientation to the college community and the Transitional Studies program, resources, and services.

ABE 071 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 1

A Beginning Literacy Level ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language Skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

ABE 072 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 2

A Beginning Basic Education ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language Skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 201 to 210, or instructor permission.

ABE 073 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 3

A Low Intermediate Basic Education ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 211 to 220, or instructor permission.

ABE 074 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 4

A High Intermediate Basic Education ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 221 to 235, or instructor permission.

ABE 075 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 5

A Low Adult Secondary Education ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 236 to 245, or instructor permission.

ABE 076 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 6

A High Adult Secondary Education ABE course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 246 to 255, or instructor permission.

Accounting (ACCT)

ACCT 101 F,W,Sp 5 credits
Introduction to Accounting Concepts

Provides students with an introduction to the field of accounting. Topics include the accounting cycle, accounting for and presentation of assets, liabilities, and owner's equity.

Prerequisite: MATH 078/079 or TECH 078/079 or higher with a grade of C or better.

ACCT 150 Sp 5 credits
Payroll Accounting and Business Tax Reporting

Gives students experience in payroll accounting and business tax reporting. Topics include: payroll processing, payroll tax return preparation, and preparation of excise tax returns.

Prerequisite: MATH 088/089 or TECH 088/089 and ACCT 101 or instructor permission.

ACCT& 201 F,W 5 credits
Principles of Accounting I

Includes an introductory study of financial accounting and accounting theory. Includes an in-depth study of the accounting cycle for service organizations, provides an introduction to merchandising transactions, cash, marketable securities, receivables, and inventory.

Prerequisite: MATH 088/089 or TECH 088/089. No previous accounting courses are required.

ACCT& 202 W,Sp 5 credits
Principles of Accounting II

Studies the components of a simple corporate balance sheet including application to transactions in areas such as current liabilities, long-term assets, bonds, and stocks. Also introduces the statement of cash flows and financial statement analysis. Financial accounting theory is discussed and applied throughout the course.

Prerequisite: ACCT& 201 with a grade of C or better.

ACCT& 203 Sp 5 credits
Principles of Accounting III

Emphasis on accounting information as a planning and analysis tool to support management decision-making. Topics include manufacturing costs, job order costing, budgeting, break-even and cost-volume-profit analysis, relevant costs, capital investment decisions, and performance measurement.

Prerequisite: ACCT& 202 with a grade of C or better and basic spreadsheet skills.

ACCT 241 F 4 credits
Intro To Quickbooks

Provides students experience with a multi-function electronic accounting system. Students will learn to enter business transactions in the general ledger and subsidiary accounts such as payroll, accounts receivable, accounts payable, inventory, and fixed assets. Students will solve common accounting problems associated with the electronic accounting process.

Prerequisite: ACCT 101 or ACCT& 201 and CS 110 or CS 111 or instructor permission.

ACCT 244 F 5 credits
Individual Income Taxation

Explores the fundamental concepts of federal income taxation as it relates to individuals with some attention to sole proprietorships. Topics include federal tax structure, income inclusions and exclusions, deductions, and credits. The course also includes practice in preparing individual returns and related schedules.

Prerequisite: MATH 078/079 or TECH 078/079.

ACCT 260 W 5 credits
Certified Bookkeeper Prep

Designed to prepare students for the national Certified Bookkeeper examination. Topics include adjusting entries, correction of accounting errors, basic book and tax depreciation, payroll, inventory, and internal controls.

Prerequisite: ACCT& 202 with a C or better or instructor permission.

Allied Health (AH)**AH 094 2 credits**
Fundamentals of Caregiving

Focuses on the role of the caregiver in providing care to individuals residing in the home, adult family home, assisted living facility and in licensed boarding homes. Utilizes DSHS curriculum on client and caregiver rights, community resources, personal care, prevention of injury and infection, nutrition, assisting with medications, mobility needs, requirements for nurse delegation and observation and recording, and medical and physical conditions.

AH 095 1 credit
Modified Fundamentals of Caregiving

Focuses on the role of the caregiver in providing care to individuals residing in the home, adult family home, assisted living facility and in licensed boarding homes. Utilizes DSHS curriculum on client and caregiver rights, resources for the caregiver, prevention of infection, nutrition, assisting with medications, requirements for nurse delegation and observation and recording.

AH 096 1 credit
Nurse Delegation Training for Caregivers

Focuses on the role of the caregiver in providing care to individuals residing in the home, adult family home, assisted living facility and in licensed boarding homes. Utilizes DSHS curriculum providing an in-depth understanding of the nurse delegation law, basic medical knowledge of body systems and selected nursing tasks that may be delegated by a Registered Nurse.

AH 100 F,Sp 1 credit
Blood Borne Pathogens and Infection Control

Examines blood borne illnesses: etiology, epidemiology, clinical manifestations, treatment, transmission, testing, infection control, legal, ethical, psychosocial and counseling issues. Fulfills Washington State Department of Licensing requirement for license renewal for persons governed by Chapter 18.130.RCW.(GE).

AH 104 F,W,Sp,S 2 credits
Healthcare Foundations

Provides introductory foundational skills for health care careers. Explores health care career opportunities, the history of health care, the structure and function of health care systems, as well as foundational legal, ethical, regulatory and safety issues in health care.

Concurrent requirement: For nursing students, must be taken concurrently with or before NURS 101.

AH 112 F,Sp 1 credit
Body Structure, Function and Terminology I

Basic anatomy and function is discussed with an introduction to using the correct basic medical terminology. Common medical terms for body systems, structure and function will be discussed.

Prerequisite: High School Diploma or GED certificate. Appropriate scores in the entry test. Meet the requirements for LCC students assigned to health care agencies which include: request the forms from Nursing/Allied Health, background check, drug screen, and current immunizations and TB records. Any exceptions to the admission requirements must be approved by the program director or dean.

AH 114 F,W,Sp,S 2 credits
Healthcare Communication Skills

Provides introductory content on the communication process in health care settings. Introduces principles of communication, therapeutic communication skills, barriers to effective communication, and principles of verbal and written reporting in health care. Explores communication with clients who have complex needs, conflict resolution, team work, health care informatics, and cultural competency in health care. Techniques for acquiring employment will be discussed, and internet websites will be evaluated for credibility.

AH 230 F,W,Sp 1 credit
Management Issues in Health Care

Explores leadership, management, legal, ethical, and research issues essential to nursing practice.
Prerequisite: Concurrent enrollment in NURS 201

Anthropology (ANTH)

ANTH 109 S 5 credits
American Cultural Diversity: DIV SS

Examines the cultures of the United States from the perspectives of ethnicity, race, gender and class. Special emphasis is placed upon anthropological methods and approaches to enhance student's understanding of contemporary socio-cultural variables in peoples' lives. Meets the Diversity requirement.

ANTH& 205 F,S 5 credits
Biological Anthropology NS

Examines the essential facts of human biological evolution by providing a thorough understanding of the concept of evolution and applying it to the particular details of the evolution of human populations and the fossil record. Attention will also be given to the methodology of contemporary research and its application to the study of primate and human evolution.

ANTH& 206 W 5 credits
Cultural Anthropology: DIV SS

Examines the impact that the concept of culture has upon the anthropological understanding of humanity. Attention will be given to a thorough understanding of the concept of culture as a source of human diversity and its relationship to historical, economic, political, social, linguistic and religious development. Meets the Diversity requirement.

Art (ART)

ART& 100 F,W,Sp,S 5 credits
Art Appreciation: DIV H

Introduces basic art vocabulary and concepts, and provides a basis for understanding and appreciating art from a variety of cultures and time periods through visual presentations, demonstrations, discussions, and field trips. Meets the Diversity requirement.

ART 101 F,W,Sp,S 3 credits
Beginning Drawing H, P

Introduces basic drawing techniques with a variety of media. Hands-on experience in the effective use of composition, line, shape, surface quality, and perspective. Intended for the beginning student. Focuses on learning to draw what is actually seen, i.e. drawing from the "right" brain.

ART 102 F,W,Sp,S 3 credits
Intermediate Drawing H, P

Continues the skills and concepts from ART 101 and applies them to a broader range of media and subject matter. Part of the term is devoted to introductory figure drawing working from a model.

Prerequisite: ART 101 or instructor permission.

ART 103 F,W,Sp 3 credits
Advanced Drawing H, P

Expands on the experiences from ART 101 and 102 and adds more in-depth understanding of the materials and concepts in visual communication. This is a project oriented class.

Prerequisite: ART 102 or instructor permission.

ART 106 F,W,Sp,S 5 credits
Basic Design H, P

Introduces the theory and fundamentals of visual organization through the explanation of black and white media.

ART 107 F,W,Sp,S 5 credits
Basic Design I H, P

Introduces the theory and application of color to specific two-dimensional and three-dimensional design problems.

ART 108 Sp 3 credits
Basic Design II H, P

Introduces three-dimensional form and space with emphasis on materials, spatial composition, and fabrication.

ART 111 F,W,Sp,S 3 credits
Beginning Painting H, P

Introduces the use of oil and acrylic painting media and the study of traditional and contemporary painting concepts and techniques.

ART 112 F,W,Sp,S 3 credits
Intermediate Painting H, P

Presents more in-depth exploration of painting materials, techniques, and subject matter.

Prerequisite: ART 111 or instructor permission.

ART 113 F,W,Sp,S 3 credits
Advance Painting H, P

Offers advanced painting theory and practice and the development of individual expression in subject matter and composition.

Prerequisite: ART 112 or instructor permission.

ART 130 W 4 credits
Introduction to Graphic Design H, P

Provides an overview and introduction to pre-press electronic publishing using pagination software covering page layout design principles, font use, copy fitting and color as they relate to both printed products and web work. Includes file management, copyright and ethical issues related to the publishing industry.

Prerequisite: Basic computing skills using the Windows O/S recommended.

ART 151 F,W,Sp 2 credits
Beginning Photography: Digital & Analog H, P

ART 151 is the entry level photography course for both digital and analog photography which introduces students to the fundamentals of camera/lens operation, using exposure and creative controls, composition, editing, and presentation, as well as exposure to the history and to great works of photography. This must be taken concurrently with ART 151A - Digital Lab, or with ART 151B - Traditional b/w darkroom lab. Students are required to provide their own digital or film camera with adjustable focusing, exposure, aperture, and shutter controls.

Prerequisite: Concurrent enrollment in ART 151A or ART 151B or instructor permission.

ART 151A F,W,Sp 3 credits
Beginning Digital Photography Lab H, P

ART 151A is an entry level digital photography lab course to be taken concurrently with ART 151 - Beginning Photography (lecture) class. Introduces students to the digital lab, where they will develop a digital workflow using Photoshop software tools on images that they have shot digitally, to correct and/or enhance them, and to create custom fine art digital prints as output for presentation in their portfolio.

Prerequisite: Concurrent enrollment in ART 151 or instructor permission.

ART 151B F,W,Sp 3 credits
Beginning Analog Photography Lab H, P

ART 151B is an entry level analog photography lab course to be taken concurrently with Art 151 - Beginning Photography (lecture) class. Introduces students to the traditional black and white darkroom lab, chemicals, and equipment, where they will learn to process their own b/w film and make custom b/w photographic prints. They will prepare their prints for presentation to develop an expressive portfolio of their work.

Prerequisite: Concurrent enrollment in ART 151 or instructor permission.

ART 152A W 3 credits
Intermediate Black & White Photography - Studio H, P

Further explores camera vision and pushes the limit of camera controls to create photographic images with digital or film cameras. Students will explore adjusting ISO/film speeds for advanced exposure control, and will gain more understanding and control over lighting. Focused on studio photography, students will also refine camera and digital lab or darkroom printing skills as they relate to photography. Students also participate in photo critiques.

Prerequisite: ART 151 or instructor permission.

ART 152B Sp 3 credits
Intermediate Back and White Photography Documentary Photography H, P

Provides both digital and analog students, who have completed ART 151, the opportunity to further advance their camera, printing and editing/critiquing skills. Learn how to utilize ISO adjustments with both digital and film cameras to maximize exposure control and use flash as it relates to different applications on location in order to visually document people and events. Learn how to create effective layouts for series and photo essays. Learn about the ethics and legal aspects related to photography.

Prerequisite: ART 151 or instructor permission.

ART 153 Sp 3 credits
Advanced Photography: Digital & Analog H, P

Provides students with a continuation of photographic exploration, with an emphasis on fine art applications, some of which may blend both traditional and new technologies. Students will continue to fine tune their technical skills as well as develop their own visual style.

Prerequisite: ART 152A or ART 152B or instructor permission.

ART 162 F,W,Sp 3 credits
Photoshop for Web & Print

Introduces Adobe Photoshop basic skills including palettes, tools, layers, masks, image correction and manipulation. Emphasizes skill building applicable to photography, web design, and graphic design essentials. Basic computer skills required.

ART 206 F 5 credits
Arts of the Americas: DIV H

A comparative investigation into the development of artistic themes and styles within the cultures of North, Central, and South America past and present. Study will include an exploration into the migration and settlement of indigenous peoples of the Americas as represented by their art forms, the impact of European colonization on art and culture, and a look at cultural and historical interpretations addressed by contemporary artists. Meets the Diversity requirement.

ART 207 W 5 credits
Arts of the World: DIV H

A comparative investigation into the development of artistic themes and styles in Asia, Africa, and Oceania past and present. Study will include an exploration into the components of society, the development of belief systems, and the formation of world views as represented by art and architecture. In addition, emphasis will be placed on cultural and historical interpretations that inform the ideology and art of contemporary artists in terms of contemporary cultural identities and the challenges they pose. Meets the Diversity requirement.

ART 208 Sp 5 credits
Arts of the Pacific Northwest: DIV H

A comparative investigation into the development of artistic themes and styles within the cultures of the Pacific Northwest past and present. Study will include an exploration into the migration and settlement of indigenous peoples of the Pacific Northwest as represented by their art forms, the impact of European colonization on art and culture, and a look at cultural and historical interpretations addressed by contemporary artists. Meets the Diversity requirement.

ART 226 F 5 credits
History of Western Art H

History of Western Art is an investigation into the development of art from before history through the Roman Empire, approximately 35,000 BCE to 500 CE. This study includes a conceptual look at the emergence of the creative spark and why art and architecture exists. A comprehensive look at art from the prehistoric natural world, through the emergence of civilization and social organization in ancient cultures, to the glory of Greece and Rome, art continues to interpret culture and to shape contemporary lives.

ART 227 W 5 credits
History of Western Art H

History of Western Art is an investigation into the development of art from early medieval through Renaissance Europe, approximately 500 CE to 1600 CE. This study includes a comprehensive look at art and architecture as it reflects changing world views as art continues to interpret culture and to shape contemporary lives.

ART 228 Sp 5 credits
History of Western Art: DIV H

Investigates the development of art from 17th century Europe, through its introduction to America, and into 21st Century Europe and the United States. This study includes a critical evaluation of interpretations by artists through their art to address issues of difference, power, and discrimination. Art continues to reflect culture and to shape contemporary lives. Meets the Diversity requirement.

ART 241 F,W,Sp,S 3 credits
Beginning Ceramic Art, Pottery H, P

Introduces the study of ceramic materials and techniques including hand construction and wheel throwing.

ART 242 F,W,Sp,S 3 credits
Intermediate Ceramic Art, Pottery H, P

Involves more advanced techniques of hand construction and wheel throwing. Beginning glaze formation and kiln-firing processes are included.

Prerequisite: ART 241 with a grade of C or better.

ART 243 F,W,Sp,S 3 credits
Advanced Ceramic Art, Pottery H, P

Continues wheel and hand forming techniques with emphasis on aesthetics, including decoration and glazing.

Prerequisite: ART 242 with a grade of C or better.

ART 290 F,W,Sp,S 1-3 credits
Art Studio Lab-Ceramics

Provides lab opportunity in ceramics for students who have completed ART 241, 242, 243.

Prerequisite: Instructor permission

ART 295 F,W,Sp 1-3 credits
Art Studio Lab-Photography

Provides lab opportunity in photography for students who have completed ART 153. Students will develop a description/contract of what they would like to focus their study on.

Prerequisite: ART 153 or instructor permission.

Astronomy (ASTR)

ASTR& 101 W,Sp 5 credits
Introduction to Astronomy NSL

Provides for student investigation of information gathered on distant objects by telescope, spectrometer, radio, satellites, and other instruments. Students pursue both the knowledge and processes for acquiring knowledge of the moon, sun, planets, comets, and meteors of the solar system, distant stars, nebulae, clusters, and galaxies, and their theoretical evolution.

Automotive Technology (AMTC)

AMTC 100 W 5 credits
Essential of Mechanics

Develops beginning mechanical skills and knowledge essential to successful completion of the automotive and/or diesel technology program. Includes shop safety, fasteners, measurements, cutting tools, lifting, tool usage, shop orientation, manuals (including computer retrieval systems), bearings and seals, and special emphasis on preventative/predictive maintenance. This is an introductory course for beginning students of Automotive or Diesel Technology. Course can be waived if student has completed principles of technology and auto program in high school.

AMTC 101 F 5 credits
Electrical Systems I

Covers the theory of electricity from fundamentals through solid state and electrical safety. Includes solving and proving Ohm's Law, in series, parallel, and series-parallel circuits. Automotive wiring and circuits are included, as well as how to read wiring diagrams and use them to effectively diagnose an electrical malfunction, circuit tracing and wiring repair techniques.

AMTC 102 F 10 credits
Electrical Systems II

Presents brief review of the theory of electricity. Covers theory, diagnosis and repair of low voltage systems (12V), including batteries, starting systems, charging systems, instrumentation and warning devices, lighting systems, power accessories, (e.g. power windows, power seats), and computer operation and circuit analysis. Also covered are high voltage energy, distributorless, and breaker point ignition systems.

Prerequisite: AMTC 101 or instructor permission.

AMTC 104 Sp 6 credits
Vehicle Climate Control

Studies the theory of operation, design, diagnosis and repair of both manual and automatic heating/air conditioning systems used in automobiles and truck/heavy equipment applications. This is a second year course.

AMTC 111 W 5 credits
Hydraulic Brakes

Covers the theory of hydraulics, fundamentals of manual, power, drum, and disc brake systems. This is a first-year course and may be waived with the instructor permission.

AMTC 112 W 3 credits
Antilock Brakes and Traction Control

Presents brief review of hydraulic brakes giving complete coverage of theory, diagnosis, and how to repair antilock brakes and traction control systems. This will include scan tool diagnosis as well as functional and visual tests.

Prerequisite: AMTC 111 or instructor permission.

AMTC 121 Sp 5 credits
Gas Engines I

Provides an introductory course for the student with little or no experience with gasoline engines. Covers theory of operation, performance factors, and routine diagnosis and maintenance of spark ignition engines. This is a core course in the AMTC program and the first part of a two-part sequence in gasoline engine repair. Course can be waived with instructor permission based on experience or successful completion of high school automotive program.

AMTC 122 Sp 1-10 credits
Gas Engines II

Covers all facets of the internal gasoline engine. Includes theory of operation, removing, inspecting, cleaning, measuring, machining, reassembling, reinstalling, and testing. The student will completely rebuild a gasoline engine.

Prerequisite: AMTC 121 or instructor permission.

AMTC 201 W 10 credits
Fuels and Emissions

Provides a study in the theory of operation, diagnosis and repair of carburetors, gasoline fuel injection, fuel storage systems and fuel delivery systems. Air pollution from the automobile will be studied as well as the systems used to control the pollutants.

Prerequisite: AMTC 101 and AMTC 102 or instructor permission.

AMTC 202 Sp 10 credits
Automotive Computer Systems

Presents theory of operation, diagnosis and repair techniques of components controlled by the automotive computer control system.

Prerequisite: AMTC 101,102, and 201 or instructor permission.

AMTC 215 W 8 credits
Suspension and Alignment

Prepares the student to perform all aspects of automotive type suspension and alignment work, including powered and non-powered steering systems, inspection, diagnosis, adjustment, and repair of front and rear suspension systems, and related components such as tires and wheels. Use of four-wheel alignment equipment is an integral part of this course.

AMTC 216 F 8 credits
Automatic Transmission

Studies hydraulic principle of pressure and force multiplication, operation, diagnosis and repair of automotive automatic transmissions and transaxles.

AMTC 217 F 6 credits
Powertrains

Studies the theory of operation, diagnosis and repair of clutches, manual transmission/transaxles, drivelines, drive axles and transfer cases. Covers all of the mechanical components used to transfer power from the engine to the drive wheels - both 2 and 4 wheel drive. Automatic transmissions are not covered in this course.

Biology (BIOL)**BIOL& 100 5 credits****Survey of Biology F,W,Sp NSL**

Examines major concepts in biology – The science of life – and the nature of science itself and includes survey of fundamental life processes by which organisms live, grow, reproduce, and interact with their environment. This course is recommended for students interested in a brief overview of biology. Laboratory is included.

BIOL 109 5 credits
Energy and Life: Biological Sciences NSL

Explores energy and life on earth through the study of biodiversity, metabolism, cell structure, genetics, evolution, and ecosystems. Students will gain an understanding of the natural world, science as a field of study, and develop skills to apply and teach scientific principles in everyday life. Intended for elementary education and early childhood education majors. Part of a three quarter sequence; students are not required to take entire sequence. Includes lab.

**BIOL 130 Sp 5 credits
Plants of the Pacific Northwest NSL**

Introduces biological diversity of the major ecosystems of the Pacific Northwest (e.g. forest, riparian, wetland, estuary, and marine intertidal). Surveys common organisms of these ecosystems and students will learn fundamental biological principles as they relate to biodiversity (e.g. ecology, evolution, genetics) and the importance to human well-being, as well as the intrinsic value of biodiversity at three levels: genetic, species, and ecosystems. Students will learn methods in the lab and field for surveying, identifying, and measuring biodiversity. Students will complete original research on a group and/or ecosystem of their choice. Class will meet often outdoors and three day-long field trip(s) are required.

Prerequisite: ENGL& 101, MATH 089, or instructor permission.

**BIOL 150 W 5 credits
Human Genetics and Society: DIV NSL**

This course is designed to introduce the student to the discipline of Human Genetics by interweaving classical genetics concepts with major genetic “issues” including genetic diversity, the human genome, biotechnology, and genetic disorders. Following completion of the course, students will have the tools to make informed decisions regarding the impact of genetic advances on society as well as their own personal lives. Laboratory includes the use of activities, specimens, and biotechnology equipment to further expand on DNA structure and identification along with further problem solving. Meets the Diversity requirement.

**BIOL& 160 F,W,Sp,S 5 credits
General Biology W/Lab NSL**

Provides an introduction to cell biology, including the chemistry of life, the structure, reproduction, and metabolism of cells, genetics, and evolutionary biology. Topics are similar to BIOL& 211 but are covered in less depth.

**BIOL& 170 5 credits
Human Biology NS**

Introduces students to such fundamental biological principles as the cell and metabolism, then progresses through tissues to human organ systems including respiratory, circulatory, digestive, reproductive, immune and others. Also surveyed are heredity and human ecology.

**BIOL& 211 F 5 credits
Majors Biology Cellular NSL**

Covers three major themes in biology: cellular, genetics, and evolution. Cell biology includes cell structure, organization, metabolism, and energetics. Genetics includes gene structure and function, molecular and chromosomal mechanisms of inheritance, and Mendelian and microbial patterns of inheritance. Evolution is a central theme in biology that ties together all other major themes. Laboratory is included.

Prerequisite: CHEM& 161 or CHEM& 121 or instructor permission.

**BIOL& 212 W 5 credits
Majors Biology Animal NSL**

Continues these series for science majors emphasizing the biological diversity and evolution of animals and comparing general principles of physiology, growth, development, and behavior across animal groups. Laboratory included.

Prerequisite: BIOL& 211 with 2.0 or better.

**BIOL& 213 Sp 5 credits
Majors Biology Plant NSL**

Continues these series for science majors emphasizing prokaryotes, fungi, algae, and plants including their diversity, anatomy and physiology; includes general evolutionary theory, including population genetics, and ecological principles. Laboratory included.

Prerequisite: BIOL& 212 with 2.0 or better.

**BIOL& 241 F,W,Sp, 6 credits
Human Anatomy and Physiology 1 NSL**

Provides a study of structure and function of the human body. Units of study include the cell, tissues, skeletal system, articulations, muscular system, and nervous system. This is the first of a two-course sequence. This course may not be transferable unless the entire sequence is taken at LCC.

Prerequisite: BIOL& 160 or equivalent, with a grade of C or above, or instructor permission.

**BIOL& 242 W,Sp,S 6 credits
Human Anatomy and Physiology 2 NSL**

Continues the study of the structure and function of the human body. Units of study include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, reproductive systems, and fluid and electrolyte balance. Laboratory is included.

Prerequisite: BIOL& 241 with a C- or better, or instructor permission.

**BIOL& 260 F,Sp 5 credits
Microbiology NSL**

Studies the biology of microorganisms, including history, taxonomy, morphology, physiology and relationships to the physical and economic well being of humanity. Laboratory includes techniques for isolation, cultivation and identification of microbes.

Prerequisite: BIOL& 242, or BIOL& 211 with a grade of C- or better or instructor permission.

Blueprint (BLPT)

BLPT 150 W 5 credits
Machinists Blueprint Reading

Provides basic general information in reading and understanding plans and drawings that will be useful to vocational students. Focusing on line and symbol conventions used in industrial blueprints and visualization of solid objects from orthographic and isometric projections, the course leads to development of required skills for industrial design and problem solving. It also provides comprehensive information needed by persons in the machine trades for reading industrial blueprints and emphasizes specifications of materials, geometrical tolerancing, surface finishes, AWS welding symbols, and related foundry processes.

BLPT 160 Sp 5 credits
Blueprint Reading for Welders

Provides basic general information in reading and understanding plans and drawings that will be useful to students in the welding field, focusing on identifying basic lines, dimensions, structural shapes, welding symbols, and basic joints for welding fabrication and practical layout design.

Prerequisite: MATH 106 or higher or instructor permission.

Business Administration (BUS)

BUS 100 5 credits
Personal Finance

Introduces basic concepts necessary for students to develop skills and gain confidence in the successful management of their financial affairs. Topics include: goal setting, budgeting, controlling debt and expense, saving and investing, determining insurance needs, consumer strategies, and mitigating exposure to tax liabilities.

Prerequisite: MATH 079 or TECH 079 with a grade of C or better or instructor permission.

BUS& 101 F,W,Sp,S 5 credits
Introduction to Business SS

Surveys the business environment and many important elements of business including marketing, finance, accounting, computers, labor unions, small business management, economics, and the functions of management.

BUS 104 F,W,Sp 5 credits
Business Math Applications

Teaches the use of basic mathematical processes to solve business applications. Topics include percentages, simple interest, compound interest, annuities, markups and markdowns, payroll, trade and cash discounts, banking, and solving problems with equations and formulas.

Prerequisite: MATH 078/079 or TECH 078/079 with a grade of C or better or instructor permission.

BUS 118 W 5 credits
Ethics in Management

Surveys current business ethical issues and concerns and is presented using the case study method. Through interactions, students will gain an understanding of how ethical considerations become a part of business decisions. Emphasis will be placed on advertising, affirmative action, product liability, employee rights, management/supervisory interactions, and corporate morality.

BUS 119 F,W,Sp 5 credits
Business Communications

Emphasizes planning, organizing, and writing clear, concise business letters. Includes a review of grammar, punctuation, and word usage as applied to written business communication; experience in writing favorable messages. Students will present information orally and prepare a job resume and letter of application.

Prerequisite: ENGL 100 or TECH 105 with a C or better or placement test into ENGL& 101.

BUS 144 F,W,Sp,S 5 credits
Management of Human Relations: DIV SSA

Introduces and emphasizes the many aspects of human behavior as they affect individuals and groups in the workplace. Teaches human relations skills in the context of understanding human needs, perceptions and motivations, workforce diversity, teamwork, stress management, and interpersonal communications. Focus is on management of human relations factors within an organization and understanding the effects of discrimination, prejudice, and intolerance. Meets the Diversity requirement.

BUS 150 F,W,Sp,S 5 credits
Customer Service/Management: DIV

Introduces the philosophy of "service excellence" as it pertains to organizations in today's business environment. Emphasis on the effects of globalization, cultural diversity, and workforce diversity in organizations. Topics include developing interpersonal skills, interacting effectively with employees and customers, and establishing positive relationships with employees and customers with regard to their gender and culture. Students will learn to identify the challenges and advantages of a diverse workforce. Meets the Diversity requirement.

BUS 159 F,Sp 5 credits
Principles of Retailing

Surveys retailing principles and concepts and studies store management, merchandise management, pricing, customer services, advertising, and display.

BUS 165 W 5 credits
Salesmanship

Surveys multiple aspects of selling, including the importance of selling and salespeople in business and the rewards of a sales career. Topics include: buying behaviors, the ethical and legal issues in sales, the buying process, the approach, the presentation, demonstration of merchandise, handling of objectives, closing the sale, follow-up and effective sales management.

**BUS& 201 F,W,Sp 5 credits
Business Law SS**

Introduces sources of law, where to find the law, court structure, and the initiation of a civil law suit. Concentrates on the area of contracts with particular emphasis on the Uniform Commercial Code.

**BUS 206 F,W,Sp,S 5 credits
Statistical Methods NS**

Introduces the student to descriptive statistics, probability and inferential statistical methods. Topics include probability distributions, sampling techniques, measures of central tendency and dispersion, correlation, regression, hypothesis testing and statistical inference. Credit cannot be earned for both BUS 206 and MATH 210.

Prerequisite: MATH 098/099 or TECH 098/099 with a grade of C or better.

**BUS 240 F 5 credits
Principles of Supervision**

Analyzes basic functions of the supervisory-level management along with emphasis on skills needed to be an effective leader/manager of a diverse workforce. Emphasis will be on the differences between supervisors and upper management.

**BUS 244 W 5 credits
Human Resource Management**

Introduces the fundamental concepts of Human Resource Management, including hiring skills, long-term planning, employee laws, recruitment, staffing, training, compensation programs (both direct and indirect), collective bargaining, employee relations, safety training, health and EAPs (employee assistance programs).

Prerequisite: Concurrent enrollment in ENGL& 101 or equivalent test score.

**BUS 245 Sp 5 credits
Principles of Management**

Offers the student a history of management and its various theories. Covers the principles and application of planning, organizing, leading and controlling. Students also view management from the roles of supervisory, middle and top management.

**BUS 259 F 5 credits
Starting/Managing a Small Business**

Surveys the characteristics of small businesses, and includes the study of planning and organizing a new business, starting up a new business, producing products or services, marketing, planning, and control. (Formerly known as BSAD 111)

Prerequisite: ACCT 101, BUS& 101, and CS 121 with a grade of C- or better, or instructor permission.

**BUS 264 W 5 credits
Principles of Marketing**

Presents marketing functions and their roles in the economic process, emphasizing marketing systems, product planning, promotion, and sales.

Prerequisite: BUS& 101 or instructor permission.

**BUS 265 Sp 5 credits
Advertising**

Provides an overview of the related fields of sales and advertising. The course encompasses economics of selling and selling processes and studies field of advertising with emphasis on planning, implementing, and controlling the advertising process.

**BUS 294 F,W,Sp 2 credits
Career Success**

Provides preparation for pursuing a career in business, with a focus on self-assessment, job search, application process documents, and interviewing techniques. This course is intended for Business students in their second year. Students should enroll in this course during one of the last two quarters of their program.

Prerequisite: Program advisor permission.

Business Technology (BTEC)**BTEC 100 F,W,Sp,S 1-3 credits
Computer Keyboarding**

Introduces keyboarding using the computer and individualized instruction media. Provides instruction and practice on the alphabet, number, and symbol keys, and the 10-key numeric keypad. Graded on a pass/fail basis.

**BTEC 101 F,W,Sp,S 1-5 credits
Basic Word Processing/Formatting**

Emphasizes skill building, proofreading, basic word processing concepts including letters, memos, tables, and basic reports.

Prerequisite: Passing grade in BTEC 100 or instructor permission.

**BTEC 104 F,W 5 credits
Introduction to Business Technology**

Introduces current business software and technology. Students receive hands-on practice in electronic communication and information retrieval, word processing, spreadsheet analysis, graphic presentation, and database management. Integrates career planning, effective teamwork and workplace ethics.

**BTEC 105 F,W,Sp,S 1-4 credits
Keyboarding Speed/Accuracy Building**

Provides an individualized skill-building program for students who need or want to increase their keyboarding accuracy. Graded on a pass/fail basis.

Prerequisite: Passing grade in BTEC 100 or instructor permission.

**BTEC 106 F,W,Sp,S 1-2 credits
Proofreading Skills**

Builds student's skills in finding, marking, and correcting errors in business communications. Provides special techniques for locating errors.

Prerequisite: ENGL 100 or TECH 105 or ENGL& 101 or BUS 119, each with a grade of C or better or instructor permission.

BTEC 109 F,W,Sp,S 1 credit
MS Office Upgrade

Introduces new concepts of the MS Office Suite. Students will learn through hands-on application in word processing, spreadsheet design, graphic presentation, and database management.

Prerequisite: Experience in previous version of MS Office.

BTEC 111 F,W 5 credits
Intermediate Word Processing

Increases student's knowledge of Microsoft Word through classroom instruction and guided practice including tables, columns, reports, mail merge, fliers, graphics, styles, templates, macros, and file management. Utilize software features to properly format business documents.

Prerequisite: BTEC 101 with a grade of C or better or instructor permission, and a minimum keyboarding speed of 35 wpm or concurrent enrollment in BTEC 105.

BTEC 112 Sp 5 credits
Advanced Word Processing

Presents advanced word processing features using Microsoft Word. Students design and format tri-fold brochures and magazine articles; create fill-in form templates, outlines, table of contents, master documents and advanced tables; use advanced editing techniques and advanced merging.

Prerequisite: BTEC 111 with a grade of C or better or instructor permission, and a minimum keyboarding speed of 40 wpm or concurrent enrollment in BTEC 105.

BTEC 125 F,W,Sp,S 1-3 credits
Filing

Introduces four major types of filing according to the ARMA rules: alphabetic, geographic, numeric, and subject. Rules for alphabetic indexing are emphasized. Practice is given in coding, indexing, and filing. Computerized filing using MS Access is also included.

BTEC 130 F,W,Sp,S 1-2 credits
Electronic Calculators

Develops speed and accuracy by touch on the ten-key electronic calculator and the computer numeric keypad. Includes using special features of a calculator and applying learned skills to business problems.

BTEC 145 F,W,Sp,S 1-5 credits
Electronic Calculators

Introduces students to Microsoft Word features that may be used in both personal and business environments. Topics include basic and intermediate-level document formatting. This class is offered in a lab environment.

Prerequisite: BTEC 100 or instructor permission.

BTEC 146 F,W,Sp,S 1 credit
PowerPoint Fundamentals

Introduces presentation graphics, using Microsoft PowerPoint to create electronic slide shows. Students create and edit slide shows, apply templates, format slides, enter text, print presentations, create charts, and employ other graphical functions and features.

BTEC 147 F,W,Sp,S 1-3 credits
Introduction to Desktop Publishing

Provides hands-on instruction using Microsoft Publisher. Emphasizes formatting and enhancing text, developing styles, using columns and tables with special effects, and working with art to create professional looking publications.

Prerequisite: BTEC 111 or BTEC 145 with a grade of C or better or instructor permission.

BTEC 148 F,W,Sp 1-2 credits
Introduction to Outlook

Offers an introduction to using Outlook communication and scheduling as a business tool. This course is designed to prepare students with a full understanding of features available in Outlook. Topics include email, contacts, schedule management, and instant messaging.

BTEC 149 F,W,Sp,S 1 credit
Internet Fundamentals

Offers an introduction to the Internet, the organizations that manage the Internet, and capabilities of the Internet in today's world. A Web browser is used to access the World Wide Web, to search for information, and to perform other basic Internet functions.

BTEC 161 F 5 credits
Intro to ICD-9 Coding in the Medical Office (Part I)

Teaches the rules and guidelines utilized in the assignment of ICD-10 codes. Students will select and assign the appropriate codes to diagnoses and procedures performed in both inpatient and outpatient settings, and learn to extract diagnoses from a patient's record.

Prerequisite: BTEC 181 with grade C or better or concurrent enrollment in BTEC 181.

BTEC 162 W 5 credits
Intro to ICD-9 Coding in the Medical Office (Part II)

Continues to develop and reinforce the rules and guidelines utilized in the assignment of ICD-10 codes. Students will select and assign the appropriate codes to diagnoses and procedures performed in both inpatient and outpatient settings.

Prerequisite: BTEC 161 with a grade of C or better or instructor permission.

BTEC 164 F,W,Sp,S 1-2 credits
Legal Aspects of the Medical Office

Presents the legal, ethical, and bioethical issues relevant to medical office settings. Course features legal cases and legislation. Topics include patient confidentiality, advance directives, consents, professional liability, medical malpractice, release of information, and the professional code of ethics.

BTEC 171 F 3 credits
Medical Reception Procedures

Provides a foundation of basic knowledge and skills for employment in a physician's office or clinic. Topics include reception techniques, medical records and related laws, appointment scheduling, telephone use procedures, and office maintenance.

Prerequisite: ENGL 100 or higher.

BTEC 172 W 3 credits
Medical Office Procedures

Provides instruction and practice for advanced administrative support skills in the medical office. Topics include payroll procedures, banking; fees, credit and collections; patient and insurance billing; bookkeeping, including practice in single-entry methods; and diagnostic and procedural coding.

Prerequisite: ENGL 100 or TECH 105 or instructor permission, MATH 079 or TECH 079 or instructor permission, and BTEC 171, each with a grade of C or better.

BTEC 173 Sp 3 credits
Computers in the Medical Office

Prepares students for administrative talks in healthcare practices. Using computer software students learn to enter patient information, schedule appointments, and handle billing and insurance claims.

Prerequisite: BTEC 172 with grade C or better.

BTEC 181 F,W,Sp,S 1-3 credits
Medical Terminology I

Provides a foundation for building a medical vocabulary including the study of prefixes, roots, suffixes, combining forms, and pronunciation. Emphasis is on using medical terms accurately in documenting and reporting patient care procedures.

BTEC 182 F,W,Sp,S 1-3 credits
Medical Terminology II

Continues the focus of BTEC 181 incorporating actual medical records and demonstrating how medical terminology is used in the clinical setting.

Prerequisite: BTEC 181 or MEDA 101 each with a grade of C or better.

BTEC 230 F,W,Sp,S 1-3 credits
Legal Terminology

Provides instruction in legal terminology including definitions of terms and correct pronunciation. Emphasis is placed on understanding legal terminology through the study of legal concepts and their application in the federal and state court systems, trial procedures, and translation into layperson language.

Prerequisite: ENGL& 101 or BUS 119 with a grade of C or better or instructor permission.

BTEC 260 Sp 5 credits
Office Procedures

Provides and enhances essential skills for today's modern office including teamwork, time management, basic bookkeeping, critical thinking, office technology, communication, and cultural diversity awareness to prepare for transition from school to work.

Prerequisite: BUS 119 and BUS 104 with a grade of C or better or instructor permission.

BTEC 294 F,W,Sp 2 credits
Career Success

Provides preparation for pursuing a career in business technology, with a focus on self-assessment, job search, application process documents, and interviewing techniques. This course is intended for Business Technology students in their second year. Students should enroll in this course during one of the last two quarters of their program.

Prerequisite: Program advisor permission.

Chemical Dependency Studies (CDS)

CDS 101 F,Sp 5 credits
Intro to Addictions & Chemical Dependency SS

Introduces the student to the basic theories of drug/alcohol use and abuse. Explores the scope of chemical substance dependency. Topics include socio-cultural aspects of drug usage, patterns and progression, definitions of substance abuse and dependency recovery and prevention. This course is the primary course for students interested in a career counseling the chemically dependent.

CDS 102 W 3 credits
Introduction to Theories and Counseling of Chemically Dependent Clients H,P

Introduces the student to the need for a theoretical base for CD counseling. Students will learn the fundamental concepts of at least three contemporary theories of counseling, and will gain a working knowledge of brief therapy.

Prerequisite: CDS 101 with a grade of C or better.

CDS 105 W 3 credits
Introduction to Theories and Counseling of Chemically Dependent Clients

Provides students with a basic understanding of social problems and legal issues relative to domestic violence and its impact on children and families.

CDS 106 W 3 credits
Prevention/Intervention Specialist

Provides a general overview of prevention, philosophies and school-based substance abuse prevention/intervention models. This course will also cover information about the role and function of the prevention/intervention specialist, school infrastructure, and systemic dynamics that may sabotage prevention efforts. This course is designed for CD counselors, nurses, social workers, counselors and teachers; instructor's permission required for others to enroll.

CDS 107 Sp 3 credits
Adolescent Developmental Issues and Chemical Dependency

Examines the special issues and challenges of working with adolescent chemical abuse and dependency. This class will cover the following: adolescent development tasks, assessment process and tools, diagnostic challenges, treatment and recovery considerations, co-occurring disorders and relapse prevention. It will also cover information about family assessment, treatment, and recovery issues.

CDS 108 F 3 credits
Running School-Based Support Groups

This is an experiential course during which students will practice running several types of substance abuse groups that are commonly found in a school setting. We will discuss how these groups differ in a school setting versus a treatment setting. The course will discuss three types of groups: Alcohol/Drug Information groups, Concerns Persons group, and Recovery groups. We will discuss each group's structure and content. Also we will go over the basics of group development.

CDS 110 Sp 3 credits
Alcohol/Drug Pathophysiology and Pharmacology

Reviews the human body with emphasis on the action of alcohol and other frequently abused drugs on each of the systems. Drug classification, prescription and non-prescription, drug interactions, poly-drug abuse, detoxification process, acute and post-acute withdrawal signs and systems will be studied. Fetal effects from substance abuse will be examined.

Prerequisite: CDS 101, 102, and 113 all with a grade of C or better.

CDS 111 Sp 3 credits
Record Keeping and Case Management

Introduces the student to case management and record keeping techniques. Assessment, diagnosis, individual treatment planning, charting, and continuing care planning will be explored. Confidentiality utilization review and staffing techniques will be discussed.

Prerequisite: CDS 101, 102, and 113 all with a grade of C or better.

CDS 113 F 3 credits
Treatment Principles and Chemical Dependency

Provides a working knowledge of treatment principles and models. Explores the anatomy of addiction, the principles and process of treatment, including principles of relapse, relapse prevention and stages of recovery.

CDS 121 W 3 credits
Legal and Ethical Issues in Chemical Dependency Studies

Studies ethical and legal issues in chemical dependency counseling. Counselor/client professional relationship will be reinforced.

CDS 201 Sp 3 credits
Dynamics of the Family and Chemical Dependency

Introduces students to the dynamics of the chemically dependent family. Studies the effects of addiction on the family. ACOA (adult children of alcoholics) issues will be addressed. Education and treatment strategies will be explored. Students must enroll concurrently in CDS 111, and either enroll concurrently in CDS 110 or obtain instructor permission.

Prerequisite: CDS 101, 102, 113 and 215 with a C or better.

CDS 202 F 3 credits
Chemical Dependency Counseling with Diverse Populations

This course is designed to prepare the chemical dependency counselor for working with individuals and families from diverse populations. The goal of the course is to raise the level of awareness and cultural sensitivity of the chemical dependency counselor. It will challenge the student to examine culturally learned assumptions that shape their interactions with clients. It helps the chemical dependency counselor become more knowledgeable about social structures that cause inequality and its effect on treatment.

Prerequisite: CDS 101, 102, 113, and 121 or instructor permission.

CDS 203 W 3 credits
Relapse Prevention and Intervention

This course is designed to educate the chemical dependency counselor on all aspects of the relapse process. This includes assessment, education, intervention, relapse treatment plans, family involvement, and stress management.

Prerequisite: CDS 101, 102, and 113 or instructor permission.

CDS 215 F 3 credits
Group Counseling: Theories and Application

Provides the student with the theory and the practice of group counseling with chemical dependent clients and their families being studied. Students will gain a working knowledge of group counseling theories. Styles of group decision-making will also be applied. Role playing and modeling techniques will enhance the students' skills.

Prerequisite: CDS 101 and 113 both with a grade of C or better.

CDS 220 Sp 3 credits
Co-Occurring Disorders: Mental Health Disorders in CDs

Examines the mental/emotional alterations and their impact on the client with chemical dependency. Materials covered include use of the current edition of the Diagnostic and Statistical Manual, as it relates to diagnosis.

Prerequisite: CDS 101, 102, and 113 all with a grade of C or better or instructor permission.

CDS 240 3 credits
Compulsive Sexual Behaviors

Focuses on the assessment, clinical and theoretical clarification, and treatment of a number of forms of compulsive sexual behaviors. A distinction between addictive, compulsive, and impulsive sexual behavior will be presented as well as various theories of the condition's development. A variety of treatment modalities will be reviewed.

Chemistry (CHEM)

CHEM& 100 F,W,Sp,S **5 credits**
Preparatory Chemistry **NSA**

Introduces the world of chemistry through the exploration of matter and the basic properties related to what our surroundings are composed of. Students will examine laws, formulas, reactions, and structure governing all substances and their interactions. Prepares students for further study in chemistry. No credit is given to those with one year of recent high school chemistry credit.

CHEM& 110 F,W,Sp,S **5 credits**
Chemical Concepts w/Lab **NSL**

Provides an exploration of our universe through the study of atomic structure, interactions between matter and energy, and everyday encounters with chemistry (technology, environment, energy, materials, foods, etc.). This course is primarily for non-science majors planning to transfer. Laboratory is included.

Prerequisite: Completion of or concurrent enrollment in MATH 078/079 or TECH 078/079.

CHEM& 121 F,W,Sp,S **5 credits**
Intro to Chemistry **NSL**

Provides an exploration of the matter that makes up our universe through the study of atomic structure, gases, solutions, acids and bases, stoichiometry, and reactions. This course is primarily for non-science majors preparing for careers in the health sciences and related fields. Laboratory is included.

Prerequisite: CHEM& 100 or CHEM& 110 or one year of high school chemistry, completion of, or concurrent enrollment in MATH 088 or TECH 088 or instructor permission.

CHEM& 131 Sp **5 credits**
Intro to Organic/Biochemistry **NSL**

Explores the chemistry of carbon compounds including structures, nomenclature, and properties of basic organic compounds with an emphasis on biochemical substances and applications. Includes families of alkanes, alkenes, alcohols, ethers, aldehydes, ketones, acids, proteins, carbohydrates, and other biochemical materials. This course is primarily for non-science majors preparing for careers in the health sciences and related fields. Laboratory is included.

Prerequisite: CHEM& 121 or CHEM& 161.

CHEM& 161 F **5 credits**
General Chemistry w/Lab I **NSL**

Provides an in-depth study of chemistry formulas and equations, mathematics, gas laws, atomic, solution chemistry, periodic law, electron configurations, the mole concept, and stoichiometry. This is the first of a three-quarter sequence designed for science majors. Laboratory is included.

Prerequisite: CHEM& 100 or high school chemistry and MATH 099 or TECH 099.

CHEM& 162 W **5 credits**
General Chemistry w/Lab II **NSL**

Provides the applications portion of the year-long study of chemistry. This course examines bonding and molecular theory, intermolecular forces, solids, liquids, and gases, solutions, acids, bases, salts, pH, kinetics, equilibrium, electrochemistry, and an introduction to thermodynamics. This is the second in a three-quarter sequence designed for science majors. Laboratory included.

Prerequisite: MATH 099 or TECH 099 and CHEM& 161.

CHEM& 163 Sp **5 credits**
General Chemistry w/Lab III **NSL**

Examines, in more detail, equilibrium, thermodynamics, and descriptive chemistry of elements and their compounds. Topics in kinetics and equilibrium are revisited to enhance students' comprehension and understanding. The course ends with a survey of several areas of chemistry including coordination chemistry, nuclear and radiochemistry, nanochemistry, organic chemistry, and biochemistry with special emphasis on relevant and inspiring aspects of these topics. Laboratory is included.

Prerequisite: CHEM& 162.

CHEM 231 Sp **5 credits**
Quantitative Analysis **NSL**

Provides a study of the qualitative and quantitative analytical applications of chemistry including the mathematical treatment of data collected. It will examine gravimetric and volumetric wet chemical analysis, instrumental analysis of both organic and inorganic substances will be done. This is a one-quarter course required for students who are chemistry and chemical engineering majors.

Prerequisite: Completion of or concurrent enrollment in CHEM& 163.

CHEM& 261 F **5 credits**
Organic Chemistry w/Lab I **NSL**

Explores the chemistry of organic compounds including structures, nomenclature, bonding, and properties of basic organic compounds. The course covers the families of alkanes, alkenes, and alkynes, and discusses functional groups and stereochemistry and their roles in chemical properties. This is the first in a three-quarter sequence designed for science majors in chemistry-related fields. Laboratory is included.

Prerequisite: CHEM& 163 or instructor permission.

CHEM& 262 W **5 credits**
Organic Chemistry w/Lab II **NSL**

Continues the exploration of the chemistry of organic compounds including structures, nomenclature, and synthesis of basic organic compounds. The course covers the families of alkyl halides, alcohols, aldehydes, ketones, and other groups of compounds. Reactions and synthesis of various compounds of these families will be studied and performed. Products of the processes will be examined using physical and spectroscopic means. This is the second in a three-quarter sequence designed for science majors in chemistry-related fields. Laboratory is included.

Prerequisite: CHEM& 261.

CHEM& 263 Sp 5 credits
Organic Chemistry w/Lab III NSL

Continues the exploration of the chemistry of organic compounds including structures, nomenclature, and synthesis of basic organic compounds. The course covers the families of amines, carbonyls, aromatics, biochemical compounds and other groups of compounds. Reactions and synthesis of various compounds will be studied and performed. Products of these processes will be examined using physical and spectroscopic means. The course includes a qualitative analysis of organic compounds. This is the third of a three-quarter sequence designed for science majors in chemistry-related fields. Laboratory is included.

Prerequisite: CHEM& 262.

College Success (COLL)**COLL 093 F,W,Sp,S 1 credit**
Test Taking

Offers strategies to help students improve test-taking abilities such as scheduling time, preparing for exams, finding exam cues, writing essay responses, and answering objective questions.

COLL 094 F,W,Sp,S 1 credit
Note Taking

Prepares students to effectively take lecture notes. Techniques include active listening, looking for main ideas, using signal words, and organizing notes.

COLL 095 F,W,Sp,S 1 credit
Time Management

Offers strategies to help students organize time effectively, improve the study environment, prioritize goals, control procrastination, and use support resources as needed.

COLL 096 F,W,Sp,S 1 credit
Textbook Reading Techniques

Provides techniques that improve ability to read and comprehend college textbooks. Skills include pre-reading, skimming, scanning, marking, highlighting, and annotating. (Formerly known as INDV 096)

COLL 100 F,W,Sp,S 5 credits
College Success

Emphasizes development of necessary skills for successful completion of college courses. Provides techniques and strategies to improve time management, memory, lecture note taking, textbook reading, outlining, learning styles, use of library, test preparation, and test taking. Focuses on how individuals become independent learners and critical thinkers. Empowers students to apply learning strategies in all other content classes.

Prerequisite: Reading and writing skills at or above ENGL 075.

Computer Science (CS)**CS 100 F,W,Sp,S 5 credits**
Introduction to Information Systems SS

Presents a general overview of information technology. Introduces the student to the complex array of components that make up an information system. The technology and human issues involved in developing a successful information system as well as career paths and ethical issues facing these professionals will be covered.

CS 102 F,W 5 credits
Introduction to Internet Theory, Application, and Web Page Design

Offers concepts, fundamentals, and techniques of web page design and introduction to Internet networking principles. Topics include web page usability, design principles and development, site planning, and implementation, (X)HTML scripting language and basic Cascading Style Sheets are used to create structural and presentational web pages. Students will use concepts presented in the course for development of personal and commercial pages.

Prerequisite: CS 108 and CS 110 or equivalent or instructor permission.

CS 104 5 credits
Intermediate Web Page Design

Continuation of Web Page Design using client and server side scripted/programming languages and dynamic page coding to extend design capabilities and Web Site effectiveness. Methods introduced include browser control, security related issues, and Web Page structural/presentational control using these languages.

Prerequisite: CS 102 (was CIS 102), CS 170 (was CIS 180) or equivalent, or instructor permission.

CS 110 F,W,Sp,S 3 credits
Introduction to Microcomputer Applications

Introduces the student to microcomputers and software applications. Windows, word processing, and electronic spreadsheets basics are presented.

Prerequisite: Ability to use a keyboard.

CS 111 F,W,Sp 4 credits
Intro to Windows

Offers an introduction to the study of the Microsoft Windows operating systems. Presents fundamental concepts of a Microsoft Windows client operating system such as file management and customizing a graphical user interface (GUI).

CS 121 F,W,Sp 5 credits
Introduction to Spreadsheets

Provides an introduction to the use of spreadsheet programs in business applications. Students are provided with practical experience in using a spreadsheet to solve common business problems. (Formerly known as CIS 120)

Prerequisite: BTEC 104, CS 110, or CS 111; and MATH 089, TECH 089, or BUS 104; or instructor permission.

**CS 122 F 5 credits
Advanced Spreadsheet Applications**

Offers an introduction to more advanced spreadsheet topics. The student will use complex features such as macros, data management, and advanced formulas and functions to solve business problems. This course is intended for CIS majors and business students who are ready for a challenging spreadsheet class.

Prerequisite: CS 121 with a grade of C or better, or instructor permission.

**CS 130 F,W,Sp 5 credits
Introductory Database Applications**

Offers an introduction to the study and use of computerized database management systems. This course provides basic database theory and application in a disciplined approach to problem solving in a business environment.

Prerequisite: CS 121 with a grade of C or better, or instructor permission.

**CS 144 F,W 5 credits
Principles of PC Operating Systems**

Introduces the study of microcomputer operating systems using both graphical environment and command line. Prepares students with IT profession entry level skills in operating systems. Topics covered include OS fundamentals, installation, diagnosis, configuration, and troubleshooting for the Windows, networking and Linux operating systems.

**CS 170 F,W,Sp 5 credits
Fundamentals of Computer Programming NS**

Offers an introduction to computer programming concepts and the development of applications. Program development, style, testing, and documentation are presented, discussed and applied using the C++ programming language. This course is a beginning course for CS majors and others, such as engineering transfer students, wishing an introduction to structured computer programming.

Prerequisite: MATH 089 or TECH 089 with a grade of C or better, and knowledge of Windows is required; or instructor permission.

**CS 175 Sp 5 credits
Event-Driven Programming**

Offers an introduction to designing and implementing Windows applications using Visual Basic. Concepts involving event-driven programming, graphical user interface design, and algorithm implementation are covered.

Prerequisite: CS 170 with a grade of C or better, or instructor permission.

**CS 208 W 5 credits
Introduction to Management Information Systems**

Introduction to the principles, roles, and application of Management Information Systems (MIS) in business. Investigations into MIS include hands-on lab experiences and case studies.

Prerequisite: BUS& 101, ENGL& 101, or instructor permission. CS 110 recommended.

**CS 211 F 5 credits
Networking Basics**

Offers an introduction to the study and use of microcomputer networks. Includes topics covered in the COMPTIA Network+ exam: network topologies, standards, hardware, software, media and protocols.

Prerequisite: CS 144 with a grade of C or better or instructor permission.

**CS 212 W 5 credits
Local Area Networks: Theory and Application**

Offers study of Local Area Networks. This course provides theory and practice in a disciplined approach to installing and maintaining a microcomputer network utilizing a network operating system. Students will apply their learning by developing and maintaining a Local Area Network in the laboratory.

Prerequisite: CS 211 with a grade of C or better, or instructor permission.

**CS 213 Sp 5 credits
Local Area Networks: Theory and Application**

Offers further study of data communications and Local Area Networks. This course provides theory and practice in a disciplined approach to maintaining a data communication system utilizing LAN software. Students will apply their learning by developing, monitoring and optimizing a Local Area Network in the laboratory.

Prerequisite: CS 212 with a grade of C or better, or instructor permission.

**CS 216 2 credits
Network Scripting**

Introductory course in shell scripting for the Windows and Linux operating systems. This course introduces both the Windows Script Host (WSH) using VBScript and the BASH shell used as an interface to the Linux operating system kernel. Students will learn to write, test, and execute scripts to manipulate client and network resources.

Prerequisite: CS 170 and CS 249 or instructor permission.

**CS 230 F 5 credits
Database Development**

Offers further study and use of computerized database management systems. Provides intermediate theory and practice in a disciplined approach to problem solving using a database management system in a business environment.

Prerequisite: CS 130 with a grade of C or better, and CS 170 or instructor permission.

**CS 245 W,Sp 6 credits
Computer Configuration and Maintenance**

Offers the computer student an introduction to the configuration of hardware in computer systems. In the laboratory, students will build computers, install operating systems and application software, troubleshoot computers and install computers and peripherals in a network environment. This course will provide a foundation in hardware for those working toward A+ Certification.

Prerequisite: CS 144 with a grade of C or better.

**CS 249 W 5 credits
Advanced Operating Systems**

Offers further study of microcomputer operating systems. This course addresses advanced concepts that are applicable to a variety of operating systems with an emphasis on Linux.

Prerequisite: CS 144 and CS 170 each with a grade of C or better, or instructor permission.

**CS 251 5 credits
Digital Forensics Incident**

Introduces students to the basic procedures and methods used in digital forensics to properly capture digital content from digital devices and complete a preliminary analysis of data. This is a hands-on course focused on following sound forensic procedures and methods.

Prerequisite: CS 250.

**CS 252 5 credits
Collect/Exam Digital Evidence**

Continues collection and examination of evidence and preparation of a report of findings through a full digital forensics situation. Topics include finding data, encryption and passwords, log and history analysis, event and registry methods, metadata, and handling virus and malware in case analysis.

Prerequisite: CS 251

**CS 253 4 credits
Digital Forensics Live & Mobile**

Covers digital forensics skills, procedures, and methods used in acquiring potential digital evidence in live network and computer environments. Students will also investigate and apply skills to a variety of mobile digital devices encountered by the digital forensics analyst.

Prerequisite: CS 252

**CS 260 Sp 5 credits
Introduction to Network Security**

Offers an introduction to the study of network security. This course gives the student an opportunity to learn and apply basic security concepts to a local area network. Students will apply their learning by designing a network security plan and using a variety of network security tools. Study of topics include both theory and practical hands on skills through extensive lab projects.

Prerequisite: CS 211 with a grade of C or better or instructor permission.

**CS 264 5 credits
Computer Forensics**

Offers a study of computer forensics. This course gives the student an opportunity to learn and apply basic concepts of computer forensics in a laboratory setting. Students will apply their learning by using investigative tools to solve simulated computer crimes.

Prerequisite: CS 245, and CS 249 both with a grade of C or better, or instructor permission.

**CS 270 F 5 credits
Data Structures I NS**

Offers a detailed study of structured and object-oriented programming, including algorithms, searching and sorting, and data structures using the programming language C++.

Prerequisite: MATH 099 or TECH 099 and CS 170, both with a grade of C or better, or instructor permission.

**CS 275 W 4 credits
Object-Oriented Programming in Java**

Offers an introduction to the object-oriented programming paradigm using Java. Various object-oriented programming concepts will be discussed. Object-oriented programs will be developed and implemented.

Prerequisite: CS 170 with a grade of C or better, or instructor permission.

**CS 280 Sp 5 credits
Advanced Data Structures**

Offers a detailed study of advanced data structures, including the analysis of algorithms and object-oriented programming using the programming language C++.

Prerequisite: CS 270 and MATH 112 both with a grade of C or better, or instructor permission.

**CS 281 S 6 credits
Digital Design**

Provides an introduction to the design and implementation of combinational and sequential digital circuits and systems.

Prerequisite: MATH 112 and CS 270, both with a grade of C or better, or instructor permission.

**CS 282 5 credits
Microprocessors**

An introduction to the architecture of microprocessors, microcontrollers, microcomputers and assembly language programming.

Prerequisite: CS 281 with a grade of C or better, or instructor permission.

**CS 285 5 credits
Programming Tools**

Covers tools and techniques which facilitate programming and debugging, including debuggers, profilers, scripting, and C and C++ programming under the Linux operating system.

Prerequisite: CS 270 with a grade of C or better, or instructor permission.

Criminal Justice (CJ)

CJ 100 F 15 credits
Basic Law Enforcement

Addresses criminal law, evidence, administration of justice, investigation, patrol, traffic, and juvenile procedures. This 16-week course, containing 450 hours of instruction, is designed to meet the standards of the Washington Law Enforcement Officers Training Commission basic school for newly employed officers. This course is open only to active law enforcement officers.

CJ& 101 F 5 credits
Introduction to Criminal Justice SS

Introduces and provides an overview of the various agencies involved in the administration of criminal justice, including local, state, and federal agencies as well as a history of police and corrections. Students will study how our criminal justice system evolved and how it functions, examined from the perspective of the Constitution through the criminalization process of investigation, arrest, trial, and post-trial procedures.

CJ& 110 F 5 credits
Criminal Law

Focuses on an explanation of criminal law principles including a discussion on crimes against person and property.

CJ 154 W 5 credits
The American Legal System

Introduces students to the philosophy of our legal system as well as how the various actors within the system interrelate.

CJ 181 W 3 credits
Report Writing for Law Enforcement

Prepares students interested in law enforcement to write effective and concise police reports. Strong emphasis is placed on observation, note taking, and narrative skills.

CJ 183 W 5 credits
Administration of Justice

Studies criminal justice in the State of Washington, including analysis of the laws of arrest, search and seizure, grand jury proceedings, extraditing, pretrial procedures, conduct of criminal trials, rights of the accused, motions, appeals, probation, and parole. The course includes organization and jurisdiction of the Federal Court System and study of U.S. Supreme Court decisions affecting law enforcement.

CJ 185 5 credits
Community Policing

Covers the evolution of community policing. It will address the need to understand and involve the community; communicating with diverse populations; building partnerships with the media and bringing youths into community policing. The course will focus on community policing, gangs, and preventing violence.

CJ 187 F,Sp 3 credits
Crisis Intervention Prof

Provides a basic multidisciplinary understanding of what a mental disorder/illness is and how to help a person experiencing a mental health crisis. De-escalation and communication techniques specific to professions such as education, medicine, and law enforcement - anyone who may encounter persons experiencing a mental health crisis - will be the focus of lecture and group discussions.

CJ 260 Sp 5 credits
Physical Evidence and Criminalistics

Studies collection and preservation of physical evidence, scientific aids, modus operandi, and crime scene search and includes examination of physical evidence and evaluation of findings in terms of legal questions involved. The course also surveys problems relating to homicide, drugs, arson, and burglary.

CJ 286 5 credits
Criminal Law Administration

Provides a study of legal limitations on law enforcement practices and procedures, including analysis of eye-witness identification procedures, criminal interrogations and confessions, the law of arrest, the exclusionary rule, search and seizure, and the constitutional limitations on legislative power to create and define criminal offenses.

Dance (DANCE)

DANCE 100 F,W 2 credits
Introduction to Dance H,P

Students will study concepts and practice the fundamentals of ballet, modern, and jazz dance. Students will participate in some physical exercise including a full body warm-up to begin class. Prior dance experience is not necessary. Students will learn short dance combinations involving body awareness, mental and physical discipline, balance, body toning, strength and flexibility as well as rhythmic awareness.

DANCE 105 Sp 2 credits
Introduction to Jazz Dance H,P

Studies the concepts relevant to movement and practices the fundamentals of jazz dance. Students will learn short jazz dance combinations involving body awareness, mental and physical discipline, balance, body toning, strength, flexibility, and rhythmic awareness. Prior dance experience is not necessary.

DANCE 110 2 credits
Introduction to Tap Dance H, P

Introduces fundamentals of tap dance. Students will learn short dance combinations involving body awareness, mental and physical discipline, balance, strength and rhythmic awareness. Students will participate in physical exercise while dancing. Classes incorporate a full body warm-up including stretching, balance, and leg strengthening exercises providing a moderate cardio exercise. Prior dance experience is not necessary.

DANCE 144 **2 credits**
Show Dance

Covers the fundamental techniques and principles of integrating voice, music and dance into a performance show choir. Students will sing (from memory) and perform beginner/intermediate choreography of music from a variety of styles ranging from Broadway and Jazz to Contemporary music. Ensembles perform a minimum of 1 concert per quarter, and all performances are mandatory.

Prerequisite: Instructor permission.

DANCE 197 **F,S** **1-5 credits**
Rehearsal and Performance I **P**

Provides experience for students who participate in dance performances and performing arts productions not associated with current enrollment in a dance course. This includes dancers, choreographers, designers, technicians, and support personnel. Students must successfully complete the rehearsal process through the final performance.

Prerequisite: Instructor permission.

Diesel & Heavy Equipment Technology (DHET)

DHET 100 **F** **5 credits**
Essentials of Mechanics

Develops beginning mechanical skills and knowledge essential to successful completion of the automotive and/or diesel technology program. Includes shop safety, fasteners, measurements, cutting tools, lifting, tool usage, shop orientation, manuals (including computer retrieval systems), bearings and seals, and special emphasis on preventative/predictive maintenance. This is an introductory course for beginning students of Automotive or Diesel Technology. Course can be waived if student has completed principles of technology and auto program in high school.

DHET 101 **W** **5 credits**
Electrical Systems I

Covers the theory of electricity from fundamentals through solid state. Includes Ohm's Law, series, parallel, and series-parallel circuits. Automotive wiring and circuits will be included as well as how to read wiring diagrams and circuit tracing and repair. Course can be waived if student has completed principles of technology and auto program in high school.

DHET 102 **W** **10 credits**
Electrical Systems II

Presents brief review of the theory of electricity. Covers theory, diagnosis and repair of low voltage systems (12V), including batteries, starting systems, charging systems, instrumentation and warning devices, lighting systems, power accessories, (e.g. power windows, power seats), and computer operation and circuit analysis. Also covered are high voltage energy, distributorless, and breaker point ignition systems.

Prerequisite: DHET 101 or instructor permission.

DHET 104 **Sp** **6 credits**
Vehicle Climate Control

Studies the theory of operation, design, diagnosis and repair of both manual and automatic heating/air conditioning systems used in automobiles and truck/heavy equipment applications. This is a second year course.

DHET 111 **Sp** **5 credits**
Hydraulic Brakes

Covers the theory of hydraulics, fundamentals of manual, power, drum, and disc brake systems. This is a first-year course and may be waived with the instructor permission.

DHET 115 **Sp** **5 credits**
Air Brake System

Offers training on vehicle air brake systems with coverage of compressors, valves and brake foundation. Emphasis will be placed on maintaining Federal Motor Vehicle Safety Standards.

DHET 125 **Sp** **5 credits**
Heavy Duty Chassis Maintenance

Offers training in the repair, maintenance, and diagnosis of heavy equipment frames, steering, suspension, wheels, tires and undercarriage.

DHET 141 **F** **4 credits**
Hydraulics I

Studies the basic principles, operation, maintenance and basic design of mobile hydraulic systems.

DHET 142 **F** **6 credits**
Hydraulics II

Provides a more in-depth look at hydraulic pumps, valves, and actuators in mobile hydraulic systems. Emphasizes testing, diagnosis and the repair of hydraulic systems.

Prerequisite: DHET 141 or MFG 140 or concurrent enrollment.

DHET 210 **W** **16 credits**
Diesel Engine Rebuild

Studies the operation, maintenance, repair, and overhaul of diesel engines used in heavy equipment. Required course for all Diesel/Heavy Equipment Technology majors.

Prerequisite: DHET 100.

DHET 215 **F** **15 credits**
Heavy Duty Engine Performance

Studies factors and components that affect diesel engine performance, fuel economy, and exhaust emissions. Includes fuel system and valve train problem diagnosis, maintenance, repair, and adjustment.(was ADT 226)

Prerequisite: DHET 102 or instructor permission.

DHET 216 **F** **5 credits**
Auto/Diesel Tune Up and Performance

Provides a study of the diesel fuel systems and electronic engine controls found in modern high speed diesel engines. This course will introduce students to the theory of fuel system operation, troubleshooting and the servicing of modern high speed diesel engines found in light and medium duty vehicles, cars and boats.

Prerequisite: DHET 102 or instructor approval.

DHET 220 Sp 10 credits
Heavy Duty Power Trains

Provides study of the principles of operation, maintenance, problem diagnosis, and repair of clutch systems, manual transmission, automatic transmission, power take-off, transfer cases, drive lines, differential assemblies and final drives used in trucks and heavy equipment.

DHET 228 2 credits
Truck Driving for Technicians

Prepares second-year Diesel students to pass Washington State CDL tests (written and driving) using a combination of classroom and driving time. This class is not intended to prepare students for a career in truck driving. Rather, it prepares diesel technology students to test drive and relocate commercial vehicles.

Prerequisite: DHET 102, 141, and 142, or instructor permission.

DHET 230 Sp 5 credits
Advanced Shop Practices

Provides a review of key skills learned in previous diesel program courses and reinforce industry shop practices. Emphasis will be placed on time management and documentation. A course for Diesel AAS students.

Prerequisite: Completion of 60 DHET credits.

Drafting (DRFT)**DRFT 107 F,W,Sp 1-3 credits**
Technical Graphics

Involves students in the use of techniques and standard practices of technical graphics so that design ideas can be adequately communicated and produced. Includes free-hand sketching, use of drafting instruments, line work, lettering, orthogonal projections, pictorials, basic dimensioning, and an introduction to computer-aided design drafting.

DRFT 151 F,W,Sp 1-3 credits
Introduction to Computer-Aided Drafting (CAD)

Introduces drafting operations as applied to computer aided drafting (CAD) and the commands and procedures used to create, edit, and plot two-dimensional CAD drawings. Drawing productivity, accuracy, and organizational techniques are emphasized in this course. Assignments will be chosen from various drafting disciplines.

Prerequisite: CS 110 or instructor permission

DRFT 210 F,W,Sp 1-3 credits
Advanced Technical Graphics

Involves students in the use of techniques and standard practices of technical graphics towards the solution of technical design problems, and to communicate and produce design ideas. Includes dimensioning and tolerancing, production of working drawings, and advanced computer-aided design drawing. This course also introduces students to electronic, piping, and welding drawings.

Prerequisite: DRFT 107 or ENGR& 121.

DRFT 252 F,W,Sp 3 credits
3-D Computer Aided Drafting

Involves students in the use of parametric solid modeling towards design on three-dimensional part and assembly models. Includes creating part and assembly drawings from 3D models, modifications throughout the design process, and comparing the many parametric solid modeling software packages available.

Prerequisite: DRFT 210

DRFT 260 F,W,Sp 3 credits
Survey of Civil and Architectural Graphics

A survey course that introduces the student in the use of the drafting standards used by Civil and Architectural disciplines. The concepts of these standards will include: structural graphics, map drafting, architectural drafting, and welding and piping drafting.

Prerequisite: DRFT 107 or ENGR& 121 or instructor permission.

Drama (DRMA)**DRMA& 101 F,W,Sp 5 credits**
Introduction to Theatre: DIV H

Covers the development of theatre in western society from the ancient Greece up to today. The various areas of theatre required to produce a play are studied: set, light and costume design; various approaches to acting including working in small groups to understand the complexity of theatre in society today. Students read, write directed entries and seminar on plays from various playwrights to show how plays connect to the times in which they were written and how plays reflect upon and shape community values. The Center Stage production for the quarter focuses on a single play using acting, directing, designing, producing and its historical and social context to illustrate the complex nature of taking a play from the printed page to the stage.

DRMA 106, 107, 108 F,W,Sp,S 5 credits
Introduction to Acting I, II, III H, P

A beginning acting course involving movement, voice production, improvisation, and scene work. Group work is used to allow each student to be comfortable in interactions with other people. Students are not required to be in the current Center Stage production. No prior acting is required.

DRMA 116, 117, 118 F,W,Sp,S 5 credits
Stage Crafts I, II, III

Teaches technical areas involved in producing a play through lecture and application of skills learned in selected technical areas from design to construction to production. Practical experience is gained in sets, costumes, lights, and by serving on stage crew for the current Center Stage production.

DRMA 119 **5 credits**
Introduction to Theatre Design and Technology

Introduces set, costume and light design, using the current production as the basis for exploring technology in the theatre. Current theatre practices using computer programs for each discipline in both analog and digital format are applied. Included are computer assisted set, and light and sound production in both analog and digital formats. Computer programs include Vector works, Adobe Soundbooth, Sketch Up Pro, and Show Cue System. Practical experience is gained through application of principles learned by using theatre facilities of Center Stage and the Wollenberg Concert Hall and by serving on stage crew for the current Center Stage production.

DRMA 147 **F,W,Sp,S** **2 credits**
Audition Techniques

Introduces audition techniques through preparation, performance and workshops of monologues and musical theatre repertoire. Focuses on interpretation, stage presence, performance etiquette and repertoire selection. Additionally, this course will cultivate successful audition techniques and create a market audition package including, headshot, resume, and portfolio.

DRMA 196, 197, 198, 296, 297, 298
F,W,Sp,S **1-5 credits**
Rehearsal and Performance I, II, III, IV, V, VI

Credit and experience for students who participate in the Center Stage production for the quarter. This includes actors, directors, designers, technicians, and support personnel. Students must successfully complete the rehearsal process through the final performance.

DRMA 206, 207, 208 **F,W,Sp** **5 credits**
Acting I, II, III

Emphasizes development and application of acting concepts used in creating a role. Includes voice, physical movement, audition techniques, styles and periods of acting. Designed for the advanced acting student. Students are not required to be in the current Center Stage production.

DRMA 210 **5 credits**
Masks

Introduces masks as a component of actor training for use on the stage and for understanding various cultures throughout the world. The mask helps develop the ability to concentrate, diminish self-consciousness, center the body, expand the body awareness, and develop outward expressions through physicalization, improvisation and scene work.

Early Childhood Education (ECED)**ECED 079** **1 credit**
Math Methodology for Educators I

This methodology course strengthens student understanding of arithmetic of pre-algebra concepts including operations on signed numbers, operations on fractions, operations on decimals, ratio and proportions, exponents, measurement, and geometry to prepare the student to teach math standards to children age birth through age 8. Concurrent enrollment in MATH 079 required.

ECED 089 **1 credit**
Math Methodology for Educators II

This methodology course strengthens student understanding of arithmetic of basic algebra skills including properties of real numbers, solving equations and inequalities, graphing, and factoring to prepare student to teach math standards to children age birth through age 8. Concurrent enrollment in MATH 089 required.

Prerequisite: MATH 079 with a grade of C or better.

ECED 099 **1 credit**
Math Methodology for Educators III

This methodology course strengthens student understanding of arithmetic of concepts covered in Elementary Algebra in greater depth to prepare students to teach math standards to children age birth through age 8. Concurrent enrollment in MATH 099 required.

Prerequisite: MATH 089 with a grade of C or better.

ECED 105 **Sp** **3 credits**
Caring for Infants and Toddlers

Provides an opportunity to analyze and apply developmentally appropriate practices for infants, wobblers, and toddlers, children birth to age 3. Introduces the concept of Infant Mental Health as it relates to providing individualized and comprehensive services to young children and their families. Focuses on the Washington State Core Competencies for Early Care and Education Professionals in the 8 content areas (Child Growth and Development; Curriculum and Learning Environment; Ongoing Measurement of Child Progress; Family and Community Partnerships; Health, Safety and Nutrition; Interactions; Program Planning and Development; and Professional Development and Leadership) as they relate to infant/wobbler/toddler respectful caregiving.

ECED 106 **F** **1 credit**
Building Bridges: Infant/Toddler Social & Emotional Development

Early care and education professionals will learn about the emerging language of the young child, fostering secure caregiver-child relationships and the importance of culturally responsive partnerships with families.

ECED 107 W 1 credit
Building Bridges: Infant/Toddler Encouraging Healthy Physical Development

Provides the early care and education professionals the components of quality infant/toddler care. This course will focus on care giving practices to support healthy and safe environments that support sensorimotor exploration. Participants will explore ways to partner with families to support the healthy development of the young child.

ECED 108 Sp 1 credit
Building Bridges: Infant/Toddler Responsive Learning Environments

Provides the early care and education professionals tools to create safe, nurturing, and engaging environments to support culturally responsive early learning, brain and language development in the earliest years.

ECED 109 Sp 3 credits
Literature and Language Development for Young Children

Provides an understanding and working knowledge of methods to foster language development in young children. The development of language and communication skills, selection and presentation of appropriate young children's literature and language art activities, and intervention and evaluation of children's communication skills are examined.

ECED 110 F,W,Sp,S 2 credits
Basics of Childcare

Provides a twenty-hour guidebook that meets the Washington State Training and Registry System (STARS) essential foundations for child care. Designed to meet basic training outcomes for personnel in early childhood and school-age child care centers as mandated by the Washington State Legislature and outlines by Washington State Training and Registry System.

ECED 115 F 3 credits
Health, Safety and Nutrition for Young Children

Prepares the student in identifying basic nutritional, safety, and health needs of the young child, and explores developmentally appropriate methods to teach and encourage nutrition, health, and safety in the early childhood setting.

ECED 116 F 1 credit
Building Bridges: Guiding Behavior of Young Children

Focuses on strengthening relationship-based care as an essential component of positive guidance. Participants will identify their own personal view or 'image' of the child and correlates this image with beliefs about guidance. Strategies to encourage caregivers to bond with children in their care will be introduced.

ECED 117 W 1 credit
Building Bridges: The Encouraging Classroom

Focuses on using the environment to support children's positive behavior, developmentally appropriate guidance practices, guidance versus punishment, and involving families to support children's social and emotional growth.

ECED 118 Sp 1 credit
Building Bridges: Positive Guidance

Focuses on positive communication and direct guidance techniques to support children's social/emotional development and strategies for specific challenging behaviors.

ECED 119 F,W 3 credits
Guidance Techniques for Young Children

Provides practical application and knowledge of positive discipline techniques. This course will put theory into action through role-play and lecture.

ECED 126 F 3 credits
Practicum I/Observation & Assessment

Introduces basic classroom skills for preschool teachers and integrates current Early Childhood developmental theory/practice with the practicum experience. Students will complete an initial assessment of present teaching skills and establish objectives for increasing the basic competencies required of persons with primary responsibility for groups of young children. Development of teaching skills will be accomplished in an Early Childhood classroom setting. Students will be observed by the instructor and meet with the instructor in weekly seminar sessions.

ECED 127 W 3 credits
Practicum II/Curriculum

Integrates the practicum experience with Developmentally Appropriate Early Childhood observation techniques. Designed to increase objectivity and skill in recording the behavior of young children. Students are required to work in an Early Childhood setting and to plan and implement appropriate activities to facilitate observation and recording of behavior. Students will be observed by the instructor and meet with the instructor in weekly seminar sessions.

Prerequisite: ECED 126 with a grade of C or better, or instructor permission.

ECED 128 Sp 3 credits
Practicum III/Learning Stories

Refines and extends skills acquired in Practicum I and II and continues to develop skills required of persons with primary responsibility for groups of young children as outlined by the Washington State Skills Standards Project. Skills are practices in an early childhood setting.

Prerequisite: ECED 126 and 127 with a grade of C or better, or instructor permission.

ECED 130 W 3 credits
Introduction to Early Childhood Education

Provides a general overview of early childhood education; explores various styles and child development theories; and presents an interpersonal, experiential approach to understanding how people's values, life experiences and perceptions influence interactions with children. Emphasis is directed toward developmentally appropriate practices, communication skills, discipline techniques, and building self-esteem.

ECED 186 3 credits
Social-Emotional Growth

Studies the development of infant/toddler social and emotional competence including how infants grow in the context of nurturing environments and how their mental health involves the psychological balance of the infant-family system.

ECED 187 3 credits
Language Development for Infants/Toddlers

Explores the role of the care provider as a facilitator through observation and study in supporting cognitive and language development in infants and toddlers. Instructional strategies to foster language development including environmental design will be studied. Strategies are discussed to assist early childhood professionals in becoming culturally competent and responsive teachers who develop nurturing relationships with both children and families.

ECED 188 3 credits
Group Care for Infants/Toddlers

Explores the importance of a child's attachment to primary care providers as a secure base for development. Emphasis will be given on creating a healthy, emotionally secure environment. Strategies are discussed to assist early childhood professionals in becoming culturally competent and responsive teachers who develop nurturing relationships with both children and families.

ECED 204 W 3 credits
Music and Movement for Young Children

Provides ideas for creating movement and music programs appropriate for young children. The course emphasizes singing, movement, appropriate records, rhythm instruments, and other related media for creative activities throughout the day. Provides instruction on perceptual motor skills designed for young children.

ECED 209 Sp 1 credit
Early Childhood Mentor Development

Provides an overview of the phases of the mentor coach process. Includes instruction in the techniques of reflective practice, the benefits for the mentor partners, and the setting of goals and objectives which align with personal and organization values.

Prerequisite: Instructor approval required.

ECED 215 F 3 credits
Early Childhood Curriculum Development

Offers students the opportunity to secure a basic knowledge of curriculum development, examining various curriculum models. Emphasis is on selection of appropriate curriculum and implementation of that curriculum.

ECED 216 Sp 3 credits
Family Systems

Provides skills and knowledge that family support personnel need to build on family strengths, help families deal with the increasing stress of family life, understand and respect cultural diversity and family lifestyles.

ECED 219 Sp 3 credits
Math, Science and Computers in Early Childhood

Designed to provide a working knowledge and understanding of math, science and computer concepts, developmentally appropriate activities and sequencing for the individual child as well as group experiences.

ECED 220 W 3 credits
Arts and Crafts for Young Children

Prepares students to present a developmentally appropriate creative art program to young children. Class will cover child developmental growth and the exploration of art process through media and materials.

ECED 260 F,W,Sp 1-9 credits
Practicum IV/Professionalism

Offers the opportunity for students to gradually assume the role of lead teacher with a group of young children. Students plan the curriculum, coordinate staff responsibilities, and attend required agency meetings/seminars. Students meet individually with the instructor to assess their progress.

Prerequisite: ENGL 101 & and all ECED 100-level courses and EDUC& 114 completed with a grade of C or better.

Earth Science (ERSI)**ERSI 104 5 credits**
Introduction to Earth Sciences NSL

Provides a comprehensive picture of Earth and its unique place in the universe by examining major concepts from geology, oceanography, meteorology, and astronomy. Topics include Earth- Sun relationships, plate tectonics, rock cycle, evolution of stars, composition and structure of atmosphere, hydrosphere, and lithosphere, characteristics of oceans, solar systems, and stars.

ERSI 105 5 credits
Earth Systems NSL

Presents a holistic view of Earth (our environments) as a system with emphasis on understanding the relationships of humans, atmosphere, hydrosphere, solid Earth, and biosphere. Major concepts are drawn from astronomy, meteorology, oceanography, geography, geology, biology, and ecology. Humans' part, effects, and relationships within the global ecosystem and Earth Systems are analyzed, as well as our dependence and interconnections with natural resources. Includes lab.

ERSI 109 5 credits
Energy and Our Planet: Earth Sciences NSL

Earth science is an explanation of the earth system and the energy that powers its subsystems. Concepts are from astronomy, meteorology, oceanography, geology, physical geography and ecology. Students will gain an understanding of the natural world and science, as well as develop skills to apply and teach how scientific principles apply to everyday life. Intended primarily for elementary education and early childhood education majors. Part of a three quarter sequence; students are not required to take entire sequence. Includes lab.

Economics (ECON)

ECON 104 S 5 credits
Contemporary Economic Issues SS

Introduces basic economic models and applies these models to current economic problems. Addresses related policy options and choices.

Prerequisite: MATH 079 or TECH 079

ECON 105 F,W,S 5 credits
Introduction to Economics SS

Introduction to basic principles of macro and micro economics for the non-major. This course introduces the market and pricing system, the economics of the firm, the distribution of wealth and income, the institutional aspects of distribution, and international trade and monetary transaction, as well as the concepts of national wealth, operation of the United States economy, factors of production, and distribution of wealth. Additionally, this course discusses critical economic thought and its history.

ECON& 201 F,W,S 5 credits
Micro Economics SS

Studies the market and pricing system, the economics of the firm, the distribution of wealth and income, the institutional aspects of distribution, and international trade and monetary transaction.

Prerequisite: MATH 088 or TECH 088 or BUS 104 and ENGL& 101 or BUS 119.

ECON& 202 F,W,S 5 credits
Macro Economics SS

Introduces concepts of national wealth, operation of the United States economy, factors of production, and distribution of wealth. Emphasis is on measurement and composition of national income and factors that affect its fluctuation.

Prerequisite: ECON& 201 with a grade of C or better

Education (EDUC)

EDUC 109 1 credit
Learning Styles and Multiple Intelligences

Course provides an introductory study of learning styles and Howard Gardner's theory of multiple intelligences.

EDUC& 114 F 3 credits
Child Development

Provides an in-depth study of the physical, emotional, social and mental development of children from conception through eight years of age. Emphasis will be placed on the application of information to childcare practices.

EDUC 115 Sp 3 credits
Education and the Law

Surveys the legal, health, and safety issues as they pertain to the rights and responsibilities of teachers and students within the school setting, including safety in the workplace. Other topics include child abuse and neglect laws, reporting procedures, the Code of Ethics, ADA, contracts, tenure, dismissal procedures, and academic freedom.

Prerequisite: ENGL 101& with a grade of C or better

EDUC 119 W 2 credits
Curriculum and Instruction

Investigates learning theories and their relationship to the curriculum design process, course development, implementation, and evaluation. Focus is placed on gaining a working understanding of the State Learning Goals and Essential Academic Learning Requirements.

EDUC& 203 W 3 credits
Exceptional Child

Provides an overview of programs for young children with special needs, including current issues and trends, the identification and assessment process, the IEP/IFSP process, and a look at some intervention and instructional strategies for working with young children with special needs.

EDUC 204 3 credits
Community College Teaching

Provides a comprehensive overview of professional/technical teaching in the community college. Specific topics include common teaching strategies, syllabus development, selection of course materials, assessment and grading, and the use of technology in the classroom. Lectures, discussions, class simulations, goal setting and self-assessment are included.

EDUC& 205 F,W,Sp 5 credits
Intro to Education w/Field Experience: DIV

Introduces the field of education, and is designed to serve the needs of those considering a career or those interested in a better understanding of the educational system. This course will integrate readings, lectures, discussions, written assignments, student presentations, guest speakers, and observation and participation in actual elementary classrooms to provide students with a broad survey of teaching in today's schools. Meets the Diversity requirement.

EDUC 206 3 credits
Course Organization and Curriculum Development

Provides a comprehensive training for professional/technical teaching in the community college in designing college courses appropriate for specific certificate or degree programs. Includes an overview of learning styles, program and unit outcomes, competencies, vision and mission, and assessment techniques. Also covers the processes of proposing new or revised curricula.

EDUC 209 **3 credits**
Occupational Analysis

Provides occupation-oriented research techniques, strategies, and training to assist professional/technical faculty at the community college in the process of helping their students to meet specific occupational requirements. Includes an overview of job availability, current job openings, present and future labor demands, and salary ranges by geographic area.

EDUC 214 **Sp** **3 credits**
Instructional Strategies

Provides an overview of the role of the teacher as facilitator. Includes instruction in knowledge and application of various classroom teaching techniques, lesson planning, and questioning skills. Provides a framework for understanding and applying fundamental elements and essential principles of instruction.

EDUC 215 **F** **3 credits**
Classroom Management

Provides pre-service teachers the necessary skills to observe and manage all aspects of the classroom. Topics include discipline, student evaluations, record keeping, grouping strategies, classroom environments, safety in the classroom, and application of "best practices" curriculum.

Engineering (ENGR)

ENGR 106 **Sp** **3 credits**
Engineering Problems **NS**

Introduces engineering and the engineering professions. Emphasizes analysis of actual engineering problems at the mathematical and reasoning levels of introductory students. Within this analytical framework, tools and concepts such as measurement theory, error analysis, dimensional analysis, metric units, systems of modeling, engineering design, and principles of elementary physics are incorporated.

Prerequisite: High school or 100-level physics or chemistry, or instructor permission. Concurrent enrollment in MATH 113.

ENGR& 121 **F,W,Sp,S** **1-3 credits**
Engineering Graphics I

Involves students in communicating design ideas, developing visualization abilities, and analyzing engineering data through the use of graphical techniques and practices. Includes free-hand sketching, use of drafting instruments, line work, lettering, orthogonal projection, pictorials, basic dimensioning, and an introduction to computer-aided design modeling.

ENGR& 122 **F,W,Sp,S** **1-3 credits**
Engineering Graphics II

Involves students in the use of graphical techniques and practices applied towards engineering design and analysis. Includes dimensioning and tolerancing, descriptive geometry, production of working drawings, advanced computer-aided design modeling, and an introduction to parametric solid modeling.

Prerequisite: ENGR& 121 or instructor permission.

ENGR& 123 **F,W,Sp,S** **1-3 credits**
Engineering Graphics III

Involves students in the use of parametric solid modeling towards design on three-dimensional part and assembly models. Includes creating part and assembly drawings from 3D models, modifications throughout the design process, and comparing the many parametric solid modeling software packages available.

Prerequisite: ENGR& 121 and ENGR& 122 or instructor permission.

ENGR& 204 **5 credits**
Electrical Circuits

Provides for student application of fundamental electrical principles in designing engineering solutions associated with linear circuit analysis, mathematical models of electrical components and circuits; sources, resistors, capacitors, inductors, operational amplifiers, and simple differential equations associated with basic circuit forms.

Prerequisite: PHYS 252, MATH& 153, and computer literacy.

ENGR 210 **5 credits**
The Environmental Physics of Energy **NS**

Solicits student descriptions of energy production, patterns of use, and the challenges posed by dwindling energy resources using the language of physics: work, power, energy, heat, and the Conservation of Energy Principle. Students explore the physical/technological bases of current/proposed technologies, along with current scientific discussions of environmental effects such as global warming and radiation. Students cannot receive credit for both ENGR 210 and PHYS 210.

Prerequisite: Algebraic, writing, and presentation skills; a previous distribution science course (e.g. PHYS& 100) would be helpful.

ENGR& 214 **F** **5 credits**
Statics

Engages student use of vector algebra and the sweeping power of a few fundamental principles to design real engineering solutions to problems involving discrete and distributed forces, resultants, equations of equilibrium, moments about points and lines, centroids, moments of inertia, and the principle of virtual work.

Prerequisite: MATH& 151 and either PHYS 251 or ENGR 106

ENGR& 215 **Sp** **5 credits**
Dynamics

Engages student application of vector algebra and the sweeping power of a few fundamental principles to design real engineering solutions to problems involving translational and rotational motion associated with kinematics, kinetics, the impulse-momentum and work-energy principles, and related topics.

Prerequisite: ENGR& 214, MATH& 152, and PHYS 251 or instructor permission.

ENGR& 224 Sp 5 credits
Thermodynamics

Encourages student application of basic principles of macroscopic thermodynamics to design solutions to engineering problems involving energy transformations and state changes, the first and second principles of thermodynamics, macroscopic properties of substances, flow analysis, entropy, equations of state, power and refrigeration cycles, and thermodynamic relations.

Prerequisite: ENGR& 214, PHYS 251, and MATH& 152 or instructor permission.

ENGR& 225 Sp 5 credits
Mechanics of Materials

Engages students in application of fundamental principles and concepts of stress, strain and their relationships to design engineering solutions associated with axial loads, torsion and bending, combined stresses, properties of materials, columns, and repeated loadings.

Prerequisite: ENGR& 214, concurrent enrollment in MATH& 152, and PHYS 252 or instructor permission.

English (ENGL)**ENGL 065 F,W,Sp,S 5 credits**
Reading and Writing Basics

Provides an understanding of the reading and writing process including how to write clear sentences and paragraphs. Instruction in vocabulary development and effective reading are also covered. Students have opportunities to work individually as well as in collaboration with others.

Prerequisite: COMPASS score of 40-68 in reading.

ENGL 072 F,W,Sp,S 1-2 credits
Sentence and Paragraph Structure

Provides opportunity to improve skills writing complete and coherent sentences and paragraphs. Sentence patterns, paragraph development, and paragraph unity also are presented. This individualized course may be used to satisfy the high school English equivalency requirement.

ENGL 073 F,W,Sp,S 1-2 credits
The College Essay

Presents an opportunity for improvement in short essay writing. Topics include developing the introduction, body, and conclusion, and using transitions to aid coherence. This individualized, pre-college-level lab course may be used to satisfy the high school English equivalency requirement.

ENGL 075 F,W,Sp,S 5 credits
Reading and Writing Improvement

Provides instruction in improving reading and writing. Emphasizes on using steps of the writing process to achieve clear expression and, at the same time, how to improve literal and critical reading expression; also stresses improving literal and critical reading comprehension skills. Students needing additional remediation will complete individualized reading, spelling and/or grammar modules in Self-Paced Learning.

Prerequisite: COMPASS scores of 69-80 in reading or completion of ENGL 065 with a grade of C or better.

ENGL 090 F,W,Sp,S 1 credit
Spelling Improvement

Provides a review of basic spelling patterns, including consonant and vowel sounds, blends, plurals, and common confusing words. Emphasis is placed on learning and using tools for catching and correcting spelling errors. An initial diagnostic test will determine placement.

ENGL 095 F,W,Sp,S 1 credit
Vocabulary Building

Improves vocabulary skills for reading, writing, and speaking. Develops skills for determining the meaning of unfamiliar words.

ENGL 096 F,W,Sp,S 2 credits
READING WORKSHOP I

Provides individualized and group instruction in reading. Students will explore their strengths and weaknesses in reading and learn to draw upon strengths to overcome comprehension barriers and successfully build from written texts.

ENGL 097 F,W,Sp,S 2 credits
READING WORKSHOP II

Continues individualized and group instruction in reading. Students will explore their strengths and weaknesses in reading and learn to draw upon strengths to overcome comprehension barriers and successfully build from written texts.

ENGL 098 F,W,Sp,S 5 credits
College-Ready English I

Introduces skills for reading college-level texts and writing college-level papers. Provides strategies for generating, developing, supporting, and organizing ideas, as well as revising for coherence, clarity, correctness, and documentation. This is an outcomes-based pathway to college-level composition courses.

ENGL 099 F,W,Sp,S 1-3 credits
Learning Lab Practicum

Provides individualized plans to master language, reading comprehension, and/or study skills as recommended by the instructor and/or student. This course is graded on a pass/fail basis.

ENGL 100 F,W,Sp,S 5 credits
College-Ready English II

Develops skills for reading college-level texts and writing college-level papers. Provides strategies for generating, developing, supporting and organizing ideas, as well as revising for coherence, clarity, correctness, style, and appropriate documentation. This is an outcomes-based pathway to college-level composition courses.

Prerequisite: ENGL 098 with a grade of C or better.

ENGL& 101 F,W,Sp,S 5 credits
English Composition I

Part one of the composition sequence. Introduces first-year college writing skills including thesis discovery, development, support, organization, sentence correctness, diction, style, and final editing. Assignments might include and integrate exposition, narration, argumentation and response. Emphasizes analytical reading and introduces formal academic documentation.

Prerequisite: College-level reading and writing skills or completion of ENGL 100 or TECH 105 with a grade of C or better.

ENGL& 102 F,W,Sp,S 5 credits
Composition II HA

Part two of the composition sequence. Practices and develops first-year writing skills by emphasizing theme, argumentation, analysis, integration and documentation of evidence as part of a formal research paper, sentence correctness, diction, and style.

Prerequisite: ENGL& 101 with a grade of C or better.

ENGL 104 F,W,Sp,S 1-2 credits
Accelerated Review of Grammar and Punctuation

Develops knowledge of standard English grammar and punctuation for college and the workforce through individualized skill work with verbs, subjects, and modifiers. Emphasis is also placed on sentence structure, capitalization, and the following punctuation marks: the comma, apostrophe, semicolon, and quotation marks. Students develop the tools to spot and correct errors in their writing.

ENGL 108 Sp 5 credits
Introduction to Literature H

Provides a broad introduction to various genres of literature, such as the novel, play, poem, short story, and non-fiction essay through extensive reading, discussion, and writing about literary works. Students will gain an appreciation for the diversity of literary offerings and strategies for interpreting them. The course prepares students for more advanced literature courses.

Prerequisite: ENGL 100 or TECH 105 concurrent or passed.

ENGL 110 F,W,Sp,S 5 credits
Industrial Communication

Offers practical, job-related study of written and interpersonal communications. Writing includes resumes, memos, work orders, and short reports. Interpersonal communications involve active listening, as well as paraphrasing, perception checking, and group problem solving.

ENGL 124, 125, 126, 224, 225, 226 F,W,Sp 2 credits
Arts Magazine Publication H, P

Provides instruction and guidance for students editing the Lower Columbia College arts magazine, and examines the role of the literary small press in print and electronic publication.

Prerequisite: ENGL& 101 required; ENGL 231 or 234 recommended.

ENGL 140 W 5 credits
Introduction to Women Writers: DIV H

Examines literature written by women over a broad span of time to understand how social forces relating to gender, class, and race shape(d)their writing. Genres to be read will include poetry, short stories, non-fiction essays, and novels. Meets the Diversity requirement.

Prerequisite: ENGL 100 or TECH 105 or college-level writing ability.

ENGL 161 3 credits
Speed Reading

Helps develop flexibility, versatility, speed of comprehension, and vocabulary acquisition skills. The emphasis is on developing good reading habits and adaptability to different types of materials.

ENGL 204 S 5 credits
The Novel H

Provides extensive reading, discussing, and writing about the works by classic novelists. Through these novels, students will gain an understanding of how the novel works, how it has developed over a period of 200 years, and how its universal truths and insights are still applicable to the modern world.

ENGL 205 W,Sp 5 credits
Film and Drama Appreciation: DIV H

Focuses on how film and drama reflect and shape community attitudes. The course looks historically at the development of narrative and style; however, particular attention is paid to how visual images shape our perceptions, reflect biases, or challenge stereotypes imbedded in popular culture. Students watch and discuss plays and films to develop critical analysis skills for interpretation and evaluation. They read representative works from Asian, African, and native American authors and filmmakers. Meets the Diversity requirement.

Prerequisite: ENGL& 101 or instructor permission.

ENGL 231 F,W,Sp 5 credits
Creative Writing H

Provides an introduction to the writing of short fiction and poetry. Assignments explore techniques of writing and revising, examining the elements of stories and poems. Students critique each other's work and study the published work of other writers.

Prerequisite: ENGL 101& or instructor's permission

ENGL 232 F,W,Sp 5 credits
Creative Writing H

Engages students in writing and revising short fiction and poetry. Assignments explore the elements of stories and poems but allow students to concentrate on one form or the other. Students critique each other's work and study the published work of other writers.

Prerequisite: ENGL 101& and 231 or consent of instructor

**ENGL 233 F,W,Sp 5 credits
Creative Writing H**

Engages students in writing and revising short fiction and poetry. Students may choose to concentrate on stories or poems in individual projects. In class sessions, students critique each other's work and study the published work of other writers.

Prerequisite: ENGL 101&, 231, and 232 or instructor's permission

**ENGL 234 5 credits
Creative Writing: Life Stories H**

Emphasizes the writing, constructive analysis, and revision of creative nonfiction, focusing on the personal experience. Students use journaling and respond to other exercises to develop ideas from personal experience; write, revise, and critique one another's work; and study the published work of other writers.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL& 235 W 5 credits
Technical Writing H**

Emphasizes written workplace communications designed especially for the CIS, engineering, and science professions. Topics covered include document format, visual design, multi-tiered audience, formal and informal reports, instructions, letters, and memos.

Prerequisite: ENGL& 101 with a grade of C or better.

**ENGL& 244 F,W,Sp 5 credits
American Literature H**

Presents the context for works of American literature and studies major works by authors such as Melville, Dickinson, and Hemingway. Explores the major forms and movements in American literature.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL 245 5 credits
Contemporary Literature: DIV H**

Explores contemporary films, drama, poetry, and fiction using analysis, interpretation, and evaluation. Field trips to view a movie or a play, or attendance at a poetry reading may be included. Essays and other written work are required. Meets the Diversity requirement.

Prerequisite: ENGL& 101

**ENGL 251 5 credits
English Literature H**

Surveys major authors from Beowulf, Chaucer, Shakespeare, Donne, Johnson, and Milton through 18th Century authors including Swift, Pope, and Fielding. Seminar-discussion format.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL 252 Sp 5 credits
English Literature H**

Surveys major authors from Blake and Wordsworth among other Romantic writers, Tennyson and Browning among other Victorian writers, and poets and prose writers of the 20th century, including Conrad, Yeats, Joyce, Lawrence, Eliot, Becket, and Auden. The course is operated in a seminar-discussion format.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL 254 5 credits
Understanding Fiction and Poetry H**

Examines traditional and experimental fiction and poetry, presenting the short story and the poem as related literary forms. Students will gain an understanding of the elements of fiction and poetry, as well as the ways in which writers reflect or challenge prevalent societal values through literature. This experience provides an opportunity for students to demonstrate their progress in developing the knowledge, skills, attitudes and values contained in the course plan outcomes.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL 256 5 credits
Special Topics in Literature H**

Focuses on special topics or genres of literature, identified each quarter. Students learn the literary depth of a specific genre or thematic topic while gaining an understanding of the different forms of literature. This experience provides transfer students an opportunity to demonstrate their progress in developing the knowledge, skills, attitudes and values.

Prerequisite: ENGL& 101 or instructor permission.

**ENGL 260 5 credits
World Literature H**

Examines literature from a thematic approach, tracing the human struggle for intellectual identity and personal autonomy in such foundational works as Gilgamesh, the Bible, the Greek classics, and in more recent writings.

Prerequisite: ENGL& 102 or instructor permission.

**ENGL 270 F,Sp 5 credits
Literature for Children H**

Offers a critical survey of literary materials appropriate for children from nursery through elementary school age with practice in using literature with groups.

**ENGL 280 W 5 credits
Multicultural Literature: DIV H**

Provides students with an introduction to multicultural literature. Emphasis is placed on increasing awareness and understanding of the values, beliefs, and experiences of people from different cultures, especially those of Asia, Latin America and Africa. Meets the Diversity requirement.

Prerequisite: ENGL& 101 with a grade of C or better or instructor permission.

English as a Second Language (ESL)

ESL 010 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Reading-Level 1**

Develop communication skills in order to enhance personal, social, and workplace environments in a beginning literacy level ESL reading course for those needing survival English.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 011 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Writing-Level 1**

Develop communication skills in order to enhance personal, social, and workplace environments in a beginning literacy level ESL writing course for those needing survival English.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 012 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Speaking-Level 1**

Develop communication skills in order to enhance personal, social, and workplace environments in a beginning literacy level ESL speaking course for those needing survival English.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 013 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Listening/Observing-Level**

Develop communication skills in order to enhance personal, social, and workplace environments in a beginning literacy level ESL listening/observing course for those needing survival English.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 014 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Integrated-Level 1**

Develop communication skills in order to enhance personal, social, and workplace environments in a beginning literacy level ESL course (integrating speaking, listening, reading, writing, and technology) for those needing survival English.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 015 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Computer Technology & Job Readiness-Level 1**

Develop English communication skills in order to enhance personal, social, and workplace environments in a beginning ESL literacy level Computer Technology and Job Readiness course.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 016 F,W,Sp,S 1-20 credits **Beginning ESL Literacy Intensive Oral communication and Grammar-Level 1**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance personal, social, and workplace in essential daily speech patterns in formal and informal conversations/situations to improve speaking skills at a beginning literacy ESL level.
Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 020 F,W,Sp,S 1-20 credits **Low Beginning ESL Reading-Level 2**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance personal, social, and workplace environments in a Low Beginning Level ESL reading course.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 021 F,W,Sp,S 1-20 credits **Low Beginning ESL Writing-Level 2**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a Low Beginning Level ESL writing course.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 022 F,W,Sp,S 1-20 credits **Low Beginning ESL Speaking-Level 2**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a Low Beginning Level ESL speaking course.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 023 F,W,Sp,S 1-20 credits **Low Beginning ESL Listening/Observing-Level 2**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a Low Beginning Level ESL listening/observing course.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 024 F,W,Sp,S 1-20 credits **Low Beginning ESL Integrated-Level 2**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a Low Beginning Level ESL course (integrating speaking, listening, reading, writing, and technology).
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 025 F,W,Sp,S 1-20 credits **Low Beginning ESL Literacy Computer Technology & Job Readiness-Level 2**

Develop English communication skills in order to enhance personal, social, and workplace environments in a low beginning level ESL technology and job readiness course.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

ESL 026 F,W,Sp,S 1-20 credits **Low Beginning ESL Literacy Intensive Oral Communication and Grammar-Level 2**

Develop and practice ESL Level 2 English grammar and use intensive drill in pronunciation, stress, reduced forms, and intonation of the English language in essential daily speech patterns in formal and informal conversations/situations to improve speaking skills at a beginning ESL level.
Prerequisite: CASAS Appraisal Exam, CASAS score of 181-190, and instructor permission.

**ESL 030 F,W,Sp,S 1-20 credits
High Beginning ESL Reading-Level 3**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance personal, social, and workplace environments in a High Beginning Level ESL reading course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 031 F,W,Sp,S 1-20 credits
High Beginning ESL Writing-Level 3**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a High Beginning Level ESL writing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 032 F,W,Sp,S 1-20 credits
High Beginning ESL Speaking-Level 3**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a High Beginning Level ESL speaking course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 033 F,W,Sp,S 1-20 credits
High Beginning ESL Listening/Observing-Level 3**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a High Beginning Level ESL listening/observing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 034 F,W,Sp,S 1-20 credits
High Beginning ESL Integrated-Level 3**

Further develop communication skills for those who have mastered basic literacy and survival English in order to enhance their personal, social, and workplace environments in a High Beginning Level ESL course (integrating speaking, listening, reading, writing, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 035 F,W,Sp,S 1-20 credits
High Beginning ESL Computer Technology & Job Readiness-Level 3**

Develop communication skills in order to enhance personal, social, and workplace environments in a High Beginning Literacy Level ESL technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 036 F,W,Sp,S 1-20 credits
High Beginning ESL Intensive Oral Communication and Grammar-Level 3**

Develop and practice ESL level 3 English grammar and use intensive drill in pronunciation, stress, reduced forms, and intonation of the English language in essential daily speech patterns in formal and informal/situations to improve speaking skills at a Low Intermediate ESL level.

Prerequisite: CASAS Appraisal Exam, CASAS score of 191-200, and instructor permission.

**ESL 040 F,W,Sp,S 1-20 credits
Low Intermediate ESL Reading-Level 4**

Further develop communication skills for those who have mastered beginning ESL in order to enhance personal, social, and workplace environments in a Low Intermediate Level Integrated ESL reading course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

**ESL 041 F,W,Sp,S 1-20 credits
Low Intermediate ESL Writing-Level 4**

Further develop communication skills for those who have mastered beginning ESL in order to enhance their personal, social, and workplace environments in a Low Intermediate Level Integrated ESL writing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

**ESL 042 F,W,Sp,S 1-20 credits
Low Intermediate ESL Speaking-Level 4**

Further develop communication skills for those who have mastered beginning ESL in order to enhance their personal, social, and workplace environments in a Low Intermediate Level Integrated ESL speaking course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

**ESL 043 F,W,Sp,S 1-20 credits
Low Intermediate ESL Listening/Observing-Level 4**

Further develop communication skills for those who have mastered beginning ESL in order to enhance their personal, social, and workplace environments in a Low Intermediate Level Integrated ESL listening/observing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

**ESL 044 F,W,Sp,S 1-20 credits
Low Intermediate ESL Integrated-Level 4**

Further develop communication skills for those who have mastered beginning literacy in order to enhance their personal, social, and workplace environments in a Low Intermediate Level ESL course integrating speaking, listening, reading, writing, and technology.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

**ESL 045 F,W,Sp,S 1-20 credits
Low Intermediate ESL Computer Technology & Job Readiness-Level 4**

Develop English communication skills in order to enhance personal, social, and workplace environments in a High Intermediate Level ESL technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

ESL 046 F,W,Sp,S 1-20 credits
Low Intermediate ESL Intensive Oral
Communication and Grammar-Level 4

Develop and practice ESL Level 4 English grammar and use intensive drill in pronunciation, stress, reduced forms and intonation of the English language in essential daily speech patterns in formal and informal conversations/situations to improve speaking skills at a High Intermediate ESL level.

Prerequisite: CASAS Appraisal Exam, CASAS score of 201-210, and instructor permission.

ESL 050 F,W,Sp,S 1-20 credits
High Intermediate ESL Reading-Level 5

Further develop communication skills for those who have mastered Low Intermediate ESL in order to enhance personal, social, and workplace environments in a High Intermediate Level Integrated ESL reading course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 051 F,W,Sp,S 1-20 credits
High Intermediate ESL Writing-Level 5

Further develop communication skills for those who have mastered Low Intermediate ESL in order to enhance their personal, social, and workplace environments in a High Intermediate Level Integrated ESL writing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 052 F,W,Sp,S 1-20 credits
High Intermediate ESL Speaking-Level 5

Further develop communication skills for those who have mastered Low Intermediate ESL in order to enhance their personal, social, and workplace environments in a High Intermediate Level Integrated ESL speaking course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 053 F,W,Sp,S 1-20 credits
High Intermediate ESL Listening/Observing-
Level 5

Further develop communication skills for those who have mastered Low Intermediate ESL in order to enhance their personal, social, and workplace environments in a High Intermediate Level Integrated ESL listening/observing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 054 F,W,Sp,S 1-20 credits
High Intermediate ESL Integrated-Level 5

Further develop communication skills for those who have mastered Low Intermediate ESL in order to enhance their personal, social, and workplace environments in a High Intermediate Level Integrated ESL course integrating speaking, listening, reading, writing, and technology.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 055 F,W,Sp,S 1-20 credits
High Intermediate ESL Computer Technology &
Job Readiness-Level 5

Develop English communication skills in order to enhance personal, social, and workplace environments in a High Intermediate Level ESL technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 056 F,W,Sp,S 1-20 credits
High Intermediate ESL Intensive Oral
Communication and Grammar-Level 5

Develop and practice ESL Level 5 English grammar and use intensive drill in pronunciation, stress, reduced forms, and intonation of the English language in essential daily speech patterns in informal and formal conversations/situations to improve speaking skills at a Low Advanced ESL level.

Prerequisite: CASAS Appraisal Exam, CASAS score of 211-220, and instructor permission.

ESL 060 F,W,Sp,S 1-20 credits
Advanced ESL Reading-Level 6

Further develop communication skills for those who have mastered High Intermediate ESL in order to enhance personal, social, and workplace environments in an Advanced Level Integrated ESL reading course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

ESL 061 F,W,Sp,S 1-20 credits
Advanced ESL Writing-Level 6

Further develop communication skills for those who have mastered High Intermediate ESL in order to enhance their personal, social, and workplace environments in an Advanced Level Integrated ESL writing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

ESL 062 F,W,Sp,S 1-20 credits
Advanced ESL Speaking-Level 6

Further develop communication skills for those who have mastered High Intermediate ESL in order to enhance their personal, social, and workplace environments in an Advanced Level Integrated ESL speaking course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

ESL 063 F,W,Sp,S 1-20 credits
Advanced ESL Listening/Observing-Level 6

Further develop communication skills for those who have mastered High Intermediate ESL in order to enhance their personal, social, and workplace environments in an Advanced Level Integrated ESL listening/observing course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

**ESL 064 F,W,Sp,S 1-20 credits
Advanced ESL Integrated-Level 6**

Further develop communication skills for those who have mastered High Intermediate ESL in order to enhance their personal, social, and workplace environments in an Advanced Level Integrated ESL course (integrating speaking, listening, reading, writing, and technology).

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

**ESL 065 F,W,Sp,S 1-20 credits
Advanced ESL Computer Technology & Job
Readiness-Level 6**

Develop English communication skills in order to enhance personal, social, and workplace environments in an Advanced Level ESL technology and job readiness course.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

**ESL 066 F,W,Sp,S 1-20 credits
Advanced ESL Intensive Oral Communication
and Grammar-Level 6**

Introduces and practices ESL Level 6 English grammar and use intensive drill in pronunciation, stress, reduced forms, and intonation of the English language in essential daily speech patterns in formal and informal conversations/situations to improve speaking skills at a High Advanced ESL level.

Prerequisite: CASAS Appraisal Exam, CASAS score of 221-235, and instructor permission.

**ESL 070 F,W,Sp,S 1-3 credits
Educational Interview-ESL**

Develop and monitor a personal plan of action to reach their personal, educational, and workplace goals by providing an orientation to the college community and the Transitional Studies program and their resources and services.

**ESL 071 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 1**

A Beginning Literacy Level ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language Skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 200 and below.

**ESL 072 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 2**

A Beginning Basic Education ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language Skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 201 to 210, or instructor permission.

**ESL 073 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 3**

A Low Intermediate Basic Education ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 211 to 220, or instructor permission.

**ESL 074 F,W,Sp,S 1-20 credits
II-BEST Academic Support-Level 4**

A High Intermediate Basic Education ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 221 to 235, or instructor permission.

**ESL 075 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 5**

A Low Adult Secondary Education ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 236 to 245, or instructor permission.

**ESL 076 F,W,Sp,S 1-20 credits
I-BEST Academic Support-Level 6**

A High Adult Secondary Education ESL course for second language students who are currently working or preparing to work in a specific job area and are enrolled in an I-BEST program. The course integrates math, reading, writing, listening and speaking skills with the linguistic requirements of the job. The content of this course varies each time it is offered. It may include English language skills for specific content areas such as certification for childcare workers, English Language skills for Health Services, etc.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 246 or 255, or instructor permission.

Environmental Science (ENVS)

ENVS 150 **5 credits**
Environment and Society: DIV NS

Introduces the interdisciplinary field of environmental science with an emphasis on the disproportionate impacts environmental problems have on human societies, especially low-income and minority groups. Major concepts include ecology, biodiversity, natural resources, toxicology, population, climate change, and environmental justice. Explores current environmental problems and solutions through case studies set in Africa, Asia, Latin America, and North America. Meets the Diversity requirement.

ENVS 215 **5 credits**
Environmental Issues & Applications NSL

Environmental science is concerned with analyzing and solving problems stemming from many of today's most pressing issues (e.g., climate change, human population growth, toxic chemicals, resource use, and species extinctions). In this course, students will investigate these issues with an emphasis on four overlapping themes: global climate change, environmental toxicology, conservation biology and restoration ecology, and sustainability. Laboratory is included.

Prerequisite: ENGL& 101 or instructor permission, MATH 088, and one or more of the following: BIOL& 100, ENVS 150, ERSI 104, OCEA& 101, GEOL 105 or GEOL 118.

Fire Science (FISC)

FISC 101 F **3 credits**
Introduction to Fire Protection

Studies the history and development of fire service as well as safety and security movements. Identifies general fire hazards and their causes and how to apply fire protection principles.

FISC 105 F **3 credits**
Fundamentals of Fire Prevention

Studies fundamentals of fire inspection standards and techniques of evaluation, identification of hazards, and making practical recommendations. Students write reports and conduct on-site inspections of building to locate hazards and recommend improvements. Students study fire prevention and education programs and conduct presentations.

FISC 109 F **3 credits**
Fire Service Safety

Studies firefighter health and safety as it relates to Washington State. Emphasizes day-to-day health and safety of department members. Addresses standards and regulations, the safety officer's role, accident prevention and investigation, record keeping. Structural, EMS, hazardous materials, and wild land emergencies will be addressed.

FISC 110 W **3 credits**
Fire Science I

Studies characteristics and behavior of fire, fundamental physical laws and chemical reactions occurring in fire and fire suppression. Analyzes factors contributing to fire: its cause, rate of burning, heat generation and travel, by-products of combustion, fire confinement, control, and extinguishing.

FISC 111 F **10 credits**
Basic Fire Fighting Skills

Studies basic tools,, procedures, techniques and safety precautions utilized by the fire fighter during fire ground operations based on nationally recognized professional standards and Washington State "basic fire fighter" training requirements.

FISC 125 Sp **5 credits**
Fire Service Rescue

Studies a variety of procedures, equipment, and tools utilized by emergency rescue personnel. Student will become familiar with building search, auto extrication, rope rescue, and water rescue.

Prerequisite: FISC 112 or instructor permission.

FISC 129 **3 credits**
Emergency Incident Management

Studies the emergency incident management (IMS) process as it applies to the fire service at the "fire company" level. Emphasis to include basic command structure and components, incident safety considerations, personnel accountability, and application of the management process to a variety of emergency situations.

FISC 170 W **8 credits**
Emergency Medical Technician I

Provides skill development in recognition of symptoms of illness and injuries, and in proper emergency care problems. Includes proficiency tests and evaluation sessions. Prepares students to take the state certification examination for EMT I.

FISC 205 W **3 credits**
Fire Investigation and Cause Determination

Studies burning characteristics of combustibles. Interprets clues and burn patterns leading to point of origin. Identifies incendiary indications, sources of ignition and materials ignited, and how to preserve the fire scene evidence.

FISC 206 Sp **3 credits**
Hazardous Materials

Reviews basic chemistry as it applies to fire technology. Studies the identity of hazardous material by color, symbol, and marking. Covers recommended practices for storage and handling of solids, liquids, and gases, and studies fire control methods for these materials. Meets federal standards for awareness and operations level.

FISC 207 Sp 3 credits
Fire Apparatus and Pumping Equipment

Provides an introduction to various fire pumps and their operation. Reviews operating principles and construction of various equipment, and covers preventive maintenance and troubleshooting. Also introduces ground flow and friction loss considerations, and pump discharge pressure calculations.

FISC 210 W 3 credits
Building Construction for Fire Protection

Offers knowledge and skills in the various construction features of buildings. Includes structural features affecting fire spread and building collapse, the effect of fire on materials, fire stops and ratings. Use of blueprints and plans to understand building features and pre-fire planning is emphasized.

FISC 215 Sp 3 credits
Fixed Systems and Extinguishers

Studies portable extinguisher equipment, fire alarm and detection systems, sprinkler systems and standpipes, protection systems for special hazards, explosion release, ventilated systems, inert atmosphere and static bonding.

FISC 220 3 credits
Wildland Firefighter II

Trains persons in the basic skills of wildland fire fighting. Examines wildland fire behavior, fire control tactics, operation of fire pumps, standards for fire fighter safety and survival, and an introduction to the Incident Command System. Students completing this course will be qualified to suppress wildland fire under close supervision.

FISC 224 3 credits
Fire Service Instructor I

Provides a basic understanding of the implementation strategies for specific fire service curricula and instructional methodology used in the workplace. Each student will demonstrate the knowledge of and the ability to deliver instruction from prepared materials, and effectively critique lesson deliveries of their peers.

FISC 230 1 credit
Wildland Firefighter II Refresher

Refreshes basic skills of wildland fire fighting. Examines wildland fire behavior, fire control tactics, operation of fire pumps, standards for firefighter safety and survival, and an introduction to the Incident Command System. Students completing this course will be qualified to suppress wildland fire under close supervision.

Prerequisite: FISC 220 or equivalent.

FISC 255 Sp 3 credits
Fire Fighting Tactics and Strategy

Studies fire ground tactics and strategy, responses and size-ups, protection of exposures, containment, extinguishing, the command post, combined operations, analysis and post-mortem evaluation, pre-fire surveys, and planning.

Geography (GEOG)**GEOG 105 5 credits**
Physical Geography
NSL

Examines our physical environment especially the global distribution and interrelationship of such factors as climate, soils, flora, fauna, and landforms. Topics include maps, Earth-Sun relationships, seasons, time, weather, hydrology, landforms, climate types, natural vegetation assemblages, biomes, ecosystems, and their significance in the biosphere. Laboratory includes use of globes, maps, aerial photographs, data tables, and graphs for analysis and problem solving. Use of the scientific method is emphasized.

Geology (GEOL)**GEOL& 101 5 credits**
Intro Physical Geology
NSL

Examines Earth's internal composition and structure, its internal and superficial processes. Major topics: rocks, minerals, weathering, mass movements, erosion, deserts, coasts, ground water, plate tectonics, volcanoes, earthquakes, mountain building, and geologic resources and hazards.

Laboratory work includes identification of rocks, minerals, and landforms, interpretation of topographic and geologic maps and cross-sections, stereograms, photographs, and satellite images.

GEOL 105 5 credits
Geology: Earth Revealed
NSL

Offers a comprehensive one-term study of the Earth's physical properties and processes. Major topics are rocks and minerals, weathering, erosion, deserts, coasts, ground water, plate tectonics, volcanoes, earthquakes, mountain building, and geologic hazards. Laboratory work, to be completed at home, includes identification of minerals and rocks and map interpretation. This telecourse is recommended only for the strongly self-motivated student. It is not intended for geology majors.

GEOL 116 5 credits
Geology: Earth's Interior
NSL

Examines Earth's internal composition, structure, and dynamic internal processes. Major topics include minerals, the rock cycle, volcanoes, earthquakes, mountain building, plate tectonics, and geologic resources. Laboratory work includes identification of minerals and rocks, location of earthquake epicenters, and mapping of geologic hazards. A field trip may be required.

GEOL 118 5 credits
Historical Geology
NSL

Examines the physical and biological evolution of Earth as determined from evidence preserved in rocks. Major topics include plate tectonics, evolution, biogeography, geologic time, and climate change. Laboratory includes identification of rocks and fossils, determination of relative and absolute ages, and interpretation of past environments. A field trip may be required.

GEOL& 208 **5 credits**
Geology of the Pacific Northwest **NSL**

Explores the rocks, plate tectonics and other geologic features, and evolution of the Pacific Northwest, including the Cascades, Columbia Plateau, Olympic Mountains, and Yellowstone. Laboratory includes rock identification, interpretation of topographic and geologic maps of the Northwest. Field trips may be required.

Health (HLTH)

HLTH 100 **F,W,Sp,S** **3 credits**
Occupational Safety and Health

Introduces fundamental concepts and practices related to safety and hygiene in the work place, including bloodborne and airborne pathogens, AIDS awareness and risk reducing behaviors. First Aid/CPR-D training is included. Students are issued First Aid/CPR-D Health Care Provider card upon completion.

HLTH 106 **F,W,Sp** **2 credits**
Health Today **SSA**

Analyzes a vast array of information on the dangers of risky health behaviors and the benefits of healthy decisions as it affects one's life. Emphasis will be on personal decision-making and positive behavioral changes toward the goal of wellness as a lifestyle.

High School Completion (HSC)

HSC 080 **F,W,Sp,S** **1-5 credits**
Mathematical Concepts

Provides the student with a review of arithmetic operations on whole numbers, fractions, and decimals. Covers applications of percent, proportions, and ratios in order to solve multi-step problems. Prepares the student for future math courses while introducing critical thinking and problem solving in math related real-world situations. Strong emphasis on collaborative work when solving mathematical problems.

Prerequisite: Acceptance to CEO program.

HSC 085 **F,W,Sp,S** **1-5 credits**
Health

Covers topics in the areas of physical, mental, and emotional health.

HSC 086 **F,W,Sp,S** **1-5 credits**
Introduction to Literature

Explores various genres and the elements of the short story: plot, character, setting, theme, style, and perspective.

HSC 087 **F,W,Sp,S** **1-5 credits**
Literature: Creative Non-Fiction

Offers and introduction to the different types of creative non-fiction: narration, description, illustration, definition, comparison and contrast, cause and effect, process, and argument.

HSC 088 **F,W,Sp,S** **1-5 credits**
Introduction to Writing

Offers an introduction to patterns of development in writing and practice in the writing process.

HSC 090 **F,W,Sp,S** **1-5 credits**
Natural Hazards

Surveys the physical characteristics, cultural characteristics, and locations of places on Earth's surface, with an emphasis on human interaction on the environment and the geographic context of global issues.

HSC 091 **F,W,Sp,S** **1-5 credits**
Environmental Science

Surveys ecological concepts, which include using the scientific method for gathering data, exposure to scientific laws and theories, population dynamics, making careful observation, humans and the environment, and basic theories of biodiversity.

HSC 092 **F,W,Sp,S** **1-5 credits**
U.S. Government

Surveys the United States system of government including the constitution, the three branches of government, and the effect citizens have on governmental decisions. Examines current political and governmental topics.

HSC 093 **F,W,Sp,S** **1-5 credits**
U.S. History I

Surveys United States history from pre-colonial times up to the beginning of the Civil War.

HSC 094 **F,W,Sp,S** **1-5 credits**
U.S. History II

Surveys United States history from the Civil War to the present. Continuation of U.S. History I.

HSC 095 **F,W,Sp,S** **1-5 credits**
Washington State History

Surveys early development in the Pacific Northwest, including Native American history, early white explorers, government claims, treaties and wars, resources and industries, and the statehood of Oregon and Washington.

HSC 096 **F,W,Sp,S** **1-5 credits**
Contemporary World Problems

Surveys current world problems regarding the environment, health, politics and contemporary science issues.

HSC 097 **F,W,Sp,S** **1-5 credits**
Consumer Finance

Presents topics for personal money management, including budgeting, banking, consumer credit, and taxes.

History (HIST)

HIST& 116 **5 credits**
Western Civilization I **H**

Traces the economic, political, social and cultural development of various western civilizations up to c. 1500. We will also endeavor to show that contemporary American culture is the living, breathing manifestation of ideas, beliefs, customs, habits and institutions of Western cultural traditions.

HIST& 117 **5 credits**
Western Civilization II **SS**

Examines the material and mental developments in Western religious, political, economic, social and cultural life from the early sixteenth century to the mid-nineteenth century. More specifically, the course explores the profound changes attending the Reformation, the scientific revolution, the rise of the modern nation state, the Enlightenment, and the projection of the Western presence abroad.

HIST& 126 **F** **5 credits**
World Civilizations I:DIV **H**

Focuses on the origins, development, and features of various societies up to 1500 C.E., including the peoples of Asia, Africa, Europe, the Americas, and Oceania. This course examines the political, social, and cultural contours of particular societies and the interactions and relationships among people of different historical cultures. Meets the Diversity requirement.

HIST& 127 **W** **5 credits**
World Civilizations II:DIV **SS**

Examines the dramatic changes in world history in the early modern period, a time of profound and unprecedented transformations in many societies around the world. Historical topics include: the development of new economic systems such as mercantile capitalism; large-scale interactions such as the Columbian exchange; scientific, philosophical, and political revolutions; and new global relationships such as colonialism. Meets the Diversity requirement.

HIST& 128 **F,S** **5 credits**
World Civilizations III:DIV **SS**

Examines the ways people in the past two hundred years have shaped and reacted to the issues of the modern world. Special attention may be given to "modern" themes: 1) the emergence of global economic systems and their political, social and cultural effects; 2) the role of warfare, empire, power relations, and revolution in shaping international events; and 3) the interactions and reactions when cultural values, ideas, and technologies of many societies are in sustained contact. Meets the Diversity requirement.

HIST& 136 **F,W,S** **5 credits**
U.S. History 1 **SS**

Focuses on the causes and effects of social, cultural, political, intellectual and economic change, from the colonial period to the end of the Civil War. Attention will also be given to the events outside North America that contributed to the emergence of the United States.

HIST& 137 **F,W,S** **5 credits**
U.S. History 2 **SS**

Focuses on the causes and effects of social, cultural, political, intellectual and economic change, from the end of the Civil War to the present. Attention will also be given to the events (e.g., immigration) outside North America that contributed to the emergence of the U.S. as well as the effects (e.g., imperialism) of its emergence on the rest of the world.

HIST 205 **S** **5 credits**
History of East Asia: DIV **SS**

Explores the past two hundred years of East Asia history, paying particular attention to China and Japan. It examines a number of topics: 1) the political, economic, and cultural changes and continuities within East Asian societies, 2) the interrelations among these countries, and 3) their interactions with the world outside their region. Meets the Diversity requirement.

HIST& 215 **W** **5 credits**
Women in U.S. History: DIV **SS**

Focuses on the history of American women from pre-European settlement to the present. Lectures, readings, and assessments emphasize how female roles in family, work, politics, and culture have changed over time, creating new definitions of womanhood. Emphasizes the diversity among women in terms of race, ethnicity, class, and sexuality. Meets the Diversity requirement.

HIST 254 **5 credits**
History of Washington and the Pacific Northwest **SS**

Provides a social, political, economic history of the Pacific Northwest with particular emphasis on the State of Washington, including Native American history and gender/ethnic history. Course meets the Washington State History requirement for teacher certification.

Home and Family Life (HOFL)

HOFL 131, 132, 133 **3 credits**
Parent/Child Experience **SSA**

Provides knowledge of early childhood development and parenting skills. Educational experiences may take place in early learning environments such as the LCC Home and Family Life Early Learning Center, and/or Headstart/ECEAP classrooms. Other options provided for students include parent seminars and independent parent/child projects.

Human Development (HDEV)

HDEV 075 **2 credits**

Journeys-A Workshop for Women

Targets women in life transitions - divorce, empty nest, job loss, etc., and provides them with tools to understand the challenges involved in change and new beginnings. Explores the process of transition, models of adapting to change, self awareness, and self assessment. Participants will explore educational and career options, with a focus on non-traditional careers that offer high-wage, high-demand opportunities, and develop a personal Success Plan. Meets for seven weeks and is graded on a pass/fail basis.

HDEV 080 **1-7 credits**

Transitions

Explores and develops the coping skills, attitudes, and behaviors needed to deal with job loss or underemployment and move forward with career and life planning. Main topics include dealing with job loss, assessing interests and skills, career exploration, goal setting, and job finding skills. Additional topics may include specialized skill assessment, financial management, utilizing community resources, advanced interview preparation, computerized job search. Skill building in reading, writing, math, and computers may also be integrated with these studies.

HDEV 090 **2 credits**

Success by Your Design

Explores the connection between their thoughts and behaviors. Students will apply concepts in this interactive course to cultivate "Thought patterns for a Successful Career. Through self-reflection and discussion, students will examine thought processes and how to control them, as well as understand how the mind works to create beliefs, habits, and attitudes, thus re-calibrating them for success.

HDEV 100 **1 credit**

New Student Orientation

Helps students gain in-depth knowledge of the enrollment process, student rights and responsibilities, and college policies and procedures. Emphasizes activities and services available in Career and Employment Services, Computer Labs, the Learning Center, Financial Aid, and the LCC Library. Students will be required to attend two student success series workshops.

HDEV 101 **1-5 credits**

Career Planning

Launches students into an investigation of interests, values, and careers, followed by decision-making and goal setting. Life planning component concentrates on self-esteem, self-exploration, emotions, relationships, and locus of control. The class may be offered for different 2 or 3 credits as well. Emphasis in the content will vary accordingly.

HDEV 106, 107, 108, 206, 207, 208 **1-2 credits**
Activities/Events Programming

Involves students in development and implementation of variety of co-curricular activities. Students learn to organize educational, cultural, social, and recreational programs for campus community, as well as budget development, committee participation, and cooperative programming with campus and community organizations. Students enrolled for one credit either serve on the ASLCC Programming Board as a program director or some combination of programming committee(s) and or special projects assignment(s). Additional credit is available for additional committee or project responsibilities. This course is offered on a pass/fail basis.

HDEV 110 **1-3 credits**

Job Finding Skills

Provides effective job search techniques, including identification of transferable skills, job applications, job readiness, and creative job search. Students should be ready to conduct an active job search.

HDEV 115 **2 credits**

Stress Management

Focuses on developing effective life coping skills as related to interpersonal, work, family, and academic stressors. Students examine their beliefs, emotions, and self-defeating behaviors.

HDEV 116, 117, 118, 216, 217, 218 **1-3 credits**

Leadership and Student Government

Offers experience in elections, meeting procedure, college and ASLCC committees, planning and conducting governance activities, planning and managing budgets, deliberating issues and setting goals for student welfare, and effective leadership responsibilities. Students enrolled in this class are voting members of the Executive Council of the ASLCC.

HDEV 120 **1-6 credits**

Individual and Group Relations

Extends to students' opportunities in transfer information, goal setting, and other areas related to behavior change. Course may be repeated up to six times for a total of 6 credits.

HDEV 125 **2 credits**

Assertiveness Training

Examines interpersonal dynamics of relationships and personality. Students explore fears and anxieties connected to their interpersonal conflicts, as well as the impact of their personality on communication and behavior.

HDEV 127 **1-3 credits**

Student Support Services

This variable 1 - 3 credit course is designed to increase the retention, graduation, and transfer rate of first generation, low-income, and students with disabilities who are enrolled as Student Support Services participants. This course will expose students to strategies and activities designed to enhance a student's ability to learn, develop educational perspective, and improve academic performance. Emphasis on student's Individualized Academic Plan and personal needs will determine the class content for each student.

HDEV 145 **2 credits**
Anger Management

Encourages students to examine irrational beliefs and self-defeating behaviors. Focus is on covert and overt behaviors contributing to the power held by our “intimate enemies.”

HDEV 150 **1-3 credits**
Psychology of Humor

Engages students in laughter and play. Focuses on biological and psychological effects of humor. Designed to help students develop health-conscious environment, manage pain, cope with emotional issues, and reduce stress. Pass/Fail grade.

Humanities (HUM)**HUM 104** **5 credits**
Ethics and Cultural Values: DIV **H**

Explores and analyzes moral issues from various perspectives and examine elements of virtue, duty, obligation, and rights from various classical, traditional, and contemporary systems as presented in Western, Hindu, Buddhist, Confucian, Islamic, and/or African writings, films, literature, and/or practices. Meets the Diversity requirement.

Prerequisite: College-level reading.

HUM 106 **1 credit**
Community Conversations

A weekly lecture series addressing contemporary issues in American life. The areas and issues contemplated include politics, the family, religion, the environment, health care, the economy and other important issues.

HUM 107 **1 credit**
How to See a Play **H**

Read play produced by LCC Center Stage and attend performance. After performance, actors, director, and designers participate in talkback session, answering questions prepared by students regarding play, production, and various elements required for a play presentation. Talkback includes social, political, philosophical and psychological components of the play and actor interpretation of the role(s) played.

HUM 110 **5 credits**
Introduction to Cultures: DIV **H**

Focuses on United States immigrant groups and introduces students to a specific culture each quarter. The course will explore language, history, and social structures of the country of origin to provide insight into values and customs. The class schedule will specify the group to be featured during a given quarter and may change from quarter to quarter. For example, one quarter may feature Vietnamese while another may focus on Russian, Mexican, or other immigrants. Meets the Diversity requirement.

HUM& 116 **5 credits**
Humanities I **H**

Survey of major movements in philosophy, art, music, architecture, and literature from prehistory to 1300 C.E. Exploration, analysis, and discussion of the era's masterpieces from around the world as well as the historical and cultural influences of the birth of civilization in the Near and Far East, the Classical Eras of Greece, Rome, and China, and the rise of Buddhism, Christianity, and Islam and cross-cultural encounters upon such works and the masters who created them.

Prerequisite: College-level reading required.

HUM& 117 **5 credits**
Humanities II **H**

Survey of major movements in philosophy, art, music, architecture, and literature from 1300 to 1800 C.E. Exploration, analysis, and discussion of the era's masterpieces from around the world as well as the historical and cultural influences of the Renaissance, the Reformation, the Enlightenment, the Scientific Revolution, and cross-cultural encounters upon such works and the masters who created them.

Prerequisite: College-level reading required.

HUM& 118 **5 credits**
Humanities III **H**

Survey of major movements in philosophy, art, music, architecture, and literature from 1800 C.E. to the present. Exploration, analysis, and discussion of the era's masterpieces from around the world as well as the historical and cultural influences of the Romantic Era, Freudian theory, World Wars I and II, totalitarianism, postmodernism, and the Information Age, and cross-cultural encounters upon such works and the masters who created them.

Prerequisite: College-level reading required.

HUM 164, 165, 166 **5 credits**
Lifestyles **H**

Examines personal lifestyles affecting daily life, exploring them through a variety of topics in the humanities. Drama, film, music, art, architecture, etc.

HUM 210 **5 credits**
Myths and Rites: DIV **H**

Defines and explores examples of creation, flood, and resurrection myths as well as diverse examples of initiation, celebration, religious, and political rites from around the world and across time. The significance of such myths and rites are also explored through the analysis of works of drama, literature, and film. Meets the Diversity requirement.

Prerequisite: ENGL& 101

HUM 220 **1-10 credits**
Arts Alive **H**

Introduces the basics of appreciation and criticism for the arts through study and attendance at college and regional events. Explores and compares ideas and themes expressed in art, literature, music, dance, and theatre around the world. Studies different cultures and styles each term, and may be taken out of sequence. Requires attendance at a minimum of three regional events.

HUM 230 **5 credits**
Thinking about Thinking **H**

Examines and explores the role of critical thinking and analysis in evaluating written material to include literature, non-fiction prose, and media sources. Applies various models from formal logic and literary criticism to discover both the explicit and implicit meaning of fiction, non-fiction prose and media sources.

Prerequisite: ENGL& 101 or instructor permission.

Library (LIBR)

LIBR 094 **F,W,Sp,S** **2 credits**
Information Literacy I

Introduces students to the basic skills, strategies, and tools of information research. Emphasis is placed on the process of identifying information needs, selecting appropriate sources, and evaluating information for accuracy. Students will gain competency in using traditional resources, e.g., the library catalog, and also explore electronic resources such as databases and Internet search engines.

LIBR 101 **2 credits**
Introduction to Library & Information Research HA

Introduces students to the basic principles of information research. Emphasis is placed on the process of locating and evaluating information in both print and online formats. Includes basic introduction to searching the Internet, online databases, online library catalogs, and the use of various tools to access information. An annotated bibliography will be developed in an academic area of the students' choice. This course is especially helpful to those enrolled in classes with a required research paper.

LIBR 104 **F,W,Sp,S** **2 credits**
Information Literacy II

Reinforces basic research skills, strategies, and tools of information. Develops an understanding of the entire research process, from identifying topics to creating an annotated bibliography. Topics include narrowing and refining electronic searches, finding access to many types of resources, and evaluating popular and scholarly sources using a variety of criteria. Avoidance of plagiarism and correct documentation will be emphasized.

LIBR 204 **F,W,Sp,S** **1-2 credits**
Information Literacy III

Guides students through the process of designing and completing a complex research assignment. Emphasis will be placed on evaluating information, including assessing the differences between databases and applying a rubric of information evaluation. Additional topics addressed include proper usage of quotations, citation styles, and annotated bibliographies. Part 1 includes refining a research topic, finding sources, and identifying and avoiding plagiarism. Part 2 focuses on evaluation and annotation of sources and reflection on the research project.

Machine Trades (MASP)

MASP 071 **F** **1 credit**
Machine Shop Support I

Introduces machine shop practices. This theory course addresses topics such as the appropriate uses and safe operation of basic hand tools, saws, bench grinders, drill press and the engine lathe. Concurrent enrollment in MASP 111 required.

MASP 072 **W** **1 credit**
Machine Shop Support II

Introduces machine shop practices. This theory course addresses topics such as basic metallurgy and the appropriate uses and safe operation of milling machines and grinding machines. Concurrent enrollment in MASP 111 required.

MASP 107 **F,W,Sp,S** **1-6 credits**
Machining for Related Occupations

This course will expose students to three basic types of machine tools as well as general shop safety, layout, cutting tool geometry, and precision measuring. The three areas of focus will be hole operations such as drilling, reaming, and tapping, engine lathe operations turning, facing, and boring, the basic operation of the vertical milling machine.

MASP 111 **F,W,Sp,S** **1-10 credits**
Machine Shop I

Designed to introduce the beginning student to the safe operation of basic hand tools, saws, bench grinders, drill press and the engine lathe. The student will use these tools to complete basic projects designed to use the equipment in a wide variety of operations to develop basic skills.

MASP 112 **F,W,Sp,S** **1-10 credits**
Machine Shop II

Continues building skills learned in MASP 111, while expanding the scope to include more advanced procedures on equipment used in the previous class. This class also introduces new equipment such as a shaper and surface grinder, along with tools and procedures required for their safe operation.

Prerequisite: 10 credits of MASP 107 and/or MASP 111.

MASP 113 **F,W,Sp,S** **1-10 credits**
Machine Shop III

Teaches students the use of milling machines and carbide cutting tools. This course will cover various techniques of holding parts and the proper use of different styles of machinery. The student will also learn to apply basic and advanced procedures to accomplish the required tasks.

Prerequisite: 10 credits of MASP 112.

MASP 114 **F,W,Sp,S** **1-10 credits**
Machine Shop IV

Teaches design, and students will build a major project using as many machines and skills as possible to complete the project within the quarter. The project must demonstrate the proper use of machine tools and procedures learned throughout the program.

Prerequisite: 10 credits of MASP 113.

**MASP 204 F,W,Sp,S 3 credits
CNC Machining Center Fundamentals**

This course introduces students to the history, theory, and workings of computer numerically controlled Machining Centers. The course provides a basic understanding of the required skills to program, set-up, and operate computerized machine tools.

**MASP 205 F,W,Sp,S 3 credits
CNC Turning Center Fundamentals**

This course introduces students to the history, theory, and workings of computer numerically controlled Turning Centers. The course provides a basic understanding of the required skills to program, set-up, and operate computerized machine tools.

**MASP 221 F,W,Sp,S 1-10 credits
CNC Milling**

Introduces students through hands-on experience to the basic operations of CNC machines. Working with computer controlled mills, basic machine functions are used to produce parts of various shapes that could not be easily made on conventional equipment.

Prerequisite: MASP 204.

**MASP 222 F,W,Sp,S 10 credits
CNC Turning**

Introduces students through hands-on experience to the basic operations of CNC machines. Working with computer controlled turning centers, basic machine functions are used to produce parts of various shapes that could not be easily made on conventional equipment.

Prerequisite: MASP 205.

**MASP 223 F,W,Sp,S 1-6 credits
Advanced CNC Processes**

This course exposes the student to advanced machining practices on the CNC Machining Center and CNC Turning Center including introduction of 4th axis set-ups and programmable tailstock operations. It will also include nontraditional set-ups.

Prerequisite: MASP 221 or MASP 222.

Manufacturing (MFG)

**MFG 105 W 3 credits
Industrial Safety**

Provides instruction on safety topics and practices specifically related to industrial work environments. Topics include an overview of OSHA/WISHA requirements, personal protective equipment, energy lock-out/tag-out procedures, material handling, electrical safety, machine guarding, hazardous materials, fire prevention, hazard identification and control, and safety inspection.

**MFG 110 4 credits
Project Management**

The course is an introduction to the theory of project development procedures. The concepts used for project management will include scheduling by means of the critical path method. The fundamentals of CPM will be presented and the concepts applied with software used in industry. Basic job estimating theory will be presented and applied using current industrial software.

**MFG 115 F 5 credits
Manufacturing Processes**

A compressive study of the processing of materials, industry standards, and the manufacturing techniques that expose students to the basic types of machine tools as well as cutting tool geometry and precision measuring.

**MFG 120 Sp 4 credits
Qualify Assurance**

Provides the student with a comprehensive introduction to the principles and purpose of Quality Assurance Management in industry. The student will also gain basic understanding of the quality control tools used in industry, such as standard deviation, histograms, distribution curves, etc.

**MFG 130 W 5 credits
Materials Science**

Material Science is a study of the nature, structure, characteristics, and properties of natural and synthetic materials used in contemporary industry. Emphasis will be placed on understanding how the structure and properties of industrial influence the selection of primary materials and their conversion into useful products.

**MFG 140 F 4 credits
Applied Hydraulics**

Covers basic problems of hydraulics, fluids, power, hydraulics actuators, controls, pressures and circuits, and principles of industrial applications.

Prerequisite: MATH 079 or higher or instructor permission.

**MFG 205 Sp 3 credits
Work Teams in Industry**

Explores the interpersonal skills, group roles, team structures, problem solving techniques, and work ethics necessary for success in modern industrial organizations. Practical exercises are used to allow students to develop critical skills.

**MFG 230 Sp 4 credits
Computer Integrated Manufacturing**

Introduces the student to the basic concepts of Computer Integrated Manufacturing and provides a foundation for applying those concepts in actual industrial situations. The course also introduces the student to CAD/CAM concepts and their function in the design and manufacturing process. Students will use specialized software to design parts, simulate the machining process, and observe the production of actual machine parts.

Math (MATH)

MATH 050 F,W,Sp,S 1 credit
Review Math – Whole Numbers

Provides a review of addition, subtraction, multiplication, and division of whole numbers.

MATH 078 F,W,Sp,S 3 credits
Pre-College Math I

Covers operations on and applications of integers, fractions, and decimals. This is the first in a three quarter pre-college mathematics sequence which contains pre-college math modules 01 - 03. Credit cannot be earned for both MATH 078 and TECH 078.

Prerequisite: Placement exam or instructor permission.

MATH 079 F,W,Sp,S 2 credits
Pre-College Math I

Covers operations on and applications of ratios, proportions, and percents. Also includes topics in measurement and geometry. This is the continuation of the first in a three quarter pre-college mathematics sequence which contains pre-college math modules 04 - 05. Credit cannot be earned for both MATH 079 and TECH 079.

Prerequisite: MATH 078 with a C or better, placement exam, or instructor permission.

MATH 088 F,W,Sp,S 3 credits
Pre-College Math II

Covers solving linear equations and inequalities and an introduction to graphing. Techniques and strategies for problem solving are emphasized. This is the second in a three quarter pre-college mathematics sequence which contains pre-college math modules 06 - 08. Credit cannot be earned for both MATH 088 and TECH 088.

Prerequisite: MATH 079 with a C or better, placement exam, or instructor permission.

MATH 089 F,W,Sp,S 2 credits
Pre-College Math II

Covers operations on polynomials and factoring of polynomials. This is the continuation of the second in a three quarter pre-college mathematics sequence which contains pre-college math modules 09 - 10. Credit cannot be earned for both MATH 089 and TECH 089.

Prerequisite: MATH 088 with a C or better, placement exam, or instructor permission.

MATH 098 F,W,Sp,S 3 credits
Pre-College Math III

Covers solving systems of equations and operations on rational and radical expressions. This is the third in a three quarter pre-college mathematics sequence which contains pre-college math modules 11 - 13. Credit cannot be earned for both MATH 098 and TECH 098.

Prerequisite: MATH 089 with a C or better, placement exam, or instructor permission.

MATH 099 F,W,Sp,S 2 credits
Pre-College Math III

Covers solving and graphing quadratic equations and an introduction to exponential and logarithmic functions. This is the continuation of the third in a three quarter pre-college mathematics sequence which contains pre-college math modules 14-15.

Prerequisite: MATH 098 with a C or better, placement exam, or instructor permission.

MATH 105 W 5 credits
Math for Health Sciences

Includes a review of the basic arithmetic skills, including whole numbers and decimal numbers; fractions and percentages; powers of 10 and logarithms; introduction to basic algebraic concepts, including fractional equations and formulas; metric, apothecaries and household systems of measurement and calculations needed to determine dosages.

Prerequisite: MATH 078/079 or TECH 079 with a grade of C or better.

MATH 106 F,Sp 5 credits
Industrial Mathematics

Emphasizes basic skills in applied mathematics designed to support students entering the vocational/technical work force of tomorrow. The focus is real world problem solving that students carry to their specific careers. Although the use of math in the workplace is primary, emphasis is given to the critical and creative thinking process as students look to strengthen their use of arithmetic concepts, measurements, practical geometry, basic algebra and right angle trigonometry.

Prerequisite: MATH 079 or TECH 079 with a C or better or instructor permission.

MATH& 107 F,W,Sp,S 5 credits
Math in Society NS

Functions as a terminal course in mathematics for students whose major does not require further mathematics. The core topics of this course are logic, probability and statistics. Additional topics will be selected by the instructor. These topics could include geometry, number systems, linear programming, set theory, number theory, functions, graph theory, topology, etc.

Prerequisite: MATH 099 with a grade of C or better.

MATH 112 F,W,Sp,S 5 credits
College Algebra NS

This course prepares students for further study in science, engineering, mathematics and business. The course covers advanced techniques for solving equations and systems of equations. The analysis and graphing of functions including polynomial, rational, exponential and logarithmic functions is emphasized.

Prerequisite: MATH 099 with a grade of C or better

MATH 113 **W,Sp,S** **5 credits**
Trigonometry **NS**

Provides preparation for further math studies, including calculus. Students review properties of real numbers, and then investigate angle measurement, trigonometric functions and their inverses, graphs of trig functions, solving trig equations, complex numbers, polar coordinates and DeMoivre's Theorem. Students study appropriate applications throughout the course.

Prerequisite: MATH 112 with a grade of C or better

MATH 125 **W** **5 credits**
Finite Mathematics **NS**

Acquaints students with linear equations and matrices, simplex method, sets and counting, probability, statistics, Markov processes, and game theory.

Prerequisite: MATH 099 with a grade of C or better

MATH& 131 **F** **5 credits**
Math for Elementary Teachers I

Strengthens students understanding of problem solving, operations on whole numbers, decimals and fractions, and number theory. This is the first class in a two-part series designed to meet the requirements for future teachers of grades K-8.

Prerequisite: MATH 099 with a grade of C or better. MATH& 107 is recommended.

MATH& 132 **W** **5 credits**
Math for Elementary Teachers 2 **NS**

Strengthens students' understanding of the real number system, probability and statistics, geometry, measurement, functions and graphs. This is the second class in a two-part series designed to meet the requirements for future teachers of grades K-8.

Prerequisite: MATH& 131 with a grade of C or better. MATH& 107 recommended.

MATH& 148 **Sp** **5 credits**
Business Calculus **NS**

Introduces calculus concepts needed by students of management, social science or biology, or can serve as a survey course for liberal arts majors. Course covers sets, systems of numbers, relations and functions, limits, differentiation and integration, including the definite integral, exponential and logarithmic functions and applications from various fields.

Prerequisite: MATH 112 or MATH 150 with a grade of C or better

MATH 150 **F,Sp,S** **5 credits**
Precalculus **NS**

Prepares the student for the calculus sequence of courses. Students review real number systems, field properties, relations and functions, equations and inequalities, circular and inverse functions and graphs. Intended for the student with a strong background in high school mathematics.

Prerequisite: MATH 112 and MATH 113 with a grade of C or better

MATH& 151 **F,W** **5 credits**
Calculus I **NS**

Investigates the ideas of continuity and limit, introduces the derivative as a limit, practices techniques for computing derivatives of functions, discusses the mean value theorem and its significance, utilizes these concepts to solve problems involving related rates and extreme values.

Prerequisite: MATH 150 with a grade of C or better.

MATH& 152 **W,Sp** **5 credits**
Calculus II **NS**

Introduces techniques of anti differentiation of functions including trigonometric, logarithmic, exponential, and hyperbolic functions. Applies the concept of the definite integral to solve problems involving force, work, volume, surface area, business and economics.

Prerequisite: MATH& 151 with a grade of C or better.

MATH& 153 **F,Sp** **5 credits**
Calculus III **NS**

Focuses on infinite series, partial derivatives, vector calculus and their applications. Incorporates the use of polar, cylindrical and spherical coordinate systems in applications of the calculus.

Prerequisite: MATH& 152 with a grade of C or better.

MATH 154 **W,S** **3 credits**
Calculus IV **NS**

Continuation of Calculus III. Topics include partial derivatives, multiple integrals, and vector calculus.

Prerequisite: MATH& 153 with a grade of C or better.

MATH 210 **F,W,Sp,S** **5 credits**
Elements of Statistics **NS**

Introduces the student to descriptive statistics, probability and inferential statistical methods. Topics include probability distributions, sampling techniques, measures of central tendency and dispersion, correlation, regression, hypothesis testing and statistical inference. Credit cannot be earned for both BUS 206 and MATH 210.

Prerequisite: MATH 099 or TECH 099 with a grade of C or better.

MATH 215 **Sp** **5 credits**
Discrete Structures

Acquaints students with mathematical concepts used in computer science. Topics can include logic, induction, combinatorics, recursion, analysis of algorithms and graph theory.

Prerequisite: MATH 150 with a grade of C or better or instructor permission.

MATH 220 **Sp** **5 credits**
Linear Algebra **NS**

Presents the theory and properties of matrices, determinants and linear transformations. Introduces vector space and the Gram-Schmidt orthonormalization process. Deals with the calculation and application of eigenvalues and eigenvectors.

Prerequisite: MATH& 151 with a grade of C or better or instructor permission.

MATH 240 W 5 credits
Differential Equations NS

Introduces techniques of solving ordinary differential equations including the elementary methods used for first order differential equations, method of undetermined coefficients and variation of parameters for higher order equations. Includes techniques of solving systems of differential equations, the method of La Place transforms and series solutions to differential equations.

Prerequisite: MATH& 153 with a grade of C or better.

Medical Assisting (MEDA)**MEDA 101 F,W,Sp,S 3 credits**
Medical Vocabulary I

Provides a foundation for building a medical vocabulary including the study of prefixes, roots, suffixes, combining forms, and pronunciation. Emphasis is on using medical terms accurately in documenting and reporting patient care procedures. Develops skills for utilizing a cyclopedic medical dictionary.

MEDA 102 F,W 3 credits
Medical Vocabulary II

Continues the focus of MEDA 101 or BTEC 181, incorporating actual medical records and demonstrating how medical terminology is used in the clinical setting. Electronic media are used.

Prerequisite: MEDA 101 or BTEC 181

MEDA 120 F,Sp 5 credits
Survey of Human Anatomy and Physiology

Introduces students to such fundamental biological principles as the cell and metabolism, then progresses through tissues to human organ systems including respiratory, circulatory, digestive, reproductive, immune, nervous, musculoskeletal, urinary and sensory organs.

Prerequisite: Competency in ENGL 100 or TECH 105 and MATH 079 or TECH 079 or acceptance into the Medical Assisting Program. Medical Assisting Program Director permission required for non-MEDA students.

MEDA 122 W 2 credits
Law & Ethics for the Medical Office

Presents the legal, ethical, and bioethical issues relevant to medical office settings. Course features legal cases and legislation. Topics include patient confidentiality, advance directives, consents, professional liability, medical malpractice, release of information, bioethical case studies, the American Association of Medical Assistants' professional code of ethics, and specific Washington State legislation relating to Medical Assistants.

Prerequisite: Instructor permission.

MEDA 145 Sp 6 credits
Medical Laboratory Techniques

Enables student to develop knowledge and skills necessary to work in a physician's office laboratory. Focuses on quality control; record keeping; specimen collection - including phlebotomy - processing and disposal; urinalysis; hematology; blood chemistry; immunology and microbiology. This course is part of the educational requirement for category A of the Washington State Credentialing Requirements for health care assistants (Chapter 18.135 RCW). Students enrolled in this course must show documentation for the hepatitis B vaccine series.

Prerequisite: MEDA 120 or BIOL& 241 and 242, ENGL 100 or higher or TECH 105, and current enrollment in the Medical Assisting Program.

MEDA 161 F 4 credits
Examining Room Procedures I

Gives students a foundation of knowledge and basic skills for assisting a health care practitioner in a clinical setting. Requires students to perform vital signs, infection control, patient care, and sterile technique. Explains and discusses OSHA standards for handling biohazardous materials along with first aid and medical emergencies. Provides seven hours of HIV/AIDS education, which meets state requirements.

Prerequisite: MEDA 120 or BIOL& 241 and 242 and current enrollment in the Medical Assisting Program.

MEDA 162 W 3 credits
Examining Room Procedures II

Builds on competencies developed in MEDA 161, necessary for assisting a health care provider in a clinical setting. Focuses on electrocardiography; specialty procedures, safety in radiography; nutrition in health and disease, dosage calculations, and advanced patient screening techniques.

Prerequisite: MEDA 120 or BIOL& 241 and 242, MEDA 161, and current enrollment in the Medical Assisting Program.

MEDA 165 Sp 5 credits
Medications in Medical Assisting & Diseases

Explores common diseases and pathology, including diagnostic and treatment modalities. Students will become proficient in using drug reference materials. This course is part of the educational requirement for categories C and E of the Washington State Credentialing Requirements for health care assistants (Chapter 18.135 RCWW), and teaches to the scope of practice according to this law. Lecture and laboratory content include administration and documentation of oral, subcutaneous, intramuscular, intradermal, and ophthalmic medications.

Prerequisite: MEDA 120 or BIOL& 241 and BIOL& 242, MEDA 162

MEDA 190 S 5 credits
Medical Assisting Externship

Provides student the opportunity to apply learned skills and knowledge to a practical experience. Students are assigned to clinics and doctors' offices where they rotate to different tasks, building from the simpler to the more complex, under the supervision of a facility-appointed preceptor.

Prerequisite: All previous MEDA courses and program requirements. Concurrent requirements: Enrollment in MEDA 195

MEDA 195 S 1 credit
Medical Assisting Seminar

Brings together students currently in preceptorships to discuss issues as they arise in the work place. Provides an opportunity to introduce advanced topics in medical assisting or healthcare, as well as job seeking. Topics will include: disaster preparedness, resume writing, and interviewing techniques. Discussion and practice for the AAMA certification exam is included.

Prerequisite: MEDA 145, MEDA 165. Concurrent requirement: Enrollment in MEDA 190

Music (MUSC)**MUSC 100 F,W,Sp 5 credits**
Fundamentals of Music H

Introduces music through investigation of melodic, rhythmic, and harmonic structure, and emphasizes development of basic concepts and skills in music through performance on appropriate instruments, such as tone bells, recorders, and guitars.

MUSC 101F, 102W, 103Sp 5 credits
Theory and Musicianship H

Covers fundamentals, including keys, clefs, scales, intervals & triads, four-part-writing in root position & inversions; nonharmonic tones; the melodic line, major & minor keys, rhythm & syncopation; introduction to diatonic seventh chords; secondary dominants; modulation; analysis & keyboard harmony; and creative writing. Sight singing, dictation, & ear training are included.

Prerequisite: MUSC 101 concurrent enrollment in MUSC 111, MUSC 102 concurrent enrollment in MUSC 112, MUSC 103 concurrent enrollment in 113 required.

MUSC& 105 F,W,Sp 5 credits
Music Appreciation: DIV H

Includes history, development of music, and music appreciation. Part of the course is the study of the music of foreign cultures. Lectures, readings, and recordings provide students with background for understanding and appreciation of significant musical styles of many cultures and historical periods.

MUSC 106, 107, 108, 206, 207, 208 F,W,Sp 2 credits
Group Piano Instruction

Offers study of scales, intervals, chords, and simple exercises in improvisation for those who want basic keyboard skills. Students may enroll any quarter at any level. Elective for non-music majors. Required for non-keyboard music majors unless competency demonstrated.

MUSC 111F, 112W, 113Sp 1 credit
Ear Training I, II, III

Supplements the musicianship portion of the MUSC 101,102,103 coursework. Covers terminology, scale construction and interval construction, including aural practice in harmony, rhythm and melody.

MUSC 117 1-5 credits
Music Cultures of the World: DIV H

Introduces the music of non-Western cultures. Readings, and recorded selections on CDs provide students with background for understanding and appreciation of music cultures selected from Native America and/or Black America and/or Southeast Europe and/or Latin America. Meets the Diversity requirement.

MUSC 119 F 5 credits
American Music: DIV H

Surveys music in American life from an historic and stylistic perspective in a non-technical method. Contributions of various cultures to the music of the United States are included, with emphasis on contemporary classical and popular idioms. Meets the Diversity requirement.

MUSC 121 2 credits
Beginning Guitar

Presents musical rudiments which include melody, rhythm, notes, scales, intervals, chords and simple exercises in improvisation for those who want basic guitar skills. Students will perform with the class and in a duo with a class member.
Prerequisite: Instructor permission

MUSC 126, 226 F,W,Sp 1 credit
Applied Music I

Includes individual lessons each week. No fee is charged when lessons are provided by regular faculty. Students who study with other teachers make their own financial arrangements and pay their teachers directly. A-Piano; B-Brass; G-Guitar; O-Organ; P-Percussion; S-String; V-Voice; W-Woodwind.

Prerequisite: Instructor permission, minimum proficiency in instrument or voice.

MUSC 130 F,W,Sp 2 credits
Jazz Ensemble H, P

Preparation and performance of literature from the jazz idiom appropriate from small to large jazz ensemble for required on and off campus concerts. Jazz literature from the swing era to the present will include bebop, rock, funk, fusion and blues. Prior knowledge of jazz improvisation not required. Open to trumpet, trombone, all saxophone, drum, bass, and guitar players with strong musical skills and good music reading abilities. This course may be repeated for credit up to seven quarters.

Prerequisite: Audition or approval by instructor.

MUSC 134 F,W,Sp 1-5 credits
Chamber Ensemble H, P

Offers rehearsal and performance of standard chamber music from the seventeenth through twentieth centuries. Students may form ensembles or work individually with the instructor. The course may be repeated for credit up to seven quarters. B-Brass; W-Woodwind; E-Mixed Ensemble; P-Percussion.

Prerequisite: Instructor permission

**MUSC 135 F,W,Sp 1 credit
Orchestra H,P**

Offers participation in the Southwest Washington Symphony, a student/community orchestra, which rehearses and performs standard symphonic literature. Admission is by audition. The course may be repeated for credit up to seven quarters.

Prerequisite: Instructor permission

**MUSC 136 5 credits
Early Music History H**

Investigates the developments in Western Art Music from the Middle Ages to 1600. Students will be introduced to a broad spectrum of musical life, including Art Music in common practice: Gregorian chant, Madrigals, Masses and Motets. Some discussion of compositional techniques, style characteristics, and relationships will be covered.

**MUSC 137 5 credits
Baroque-Classical Music H**

Investigates the developments in Western Art Music in the Baroque and Classical Eras. Students will be introduced to a broad spectrum of musical life, including Art music in common practice: orchestral, choral, chamber music, and solo repertoire, both instrumental and vocal. Some discussion of compositional techniques, style characteristics, and relationships will be covered.

**MUSC 138 5 credits
Modern Music History H**

Investigates the developments in Western Art Music in the 19th and 20th Centuries. Students will be introduced to a broad spectrum of musical life, including Art Music in common practice: orchestral, choral, band, chamber music, and solo repertoire, both instrumental and vocal; Musical Theater; Jazz and Pop. Some discussion of compositional techniques, style characteristics, and relationships will also be covered.

**MUSC 139 3 credits
Musical Theatre History**

Investigates the developments in Musical Theatre from its roots in the Mid-19th Century English Operettas of Gilbert and Sullivan, through its first American Masterwork, "Showboat", to its current state. Introduces a broad spectrum of musical life through lecture, reading, video and recordings. Compositional techniques, style characteristics, and relationships will be covered.

**MUSC 140 F,W,Sp 2 credits
Choir H, P**

Covers the fundamental techniques and principles of integrating voice and music in an ensemble setting. Students will perform music in a variety of languages, from various genres, eras and styles, ranging from Masterworks to Show tunes. Ensemble will perform a minimum of 1 concert per quarter, and all performances are mandatory.

Prerequisite: Instructor permission

**MUSC 144 F,W,Sp 2 credits
Show Choir H, P**

Covers the fundamental techniques and principles of integrating voice, music and dance into a performance show choir. Students will sing (from memory) and perform beginner/intermediate choreography of music from a variety of styles ranging from Broadway and Jazz to Contemporary music. Ensembles perform a minimum of 1 concert per quarter, and all performances are mandatory.

Prerequisite: Instructor permission.

**MUSC 145 F,W,Sp 2 credits
Beginning Voice H**

Introduces the art of singing, with focus on the development of healthy, efficient vocal production (breath support, vowel alignment, range extension, tone color), diction, song interpretation and performance etiquette. Students will become familiar with the structure and mechanics of the voice through study, discussion, practice and solo performances. Provides students with the skills needed to prepare and perform vocal literature.

**MUSC 146 2 credits
Voice for Actors H**

Provides actors an overview of singing techniques to broaden the actor's vocal range, both in speech and song. Focuses on proper techniques for breathing, projection, voice placement, and articulation taught through singing. Instruction emphasizes text interpretation and characterization in song, through the performance of musical theatre repertoire.

**MUSC 147 2 credits
Audition Techniques**

Introduces audition techniques through preparation, performance and workshops of monologues and musical theatre repertoire. Focuses on interpretation, stage presence, performance etiquette and repertoire selection. Additionally, this course will cultivate successful audition techniques and create a market audition package including, headshot, resume, and portfolio.

**MUSC 150 F,W,Sp 2 credits
Symphonic Band H, P**

Offers rehearsal and performances of standard concert band repertoire. Activities of this college/community band include performances for special civic events in community and public concerts. The course may be repeated for credit up to seven quarters.

Prerequisite: Instructor permission

**MUSC 161 F 5 credits
Digital Audio I**

Students will study the theories and mechanics of recording audio signals to a digital medium. Students will begin to assemble the components of a final recording portfolio. Lab is included.

**MUSC 162 W 5 credits
Digital Audio II**

Continued study of the theories and mechanics of recording audio signals to a digital medium. Emphasis on microphone techniques and applying technology to the acoustic realm and the effects of digital translation. Components will accumulate in the final recording portfolio. Lab is included.

Prerequisite: MUSC 161.

MUSC 163 Sp 5 credits
Digital Audio III

Continued study of the theories and mechanics of recording audio signals to a digital medium. Students will create the initial mix of their final multi-track recording project, which will be further refined and completed during the second year of the program. Lab is included.

Prerequisite: MUSC 162.

MUSC 170 F 2 credits
Jazz Improvisation

Instructs instrumental improvisation for dance combo, jazz ensemble, and accompaniment. Rhythm section, brass, and single reed instruments are emphasized.

Prerequisite: MUSC 101 or instructor permission.

MUSC 174 F,W,Sp,S 2 credits
Jam Band 101

Explore and develop small group performance skills through a variety of genres, including rock/pop/blues with an emphasis on arrangement and composition. Vocalists and instrumentalists (drum, guitar, bass, keyboards, etc.) will form groups and arrange existing and original compositions. The course will culminate in a performance and recording. Proficiency in voice or instrument required.

Prerequisite: Instructor permission.

MUSC 197 F,W,Sp,S 1-5 credits
Rehearsal and Performance I

Provides experience for students who participate in the LCC musical concerts, performances, and/or productions not associated with current enrollment in a music course. This includes both instrumental and vocal performers, composers, designers, accompanists, and technical and support personnel. Students must successfully complete the rehearsal process through the final performance.

Prerequisite: Instructor permission.

MUSC 200 2 credits
Beginning Composition

Offers study of notational, formal, melodic, harmonic, rhythmic, textural, dynamic, and expressive aspects of musical composition for the beginner including special study of the relationship of lyrics to melody. One-hour lecture class, plus weekly small group lessons.

MUSC 201F, 202W, 203Sp 3 credits
Advanced Theory

Includes modal theory; counterpoint; advanced modulation; altered chords; borrowed chords; secondary dominants; augmented sixth chords; the Neapolitan sixth; chords of the ninth, eleventh, and thirteenth; chromatic harmony; twentieth-century developments; analysis; composition; written work; and basic score reading.

Prerequisite: MUSC 201 concurrent enrollment in MUSC 211, MUSC 202 concurrent enrollment in MUSC 212, MUSC 203 concurrent enrollment in 213 required.

MUSC 209 5 credits
The Blues Culture: DIV H

Studies the perception and analysis of musical style as related to blues music. This course focuses on the chronology and cultural context of the blues from African sources through blues expansion, including its influence on American popular music. Meets the Diversity requirement.

MUSC 211F, 212W, 213Sp 1 credit
Ear Training IV, V, VI

Supplements the musicianship portion of the MUSC 201 course work. Includes melodic, harmonic, and rhythmic dictation drills at advanced levels.

Prerequisite: MUSC 111, 112, and 113.

MUSC 222 2 credits
Opera Workshop

Gives intermediate to advanced singers an opportunity to perform opera, operetta and musical theatre scenes, and at the same time, develop their singing, acting, and stage movement skills. Students will memorize and perform staged solos, duets, and small ensembles in a variety of languages and will be expected, with coaching, to interpret and portray the content of each piece regardless of language.

Prerequisite: Instructor permission

Nursing (NURS)**NURS 090 8 credits**
Nursing Assistant

Provides the content and experiences for students to achieve mastery of the state-defined competencies required to assist in giving basic nursing care to residents/clients under the supervision of a licensed nurse.

NURS 101 5 credits
Nursing Foundations

Explores concepts that form the foundation of practice as a licensed nurse in the role of caregiver, collaborator or care, decision-maker, communicator, teacher, and professional.

Prerequisite: BIOL& 241, PSYC& 100, MATH 210, all with a grade of C or higher. Concurrent enrollment or prior completion of BIOL& 242. Concurrent requirement: NURS 111

NURS 102 5 credits
Basic Nursing I

Builds on previously learned concepts in NURS 101 and introduces basic medical-surgical nursing care of clients with selected health challenges throughout the lifespan, including endocrine, respiratory, immune, cardiovascular, hematological, lymphatic, and musculoskeletal disorders.

Prerequisite: NURS 101 and NURS 111, and concurrent enrollment or prior completion of BIOL& 260, all with a grade of C or higher; concurrent or prior completion of AH 114. Concurrent requirement: NURS 112.

NURS 103 **5 credits**
Basic Nursing II

Builds on previously learned concepts in NURS 101 and NURS 102 and continues exploration of basic medical-surgical nursing care of clients with selected health challenges throughout the lifespan including gastrointestinal, genitourinary, neurological, acid-base, fluid and electrolyte, cancer, eye, ear and mental health disorders.

Prerequisite: Nursing 102 and 112; concurrent enrollment or prior completion of PSYC& 200 (was PSYC 205), all with a grade of C or higher.

NURS 104 **5 credits**
Family Nursing

Builds on previously learned concepts from prior nursing courses and expands preparation for the role of the licensed nurse in the care of the family.

Prerequisite: Nursing 103 and 113, concurrent enrollment or prior completion of ENGL& 101, all with grade of C or higher. Concurrent requirement: NURS 114

NURS 111 **5 credits**
Nursing Foundations - Clinical

Provides opportunities to apply knowledge gained in NURS 101 and to develop skills in the performance of nursing care in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional, with a focus on the adult patient.

Prerequisite: BIOL& 241, PSYC& 100, MATH 099, all with a grade of C or higher. Concurrent enrollment or prior completion of BIOL& 242.

NURS 112 **5 credits**
Basic Nursing I - Clinical

Provides opportunities to build on previously learned skills and apply knowledge gained in NURS 102 through the performance of nursing care in the role of caregiver, collaborator of care, decision maker, communicator, teacher and professional, with a focus on medical/surgical nursing care.

Prerequisite: NURS 101 and 111

NURS 113 **5 credits**
Basic Nursing II - Clinical

Provides opportunities to build on previously learned skills and apply knowledge gained in NURS 103 through continuing and expanding the performance of nursing care in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional, with a focus on medical/surgical nursing care.

Prerequisite: NURS 102 and 112

NURS 114 **5 credits**
Family Nursing - Clinical

Provides opportunities to build on previously learned skills and apply knowledge gained in NURS 104 through expanding the performance of nursing care in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional, into care of the family.

Prerequisite: NURS 103 and 113

NURS 124 **2 credits**
Family Nursing-Review

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 104 and NURS 114.

NURS 201 **5 credits**
Advanced Comprehensive Nursing I

Builds on knowledge of nursing concepts and care gained at the basic level, focusing on comprehensive care of clients throughout the lifespan, in preparation for the role as a registered nurse. Topics include care of the client with cardiac, respiratory, renal, and behavioral health disorders.

Prerequisite: Completion of or concurrent enrollment in CHEM& 121, NURS 104 and NURS 114, or equivalent. Concurrent requirement: NURS 221

NURS 202 **5 credits**
Advanced Comprehensive Nursing II

Builds on concepts presented in NURS 201/221 and continues focusing on comprehensive care of clients throughout the lifespan, in preparation for the role as a registered nurse. Topics include care of the client with vascular, hematological, neurological, gastrointestinal, and behavioral health disorders.

Prerequisite: NURS 201 AND NURS 221 Concurrent requirement: NURS 222

NURS 203 **5 credits**
Advanced Comprehensive Nursing III

Expands on knowledge gained in previous nursing courses to further prepare the students for the role of a registered nurse. Focuses on providing comprehensive nursing care for clients throughout the lifespan with endocrine disorders, cancer, burns, trauma, terminal illness, and multi-system disorders. Disaster planning, research, and professional role issues are discussed.

Prerequisite: NURS 202 and NURS 222 Concurrent requirement: NURS 223

NURS 209 **3 credits**
Nursing Success

Strengthens nursing skills and knowledge to promote success in upper level nursing courses. Reviews selected nursing skills, care planning, dosage calculations, legal concepts and professional issues. Familiarizes the student with LCC Nursing Program policies and clinical requirements.

Prerequisite: NURS 104 or formal acceptance into the campus-based 2nd year of LCC nursing program. Instructor permission required for enrollment.

NURS 221 **5 credits**
Advanced Comprehensive Nursing Clinical I

Provides opportunities to apply knowledge and concepts learned in NURS 201 to nursing practice, cultivate critical thinking, and develop skill in the performance of nursing care at the registered nurse level in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional. Acute care and community-based setting will be utilized.

Prerequisite: Completion of LPN program. AH 104 and 114 or equivalent. Completion of or concurrent enrollment in NURS 201.

NURS 222 **5 credits**
Advanced Comprehensive Nursing Clinical II

Provides opportunities to apply knowledge and concepts learned in NURS 202 to nursing practice, advance critical thinking, and expand skill in the performance of nursing care at the registered nurse level in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional. Acute care and community-based setting will be utilized.

Prerequisite: NURS 201 and 221

NURS 223 **5 credits**
Advanced Comprehensive Nursing Clinical III

Provides opportunities to apply knowledge and concepts learned in NURS 203 to nursing practice, reinforce critical thinking, and enhance skill in the performance of nursing care at the registered nurse level in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional. Acute care and community-based setting will be utilized.

Prerequisite: NURS 202 and 222

NURS 240 **3 credits**
Management of Care

Provides an introduction to Registered Nurse practice. Concepts of leadership and management are included. Nursing delivery systems, standards of care, quality management, and evidence-based practice are described. The course includes an in-depth review and application of the nursing process.

Prerequisite: Admission to LPN2RN online option.

NURS 241 **3 credits**
Safe, Effective Care Environment

Provides content essential to effective and safe registered nursing practice. Topics include community-based nursing, health promotion, health assessment, culture and ethnicity nutrition, teaching/learning, pharmacology, pain, perioperative nursing, safety, and infection control.

Prerequisite: NURS 240 or concurrent enrollment.

NURS 242 **3 credits**
Health Throughout the Lifespan

Provides knowledge essential to provide and manage nursing care of patients throughout the lifespan, with a focus on maternal/child nursing. Incorporates concepts of growth and development, prevention and/or early detection of health problems, and strategies to achieve optimal health for patients of all ages.

Prerequisite: NURS 241 or concurrent enrollment.

NURS 243 **3 credits**
Behavioral Health

Provides knowledge essential to provide and manage nursing care of patients with behavioral health issues. Promotes understanding of mental health and mental illness. Presents strategies in nursing care to support the emotional, mental, and social well-being of the patient and their families.

Prerequisites: NURS 242 or concurrent enrollment.

NURS 244 **3 credits**
Physiological Health I

Using a body systems approach, explores the etiology, pathophysiology, diagnostic and laboratory studies, health promotion, health assessment, pharmacologic interventions, and nursing management essential to safe and effective nursing care of patients with various health challenges. Topics include nursing management of patients with disorders of the respiratory, cardiovascular, vascular/lymphatic, neurological, urinary/renal, hepatobiliary/pancreatic, and gastrointestinal systems, as well as acid-base/fluid-electrolyte balance.

Prerequisites: NURS 243 or concurrent enrollment.

NURS 245 **3 credits**
Physiological Health II

Using a body systems approach, continues to explore the etiology, pathophysiology, diagnostic and laboratory studies, health promotion, health assessment, pharmacologic interventions, and nursing management essential to safe and effective nursing care of patients with various health challenges. Topics include nursing management of patients with disorders of the musculoskeletal, dermatologic, immune, metabolic/endocrine, hematologic, reproductive, visual/auditory systems, and cancer.

Prerequisite: NURS 244.

NURS 246 **2 credits**
Skills Laboratory

Provides opportunities to develop and enhance proficiency in nursing skills essential to safe and effective practice as a registered nurse. **Prerequisite:** Acceptance into LPN2RN eLearning or RONE option of the nursing program.

NURS 247 **10 credits**
Clinical Practicum

Provides opportunities to apply nursing knowledge and concepts to nursing practice, advance critical thinking, and expand skill in the performance of nursing care at the registered nurse level in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional. Focus is on nursing care and management of the patient experiencing complex acute and chronic illness.

Prerequisite: NURS 246

NURS 248 **5 credits**
Advanced Clinical Practicum

Provides opportunities to apply nursing knowledge and concepts to nursing practice, advance critical thinking, and expand skill in the performance of nursing care at the registered nurse level in the role of caregiver, collaborator of care, decision-maker, communicator, teacher and professional. Focus is on the nursing care and management of patients experiencing complex acute and chronic illness, moving students toward autonomous professional nursing practice through individualized precepted clinical experiences.

Prerequisite: NURS 247 or concurrent enrollment.

Nutrition (NUTR)

NUTR& 101 **5 credits**
Nutrition **NS**

Develops an understanding of the importance of the science of nutrition and dietary recommendations to maintenance of a healthy life. Students will learn the principles of nutrition as they apply to macro-nutrients and metabolic pathways. Application of vitamins, minerals, and special nutritional requirements at different stages of the life cycle, as well as current issues in nutrition will be considered. This course does not include a lab.

Oceanography (OCEA)

OCEA& 101 **5 credits**
Introduction to Oceanography **NSL**

Emphasizes principles and processes governing the ocean and its interactions with the surrounding physical environment. Covers topics from physical, chemical, biological and geological oceanography, including origin and evolution of the ocean basins, sea floor sediments, seawater, currents, waves, tides, marine life, and human impacts. Laboratory involves use of globes, charts, and graphs, sediment and biological samples. A field trip may be required.

Philosophy (PHIL)

PHIL& 101 **F** **5 credits**
Introduction to Philosophy **H**

Analyzes essential philosophical questions such as the one and/or many, what is truth, what is real being, etc. Pursues various Western attempts at their answers along with students' own personal approaches.

Prerequisite: ENGL& 101.

PHIL 120 **W,S** **5 credits**
Critical Reasoning **H**

Introduction to critical reasoning emphasizing concepts and methods useful for practical analysis of arguments in everyday contexts including the exercise of symbolic reasoning through the analysis of meaning, syllogisms, logical diagrams, inductive and statistical inference, informal fallacies, argument structures. Specific emphasis will be placed on the evaluation of claims of scientific research and epistemology.

Prerequisite: ENGL& 101.

PHIL 210 **5 credits**
Ethics **H**

Critically examines major Western philosophical answers to the questions of the good and how to achieve it. Application to some contemporary problems is also covered.

Prerequisite: ENGL& 101

PHIL 260 **W** **5 credits**
Philosophy of Religion **H**

Offers a critical, philosophic examination of the nature of religious beliefs, the functions of religious language, the arguments for the existence of God, attributes of God, the possible psychological and sociological origins of religions, the problem of evil, and the immortality of the soul, and some comparisons and contrasts between Eastern and Western religions.

Prerequisite: ENGL& 101

Physical Education (PHED)

PHED 104, 204 **F,W,Sp,S** **1 credit**
Pilates and Stretch

Strength and flexibility exercises practiced with Pilates routine to create a balanced and effective program. Emphasis on core strength, posture, balance and toning.

PHED 105,205 **1 credit**
Pilates & Yoga - Beginning

Pilates and yoga routines will be practiced together to create a balanced and effective strength and flexibility workout. The exercises will emphasize core strength, back strength, posture, balance, and toning major muscle groups.

PHED 110, 210 **F,W,Sp** **2 credits**
Circuit Training

Develops the basic components of physical fitness for students through participation in an aerobic circuit weight training program. The super-circuit aerobics program utilizes a combination of endurance and strength machines to provide one of the most effective conditioning methods known for developing baseline levels of physical fitness.

PHED 120, 220 **2 credits**
Cross Training

Introduces the fundamental theories of cross-training for various types of activities. Implements individualized work-out routines needed to better your lifetime fitness whether it is strength training, powerlifting, conditioning or endurance. Students will increase strength, fitness and conditioning by taking this class. Students will define and design a work-out program that will help them attain their fitness goals.

PHED 121 **F,W,Sp** **1 credit**
Beginning Foil Fencing

Presents the skills, strategies, rules, and physical conditioning for the competitive or leisure pursuit of fencing.

PHED 122 **F,W,Sp** **1 credit**
Intermediate Foil Fencing

Advancement of the skills, strategies, rules, and physical conditioning beyond the basics for competitive or leisure pursuit.

Prerequisite: PHED 121 or instructor permission.

**PHED 126,226 F,W,Sp 1-2 credits
Aerobic Exercise**

Guides students through rhythmical and continuous exercise performed to music. Every student, no matter what age or body type, will be provided the opportunity to improve their cardiorespiratory endurance through participation.

**PHED 127 F,W,Sp 1-2 credits
Zumba I**

Fuses hypnotic Latin rhythms and easy-to-follow moves. The routines feature interval training sessions, where fast and slow rhythms and resistance training are combined to tone and sculpt your body while burning fat.

**PHED 128, 228 F,W,Sp 1-2 credits
Weight Training**

Improves strength, physical conditioning, and performance through correct use of universal equipment, free weights and cardiorespiratory equipment. Emphasis will be on health and fitness education. Each student will design a program specific to his or her goals for the quarter.

**PHED 129 F,W,Sp 1-2 credits
Aqua Zumba I**

Blends the Zumba formula and philosophy with traditional aqua fitness disciplines into a safe, challenging, water-based workout that's body-toning and cardio-conditioning. Lap swim is also available during this time.

**PHED 130, 230 1 credit
Swimming**

Provides instruction of the basic swimming strokes, personal safety skills and conditioning programs for muscular and cardiovascular endurance of the swimmer.

**PHED 135, 235 F,W,Sp 1-2 credits
Fitness Walking**

Utilizes walking in developing the health-related components of physical fitness. Emphasis will be placed on cardiorespiratory endurance through low-impact, moderate intensity exercise.

**PHED 140, 240 F 1 credit
Basketball: Men**

Provides opportunity for students to learn basketball skills, strategies, rules of play and to participate in a basketball conditioning program.

**PHED 141, 241 F 1 credit
Basketball: Women**

Provides an opportunity for the students to learn basketball skills, strategies, rules of play and to participate in a basketball conditioning program.

**PHED 145 W 3 credits
Softball Coaching Theory**

Addresses philosophy, technique, strategy, and knowledge. Progresses from basic theories through sophisticated situational theories and strategies. The course is designed for any level of play or coach in fast-pitch softball.

**PHED 146, 246 F 1 credit
Fastpitch Softball-Women**

Presents students the opportunity to learn fastpitch skills, strategies, and rules of play. Students will participate in a softball-conditioning program designed for the sport-related needs. Fall quarter.

**PHED 147, 247 Sp 2 credits
Applied Fastpitch Softball-Women**

Provides students the opportunity to demonstrate fastpitch softball skills, strategies, rules of play and participation in a softball-conditioning program.

Prerequisite: Instructor permission

**PHED 149, 249 F 2 credits
Applied Soccer-Women**

Provides students the opportunity to demonstrate soccer skills, strategies, and rules of play and to participate in a conditioning program.

Prerequisite: Instructor permission.

**PHED 152, 252 F,W,Sp,S 1-2 credits
Personalized Fitness**

Requires students to plan and execute their own exercise program designed specifically to meet their goals and objectives as it relates to physical fitness. Students may utilize Lower Columbia's exercise facility or may choose to participate in off-campus activities. A contract with the instructor will initiate the class and written workout logs are required on a weekly basis throughout the quarter.

**PHED 162, 262 Sp 2 credits
Applied Baseball**

Provides students the opportunity to demonstrate baseball skills, strategies, rules of play and to participate in a baseball conditioning program.

Prerequisite: Instructor permission

**PHED 164, 264 W 2 credits
Applied Basketball-Men**

Gives students the opportunity to demonstrate basketball skills, strategies, rules of play and to participate in a basketball conditioning program.

Prerequisite: Instructor permission

**PHED 165, 265 W 2 credits
Applied Basketball-Women**

Gives students the opportunity to demonstrate basketball skills, strategies, rules of play and to participate in a basketball conditioning program.

Prerequisite: Instructor permission

**PHED 167, 267 F 2 credits
Applied Volleyball**

Gives students an opportunity to demonstrate volleyball skills, strategies, and rules of play and to participate in a volleyball-conditioning program.

Prerequisite: Instructor permission

PHED 171 F,Sp 3 credits
Prevention and Care of Athletic Injuries

Provides training in basic prevention and care of athletic injuries. Includes an introduction to the field of sports medicine, organization and administration of a sports medicine program, recognition of common athletic injuries, evaluation and treatment protocols, rehabilitation techniques and emergency procedures. Basic wrapping, taping, and bracing techniques will be studied and practiced. Basic anatomy, physiology, and infection control will be included.

PHED 190 W 3 credits
Baseball Coaching Theory

Addresses philosophy, technique, drill, application, demonstration, strategy and knowledge. Baseball coaching theory progresses from basic theories through situational theories. This course is designed for any level of player or coach of softball and baseball.

PHED 192 2 credits
Basketball Coaching Theory

Offers a philosophical and fundamental study of basketball as played at the college level and includes fundamental approaches, offensively and defensively, designed to produce winning teams.

PHED 205 1 credit
Pilates and Yoga-Intermediate

Builds on the basics of PHED 105 by giving students more difficult variations of the exercises. Pilates and yoga routines will be practiced together to create a balanced and effective strength and flexibility workout. Emphasis will be on core strength, back strength, posture, balance, and toning major muscle groups.

Prerequisite: PHED 105 or instructor permission.

PHED 282 3 credits
Water Safety Instruction

Provides instruction in how to teach swimming and diving skills for infants through adults and is designed to prepare lifeguards, instructors, and pool administrators for employment as certified American Red Cross water safety instructors.

PHED 284 credits
Lifeguard Training

Provides explanations, demonstrations, practice and review of rescue skills essential for Lifeguards as well as develop participants speed, endurance, and technique in swimming and Lifeguard skills. This course meets the requirements for American Red Cross certification in Lifeguard Training and is open to students who pass qualifying tests in swimming.

Physical Science (PHSC)**PHSC 108 5 credits**
Physical Science NSL

Explores the everyday physical world through the study of matter, momentum and motion, forms of energy, electricity and magnetism. Physical laws are presented that describe the interaction of energy and matter that are seen in everyday life. Students will gain an understanding of the natural world and science as a field of study. Includes lab. Students cannot receive credit for both PHSC 108 and PHSC 109.

PHSC 109 F 5 credits
Energy and Matter: Physical Sciences NSL

Explores energy and matter through the study of matter, momentum and motion, forms of energy, electricity and magnetism. Students will gain an understanding of the natural world and science as a field of study, as well as develop skills to apply and teach scientific principles in everyday life. Intended primarily for elementary education and early childhood education majors. Part of a three quarter sequence; students are not required to take entire sequence. Includes lab. Students cannot receive credit for both PHSC 109 and PHSC 108.

Physics (PHYS)**PHYS& 100 F,Sp 5 credits**
Physics: Non-Science Major NSL

Emphasizes the process and historical/logical development of physics and relates the conceptual ideas of physics to everyday experience. The course is offered primarily to meet laboratory science requirements for an Associate degree; it is also useful in lieu of high school physics. Laboratory is included.

Prerequisite: MATH 089 or TECH 089 or equivalent or instructor permission.

PHYS& 114 F 5 credits
General Physics I w/Lab NSL

Provides the first quarter of a sequence for students in various health science, technology, and pre-professional areas. Student-initiated motion studies introduce the fundamental principles of mechanics through studies of kinematics, Newton's Principles, energy and momentum conservation principles, and their rotational analogues. Students participate in supporting small group laboratory investigations.

Prerequisite: MATH 099 or equivalent working knowledge of elementary algebra and right triangle trigonometry, or instructor permission.

**PHYS& 115 W 5 credits
General Physics II w/Lab NSL**

Incorporates both thermodynamics and electromagnetism, including active student investigations of temperature, heat and thermal energy, entropy, the properties of simple electric and magnetic fields, and simple AC and DC circuits. Classroom activities help students connect the nature and role of fundamental principles in physics with real everyday operations of those principles. Students learn operation and use of contemporary instrumentation in lab investigations.

Prerequisite: PHYS& 114 and MATH 099 or instructor permission.

**PHYS& 116 Sp 5 credits
General Physics III w/Lab NSL**

Emphasizes the scientific development of fundamental principles through active student investigations of mechanical and electromagnetic waves, geometrical and physical optics, special relativity, particles, waves, the quantum theory of the atom, the physics of the nucleus, and elementary particle theory as time permits.

Prerequisite: PHYS& 115 or instructor permission.

**PHYS 210 5 credits
The Environmental Physics of Energy NSL**

Solicits student descriptions of energy production, patterns of use, and the challenges posed by dwindling energy resources using the language of physics: work, power, energy, heat, and the Conservation of Energy Principle. Students explore the physical/technological bases of current/proposed technologies, along with current scientific discussions of environmental effects such as global warming and radiation. Students cannot receive credit for both PHYS 210 AND ENGR 210.

Prerequisite: Algebraic, writing, and presentation skills; a previous distribution science course (e.g., PHYS& 100) would be helpful.

**PHYS& 221 F 5 credits
Engineering Physics I w/Lab NSL**

Provides the first quarter of a calculus-based sequence for majors in the physical sciences, engineering, or mathematics. The Principles of Newtonian Mechanics are introduced through motion analysis, with subsequent application to problems involving particle and rigid body motion. Small groups carry out supporting lab investigations. Use of elementary calculus increases during the term.

Prerequisite: Completion of or concurrent enrollment in MATH& 151 or instructor permission.

**PHYS& 222 W 5 credits
Engineering Physics II w/Lab NSL**

Incorporates study of the mechanics of fluids, oscillatory motion, thermodynamics, and electrostatics. Includes student investigations of waves, temperature, heat, entropy, electricity and electric current. Classroom activities help students connect the sweeping power of fundamental principles with real everyday engineering physics applications. Students operate and utilize contemporary instrumentation in lab investigations.

Prerequisite: PHYS& 221, MATH& 152 or instructor permission.

**PHYS& 223 Sp 5 credits
Engineering Physics III w/Lab NSL**

Incorporates electromagnetism and wave physics through active student investigation of magnetism, time varying magnetic fields, DC and AC circuits, electromagnetic waves, geometrical and physical optics. Small group lab projects support these contemporary topics.

Prerequisite: PHYS& 222 or instructor permission.

Political Science (POLS)**POLS& 101 F,W 5 credits
Intro Political Science SS**

Examines the foundations of political science: key political ideas, theories, processes, and institutions, and explores examples of these in today's world.

**POLS 107 W 5 credits
Comparative Government SS**

Analyzes the political and economic systems and ideologies of capitalism, socialism, communism, and fascism within the context of the cultural traditions of Western Civilization and considers these systems as alternative methods of the allocation of political and economic power in society, with special emphasis given to the disparity between the stated objectives of these systems and their actual accomplishment.

**POLS& 202 F,W,S 5 credits
American Government SS**

Studies the structure and functions of the government of the United States, with an evaluation of the United States as a democracy, in both theory and practice.

**POLS& 203 S 5 credits
International Relations SS**

Introduces the nature and basic principles of international politics, with an analysis of such concepts as imperialism, nationalism, internationalism, the causes of war, and conditions for peace.

**POLS 220 5 credits
The Law and Social Issues**

Studies lines drawn by democracies in the attempt to reconcile individual freedoms with the rights of the community. Analyzes and evaluates the basic problem of dealing with basic rights and liberties, freedom of expression, due process of law, and political and racial equality.

Process Control Manufacturing (PMFG)

PMFG 110 W 5 credits
Industrial Maintenance Fundamentals

Introduces essential elements of industrial maintenance. Provides an overview of the jobs and tasks generally performed in manufacturing operations. Fundamental topics covered include an overview of general types of industrial equipment, the proper use of a variety of hand tools and measuring instruments, and an exploration of fasteners, bearings, seals, and lubrication systems. Safety procedures including lock-out/tag-out of electrical/mechanical energy systems, sketching using ANSI standards, layout and machinery installation, and basic troubleshooting techniques are also covered.

PMFG 150 F 6 credits
Electrical and Electronic Fundamentals

Introduces the nature and principles of electricity and electrical/electronic devices. Focuses on general principles, safety, industrial applications, and includes topics related to both DC and AC circuits. Topics explored include basic theory and direct current circuits, measuring instruments, interpretation of electrical and schematic diagrams, ohms law, basic electrical circuit analysis, applied mathematical concepts used in solving for values in series and parallel circuits, electrical safety and basic magnetic concepts. Additional topics are alternating current circuits, the use of AC measuring instruments, single-phase and three phase AC distribution systems, transformers, and an overview of basic electronic devices, their function, and common applications. The course is designed for individuals entering the electrical trades, maintenance personnel or production/process operators.

Prerequisite: MATH 088 or concurrent enrollment or instructor permission.

PMFG 151 F 5 credits
Process Control Equipment

Provides an overview of process control equipment for operating personnel in industries utilizing process manufacturing techniques. Introduces the fundamentals of process control, instrumentation, control equipment, PLCs, process and instrumentation diagrams, and equipment fault identification and troubleshooting.

Prerequisite: Both MATH 088 and PMFG 150 strongly recommended.

PMFG 152 W 5 credits
Process Control Systems

Provides an overview of process control systems for operating personnel in industries utilizing process manufacturing techniques. Introduces the basics of control system equipment, process and instrumentation diagrams, and equipment fault identification and troubleshooting.

Prerequisite: PMFG 151 or instructor permission.

PMFG 201 W 3 credits
Electrical Control Equipment

Introduces the operation, troubleshooting, and adjustment of various types of electrical control equipment. Fuses, molded case circuit breakers, and control switches are covered. Includes basic principles of motor starters and troubleshooting of control circuits.

Prerequisite: PMFG 150 or instructor permission.

PMFG 202 Sp 2 credits
Electric Motors

Covers the concepts, maintenance, and testing of AC and DC motors. Includes a study of components and operation of a variety of AC motors and DC motors. Single-phase and three-phase motors are covered.

Prerequisite: PMFG 201 or instructor permission.

PMFG 210 Sp 5 credits
Advanced Industrial Maintenance

Explores more advanced industrial maintenance topics, including preventative maintenance, centrifugal pump repair, valve repair, rigging and lifting, vibration analysis, and shaft alignment. Safe work practices are stressed, and relevant safety topics are covered during the course.

Prerequisite: PMFG 110 or instructor permission.

PMFG 220 5 credits
Introduction to Renewable Energy

This course provides an introduction to renewable energy sources. Topics will include biomass for fuels and electricity generation, solar, wind, geothermal and hydroelectric energy. Students will compare technology, social, environmental and economic impacts of renewable energy. Upon completion, students will be able to demonstrate an understanding of renewable energy and its impact on humans and the environment.

Prerequisite: ENGL 100 or higher, or MATH 092 or higher, or instructor permission.

Psychology (PSYC)

PSYC& 100 F,W,S,Su 5 credits
General Psychology SS

Studies the science of behavior and fosters understanding of human development, learning, motivation, emotions, reactions to frustration, mental health and therapy, perception, and personality.

PSYC 140 3 credits
Introduction to Sport Psychology

Emphasizes the psychological factors affecting individual behavior as it relates to sport performance and provides student athletes the resources to better understand, predict, and modify competitive sport performance as a result.

PSYC& 200 F,W,S,Su 5 credits
Lifespan Psychology SS

Studies the physical, emotional, and social developmental behavior of the individual from childhood through adolescence, early adulthood, and late adulthood, and emphasizes specific stages encountered at various developmental levels.

Prerequisite: PSYC& 100 or instructor permission.

PSYC 204 Applied Psychology 5 credits SS

Studies applications of psychology in such areas as human motivation, business, industry, education, psychiatry, law, death and dying, combat, violence, and problems related to development.

Prerequisite: PSYC& 100 or instructor permission.

PSYC 214 Psychology of Adjustment 5 credits SS

Studies the nature of the personality, personality formation, and adjustment to environment. Dynamics of adjustment, normal and abnormal patterns of adjustment, the development of emotional, social, and intellectual competencies, and a survey of applicable theories of personality are included.

Prerequisite: PSYC& 100 or instructor permission.

PSYC& 220 F,S Abnormal Psychology 5 credits SS

Presents a study of abnormal psychopathology, specifically a study of abnormal human behavior, its description, causes, and diagnosis. Emphasis on treatment and major diagnostic categories such as schizophrenia, personality, mood, and organic brain disorders.

Prerequisite: PSYC& 100 or instructor permission.

Sociology (SOC)**SOC& 101 F,W,S,Su Introduction to Sociology: DIV 5 credits SS**

Studies principles of understanding human relationships. Various forms and processes of group interaction are analyzed, including primary groups, associations, and major institutions; urban and rural communities; intergroup and interclass relationships; structured and unstructured behavior; socialization of the individual; social organization and disorganization; and deviance and conformity to cultural patterns. Meets the Diversity requirement.

SOC 210 S Human Sexuality 5 credits SS

Presents examination of the scientific research that has led to a better understanding of human sexuality in its anatomical, physiological, sociological, cultural, and psychological aspects.

SOC 225 S Race and Ethnicity: DIV 5 credits SS

Examines the complexities of race and ethnicity in America and around the world. Topics include the social construction of racial and ethnic identities, the historical patterns of racial and ethnic exclusion, and the role of race and ethnicity in the perpetuation of social inequality and the shaping of world events. Meets the Diversity requirement.

Spanish (SPAN)**SPAN 097 Spanish Grammar for Beginners: Present Tense Verbs 2 credits**

Enables understanding of verb conjugation in the present tense in Spanish. Presents minimal vocabulary and does not concern oral proficiency. While this course is self-directed, students may be assisted by a tutor or an instructor. Graded on a credit/no credit basis.

SPAN 098 Spanish Grammar for Beginners: Agreement of Nouns and Modifiers 1 credit

Enables understanding of nouns and modifiers in Spanish. Presents minimal vocabulary and does not concern oral proficiency. While this course is self-directed, students may be assisted by a tutor or an instructor. Graded on a credit/no credit basis.

SPAN 104 Introduction to Spanish in the Workplace 1-5 credits

Introduces Spanish, presenting realistic situations and specialized vocabulary needed for basic communication with Spanish speakers in the workplace. Personalized questions, grammar exercises, dialog activities, and role-playing provide students with numerous opportunities to apply points of language in a wide variety of practical contexts. Within any of the vocabulary-specific domains, students will advance from one level to the next in sequence (SPAN 105, 106, and 107).

SPAN 105 Introduction to Spanish in the Workplace 1-5 credits

Builds vocabulary and introduces more complex points of language, including idioms, grammar, and, especially, pronunciation. Provides additional opportunities for telephone and face-to-face communication in workplace settings. Within any of the vocabulary-specific domains, students will advance from one level to the next in sequence (SPAN 105, 106, and 107).

Prerequisite: SPAN 104 or equivalent

SPAN 106 Spanish in the Workplace 1-5 credits

Accumulates vocabulary and introduces additional verb forms and pronoun usage, which are essential to clear oral communication. Enables further telephone and face-to-face communication with clients and co-workers whose principle language is Spanish. Within any of the vocabulary-specific domains, students will advance from one level to the next in sequence (SPAN 105, 106, and 107).

Prerequisite: SPAN 105 or equivalent

SPAN 107 Spanish in the Workplace 1-5 credits

Increases fluency, concentrating on effective communication (listening and speaking), self-expression, and literacy. Within a particular domain, students will learn to interact with clients and co-workers whose principal language is Spanish. Within any of the vocabulary-specific domains, students will advance from one level to the next in sequence (SPAN 105, 106, and 107).

Prerequisite: SPAN 106

SPAN& 121 **5 credits**
Spanish I:DIV **H**

Introduces Spanish, emphasizing basic vocabulary and points of language. Aiming at self-expression and literacy, this course engages students in reading, writing, listening, and speaking in the target language. Students will also acquire knowledge of the diverse social, ethnic, and cultural groups that use the language and observe how artistic expression reflects the diversity of cultural values. Meets the Diversity requirement.

SPAN& 122 **5 credits**
Spanish II:DIV **H**

Provides continuation of basic principles offered in SPAN& 121, accumulates vocabulary, reinforces basic grammar, and increases fluency. Aiming at self-expression and literacy, this course engages students in reading, writing, listening, and speaking in the target language. Students will also acquire knowledge of the diverse social, ethnic, and cultural groups that use the language and observe how artistic expression reflects the diversity of cultural values. Meets the Diversity requirement.

Prerequisite: SPAN& 121 with a grade of C or better or two years of high school Spanish.

SPAN& 123 **5 credits**
Spanish III:DIV **H**

Provides further development of basic skills, accumulates vocabulary, reinforces basic grammar, introduces new grammatical principles, and increases fluency. Aiming at self-expression and literacy, this course engages students in reading, writing, listening, and speaking in the target language. Students will also acquire knowledge of the diverse social, ethnic, and cultural groups that use the language and observe how artistic expression reflects the diversity of cultural values. Meets the Diversity requirement.

Prerequisite: SPAN& 122 with a grade of C or better or three years of high school Spanish.

SPAN& 221 **5 credits**
Spanish IV **H**

Provides an intensive review of vocabulary and basic points of language included in the first year, introduces new points, develops communication problem solving skills, and builds an extensive vocabulary pertinent to contemporary social and cultural issues.

Prerequisite: For enrollment in second-year Spanish courses, students must complete first-year college level Spanish.

SPAN& 222 **5 credits**
Spanish V **H**

Continues to build communication skills, accumulate vocabulary, and increase fluency, with added emphasis on literacy.

Prerequisite: SPAN& 221 or equivalent.

SPAN& 223 **5 credits**
Spanish VI **H**

Continues to build communication skills, accumulate vocabulary, and increase fluency, with added emphasis on literacy.

Prerequisite: SPAN& 222 or equivalent.

Speech (SPCH)**SPCH 104** **F,Sp** **5 credits**
Interpersonal Communication **H**

Explores how communication develops and changes relationships. Addresses theories and principles of interpersonal communication, including perception, self concept, feedback, listening, nonverbal communication, empathy and disclosure, and handling conflict with an emphasis on skill building and improvement. Personal, family, and working contexts are considered.

SPCH 109 **W** **5 credits**
Intercultural Communication: DIV **H**

Examines the intercultural aspects of human communication. Emphasizes the significance of communicating across cultural lines of cultural differences in today's world. Focuses on cultural identity, differing behaviors and values, historical context, language and nonverbal expression, intercultural transitions, and conflict. Emphasizes application of theory and skills designed to increase competence in intercultural communication. Meets the Diversity requirement.

SPCH 110 **F,W,Sp,S** **5 credits**
Intro to Public Speaking **H**

Examines the planning, development, and delivery of informative and persuasive speeches. Emphasis is given to effective structure and support of ideas, establishing credibility, audience analysis, language use, speaker anxiety, verbal and nonverbal presentation skills, and listening. Self-critiques are also stressed.

SPCH 114 **F,W,Sp,S** **5 credits**
Small Group Communication **H**

Introduces principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, information sharing, and the and the relational aspects of small group work. Includes analysis and evaluation of project-based small group work. Students will apply small group communication concepts to analyze their own work in a variety of structured discussions and activities.

SPCH 126, 127, 128, 226, 227, 228
F,W,Sp **2 credits**
Competitive Public Speaking

Provides investigation and practice in background, format, procedures and evaluation criteria of forensics events. Students must participate in a minimum of two intercollegiate tournaments.

SPCH 136, 137, 138, 236, 237, 238
F,W,Sp **2 credits**
Intercollegiate Debate

Provides investigation and practice in oral problem solving through the debate format. The student is expected to attend a minimum of two debate tournaments.

SPCH 290 **F,W,Sp** **1 credit**
Forensic Management and Organization

Provides instruction and practical experience in the setup, administration, and judging of forensics tournaments. Graded on a pass/fail basis.

Technology Education (TECH)

TECH 075 **5 credits** **Introduction to Technical Reading/Writing**

Offers basic writing/reading skills for technical students. Skills include writing complete sentences, improving spelling, and using writing as a form of communication. Additionally, students will learn how to read technical materials effectively, expand vocabulary, and improve comprehension.

TECH 078 **3 credits** **Pre-College Math I**

Covers operations on and applications of integers, fractions, and decimals. This is the first in a three quarter pre-college mathematics sequence which contains pre-college math modules 01-03. Credit cannot be earned for both TECH 078 and MATH 078.

Prerequisite: Placement exam or instructor permission.

TECH 079 **2 credits** **Pre-College Math I**

Covers operations on and applications of ratios, proportions, and percents. Also includes topics in measurement and geometry. This is the continuation of the first in a three quarter pre-college mathematics sequence which contains pre-college math modules 04-05. Credit cannot be earned for both TECH 079 and MATH 079.

Prerequisite: C or better in TECH 078 or MATH 078, placement exam, or instructor permission.

TECH 088 **3 credits** **Pre-College Math II**

Covers solving linear equations and inequalities and an introduction to graphing. Techniques and strategies for problem solving are emphasized. This is the second in a three quarter pre-college mathematics sequence which contains pre-college math modules 06-08. Credit cannot be earned for both TECH 088 and MATH 088.

Prerequisite: C or better in TECH 079 or MATH 079, placement exam, or instructor permission.

TECH 089 **2 credits** **Pre-College Math II**

Covers operations on polynomials and factoring of polynomials. This is the continuation of the second in a three quarter pre-college mathematics sequence which contains pre-college math modules 09-10. Credit cannot be earned for both TECH 089 and MATH 089.

Prerequisite: C or better in TECH 088 or MATH 088, placement exam, or instructor permission

TECH 090 **5 credit** **Principles of Technology**

Explores the mechanical, fluid, electrical, and thermal systems on which modern technology operates. Hands-on, real-world lab activities are integrated with mathematics and physics instruction to provide an understanding of the units of force, work, rate, resistance, and energy associated with each system.

TECH 097 **5 credits** **College-Ready English I**

Introduces skills for reading college-level texts and writing college-level papers. Provides strategies for generating, developing, supporting, and organizing ideas, as well as revising for coherence, clarity, correctness, and documentation. This is an outcomes-based pathway to college-level composition courses.

TECH 098 **3 credits** **Pre-College Math III**

Covers solving systems of equations and operations on rational and radical expressions. This is the third in a three quarter pre-college mathematics sequence which contains pre-college math modules 11 - 13. Credit cannot be earned for both MATH 098 and TECH 098.

Prerequisite: MATH 089 or TECH 089 with a C or better, placement exam or instructor permission.

TECH 099 **2 credits** **Pre-College Math III**

Covers solving and graphing quadratic equations and an introduction to exponential and logarithmic functions. This is the continuation of the third in a three course pre-college mathematics sequence which contains pre-college math modules 14-15. Credit cannot be earned for both TECH 099 and MATH 099.

Prerequisite: C or better in TECH 088 or MATH 088, placement exam, or instructor permission.

TECH 100 F,W,Sp,S **5 credits** **Advanced Principles of Technology NSA**

Provides hands-on study of energy, power, and force transformers in mechanical, fluid, electrical and thermal energy systems. Includes a review of force, work, rate, and resistance. Students will learn through a combination of lab experiments and discussion of the physics and math related to each energy system. The application in industry of various concepts is also explored.

Prerequisite: One year of high school principles of technology (certificate from instructor required), or TECH 090, or MATH 106 or higher.

TECH 170 **4 credits** **Statistical Process Control**

Explores the use of statistical process control as a means of improving a process. Problem-solving techniques including brainstorming, Pareto diagrams, and cause and effect diagrams are also examined.

Prerequisite: Recommended: MATH 106 or higher.

Welding (WELD)

WELD 071 F 1 credit
Welding Support I

Introduces shop safety practices and common welding techniques for related curriculums. The common welding techniques addressed will include oxy/fuel cutting and brazing, and basic welding. Concurrent enrollment in WELD 105 required.

WELD 072 W 1 credit
Welding Support II

Introduces shop safety practices and common welding techniques for related curriculums. The common welding techniques addressed will include oxy/fuel cutting and brazing, basic arc welding, and wire feed welding. Concurrent enrollment in WELD 105 required.

WELD 105 F,W,Sp,S 1-6 credits
Related Welding I

Studies shop safety practices and common welding techniques for related curriculums. The common welding techniques will include oxy-acetylene cutting and brazing, electrode arc welding, and wire feed welding.

WELD 151 F,W,Sp,S 1-6 credits
Introduction to Oxy-Acetylene

Covers basic principles, procedures, and safety in using oxy-acetylene equipment. Mild steel rod, brazing rod, soldering, temperatures, metal testing, fluxes, expansion, contraction and dry cutting. Projects are assigned to give practice in making basic welds.

WELD 152 F,W,Sp,S 1-10 credits
Introduction to Arc Welding

Studies basic principles, procedures, and safety in the use of welding equipment. Students must complete satisfactory vertical, flat, horizontal, and overhead welds using E6010. Projects are assigned to help develop student skills.

WELD 158 F,W,Sp,S 5 credits
Welding Theory and Fabrication

Covers theoretical and practical applications of welding processes and metal fabrication. Work on project is required outside of class.

Prerequisite: WELD 151, 152 or instructor permission

WELD 221 F,W,Sp,S 10 credits
Wire Machine

Presents a general overview of various metallic inert gas (MIG) welding machines, including instructions on stainless steel, mild steel, aluminum, flux core wire welding, and machine troubleshooting and setup problems/safety.

Prerequisite: WELD 151, 152, 254, or instructor permission

WELD 222 F,W,Sp,S 6 credits
Advanced Wire Machine

Prepares the student for successful employment in flux core wire welding. Emphasizes safety, care and use of equipment, types of testing (destructive and non-destructive), welding specifications and codes, welding procedures and qualification requirements, visual inspection, weld defects, and workmanship.

Prerequisite: WELD 151, 152, 221, 254, 256, or instructor permission

WELD 254 F,W,Sp,S 1-10 credits
Arc Welding

Continues arc welding procedures, rods, symbols, and metal testing using E7018 and different alloy rods and sizes. Students also work towards AWS/WABO certification.

Prerequisite: WELD 152 or instructor permission

WELD 255 F,W,Sp,S 1-10 credits
Advanced Welding Processes

Provides training opportunity with tungsten inert gas (TIG) and aluminum, mild steel, stainless steel, and pipe.

Prerequisite: WELD 151, 152, 254, 256, or instructor permission

WELD 256 F,W,Sp,S 1-10 credits
Advanced Welding Application

Studies maintenance, repair and production welding and provides a testing program and a service course for those desiring to complete a certification test meeting AWS or WABO specifications.

Prerequisite: WELD 152, 254, or instructor permission

ADMINISTRATION & FACULTY AT LCC

Talented, dedicated instructors teach the classes at Lower Columbia College and experienced administrators develop and implement programs and policies to ensure each student achieves personal and professional success. Listed here are administrative staff and full-time faculty responsible for fulfilling the college's mission.



Administration

President

Christopher C. Bailey (2011)

B.A., Western Washington University; J.D., University of Washington School of Law

Vice Presidents

Laura E. Brener (2007), Vice President of Instruction

B.A., M.A., State University of New York at Stony Brook

Lisa Matye Edwards (2010)

Vice President for Student Success

B.A., University of Puget Sound; M.Ed., Western Washington University; PhD, University of Northern Colorado

Nolan Wheeler (1994), Vice President of Administration

A.A., Lower Columbia College; B.A., Western Washington University; M.B.A., University of Phoenix

Deans

Brendan L. Glaser (1990)

Dean of Workforce and Continuing Education

B.S., University of Northern Colorado; M.B.A., Pacific Lutheran University

Kyle Hammon (2008), Dean of Instructional Programs

B.A., M.A., University of Oregon

Karen Joiner (1993), Dean of Instructional Programs

A.A., Lower Columbia College; B.S.N., University of the State of New York; M.S., University of Portland

Maggie Stuart (1992), Dean of Instructional Programs

A.A., Lower Columbia College; B.S. Linfield College; M.B.A., Marylhurst University

Department Directors

Tamra Bell (2007), Director of Work-based Learning and External Outreach

A.A., Lower Columbia College; B.S., M.S., Warner Pacific College

Erin Brown (2012), Executive Director of Foundation and College Development

B.A., The Evergreen State College

Margit Brumbaugh (2002)

Director of International Programs

B.A., University of Washington; M.Ed., Concordia University

Renee Carney (2009), Director of eLearning

A.A., Lower Columbia College; B.A., Washington State University; M.Ed., Northcentral University

Judith Chapar (2010)

Director of Student Support Services

A.A., Washington State University; M.S.W., Eastern Washington University

Marisa Greear (2004), Director of Financial Aid

A.A., Lower Columbia College; B.S., Western Baptist College; M.P.A., Walden University

Susan Groth (2008)

Director of College Relations and Marketing

B.A., University of Washington

Wendy Hall (2003), Director of Institutional Research, Planning and Assessment
B.A., Whitman College; M.P.A., University of Washington

Richard Hamilton (2001), Director of Campus Services, Facilities and Capital Projects
A.S., City University; A.A., Lower Columbia College; B.A., Washington State University

Sandy Junker (2000), Director of Head Start/ECEAP
B.S., Linfield College

Lynn Lawrence (1996), Director of Enrollment Services/Registrar
A.A., Centralia College; B.A., Central Washington University

Joe Quirk (2010), Director of Finance
B.B.A., Idaho State University

Brandon Ray (2011), Director of Information Systems
B.A., University of Portland; M.S., Warner Pacific College

Kirc Roland (2001), Athletic Director
B.A., San Diego State University

Kendra Sprague, J.D. (2011), Interim Director of Human Resource Services & Legal Affairs
B.A., Washington State University; J.D., Willamette University College of Law

Theresa Stalick (2011), Director of Transitional Studies
B.A., University of Oregon; M.A., University of Idaho

Full Time Faculty

Timothy Allwine (2006), Business Administration & Technology
B.S., Miami University; M.B.A., University of Montana

Gina Armer, Ph.D. (2012), Business Administration
B.A., University of Puget Sound; M.B.A., Pacific Lutheran University; Ph.D., University of Idaho

Hiedi Bauer (2008), English
A.A. Lower Columbia College; B.A., The Evergreen State College; M.A., Portland State University

William Benjamin (2008), Mathematics
B.S., Miami University; M.S., Portland State University

David L. Benson (1984), Political Science, History
B.A., Willamette University; M.A., Columbia University

Merry Bond (2011), Nursing
A.A., Lower Columbia; B.S., Washington State University

Randal D. Byrum (2006), Welding
A.T.A., Lower Columbia College

Rita Catching (1998), Nursing
B.S.N., California State College-Chico; M.N., Washington State University

David Cordero (1994), Earth Science
B.S., University of Oregon; M.S., Portland State University

Donald A. Correll (1976), Drama
B.F.A., M.A., University of Washington

Linda J. Cullom (1996), Business Technology
B.A., University of Washington; M.A., University of Portland

Robert Davis (2012), Instrumental Music
B.M., M.M., Brigham Young University; D.M.A., University of Southern California

Donald D. Derkacht (2002), Computer Science
B.S. and M.S.E.E., Washington State University

Nicole DiGerlando (2012), Reading/Composition
B.A., M.A., Lehigh University

James Dillinger (2007), Diesel/Heavy Equipment
A.A.S., Lower Columbia College

Dawn M. Draus (2003), Mathematics
B.S. and M.S., Northern Arizona University

Ken Ecklund (1997), Diesel/Heavy Equipment, Automotive Technology
A.A.S., Blue Mountain Community College; B.S., Oregon Institute of Technology

Alex Emerson (1996), English, Spanish
B.A., B.A., M.A., Central Washington University

Elizabeth Engel (2010), Medical Assisting
A.A.S., North Seattle Community College; M.Div., Luther Seminary

Allan R. Evald (1991), Welding
A.A., Walla Walla Community College

Carol J. Flakus (1974), Mathematics
B.S., Eastern Oregon State College; M.S., Western Washington University

James Franz (2008), Economics
B.A., State University of New York Plattsburgh; M.A., California State University

Katrina Fuller (2008), Biological Sciences
B.S., Stephen F. Austin State University; M.S., Louisiana State University Medical Center

Jeanne L. Hamer (2002), Nursing
A.A.S., Lower Columbia College; BSN, Washington State University; M.S.N., Washington State University

Armando L. Herbelin, Ph.D. (2002), Chemistry
B.S., Oregon State University; Ph.D., University of Washington

Joan L. Herman (2004), Pre-College Education, English
B.A. and M.A., University of Oregon

Klint D. Hull (2004), English
B.A. and M.A., Eastern Washington University

Susan James (2012), Reference Librarian
A.A., Lower Columbia College; B.A., Washington State University; M.L.S., Emporia State University

Corry Kile (2011) – Automotive Technology
Automotive Technology Diploma; Phoenix Institute of Technology

Louis LaPierre, Ph.D. (2004), Biology and Environmental Science
B.A. and Ph.D., University of California

Sharon M. Layton (1978), Nursing
B.S.N., Washington State University; M.S., University of Portland

Mary M. Leach (2007), Pre-College Education, Humanities
B.A., Washington State University; M.A., California State University

Nadine Lemmons (2004), Business Technology & Administration
A.A.S., Lower Columbia College; B.A., George Fox University; M.B.A., Marylhurst University.

Peteris Livins, Ph.D. (2008), Physics, Mathematics
B.S., State University of New York Stonybrook; Ph.D., University of Virginia

Jeffrey R. Lucas (2005), Mathematics
B.A., Northwestern University; M.S., DePaul University

David N. McCarthy, Ph.D. (1974), English
B.A., M.A., Ph.D., University of California—Santa Barbara

Kathryn A. Meier (1981), Nursing
B.S., M.S., University of Portland

Rhonda L. Meyers (1988), Biological Sciences
A.A., Lower Columbia College; B.S., Oregon State University; M.I.T., St. Martin's University; M.L.S., University of Maryland

Mike New (2012), Fire Science

Tamara R. Norton (2003), Nursing
A.A., Lower Columbia College; B.S.N. and M.S.N., Washington State University

Gina Osborn (2011), Choral Director
B.A., Western New Mexico University; M.M., New Mexico State University

Charlotte C. Persons (1992), Transitional Studies
B.S., University of Missouri; M.A., University of Illinois

Connie Ramos (2007), Nursing
A.A.S., Portland Community College; B.S.N., Regis University (Denver)

Cary W. Rhode (2005), Pre-College Education, Mathematics
B.S., University of Illinois, M.A., State University of New York Brockport

David L. Rosi (2003), Computer Science
A.A., Lower Columbia College; B.A., Central Washington State University; B.A., Western Washington State University; M.S., Nova Southeastern University

Carl F. Roush II (1980), Biological & Environmental Sciences
A.A., Lower Columbia College; B.S., M.S., Washington State University

Daniel Schabot (2012), Speech Communication
A.A., Lower Columbia College; B.A., M.A., Arkansas State University

Courtney Shah, Ph.D. (2007), History
B.A., Duke University; M.A., Brandeis University; Ph.D., University of Houston

Dennis C. Shaw, Ph.D. (1979), Anthropology, Sociology
A.A., St. Johns River Junior College; B.A., M.A., Florida State University; Ph.D., Washington State University

Terri Skeie (1996), Mathematics
A.A., Lower Columbia College; B.A., The Evergreen State College

Kathy A. Stafford (2003), Nursing
B.S.N., M.S.N., Washington State University

Jim C. Stanley (1999), Accounting
B.A., California State University; M.S., St. Cloud University

Michael J. Strayer (1980), Psychology, Sociology
B.A., The Evergreen State College; M.A., Whitworth College

Richard J. Swee (1993), Mathematics
B.S., M.A.T., University of Portland

Kam V. Todd (1994), Machine Trades, Manufacturing

Annette M. Ward (2004), Nursing
B.S.N., Oregon Health Sciences University; M.S.N., University of Phoenix

Marguerite “Nonnie” Weaver (2001), Sociology, Psychology
B.A., Hunter College; M.S.W., Walla Walla College

Ann R. Williamson (2000), Early Childhood Education
B.S., Linfield College; M.Ed., City University

Adam J. Wolfer, Ph.D. (2000), Chemistry/Chemical Engineering
B.S. and M.S., Oregon State University; M.S., Colorado State University; Ph.D., Oregon State University

Lawrence L. Woodruff (1985), Automotive & Diesel/Heavy Equipment
A.A., B.T., Oregon Institute of Technology

Sue Yarbrough (2007), Nursing
B.S., Oklahoma Baptist University; M.S., University of Oklahoma; F.N.P., University of Wyoming

Emeriti

The following Lower Columbia College faculty and administrators have been honored with emeritus status by the Lower Columbia College Board of Trustees

Dr. Vernon Pickett, President Emeritus, 1997

Dr. Donald Fuller, Dean Emeritus, 1998

Mr. Hilmar Kuebel, Dean Emeritus, 1999

Mr. Bruce Cardwell, Trustee Emeritus, 2000

Mr. Gary Healea, Trustee Emeritus, 2005

Dr. Kurtz Carpenter, Faculty Emeritus, 2005

Mr. Lionel Livermore, Faculty Emeritus, 2005

Ms. Carol McNair, Faculty Emeritus, 2006

Ms. Judith Irwin, Faculty Emeritus, 2006

Ms. Ann Mottet, Trustee Emeritus, 2006

Dr. Clint Benjamin, Faculty Emeritus, 2008

Ms. Evelyn Boyd, Faculty Emeritus, 2008

Mr. Lyle Lovingfoss, Trustee Emeritus, 2009

Ms. Kathy Demarest, Faculty Emeritus, 2010

Ms. Mary Harding, Vice President Emeritus, 2010

Ms. Mary Stone, Faculty Emeritus, 2011

Ms. Helen Kuebel, Dean Emeritus, 2011

Dr. James L. McLaughlin, President Emeritus, 2011

Mr. George Dennis, Faculty Emeritus, 2012

Mr. Michael Dugaw, Faculty Emeritus, 2012

Mr. Richard Kelley, Faculty Emeritus, 2012



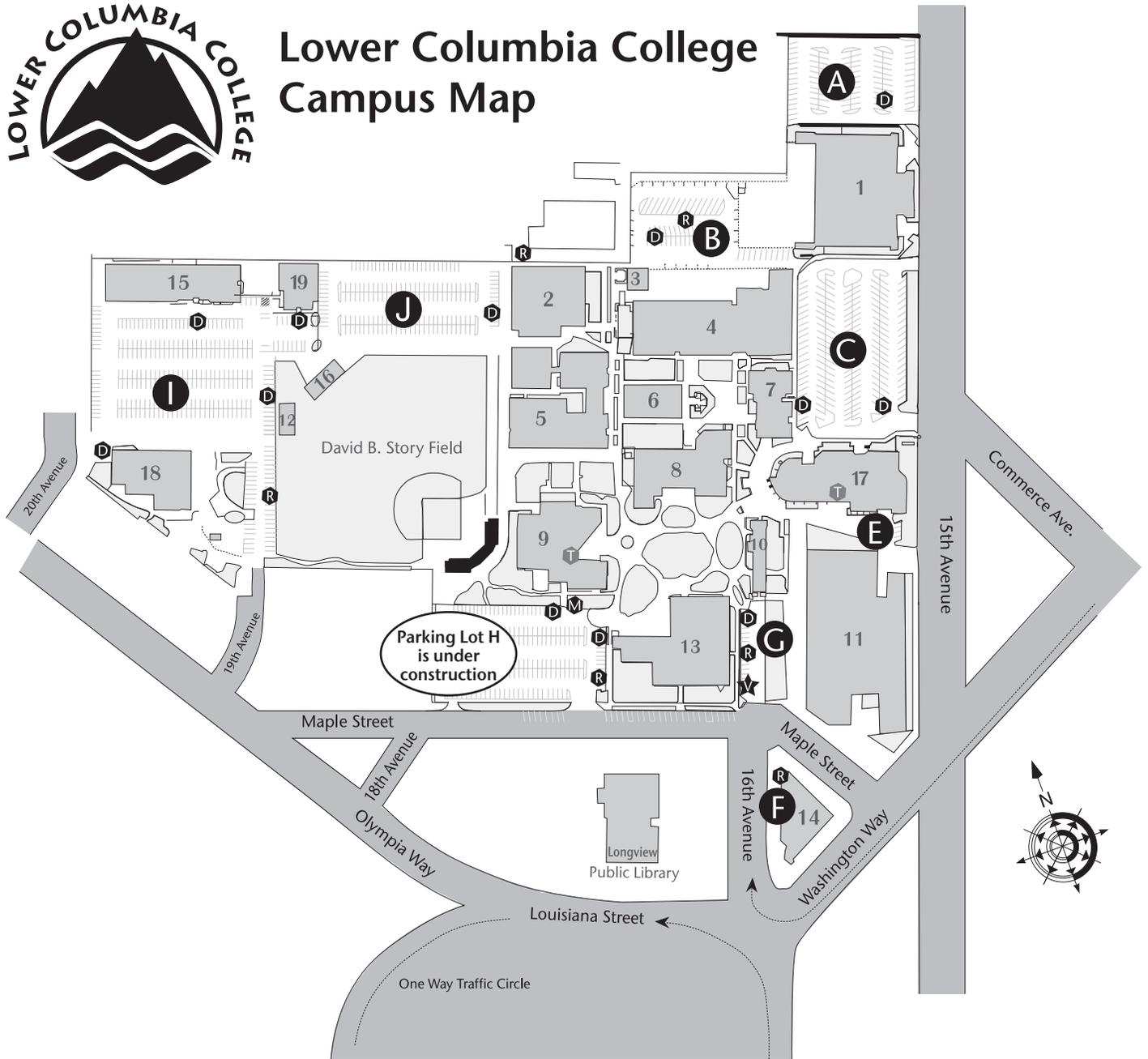
Index

Academic Calendars	2	Career Education Options (CEO)	24	Early Childhood Education (ECED).....	26, 49, 110
Academic Policies & Records	15	Career Pathways/Tech Prep.....	24	Earth Science (ERSI)	52, 112
Academic Standards Committee.....	18	Certificate of Completion	31	Economics (ECON)	53, 113
Academic Warning & Suspension ...	18	Certificate of Proficiency	31	Education (EDUC).....	54, 113
Accounting (ACCT).....	33, 91	Chemical Dependency Studies (CDS)	43, 101	Educational Talent Search.....	24
Accreditation	2, 8	Chemistry (CHEM).....	44, 103	eLearning	11, 23
Administration.....	147	Childcare	10	Elementary Education.....	26, 54
Admission	3	College Level Examination Program (CLEP)	16	Emeriti.....	150
Adult Basic Education (ABE).....	25, 87	College Success (COLL).....	104	Engineering (ENGR).....	58, 114
Advanced Placement	16	Computer Aided Design	45	English (ENGL)	61, 115
Advising	3, 9	Computer Labs	10	English as a Second Language (ESL)	25, 118
Alan Thompson Library	11	Computer Science (CS)	45, 104	Entry Center	10
Allied Health (AH).....	92	Contact Information	2	Environmental Science (ENVS).....	62, 122
American Opportunity Tax Credit....	7	Community Education	22	Faculty.....	147
Anthropology (ANTH)	34, 93	Cooperative Education	22	Fees, Miscellaneous	6, 7
Apprenticeship Programs	21	Counseling.....	10	Final Exams.....	17
Art (ART)	35, 93	Course Descriptions	87	Financial Aid	5
Art Gallery.....	9	Course Waiver	16	Fire Science Technology (FISC)	62, 122
Associated Students of Lower Columbia College (ASLCC).....	13	Credit by Challenge.....	16	Fitness Center & Gym.....	10
Associate Degrees.....	27	Credit for Prior Learning	16	Foreign Transcript Credits.....	3, 16
Astronomy (ASTR)	95	Criminal Justice (CJ).....	46, 107	Forensics	14
Athletics	13	Dance (DANCE)	107	Full-Time/Part-Time Load.....	17
Audit	17	Deans.....	147	General Business	39
Automotive Technology (AMTC).....	36, 95	Degrees & Certificates	27	General Education Development (GED)	24, 25
Bachelor Degree Options.....	26	Department Directors.....	147	Geography (GEOG)	64, 123
Biology (BIOL)	36, 96	Diesel & Heavy Equipment Technology (DHET)	47, 108	Geology (GEOL)	64, 123
Blueprint (BLPT)	98	Dining	10	Getting Started at Lower Columbia College	1
Bookstore	9	Disability Support Services	10	Global Skills.....	20
Business Administration (BUS) ..	37, 98	Distance Education Partnerships ...	26	Grade Forgiveness	15
Business Management.....	38	Distribution Lists.....	30, 31	Grade Report	15
Business Technology (BTEC)....	40, 99	Diversity Courses and Requirements	29	Grades & Credits	15
Career and Employment Services	9	Drafting (DRFT)	109	Graduation & Transfer	18
		Drama (DRMA).....	14, 48, 109		

Grants/Opportunity Grants	5, 7	Music (MUSC)	14, 76, 133	Schedule Changes	4
Head Start/Early Childhood Education & Assistance Program ...	23	Nursing (NURS)	77, 135	Scholarships	5
Health (HLTH)	124	Nursing Assistant	79	Sociology (SOC)	84, 143
Health Occupations	66	Nutrition (NUTR)	138	Spanish (SPAN)	143
Healthcare Training	23	Oceanography (OCEA)	138	Speech (SPCH)	84, 144
High School and Younger (Special Admissions)	3	Orientation	4	State Support of Higher Education ..	1
High School Completion (HSC)	124	Paraeducator	57	Student Academic Grievance Policy	18
High School Diploma	24	Parking	12	Student Clubs & Organizations	14
High School Programs	24	Pass/Fail Option	17	Student Loans	5
History (HIST)	67, 125	Payment	7	Student Handbook	14
Home and Family Life (HOFL)	23, 125	Phi Theta Kappa	11	Student Records	19
Honors & Recognition	11	Philosophy (PHIL)	80, 138	Student Support Services	12
Honors Lists	11	Photo & Video Policy	14	Technology	85
Human Development (HDEV)	126	Physical Education (PHED)	81, 138	Technology Education (TECH)	145
Humanities (HUM)	127	Physical Science (PHSC)	140	Transcripts	19
Incompletes	17	Physics (PHYS)	82, 140	Transfer Center	12
Individualized Certificate Program (ICP)	23, 67	Placement Assessment	3	Transfer Degrees	19, 27
Information Technology Systems	68	Political Science (POLS)	82, 141	Transferring Credit	18
Instructor-Initiated Withdrawal	17	Process Control Manufacturing (PMFG)	142	Transitional Studies	25
International Student Admission	3	Professional/Technical Degrees & Certificates	31	Tuition & Fees	6
Law (Pre-professional)	70	Programs of Study	33	Tutoring Services	11
Learning Commons	11	Psychology (PSYC)	83, 142	Veterans Services	13
Library - see Alan Thompson Library	11	Purchasing Textbooks & Supplies	4	Washington 45	19
Library (LIBR)	128	Quick Facts	2	Welcome to Lower Columbia College	1
LPN2RN eLearning Program	78	Reciprocity Between 2-Year Colleges	18	Welding (WELD)	86, 146
Machine Trades (MASP)	71, 128	Records Confidentiality	19	WGU Washington	26
Manufacturing (MFG)	72, 129	Registration	4	Withdrawal	4
Math (MATH)	74, 130	Reinstating Financial Aid Eligibility	5	Worker Retraining	7
Medical Assisting (MEDA)	75, 132	Repeating a Course	17		
Medical Fields (Pre-professional)	75	Residency	6		
Military Service Experience	16	Retail Management	39		
Multicultural Services	12	Running Start	24		
		Safety & Security	12		



Lower Columbia College Campus Map



Visitors may park in regular (not reserved) space long enough to pick up a Visitor's Parking Pass from the cashier's window in the Admissions Center (#8). Thirty-minute Visitor Parking is in Lot G.

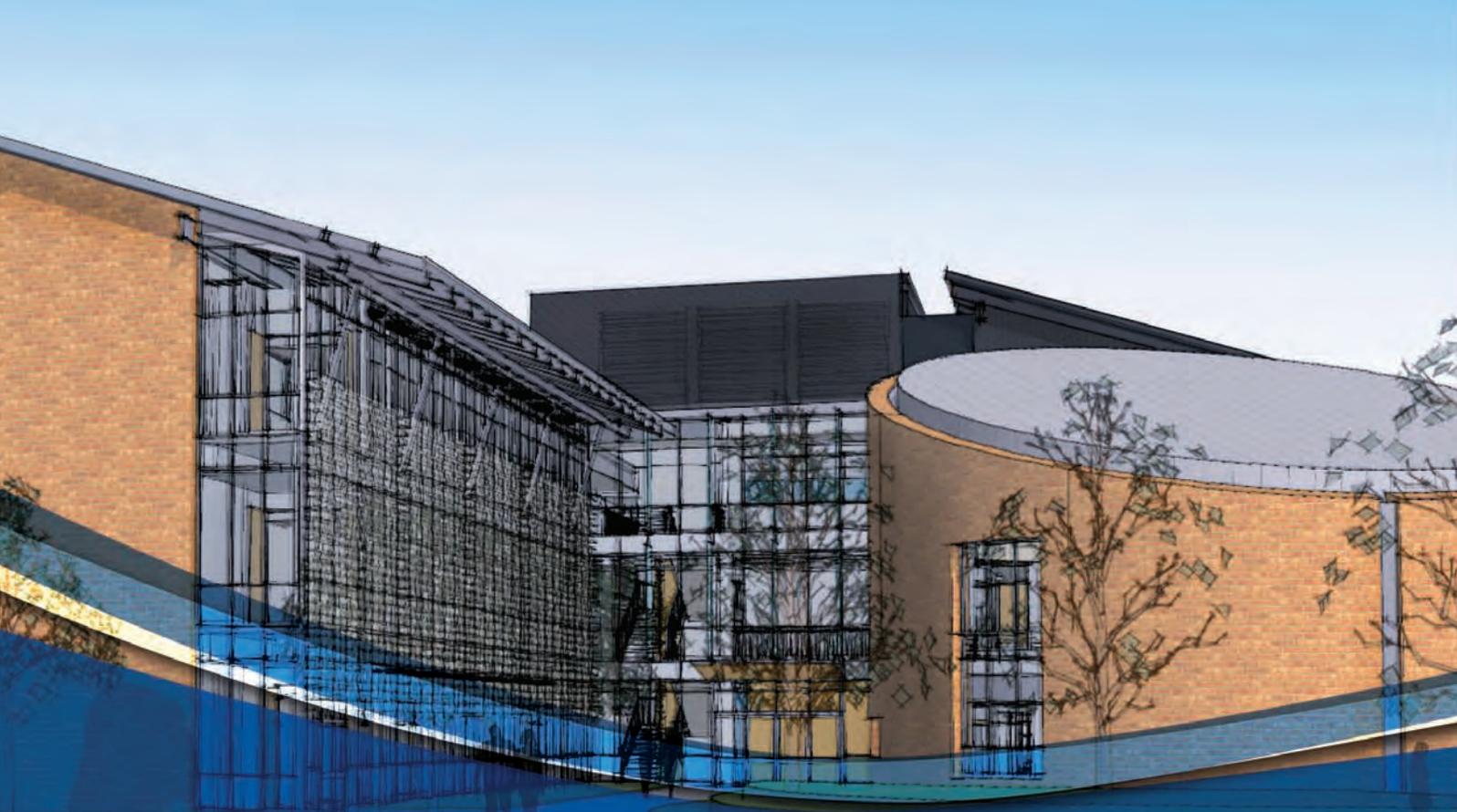
- A - J** Parking Lots
- D** Disabled Parking
- R** Reserved Parking
- M** Motorcycle Parking
- T** Telephones
- ★** Visitors

- 1. Don Talley Building (DTV)
- 2. Myklebust Gymnasium (GYM)
- 3. Steam Plant (SPL)
- 4. Vocational Building (VOC)
- 5. Applied Arts Building (AAR)
- 6. Science Building (SCI)
- 7. Physical Science Center (PSC)

- 8. Admissions Center (ADC)
- 9. Library - Alan Thompson (LIB)
- 10. Instructional Office Building (IOB)
- 11. Rose Center for the Arts (RCA)
- 12. International Center (INC)
- 13. Main Building (MAN)
- 14. Administration Building (ADM)

- 15. Head Start/
Home & Family Life Center (HFL)
- 16. Batting Barn (BTB)
- 17. Student Center (STC)
- 18. Campus Services Building (CMS)
- 19. Head Start East Building (HSE)

Note: Buildings are not physically numbered. The numbers on this map are for key purposes only.



Health & Science Building

BUILDING HEALTHY FUTURES *at Lower Columbia College*



Myklebust Gymnasium & Fitness Center