



1934

2009



2009 – 2011
ACADEMIC CATALOG



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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.



ON THE COVER: From its early days, students played an active role at Lower Columbia College enhancing classroom studies with cultural events, community service, sports and social activities. Student Council members at Lower Columbia Junior College in 1948 pose for a yearbook photo. Seventy-five years later (top photo); 2009 student body officers and members of the LCC Multicultural Club are among dozens of student groups that organize a wide range of activities throughout the year for a diverse campus community.



2009 students: (Back row) Robert Rose, Bunpa Lim, Erena Heino, Shanin Hancuff, Oscar Dominguez, Saydra Goodrum, Jose Delgado and Sergio Montes. (Front row) Melina Montes, Edith Bautista, Imari Santos, Alina Nesforkina, Jessica Vera, Guadalupea Rodriguez, Pattie Kuhns, and Mae Ann Santos.

1948 students: (Standing) Bob Bailey, Lowell Hale, Vern Johnson, Arlene Kilmer, Bill Showers, Jim Lavell, Rodney Waldron. (Seated) Louis Waldron, Dean Art Jones, Vivian Laulainen, Don Talbot, Craig Mayfield.

Welcome to Lower Columbia College

At Lower Columbia College, all of our students have a common goal: improving their lives.

Whether you want to transfer to a university to earn a bachelor's degree or to gain technical skills for a good-paying job in business and industry, we have the people and resources to help.

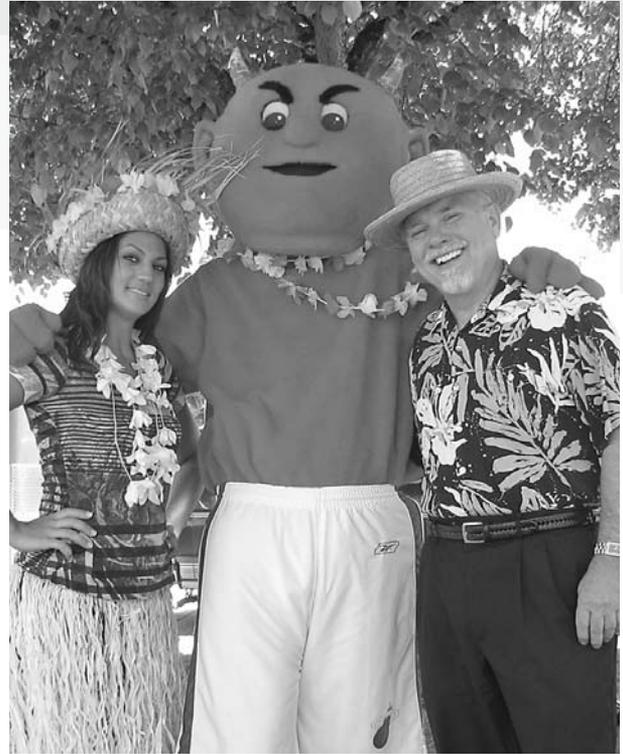
You'll be part of a community of learners dedicated to your success. I encourage you to take advantage of our services—educational planning, financial aid, tutoring and library research. Take time to enjoy activities outside the classroom like our student clubs, athletics, concerts, theatre, art shows, and student government. All these add to your college experience, and your resume.

Lower Columbia celebrates its 75th Anniversary in 2009. Much has changed since our doors opened in 1934; but our mission remains the same – to ensure each student's personal and professional success.

We look forward to adding your success story to our history.



Dr. Jim McLaughlin, President



Lower Columbia College President Jim McLaughlin and Running Start Coordinator Roxana Ahmadifard pose with LCC's mascot during Red Devil Days, a week of fun activities organized each spring by the Associated Students of LCC.

2009 LCC Board of Trustees

Max Anderson, Longview, WA

Registered Investment Advisor

Heidi Heywood, Vice-Chair, Skomakawa, WA

Private practice attorney — Part-time Superior Court commission and District Court Judge Pro Tem in Wahkiakum County

Mike Heuer, Chair, Kelso, WA

President — Woodworkers Union, Longview
Training and Safety Lead, Weyerhaeuser

Lyle Lovingfoss, Kelso, WA

Electrical/Instrumentation Team Development Manager,
Weyerhaeuser

Thuy Vo, 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.

2009-2010 Academic Calendar

Summer 2009

First Day of Classes	June 29, 2009
Independence Day Holiday	July 3, 2009
Last Day of Classes	August 20, 2009

Fall 2009

First Day of Classes	Sept. 21, 2009
Veterans' Day Holiday	Nov. 11, 2009
Thanksgiving Holiday	Nov. 26-27, 2009
Last Day of Classes	Dec. 4, 2009
Faculty Office Day	Dec. 7, 2009
Finals	Dec. 8-10, 2009

Winter 2010

First Day of Classes	Jan. 4, 2010
M. L. King Holiday	Jan. 18, 2010
Presidents' Day Holiday	Feb. 15, 2010
Faculty In-service Day/No Classes	Feb. 16, 2010
Last Day of Classes	March 18, 2010
Faculty Office Day	March 19, 2010
Finals	March 22-24, 2010

Spring 2010

First Day of Classes	April 5, 2010
Memorial Day Holiday	May 31, 2010
Last Day of Classes	June 11, 2010
Faculty Office Day	June 14, 2010
Finals	June 15-17, 2010
Commencement	June 18, 2010

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: 4,951
 - Full-time: 45%; Part-time: 55%
 - Male: 35%; Female: 65%
 - Ethnicity: 85% Caucasian; 15% of color
 - Average Age: 33

Faculty

- Full-time: 76; Part-time: 114

**Based on Fall 2008 data*

Contact Information

Lower Columbia College
The Entry Center
1600 Maple Street, PO Box 3010
Longview, WA 98632
360.442.2311

info@lowercolumbia.edu
lowercolumbia.edu

Important Phone Numbers

Bookstore	(360) 442-2240
Cashier	(360) 442-2210
Childcare	(360) 442-2890
Disabled Students	(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.

State Approving Agency

The academic programs of study are approved by the Higher Education Coordinating Board's State Approving Agency (HECB/SAA) for enrollment of persons eligible to receive educational benefits under Title 38 and Title 10, U.S. Code.

GETTING STARTED – STEPS 1-10

At Lower Columbia College, we're committed to helping each student reach his or her educational goals. The following steps provide a good start toward that success. You'll also find useful information about enrolling for classes, college costs and financial aid opportunities.



Getting Started at Lower Columbia College

■ STEP 1: APPLY FOR FINANCIAL AID

lowercolumbia.edu/finaid

If you need help paying for college, you might qualify for federal financial aid. Get information at the Financial Aid Office in the Admissions Center or online.

■ STEP 2: APPLY FOR ADMISSION

lowercolumbia.edu/applynow

Check in at the Entry Center (in Admissions Center lobby) to apply for admission or apply online.

■ STEP 3: ATTEND A WELCOME SESSION

Learn about admission, financial aid, advising and placement, textbooks and more. Sessions are usually offered weekdays on the hour. Check at the Entry Center in the Admissions Center for the current schedule.

■ STEP 4: TAKE COMPASS ASSESSMENT

If you plan to get a degree or certificate, or you plan to transfer to a four-year college, you will need to take the COMPASS assessment to determine your skill level in reading, writing and math. COMPASS is available at the Advising and Testing Office. You don't need an appointment. Contact the Entry Center for the current schedule.

■ STEP 5: MEET WITH AN ADVISOR

Meet with an Entry Advisor to discuss educational goals and develop a course schedule. Contact the Entry Center for an appointment.

■ STEP 6: REGISTER FOR CLASSES

lowercolumbia.edu/kiosk

The first time you register at LCC, you will do it in person at the Registration Office in the LCC Admissions Center. Your Entry Advisor will explain the process. Be sure to get your global PIN (personal identification number), so you can access your records and other information, pay your tuition and (next time) register online.

■ STEP 7: PAY TUITION

Go to the Cashier's Window in the Admissions Center or pay online at lowercolumbia.edu/kiosk. If you are receiving Financial Aid, finalize your paperwork first.

■ STEP 8: BUY TEXTBOOKS

lowercolumbia.edu/bookstore

Textbooks are available at the bookstore, located in the Student Center, or can be purchased online.

■ STEP 9: ATTEND NEW STUDENT ORIENTATION

Learn about student services, tour the campus and get your Student Handbook, which is loaded with important information. Find more information at the Entry Center.

■ STEP 10: GET HELP ALONG THE WAY

We want you to succeed. If you need help with anything during your time at LCC, just ask. Check our website at lowercolumbia.edu/students for all the resources available to you—from tutoring and counseling to transfer assistance and career planning.

Admission

info@lowercolumbia.edu

360.442.2311

All new students must apply for admission. If you are interested in taking classes at LCC, start at the Entry Center, which is located in the lobby of the Admissions Center. The Entry Center staff will give you information on enrolling for classes, placement testing, course information, GED testing, and advising. You are welcome to call or stop by to begin the enrollment process or to get information and assistance. Call or email for more information.

Certain programs may require special testing or training before enrollment, but all students working toward degrees follow these four steps:

1. Get an Application for Admission from the Registration Office, an LCC Admissions representative, any area high school, or online at lowercolumbia.edu/applynow
2. Complete the Application for Admission and return it to the LCC Registration Office.
3. Make arrangements for your high school(s) to send your transcript(s) to the LCC Registration Office.
4. Request that any college you previously attended send complete, official transcripts to the LCC Registration Office.

Complete an evaluation request form at the Registration Office. Once the transcript is evaluated, the results will be sent to you and your advisor. The Transfer Center also has course equivalency information.

LCC will mail you a letter of acceptance and information on how to enroll. International students, see the International Student Admission section on this page or lowercolumbia.edu/international for information on admission and programs that serve you.

Co-Admission to WSU-V

lowercolumbia.edu/coadmission

360.442.2311

Planning to transfer from LCC to WSU Vancouver? Now it is easier than ever, as you can be admitted to LCC and WSU Vancouver at the same time. If you meet WSU's freshman admission criteria, you can be co-admitted as an incoming freshman. You can also be co-admitted as a transfer to WSU Vancouver and continue your studies at LCC, once you become "transfer-eligible" with satisfactory completion of 40-60 transferable credits. For more information on WSU Vancouver degree options and Co-Admission, contact the LCC Entry Center.

High School and Younger (Special Admissions)

If you are in high school, you may enroll in LCC courses with the approval of your high school principal and an LCC counselor or through the Running Start Program. See the High School Diploma, Running Start, and Tech Prep sections on page 23 for information about enrolling in LCC through these programs. If you are younger than high school age, see the Registrar to begin the special admission process.

International Student Admission

lowercolumbia.edu/international

360.442.2300

International students who are interested in attending Lower Columbia College need to request application materials from the International Student Admissions Coordinator. To be eligible for admission, you 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.

You may be required to take pre-college English courses before you can enroll in transfer level academic classes.

International students must complete at least 12 credit hours per quarter with a minimum GPA of 2.00. If you don't meet this requirement, you will be subject to dismissal from the College and will be out of status with the Department of Homeland Security. You must also provide proof of health insurance and repatriation coverage while enrolled at LCC.

Services for international students include orientation and academic advising. Students should plan to arrive in Longview two weeks before the quarter's classes begin to find suitable housing. Financial aid and student loans are not available to international students, and most scholarships require U.S. citizenship.

Students will meet with an international student advisor each term for course advising and progress checks.

Call or check online for more information on LCC's international student programs.



Welcome Sessions

360.442.2311

You will get details about the admission process in one of LCC's welcome sessions, which include a brief overview of financial aid, placement assessment, advising, registration, cashing, textbooks, and tips for success. Most incoming students attend the 20-minute welcome session just before taking the placement assessment. Welcome sessions are provided weekdays, on the hour, from 8 a.m. to 4 p.m., from September to mid-June, and from 7 a.m. to 5 p.m. Monday–Thursday, from mid-June through August. Call for more information.

Placement Assessment

360.442.2311

If you plan to seek a degree or certificate, or transfer to a baccalaureate institution, you must take the placement assessments before enrolling. Placement assessments in reading, mathematics, English, and study skills will help you select the right courses for your needs and interests. LCC uses nationally-normed tests designed for use by community college students. You will get your results and course recommendations right away. Advisors use these placement results and course recommendations to help you plan your class schedules. Placement recommendations must be followed, although you may re-test once and appeal to the Director of Advising and Testing for higher placement.

Placement assessments, given every day, are arranged through the Entry Center. You must pay the placement assessment fee before testing begins. Call for more information.

Advising

lowercolumbia.edu/advising

360.442.2311

Academic advising is one of Lower Columbia College's most important student services. You will get information, support, and guidance from individual program and entry advisors while planning your own education. Advisors, who 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 to plan a schedule and receive their quarterly online registration PIN. If you need help contacting your advisor, call or stop by the Entry Center in the Admissions Center.

Program planners for most majors are available from the Advising and Testing Office in the Admissions Center and online at **lowercolumbia.edu/programs**. Even if you are not seeking a degree or planning to transfer, you may request help from an advisor through the Entry Center. Online advising is also available.

Registration

registration@lowercolumbia.edu

360.442.2370

Register for classes at the Registration Office as soon as you have seen your advisor. The Registration Office is located in the Admissions Center. In future quarters, you can register online after meeting with your advisor and obtaining your quarterly registration PIN.

Check the quarterly class schedule for registration dates and deadlines. The quarterly class schedules are published before each quarter's registration begins. Registration at LCC is prioritized so that degree and certificate seeking students closest to graduation, who have met with their faculty advisors, register before newer students. Be sure to discuss alternative classes with your advisor since some of the classes you want may fill before you register. Online registration is

available after your first quarter. Be sure to request a global PIN at the Registration Office, so you can access your records and do other business online at **lowercolumbia.edu/kiosk**. To register at KIOSK, you also need your quarterly registration PIN from your advisor.

You must register by the fifth day of instruction. Changes for students placed in the wrong English, Human Development, Mathematics and Physical Education classes are allowed through the tenth day of instruction.

Complete registration details and deadlines are published in the quarterly class schedule or contact the Registration Office by phone or email.

Payment

After you register, pay your quarterly tuition by the due date. Tuition and fees must be paid by the Friday following the day you register. If you have not paid by that time, you will be dropped from your classes. If you use financial aid to pay, finalize your paperwork in the Financial Aid Office, then see the Cashier in the Admissions Center.

You may pay with cash, check, Visa, MasterCard, or with an approved scholarship, waiver, or financial aid. You can sign up for LCC's automatic payment plan which will allow you to pay in monthly installments, interest free. Go to **www.lowercolumbia.edu/payplan** for details. You can also pay online. Ask at the Cashiering Office for details. Current tuition and fee amounts are posted at **lowercolumbia.edu/tuitionandfees** and published in the quarterly class schedule.

Purchasing Textbooks & Supplies

lowercolumbia.edu/bookstore

360.442.2240

Lower Columbia College Bookstore, located in the Student Center, has the textbooks and supplies you will need. Call the LCC Bookstore for more information. You can also order books online.

Orientation

360.442.2311

To learn more about the various activities and services available at LCC, as well as the processes, rules, and regulations of the College, attend an orientation session. These sessions are offered before classes begin or during the first week of instruction. You will have the chance to ask questions and meet other new students. Call for information and orientation dates and times.

Online Registration & Future Quarters

To help get the classes you need when you need them, watch for the quarterly class schedules (online or printed) and make an appointment with your faculty advisor to plan your class schedule and get your quarterly registration PIN. Then enroll for fall, winter and spring classes online or in person, according to your registration priority. (Students who are closest to earning their degrees or certificates get to register before newer students.) Be sure to get a global PIN at the Registration Office so you can check your registration date and time, access your records, register, pay tuition and more at lowercolumbia.edu/kiosk.

Schedule Changes

After you register, here's how to change your schedule:

- Online through the 3rd day of each quarter OR
- Get a Change of Registration form from the Registration Office and fill it out.
- If you are seeking a degree or certificate, get your advisor's signature. To drop a science lab class, get the instructor's signature too.
- Return the form to the Registration Office by the published deadline.

Withdrawal

You may withdraw from some or all of your classes through Friday of the eighth week of the quarter. If the class ends before the regular quarter ends, you may withdraw through the last day of class. If you drop out of a class without withdrawing, you will remain on the roster and receive a poor grade.

To withdraw, get the proper form from the Registration Office, consult with the instructor if possible, obtain your advisor's signature (if withdrawing during the first seven weeks), and return the completed form to the Registration Office. If you complete the withdrawal procedure, you will receive a grade of W ("withdrawal") for the course.

If you don't attend any classes during the first five instructional days of the quarter or contact the instructor, you may be withdrawn from the class(es). You will then receive a grade of V (vanished) for the course(s).

State Support of Higher Education

The State of Washington covers much of the cost of your community college education. Instructional costs per full-time equivalent student were estimated at \$7,041 for the 2008-09 academic year. The state provides \$4,852 per resident student FTE, and student tuition covers the remainder. The state is also providing an average of \$1,801 in financial aid per resident student for 2008-09. The most recent figures on state support are posted at lowercolumbia.edu/statesupport

Tuition & Fees

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

How much will you pay?

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 your residency cannot be determined at the time of registration, you will be required to pay non-resident tuition and fees. Ask about residency at the Registration Office, 360.442.2370. Complete residency rules are detailed in RCW 28B.15.012.

Even if you are not a permanent resident or U.S. Citizen, you may be eligible for reduced tuition, if you 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. Contact the 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 State of Washington 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

Special rates are available for some Veterans. See the Veterans' Office in the Admission Center, or call 360.442.2393 for eligibility information.

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

You may be eligible for reduced tuition or fees if you are a:

- Lower Columbia College employee
- Classified state employee or Washington Public Higher Education Employee
- Student seeking a high school diploma
- Persian Gulf veteran
- Iraqi Freedom veteran
- Afghanistan veteran
- Student enrolled in more than 18 credits of vocational classes
- Washington National Guard member
- Running Start student

For details, contact the Registration Office, 360.442.2370.

Residency

The Washington State Legislature and the Higher Education Coordinating Board require all higher education institutions in Washington to follow stringent requirements and procedures in determining a student's residency classification. The statute couples the length of time a student has resided in the State of Washington with whether he or she is financially dependent or independent.

The Registration Office will make an initial determination of your residency status from the information on your admission application and notify you if you have been classified as a nonresident at the time of registration.

To request a review of your nonresident status or apply for reclassification, 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 you to prove your residency, and inadequate or erroneous documentation may result in denial of reclassification for that particular quarter.

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.
- Application Fee: All new students are charged an application fee. After three years of non-attendance, this fee will be recharged.
- 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.
- Distance Ed: \$8
- Facilities Maintenance: Quarterly tuition includes a fee for facilities maintenance and college security.
- Fitness Center Upgrade: Quarterly tuition includes a fee of \$2.50/credit, up to 10 credits (max. \$25), for fitness center upgrade.

- GED Testing: \$75 for first time on all five. Re-testing: \$15 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. Most online and hybrid courses include a fee.
- Placement Assessment: A fee is charged for placement tests.
- Resident Excess Credit: Residents enrolled for over 18 credits pay an additional per credit charge for 19 or more credits.
- Technology: Quarterly tuition and fees charges include a technology fee of \$3.75/credit, up to 12 credits (max. \$45). 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: \$5.00 fee for each official transcript.
- Tutoring Center: The chart includes a fee to support the Tutoring Center.
- 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 of Tuition & Fees

You can pay your fees and tuition in-person, by phone, or online at lowercolumbia.edu/kiosk. LCC accepts checks, cash, debit cards, Visa, and MasterCard.

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 Community Education classes; details are in the quarterly class schedule.

Financial Aid

lowercolumbia.edu/finaid

360.442.2390

Need help paying for college? For information, applications and help with financial aid, stop by the Lower Columbia College Financial Aid Office in the LCC Admissions Center or go to lowercolumbia.edu/finaid

Financial aid options include scholarships, grants, student employment, loans, veterans' assistance and even special programs that pay for tuition, fees, books and supplies, room and board, transportation and personal expenses. The Financial Aid Office staff can help determine what type of financial aid is right for you.

There are deadlines for applications for financial aid each quarter. If you do not submit all required documents by the deadline, you will not be eligible for aid that quarter. Contact the Financial Aid Office for quarterly deadlines.

The Financial Aid Office is open weekdays from 8 a.m. to 5 p.m. and Tuesdays until 6 p.m. Evening appointments may be arranged. (Hours/days change for summer.) Call or stop by for general financial aid information.

Scholarships

lowercolumbia.edu/scholarships

It is not as hard as you might think to get a scholarship. LCC awards dozens of scholarships each year, many of them funded through the LCC Foundation. They consider many different criteria—such as your field of study, academic excellence, citizenship, leadership, community involvement or financial need—so don't assume you don't qualify.

Get LCC scholarship information and applications in the Financial Aid Office or online. Most applications are due in mid-April.

Top drama, forensics and music students are eligible for quarterly scholarships. Information and applications are available at the Financial Aid Office, online at lowercolumbia.edu/scholarships, from the LCC faculty members supervising these programs, or from area high school faculty and counselors.

LCC Booster Club athletic scholarships and partial tuition waivers are offered to a limited number of LCC athletes. For more information, contact the LCC Athletics director at 360.442.2471.

If you are returning to college after an absence of three or more years, you could get a scholarship. For more information, contact the LCC Counseling Office at 360.442.2330.

Outside businesses, organizations and clubs offer more scholarships and assistance. To learn more, contact the Financial Aid Office at 360.442.2392.

Research other scholarships online at fastweb.com, finaid.org, collegenet.com and other sites. A list of websites is available at the Financial Aid Office.

Grants

Grants, which usually don't have to be repaid, are often offered with Work-Study authorization or a loan. The College participates in the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, and the Washington State Need Grant programs.

Grant amounts vary based on your family's ability to pay for college and your enrollment status.

To be eligible for these grants, you must be a U.S. citizen, legal immigrant, or a citizen of certain trust territories. You need to enroll in a qualifying academic program, maintain satisfactory academic progress, and demonstrate financial need, as determined by a federal formula. You must not be in default on a federal educational loan, owe a repayment to a federal educational grant program, or have a drug conviction while receiving federal student aid. If you are an 18 to 26-year-old male, you must have registered with Selective Service.

To apply for a grant, complete the Free Application for Federal Student Aid (FAFSA) for the appropriate academic year. Apply online at www.fafsa.ed.gov. Allow at least three to six weeks for processing time. You must complete the Financial Aid Personal Data sheet, available at the Financial Aid Office, Entry Center or online. For more information, call 360.442.2390.

If you withdraw or stop attending classes before completing 60 percent of a quarter, you may have to repay part of your financial aid.

Student Employment

You may qualify for student employment through the Federal Work-Study, Washington State Work-Study, Temporary Aid to Needy Families (TANF) Work-Study or LCC Student Help programs. Jobs may be on or off campus.

To be authorized for federal and state work-study, which are need-based, you must complete the Free Application for Federal Student Aid (FAFSA).

LCC offers a limited number of part-time student jobs on campus through the Student Help and TANF Work-Study programs. Jobs in your field of study may also be available for Cooperative Education (see page 22) credit. For more information on student employment, call 360.442.2393. Jobs are posted at lowercolumbia.edu/hireconnections

Student Loans

Loans should be your last resort, as they must be repaid. If you need a student loan, we can help you apply. The College participates in the Federal Stafford Loan program (offering a subsidized loan based on financial need and an unsubsidized loan that is not need-based) and, for parents, the Federal Parent Loan for Undergraduate Students (PLUS).

To receive any type of loan, you must first apply for a Pell Grant using the Free Application for Federal Student Aid (FAFSA). The maximum loan amount depends on your need, dependency, and year in college. You 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.

Veterans' Assistance

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 rate and other help. Learn more at the Veterans Office in the financial aid area, 360.442.2393. Current veterans' tuition rates are posted at lowercolumbia.edu/tuitionandfees

Keeping Your Financial Aid

To continue receiving financial aid, you must meet the College's satisfactory academic progress standards, available at the Financial Aid Office counter. If you fail to meet these standards—listed with each financial aid initial award letter—you may be placed on financial aid probation or lose your financial aid. Contact the Financial Aid Office staff at 360.442.2390 for more information.

Reinstating Your Financial Aid Eligibility

If your financial aid eligibility was canceled or terminated at LCC or another institution, you may request that your financial aid eligibility be reinstated once you have met the standards for reinstatement. For information on the reinstatement process, contact the Financial Aid Office staff at 360.442.2390.

Paying Your Tuition

After you finalize your financial aid paperwork, you can request an administrative hold from the financial aid staff until the first week of class, or until a date approved by the Financial Aid or Registration Office.

American Opportunity Tax Credit

The Act creates the "American Opportunity Tax Credit" for 2009 and 2010, which will provide 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 new tax 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).

Opportunity Grants

360.442.2330

If you are an unemployed or underemployed adult, seeking a certificate or degree in a high demand career, LCC may be able to help you pay for college. The Opportunity Grant Program provides individualized support services, along with funding for tuition and fees, books, and/or tools for up to 45 credits. You may be eligible for an Opportunity Grant if you are a Washington resident, in one of the approved high demand career pathways (see application or web site for full list). You need to submit a Free Application for Federal Student Aid (FAFSA) to determine your income eligibility; however, you 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, failure to register for selective service, etc., may qualify for the Opportunity Grant. Applications for the Opportunity Grant Program are available on campus at Career & Employment Services in the Admissions Building. Individualized support services include: assistance with education planning, financial aid, campus and community resources and skill building.

Worker Retraining

lowercolumbia.edu/workerretraining 360.442.2336

If you have lost your job due to plant closures, downsizing, or other causes, are a displaced homemaker or have lost your business, LCC may be able to help you get new job skills and training. The college works with the Employment Security Department and other community agencies to provide services to dislocated workers. The various community partners together provide a broad array of assistance and can work with companies and employees as they plan 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. We offer educational planning, advising, assistance with admissions, registration, and financial aid. Located in the Career & Employment Center, Room 116 in the Admissions Building.

General Education Outcomes

In 2007, Lower Columbia College faculty developed the following set of outcomes for LCC students. The outcomes describe the knowledge, skills and abilities that the college expects all students to possess by the time they earn an associate degree. The college regularly evaluates student progress in these areas to help plan improvements and ensure quality in every area.

Citizenship

Contribute to the betterment of the community through participation, volunteer work, personal/civic respect for the environment and our fellow species, as well as for humans.

1. Students will demonstrate knowledge of U.S. governmental processes; for example, the executive, legislative, or judicial branches.
2. Students will demonstrate an understanding of the role of community and/or charitable organizations.
3. Students will demonstrate an understanding of the democratic process; for example, local, regional and national elections and referendums.
4. Students will demonstrate an understanding of environmental ethics, issues and information in local and global contexts.

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.

1. Students will write in complete sentences, demonstrating use of grammar, mechanics, and word choice appropriate to context.
2. Students will compose paragraphs with a single topic and present ideas in a clear and organized manner.
3. Students will produce written work that is unified by a single controlling idea and is organized cohesively and coherently overall.
4. Students will use computer databases, the internet and other technology to gather and communicate information.
5. Students will include credible evidence to support arguments and conclusions.
6. Students will document source information accurately and appropriately.
7. Students will comprehend materials from a wide variety of disciplines and applications.
8. Students will speak in a clear, logically organized and credible manner using effective verbal structure, word choice and delivery.

Critical Thinking

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

1. Students will identify and define primary problems or issues.
2. Students will gather relevant and accurate information from a variety of sources and draw valid inferences from that information.
3. Students will analyze problems or issues using techniques or processes appropriate to the subject.
4. Students will propose and evaluate solutions based on the criteria of logic, ethical principles, and coherence.
5. Students will be able to make judgments in response to aesthetic expression.

Interpersonal Skills

Interact effectively with individuals and within groups.

1. Students will communicate effectively, and work cooperatively with a group.
2. Students will receive, consider, and respond appropriately to verbal and non-verbal cues.
3. Students will apply appropriate techniques for resolving conflicts and dealing with differences in a variety of settings.

Multiculturalism

Develop an understanding of the world as a community through the study of diverse groups in society.

1. Students will examine how people define themselves and others as members of various social, ethnic, and cultural groups.
2. Students will analyze global issues from multiple perspectives and make connections between the local and global community.
3. Students will demonstrate knowledge of multiple perspectives and interpretations of cultures and histories.
4. Students will recognize how forms of artistic expression reflect the culture and values of the artists.

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.

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

SERVICES FOR STUDENTS & CAMPUS LIFE

At LCC, student support doesn't stop in the classroom. We have resources to help you every step of the way. Check out the many services available to you on campus. We also encourage you 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 you information, support, and guidance from individual program and entry advisors. While you will still be responsible for your educational planning, your advisor can help you choose the right classes for your program. Advisors are assigned based on their particular knowledge in your area of interest or field of study. If you plan to earn a degree or certificate at LCC or you plan to transfer to a baccalaureate institution, you must meet with an advisor prior to registering each quarter.

Bookstore

lowercolumbia.edu/bookstore 360.442.2240

You 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 1st floor in the Student Center. A book buyback is held during finals week of each quarter. The Bookstore is open to the public, weekdays from 8 a.m. to 5 p.m., with extended hours as needed. Summer hours vary. Check the quarterly class schedule for hours and buyback dates. You can also order your books online at lowercolumbia.edu/bookstore. The Bookstore's primary goal is to serve students, and the staff is always open to your suggestions.

Career and Employment Services

lowercolumbia.edu/careercenter 360.442.2330

The Career Center is a computer lab loaded with multiple resources to help you develop a personalized career/educational plan or to find that job you've been looking for. Career assessments will help you find a career that matches your interest, skills, and abilities. Current career information resources will help you learn about job duties, education requirements, working conditions, and occupational demand.

The Cooperative Education program will allow you to apply your classroom learning at a local workplace.

HireConnections will enable you to search for local work study positions, work-based learning opportunities, and part- or full-time employment. Professional counselors are available to help you with your career planning and job search needs.



Art Gallery

lowercolumbia.edu/artgallery 360.442.2511

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. Hours are 10 a.m. to 4 p.m. Monday and Tuesday, and 10 a.m. to 8 p.m. Wednesday and Thursday.

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 modern computing facilities equipped with the latest hardware and software in support of instructional programs, students, faculty, staff, and administration. The College's instructional computing facilities, which include a central campus computing center and several other labs that support specific programs, are networked using the latest network hardware and software. Students, faculty, administrators, and staff are able to access the Internet through the campus network. Wireless Internet access is available to students with notebook computers. Please contact the Information Services Department, located in the Information Technology Center, for assistance. Students are also eligible to receive individual log-on accounts and email addresses.

Counseling

lowercolumbia.edu/counseling 360.442.2311

Lower Columbia College provides counseling services for students, including personal, educational, and career counseling. If you would like to 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.

Disabilities Services

lowercolumbia.edu/disability 360.442.2341

If you have a disability and need assistance, the Special Services Office may be able to assist you. The College is committed to providing support services to students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Contact the Special Services Office at least one month prior to the beginning of classes to obtain services. You will be required to provide documentation of your disability. The office may also be able to assist with academic advising, referrals to agencies, admission, registration for classes, assistance with applying for financial aid, and arranging appropriate auxiliary aids.

Entry Center

info@lowercolumbia.edu 360.442.2311

The Entry Center is the place to go for enrollment information and general help getting started at LCC. New student advising is coordinated through the 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, or Aerobics class to add some "positive" stress to your hectic schedule. Inhale...Exhale!

Food Service

lowercolumbia.edu/cafe

Lower Columbia College provides food service when classes are in session. The serving area opens for breakfast and coffee at 7 a.m. Breakfast is served all day. Daily lunch specials are prepared from 10 a.m. to 2 p.m. Hamburgers, salads, soups, sandwiches, pizza, and snacks are also available. The espresso bar is open weekdays, 7 a.m. until 1:30 p.m. Catering and banquets can be provided upon request.

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.

International Students

lowercolumbia.edu/international 360.442.2300

Lower Columbia College welcomes students from other countries. The college is committed to promoting international cultural awareness and understanding, and international students are integral to this commitment. For information on international student admission and enrollment, see page 4 or our webpage.

Learning Commons

lowercolumbia.edu/learningcenter 360.442.2570

The Learning Commons combines Library Services, Self-Paced Learning, eLearning and Tutoring Services. Whether you need help with studying, research, or specific classes, the Learning Commons is here to assist you. 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 ANGEL, Elluminate, and other online systems. Hours of service are posted in the Learning Commons and on the website. Send email to elearning@lowercolumbia.edu.

■ LIBRARY SERVICES

lowercolumbia.edu/library 360.442.2660

The LCC Library is here to help you succeed. Library Services in the Learning Commons houses collections of print, audiovisual and electronic materials. The online catalog includes holdings of the LCC Library, Longview Public Library and Kelso Public Library. You will also find leisure reading paperbacks, audio and video players, quiet study rooms, copy machines and computers. The Library Services web site 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 web site 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, mathematics and general study skills (test taking, textbook reading, note taking). You'll work with trained staff in the Learning Commons to learn new skills and/or improve existing skills so you'll do well in college courses. Hours of operation are posted in the Learning Commons.

■ TUTORING SERVICES

lowercolumbia.edu/tutoring 360.442.2572

Need some help? Individual and group tutoring are free to LCC students. Well-qualified tutors help students in most college subjects, including composition, grammar and punctuation, and relation writing issues. The tutors 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 web site 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.



Retention Program

360.442.2311

Lower Columbia College staff members will contact you several times during your first quarter to offer assistance, inform you of services on campus, and remind you of upcoming dates and deadlines.

Student Support Services Program

lowercolumbia.edu/sss

360.442.2420

The Student Support Services Program provides academic assistance to help program-eligible students succeed in college. The federally funded Trio program helps students stay in college, graduate, and transfer to a baccalaureate institution. Services include advising, individualized tutoring, and peer mentoring. If you qualify, Student Support Services will review your program of study regularly and guide you toward a timely graduation. They will also help you select a career and a transfer school and improve your study skills and personal awareness to become a more effective college student.

Transfer Center

lowercolumbia.edu/transfercenter

360.442.2350

The personnel in the Transfer Center, located in the Admissions Center, can help you make a successful transition to a baccalaureate institution. You can get help with selecting a transfer college or university, as well as admission procedures, financial aid application, housing information, and transfer admission requirements. The Center sponsors van trips to popular transfer colleges and has transfer guides that show course transfer equivalencies.

Tutoring Services

(see Learning Commons)

Veterans Services

360.442.2393

The College offers V.A.-approved educational programs to eligible veterans and eligible dependents of deceased or totally disabled veterans under Title 38 and Title 10, U.S. Code. If you qualify for this program, the Veterans' Affairs Office can help you process applications for V.A. educational benefits and can provide information on eligibility, pay, and other V.A. matters. The Office is located in the Financial Aid area of the Admissions Center. Assistance is available Monday through Friday from 8 a.m. to 5 p.m. Evening appointments may be arranged.

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 the Veterans' Affairs staff. To qualify, you must provide a copy of your DD Form 214, showing that you were awarded either the Vietnam Service Medal or the Southwest Asia Service Medal.

LCC programs are approved for V.A. educational benefits by the Higher Education Coordinating Board. The College participates in the following V.A. educational programs: Montgomery GI Bill—Active Duty program based on the veteran's active military service; Montgomery GI Bill—Selected Reserve program for military reserve and National Guard service; the V.A. Vocational Rehabilitation program for veterans with service-connected disabilities; and the Survivors and Dependents Educational Assistance program.

Get involved in one or more of LCC's clubs or organizations, and you will be more likely to succeed academically— studies prove it. Plus, it is a great way to make lifelong friendships. The Student Activities Office, located in the Student Center, coordinates many co-curricular events and activities and is the campus headquarters for the Associated Students of Lower Columbia College (ASLCC), student publications, and a number of student clubs.



Equal Opportunity and Reasonable Accommodation

It is the policy of Lower Columbia College to provide equal opportunity in all facets of education and employment regardless of sex, race, creed, marital status, age, national origin, sexual orientation, veteran status, religious preference, or the presence of any sensory, mental or physical disability. To request disability accommodations in the application process, students should contact the Special Services Office at least 3 days in advance at – Voice: 360.442.2341, or email: tcorrie@lowercolumbia.edu. The Title IX equal opportunity officer is Mary Harding, LCC Admissions Center, Room 159, 360.442.2301. LCC's Section 504 disability and ADA Coordinator is John Krause. For more information call 360.442.2331.

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 May.

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, 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 nine NWAACC titles with appearances in 21 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, you 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 your musical experience at LCC. Top high school musicians from high schools in southwest Washington and northwest Oregon come to LCC each year for our High School Invitational Honor Band.

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.

Publications

Headliner—The Student Activities staff publishes and distributes the weekly online Headliner, a listing of announcements and news to keep you informed about campus events. Printed copies are distributed in the Student Center, and a link to the electronic version is distributed by email. Submit items for inclusion to the Student Activities Program Coordinator.

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 webpage.

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:

- Anime Club
- Associated Students Executive Council
- Campus Christian Club
- Biological Society
- Campus Programming Board
- Chemistry Club
- Community Choir
- Dance Club
- Democratic Society
- Drama Club (ACT ONE)
- Fencing Club
- Forensics (speech and debate) (Phi Rho Pi)
- Jazz Band
- Jazz Choir
- Multicultural Club
- New Student Orientation
- Northwest Voices
- Phi Theta Kappa
- Salal Literary Magazine
- Science Fiction Club
- Student Nurse Organization
- Student League of Independent Potters (SLIP)
- Symphonic Band
- Transfer Club



Rose Center for the Arts

lowercolumbia.edu/rosecenter

The new Rose Center for the Arts showcases the College's fine arts programs, with a 500-seat auditorium for concerts and other events, a 113-seat theatre, and excellent new rehearsal space, faculty offices, practice rooms, and a digital recording studio. It is also home for the LCC Art Gallery.

Photo & Videotape Policy

Lower Columbia College takes photographs and videotapes 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 videotapes 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 videotapes might include them and might be used in college publications, newspapers, and other media for publicity purposes.

ACADEMIC POLICIES & RECORDS

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



Grades & Credits

At Lower Columbia College, you will 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.

Advanced Placement

Eligible students may be permitted to enroll in an advanced class without having taken the course normally preceding it. Eligibility for advanced placement, such as waiver of a required course, is determined based on the student's prior experience, parallel skills, and/or knowledge required to complete the course being waived. LCC also grants credit for completion of the College Board's Advanced Placement examinations. Contact the Registration Office at 360.442.2370 for specific information.

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.

Course Challenge

You could earn course credit at LCC without attending regular classes by challenging a course. To do this, you must pass a comprehensive examination and/or complete projects designated by the instructor. Permission to challenge a course is conditional and is based on the express permission of the full-time instructor who normally teaches the course. Challenges are not allowed for work previously taken in

high school or college, or for a course the student has previously failed.

Challenged credits may be used to meet an appropriate graduation requirement, but are not accepted as part of the 24 credits in residence. If permission is given to challenge a course, the student must register for that course and pay regular course fees.

Course Waiver

You may petition to have a course requirement waived, based on your prior educational or work experience. The current instructor of the course initially evaluates the request to waive a course, with final approval by the Vice President of Instruction.

At your request, the instructor submits a Course Waiver Form to the Vice President of Instruction. Once approved by the Vice President, it is sent to the Registrar and recorded on the student's transcript. 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 GPA.

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.

Credit by Examination

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 Sciences-Transfer degree. Credit will be granted for Excelsior College Examinations on a case by case basis. Students should discuss this option with faculty. CLEP or Excelsior College Examinations credits will be granted after a student earns a minimum of 12 LCC credits.

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.

Grade Forgiveness

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

Grade Report

Get your grades (unofficial transcripts) through the student information kiosk website at lowercolumbia.edu/kiosk, using your Student ID Number and your global PIN (personal identification number) available from the Registration Office.

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. If you qualify for either list, LCC will congratulate you by mail and release your name for publication.

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. Otherwise, the "I" remains on the transcript.

Instructor-Initiated Withdrawal

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

Pass/Fail Option

You may choose the pass/fail grading option through the first 10 days of each quarter. Formalize this choice 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. You may reverse your decision to enroll on a pass/fail basis 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 your freedom of expression and protects you from improper, arbitrary or capricious academic evaluation.

If you believe you have been graded improperly and are unable to informally resolve the situation with your instructor, you 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.

Satisfactory Academic Progress

Poor grades may bring you an academic warning, alerting you to low scholarship status and encouraging you to improve performance. The academic warning and suspension policies are:

A student who receives a quarterly GPA below 2.0 for any quarter will be placed on warning status.

A student who receives a quarterly GPA below 2.0 for two consecutive quarters and whose cumulative GPA is less than 2.00 will be suspended for academic reasons.

Suspended students are not allowed to enroll for classes. To be readmitted after academic suspension, you must submit a written petition, listing the reasons for the reinstatement. 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, you will enroll under whatever conditions the Vice President believes will help you succeed.

Graduation & Transfer

Applying for Graduation

To receive a degree from LCC, you must apply for graduation through the Registration Office. Pick up a graduation application in the Registration Office, 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. We recommend that you apply for graduation two quarters before you intend to graduate, so that any deficiencies may be identified and corrected. You 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. If you will be eligible to graduate at the end of summer quarter, you may—during the preceding spring quarter—apply for spring graduation and participate in Commencement,

completing your requirements through the Summer Completion Option.

You may apply for graduation under the graduation requirements in effect at the time you first enrolled, provided your first enrollment year is within five years of your 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 and the courses that are accepted are used in the computation of the Lower Columbia College grade point average. 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, or one or more Distribution Area requirements. Students must initiate the review process and be prepared to provide necessary documentation. For complete information, contact the Director of Enrollment Services/Registrar, 360.442.2371.

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 current 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 25. Some colleges require specific course patterns or courses, in addition to the basic Associate in Arts degree. Consult an advisor or the Advising Office in the Admissions Center for details and be sure to work closely with your program advisor. For the latest information on LCC's transfer agreements with other colleges, phone 360.442.2357, stop by the Transfer Center in the LCC Admissions Center or go to lowercolumbia.edu/transfercenter

Student Records

Official Transcripts

An official transcript is a copy of your 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 your record. You may request a transcript in-person, in writing, or online through the student information website, lowercolumbia.edu/kiosk. Your transcript will only be released to you or to persons you authorize in writing. LCC charges a small processing fee for each official transcript requested.

Records Confidentiality

To protect your privacy, only limited information about you can be released to individuals off campus without your express written permission. Federal laws concerning the privacy rights of students and college policy provide the basis for these procedures.

WITH your express written permission, information is released as follows:

- Requests for information from employers or prospective employers.
- Requests for student records from other colleges and schools.
- Requests for student records, grades, and enrollment records from parents or spouses or other persons, regardless of the age of the student.
- Directory information, which includes address, telephone number, major, degrees earned, height and weight (for athletes), and other personally identifiable information about the student.

WITHOUT your permission, information is released as follows:

- Requests for information from College faculty and staff when the information is required to carry out their job responsibilities.
- Requests for information from persons reviewing a student's financial aid or financial aid applications.
- The following is released for publication: (1) the name, sport, high school, height and weight of student athletes, (2) the name and major of scholarship recipients, (3) the names of graduates of the college, (4) the names and qualifications of students receiving various honors, and (5) the names and activity of students participating in public performance events.
- Bona fide researchers conducting special studies. Information shall be released in an unidentifiable manner, if possible.
- In compliance with judicial orders or judicial subpoenas, information about you may be released. You must be notified by the individual responding to the subpoena.

IN AN EMERGENCY or to protect the health and safety of you or others, student information may be released. The Director of Enrollment Services/Registrar or the Vice President for Student Success determines what constitutes an emergency, in accordance with college procedures.

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. Choose the learning style that works best for you.



Apprenticeship Programs

360.442.2336

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 Apprenticeship 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 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.

If you are a registered apprentice in a program supported by LCC or have questions regarding programs supported by the College, call 360.442.2336.

Continuing Education

lowercolumbia.edu/continuinged 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 360.442.2332

Through cooperation between you, your instructor and an employer, you may earn one credit for every 30 hours of work related to your program of study at LCC. Most LCC programs have established Cooperative Education courses (Numbers 288/289). You may enroll for a maximum of 15 credits toward your 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.

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

To participate, you'll need to have completed nine credits of your program-related courses and have at least a 2.0 GPA. To enroll, you must have permission from your LCC program instructor 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.



Home & Family Life

lowercolumbia.edu/hofl

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.

Online Learning

lowercolumbia.edu/online

360.442.2520

Take a single online course or complete requirements for your degree from the comfort of your home or any location you choose. LCC continues to expand our online course curriculum with offerings in math, science, the arts and more. Complete your education while continuing with the rest of life. Point your web browser to lowercolumbia.edu/online or send email to elarning@lowercolumbia.edu for more information.

Head Start/Early Childhood Education & Assistance Program

lowercolumbia.edu/headstart

360.442.2800

Head Start/ECEAP (Early Childhood Education and Assistance Program) is a federally and state-funded comprehensive child and family development program that includes preschool, home visits, health and developmental screening, social service referrals and parent involvement opportunities. Families must meet federal and state income guidelines to qualify.

Children may 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.

Head Start/ECEAP supports you in your role as prime educators of your children, and you are encouraged to attend weekly group parent meetings and to volunteer at the centers. Head Start/ECEAP offers you many opportunities to participate in all program activities and program decision-making. Parents may register in HOFL 131, 132 and 133 for college credit.

Healthcare Training

lowercolumbia.edu/healthcaretraining

360.442.2620

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 South-west 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

360.442.2332

The Individualized Certificate Program offers you an opportunity to pursue a custom-designed, work-based learning program that is not available through current apprenticeship or college programs. Work closely with the ICP advisor to ensure that courses meet the program requirements.

High School Programs

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. If you qualify, you may enroll in a full range of professional/technical and academic courses for university or college transfer. You will attend regular Lower Columbia College classes during the school day, in the evening or online. Upon satisfactory completion of the course requirements, you will get college credit that is fully transferable to most colleges and universities. Credits also apply to your high school diploma according to individual school district policy. To be admitted to the Running Start program, you must place into college-level writing and reading, participate in an orientation and apply by the published deadline. For more information or to apply, contact the Lower Columbia College Running Start Office or your high school counseling office.

Tech Prep

lowercolumbia.edu/techprep

360.442.2331

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. If you are in high school, you may earn free college credit when you earn a B or better in a Tech Prep course offered at your school. Check your high school course catalog for specific career-technical education (CTE) courses listed as Tech Prep. Earning Tech Prep credit while in high school gives you 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 your high school CTE instructor or counselor about Tech Prep or contact the Tech Prep Office at LCC.

High School Diploma

lowercolumbia.edu/hsdiploma

360.442.2330

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

Transitional Studies

Adult Basic Education (ABE)

lowercolumbia.edu/abe 360.442.2580

If you are 16 years or older and need to review or learn basic skills for college entrance, employment, or preparation for the General Education Development (GED) exam, LCC offers you 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, you will take a short appraisal test to place you at the right level of instruction. Classes are available at LCC and at Kelso WorkSource.

Career Education Options (CEO)

lowercolumbia.edu/ceo 360.442.2582

If you left high school without a diploma, this educational recovery program gives you the chance to return to school to restart your education and improve your career opportunities. You are eligible if you are between the ages of 16 and 21, not currently in high school, and do not have a high school diploma. You 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. You may take high school level courses that satisfy high school graduation requirements. You may also earn college credits that meet high school graduation requirements. If you qualify for enrollment in this program, CEO will provide tuition, books, tutoring, and one-on-one help with clarifying educational and career goals. For more information or to apply, call or visit the CEO office at the International Center.

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, you will take a short placement test to determine the best classes for you. 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)

lowercolumbia.edu/ged 360.442.2580

Lower Columbia College is an official GED testing center. If you did not finish high school, you may earn high school credentials by taking this series of five tests. We also offer practice and instruction to help you pass the GED test. You will review and get 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 Kelso WorkSource. For the GED testing schedule, call 360.442.2353.

Bachelor Degree Options

Co-Admission to WSU Vancouver

lowercolumbia.edu/coadmission 360.442.2311

You can earn your bachelor's degree here in Southwest Washington. Take advantage of LCC and WSU Vancouver's Co-Admission Program to save a bundle on tuition and living expenses, and do away with transfer and admission hassles. For more information on Co-Admission see lowercolumbia.edu/coadmission. Information on bachelor's degrees offered at WSU Vancouver is available at www.vancouver.wsu.edu

Early Childhood Education

Beginning Winter Quarter 2010, you can earn a bachelor's degree in Early Childhood Education through a partnership program between Lower Columbia College and Concordia University. 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.

Elementary Education

lowercolumbia.edu/elementaryed

WSU Vancouver offers a Bachelor of Arts Degree in Elementary Education program, with classes held on the WSU Vancouver campus. Graduates are certified to teach kindergarten through eighth grade.

Distance Education Partnerships

lowercolumbia.edu/bachelors 360.442.2311

You can earn your bachelor's degree via Distance Education through LCC's partnerships with universities such as 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.

DEGREES & CERTIFICATES

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



Transfer Degrees

Lower Columbia College's transfer degrees allow you to complete the first two years of a bachelor's degree at LCC. 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, you must fulfill these general requirements to earn an LCC transfer degree:

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.

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

This degree, considered a general transfer option, is recommended as a starting point for students who plan to transfer but are unsure of their major when they first enter college. The AA-DTA is widely accepted as the first two years towards a bachelor's degree by public institutions in Washington, some in Oregon, and by most private institutions in Washington. In any degree program, you should work closely with your program advisor to ensure that you are taking the proper courses.

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.
- **Quantitative/symbolic reasoning skills requirement**—5 credits. MATH 099 or proficiency, AND one of the following: BUS 206 (was BSAD 206), ENGR& 214 (was ENGR 122) or ENGR& 215 (was ENGR 261); MATH& 107 or higher (excluding MATH 121); PHIL 120; or PHYS 101, 102, 103, 251, 252, or 253.

- **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.
- **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.
- **Natural Science requirement**—15 credits from at least three areas on the Distribution List for Transfer Degrees. No more than 10 credits from any one discipline; must include 5 credits of lab courses. No more than 5 credits from Math, Computer Science, and Engineering. If a course is used to fulfill the quantitative skills requirement, it may not be used to satisfy the natural science requirement.
- **Capstone requirement**—5 credits. These courses require students to demonstrate the knowledge, skills, attitudes, and values expected of students earning the AA-DTA. Courses that meet this requirement may also be used toward other graduation requirements and will be designated in course schedules. To enroll, students must have completed at least 60 credits toward the AA-DTA degree, including MATH 099 (or competency) and ENGL 102, both with a grade of C- or better.
- **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 32 to 60.
- 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 ARTS AND SCIENCES (AA)

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

GENERAL DEGREE REQUIREMENTS (AA)

General requirements listed for transfer degrees, plus:

- Communications requirement—15 credits
ENGL& 101, ENGL 102 or ENGL& 235 (was ENGL/ ENGR 220), and SPCH 110.
- Courses as prescribed by the faculty advisor and approved by department chair.

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

The AAS-T degree is built upon the technical courses required for job preparation and includes a college-level general education component. Baccalaureate institutions are not required to accept AAS-T degrees. The AAS-T does not fulfill general education requirements for a baccalaureate degree. Transferability of an AAS-T degree to a given baccalaureate institution is neither implied nor guaranteed. Each institution has its own transfer policies and each student is responsible for knowing the transfer and admission requirements of the receiving institution. Students are urged to check with their advisor at Lower Columbia College and a representative from the college they plan to attend.

■ ASSOCIATE IN SCIENCES — TRANSFER (AS-T)

The AS-T degree is designed to prepare students for upper division study in science-related fields. It will give students the broad background needed before beginning more specialized, upper-division courses.

Degrees structured under the AS-T umbrella provide:

- Priority admissions consideration at public universities for most science and engineering majors ahead on non-degreed transfers.
- Completion of similar lower division general education requirements as first- and second- year university students in engineering or science-based fields.
- Credit for all courses completed within the AS-T up to and in some cases beyond 90 credits.
- Opportunity to explore other fields within the electives included in the degree.

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.
- "Learning Experience" course that demonstrates knowledge, skills, attitudes, and values. Program advisor must approve—5 credits.
- Pre-major program courses specific to the appropriate track.
- Remaining courses specific to the appropriate track—10-15 credits.

MAJOR RELATED PROGRAM DEGREE REQUIREMENTS (MRP)

- The specific courses required in each of the MRP's can be found on pages 32 to 60.
- 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.

Diversity Courses*

ANTH& 206 (was ANTH 207)—Cultural Anthropology
 ART& 100 (was ART 110)—Art Appreciation
 ART 206—Arts of the Americas
 ART 207—Arts of the World
 ART 208—Arts of the Northwest
 BIOL 150—Human Genetics and Society
 BUS 144 (was BSAD 126)—Management of Human Relations
 BUS 150 (was BSAD 164)—Customer Service/Management
 DRMA& 101 (was DRAM 100) —Intro to Theatre
 EDUC& 205 (was EDUC 110)—Introduction to Education w/Field Experience
 ENGL 204—The Novel (intermittent Cultural Diversity course)
 ENGL 205—Film and Drama Appreciation
 ENGL 245—Contemporary Literature
 ENVS 150-Environment and Society
 HIST& 126 (was HIST 116) – World Civilizations I
 HIST& 127 (was HIST 117) – World Civilizations II
 HIST& 128 (was HIST 118) – World Civilizations III
 HIST& 215—Women in U.S. History
 HUM 110—Introduction to Cultures
 HUM 210—Myths and Rites
 MUSC& 105 (was MUSC 110)—Music Appreciation
 MUSC 117—Music Cultures of the World
 MUSC 119—American Music
 MUSC 209—The Blues Culture
 SOC& 101 (was SOCY 110)—Introduction to Sociology
 SOC 209—Sociology and the Family
 SPAN& 121 (was SPAN 101)—Spanish I
 SPAN& 122 (was SPAN 102)—Spanish II
 SPAN& 123 (was SPAN 103)—Spanish III
 SPCH 109—Intercultural Communication

*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) or ART 114, and ART 101*, 102*, 103*, 106*, 107*, 111*, 112*, 113*, 119, 151*, 152*, 206, 207, 208, 226, 227, 228, 241*, 242*

DANCE 100*, 105*

DRMA& 101 (was DRAM 100), and DRMA 106*, 107*, 108*, 215, 255

ENGL 108, 124*, 125*, 126*, 204, 205, 224*, 225*, 226*, 231, 232, 233, 234, 239C (was 235C), 240, 245, 251, 252, 254, 256, 260, 270, and ENGL& 235 (was ENGL/ENGR 220),

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) 110, HUM& 116, 117, 118, HUM 164, 165, 166, 210, 230

LIBR 101, 105

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

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

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

SPAN& 221, 222, 223 (was SPAN 201, 202, 203)

SPCH 104, 109, 204, 205, 210

Social Sciences

ANTH& 206 (was ANTH 207)

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

CJ& 101 (was ADMJ 186)

CS 100

ECON 105 or ECON& 201 (was ECON 205), ECON 105 or ECON& 202 (was ECON 206), and ECON 208C

HLTH 106

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& 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), and SOC 209 and 210

Natural Sciences

ANTH& 205 (was ANTH 206)

ASTR 110**

BIOL& 100**, BIOL& 170 (was BIOL 120), and BIOL 109**, 130**, 150**, 201**, 202**, 203**, 221**, 222**

BUS 206, 207 (was BSAD 206, 207)

CHEM 105**, 120, and CHEM& 121**, 131** (was CHEM 111**, 112**), CHEM& 161**, 162**, 163** (was 151**, 152**, 153**)

CS 170 (was CIS 180), and CS 270 (was CIS 280)

ERSI 104** or 105, 109**

ENGR 210

ENVS 120, 130**, 150, 210

GEOG 105**

GEOL 105** or 116** or 117**, 118**, 170**

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

OCEA& 101** (was OCNG 140)

PHIL 120

PHYS& 100**, and PHYS 101**, 102**, 103**, 210

PHSC 109**

Restricted Course List

ACCT 101, 150, 241

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 250 (was BSAD 250), BUS 259 (was BSAD 111), BUS 294

BTEC—all courses

CDS—all courses except CDS 101

CS (was CIS) 100, 101, 102, 104, 105, 106, 107, 108, 109, 110, 111 (was 150), 121 (was 120), 122 (was 220), 130, 144, 175 (was 185), 211, 212, 213, 216, 230, 245 (was 251), 249 (was 252), 281 (was 282), 282 (was 283), 285 (was 235)

COLL—all courses

DHET—all courses

DRFT—all courses

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

ENGL 100, 104

FISC—all courses

HOFL—all courses

HDEV—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 you 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 (was BSAD 190); or SPCH 110.
- Health requirement—2-5 credits. HLTH 100 or 106; NURS 101; or MEDA 161 or 162.
- Computational requirement—5 credits. MATH 092 or higher or BUS 104 (was BSAD 104).
- Human Relations requirement—2-5 credits. ANTH& 206 (was ANTH 207); BUS 144 (was BSAD 126), BUS 150 (was BSAD 164), or BUS 240 (was BSAD 240); CDS 102 or 215; ECED 119; HDEV 110; NURS 101 or 202; PSYC& 100 (was PSYC 111), PSYC 204, or 214; SOC& 101 (was SOCY 110); 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.
- 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 computational 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's degree in the same or similar field.

CERTIFICATE OF PROFICIENCY REQUIREMENTS (COP)

45 credits or more, including:

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

Some programs also have a Natural Science 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's degree.

FIELD OF STUDY	Associate in Arts and Sciences		Major Related Program	Associate in Sciences — Transfer	Associate in Applied Science — Transfer	Associate in Applied Science	Certificate of Proficiency	Certificate of Completion
	Associate in Arts — Direct Transfer							
Accounting Technician					X	X		
Anthropology	X	X						
Art	X	X						
Automotive Technology						X		
Biological Sciences	X			X				
Biology Education			X	X				
Business		X	X					
General Business						X		
Business Management				X	X			
Retail Management						X	X	
Business Technology								
Administrative Assistant & Medical Administrative Support						X		
Administrative Support						X		
Medical Reception						X		
Medical Transcription						X		
Medical Billing & Coding Specialist						X		
Chemical Dependency Studies						X		
Chemistry	X			X				
Chemistry Education			X	X				
Computer Aided Design						X		
Computer Science				X				
Computing Specialist				X	X			
Help Desk Technician							X	
Networking							X	
Web Development							X	
Programming							X	
Criminal Justice	X	X				X		
Diesel/Heavy Equipment Technology						X	X	
Drama	X	X						
Early Childhood Education		X		X	X			X
Earth Sciences	X	X		X				
Economics	X	X						
Education—Elementary	X	X	X					
Paraeducator							X	
Education—Secondary			X	X				
Engineering	X			X				
Bioengineering & Chemical Engineering			X	X				
Computer and Electrical Pre-Engineering			X	X				
Electrical Engineering & Computer Engineering Technology			X	X				
Mechanical/Civil/Aeronautical/Industrial Materials Science Pre-Engineering			X	X				
Mechanical Engineering Technology			X	X				

FIELD OF STUDY	Associate in Arts and Sciences		Major Related Program	Associate in Sciences — Transfer	Associate in Applied Science — Transfer	Associate in Applied Science	Certificate of Proficiency	Certificate of Completion
	Associate in Arts — Direct Transfer							
English	X	X						
Environmental Studies				X				
Fire Science Technology						X		
Fire Prevention Specialist							X	
Fire Inspector								X
Fire Investigator								X
Public Education Specialist								X
Geography	X	X						
Geology	X	X		X				
Health Occupations								X
History	X	X						
Individualized Certificate Program							X	X
Law (Pre-law)	X							
Machine Trades						X		
Computer Numerical Control							X	
Machinist							X	
Manufacturing								
Advanced Manufacturing Technology						X		
Process Manufacturing							X	
Manufacturing Occupations							X	
Fundamentals of Manufacturing								X
Mathematics	X	X						
Math Education		X	X					
Medical Assisting						X	X	
Medical Fields—Preprofessional	X							
Music	X	X						
Contemporary Musicianship & Audio Production						X	X	
Nursing								
Nursing Assistant - Certified								X
Practical Nurse							X	
Registered Nurse					X	X		
Registered Nurse - LPN2RN						X		
Registered Nurse - RONE						X		
Philosophy	X	X						
Physical Education		X						
Physics	X			X	X			
Physics Education			X	X				
Political Science	X	X						
Psychology	X	X						
Science								
General Science Education			X	X				
Sociology	X	X						
Speech		X						
Technology		X	X					
Welding						X	X	

FIELDS OF STUDY

At LCC, you can train for a career in a high-demand field, complete the first two years of a bachelor's degree or just take classes for the pleasure of learning. Select the field of study that matches your interests and talents. Then your LCC program advisor will help you find the degree or certificate program that best fits your educational 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

GENERAL EDUCATION REQUIREMENTS

Communication

BUS 119 (was BSAD 190)	Business Communications or English Composition I	5
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Computation

MATH 092	Elementary Algebra	5
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Human Relations /Social Sciences/Diversity

BUS 144 (was BSAD 126)	Management of Human Relations	5
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Humanities or Natural Sciences

	From distribution list	5
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Health

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

PROGRAM REQUIREMENTS

ACCT 101	Introduction to Accounting Concepts	5
ACCT 150	Payroll Accounting and Business Tax Reporting	5
ACCT& 201 (was ACCT 231)	Principles of Accounting I	5
ACCT& 202 (was ACCT 232)	Principles of Accounting II	5
ACCT& 203 (was ACCT 233)	Principles of Accounting III	5
ACCT 241	Computerized Accounting Concepts	4
ACCT 260	Certified Bookkeeper Prep	5
ACCT 288/289	Cooperative Education	5
BUS& 101 (was BSAD 110)	Intro to Business or	
ECON& 201 (was ECON 205)	Micro Economics	5
BUS 104 (was BSAD 104)	Business Math Applications	5
BUS& 201 (was BSAD 251)	Business Law	5
BTEC 130	Electronic Calculators	2
BTEC 145	Intro to MS Word	3
CS 111 (was CIS 150)	Intro to Windows	4
CS 121 (was CIS 120)	Introduction to Spreadsheets	5
CS 130 (was CIS 130)	Introductory Database Appl.	5

TOTAL CREDITS **95-96**

Accounting Technician

■ ASSOCIATE IN APPLIED SCIENCE — TRANSFER

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computation

MATH 112 College Algebra 5

Social Science

BUS& 201 Business Law 5
(was BSAD 251)

Natural Science & Humanities

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

Health

HLTH 100 Occupational Safety and Health 3

Human Relations

BUS 144 Management of Human Relations 5
(was BSAD 126)

PROGRAM REQUIREMENTS

ACCT 101 Introduction to Accounting Concepts 5

ACCT 150 Payroll Accounting & Business Tax Reporting 5

ACCT& 201 Principles of Accounting I 5
(was ACCT 231)

ACCT& 202 Principles of Accounting II 5
(was ACCT 232)

ACCT& 203 Principles of Accounting III 5
(was ACCT 233)

ACCT 241 Computerized Accounting Concepts 4

ACCT 288-289 Cooperative Education 5

BUS 150 Customer Service/Management 5
(was BSAD 164)

BTEC 130 Electronic Calculators 2

BTEC 145 Intro to MS Word 3

CS 111 Intro to Windows 4
(was CIS 150)

CS 121 Introduction to Spreadsheets 5
(was CIS 120)

CS 130 Introductory Database Appl. 5
(was CIS 130)

TOTAL CREDITS 91

Anthropology

The study of anthropology provides an understanding of the diversity of humans and human cultures, past and present, around our globe. Prepare for advanced studies in the field of anthropology at a baccalaureate institution and eventual employment in a broad range of jobs in both government and industry that focus on cross-cultural issues and involve working with people from different cultural backgrounds.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE OF ARTS — DIRECT TRANSFER AGREEMENT

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 AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

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

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110 Industrial Communications recommended 5

Computation

MATH 092 Elementary Algebra or higher, (MATH 106 Industrial Mathematics recommended) 5

Human Relations/Social Sciences/Diversity

BUS 144 Management of Human Relations recommended (was BSAD 126) 5

Natural Sciences

TECH 100 Adv Prin of Technology recommended 5

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM REQUIREMENTS

You may complete some of these requirements through an approved high school Tech Prep program.

(AMTC sections previously ADT sections)

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—Select electives to meet individual needs:

ACCT 101, BUS& 101 (was BSAD 110), CS 110 (was CIS 110), DHET 216, WELD 151, 152, 221.

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 ARTS AND SCIENCES

■ ASSOCIATE IN SCIENCES — TRANSFER

Undergraduate Studies for Future Secondary Biology Teachers

■ ASSOCIATE IN BIOLOGY EDUCATION — TRANSFER OPTION 1/MAJOR RELATED PROGRAM

Note: For this degree, specific grade requirements vary from course to course and among transfer institutions. The student will need to check with transfer advisors. Some baccalaureate institutions require physics with calculus. It is your responsibility to check your baccalaureate institution's specific major requirements the year prior to transferring.

PROGRAM REQUIREMENTS

Communications

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

Mathematics

MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH 210	Elements of Statistics	5

(Pre-Calculus cannot be used to satisfy the mathematics requirement)

Humanities/Social Science/Diversity

PSYC& 100	General Psychology and ten more credits with no more than ten credits from any one discipline	15
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General Chemistry

CHEM& 161	General Chem w/Lab I (was CHEM 151)	5
CHEM& 162	General Chem w/Lab II (was CHEM 152)	5
CHEM& 163	General Chem w/Lab III (was CHEM 153)	5

Organic Chemistry

CHEM& 261	Organic Chem w/Lab I (was CHEM 251)	5
CHEM& 262	Organic Chem w/Lab II (was CHEM 252)	5
CHEM& 263	Organic Chem w/Lab III (was CHEM 253)	5

Biology for Science Majors

BIOL 201	General Biological Science	5
BIOL 202	General Biological Science	5
BIOL 203	General Biological Science	5

(15 credits of PHYS is recommended but not required)

Electives

EDUC& 205	Intro to Education w/Field Experience (was EDUC 110)	5
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TOTAL CREDITS

90 MINIMUM



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. Work closely with a program advisor, as program entry requirements vary among universities.

PROGRAM REQUIREMENTS

Communications

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

Quantitative/Symbolic Reasoning Skills

(MATH 099 proficiency is required)

MATH 125	Finite Mathematics	5
MATH& 148 (was MATH 140)	Business Calculus	5

Humanities/Diversity

No more than 10 credits per discipline area.
 No more than 5 credits in world languages.
 No more than 5 credits of performance/skills classes are allowed. 15

Social Science

ECON& 201 (was ECON 205)	Micro Economics	5
ECON& 202 (was ECON 206)	Macro Economics	5
5 additional credits		5

Natural Science

BUS 206 (was BSAD 206)	Statistical Methods	5
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10 additional credits in two different disciplines is required in physical, biological, and/or earth sciences, including at least one lab course. 10

Business

ACCT& 201 (was ACCT 231)	Principles of Accounting I	5
ACCT& 202 (was ACCT 232)	Principles of Accounting II	5
ACCT& 203 (was ACCT 233)	Principles of Accounting III	5
BUS& 201* (was BSAD 251)	Business Law	5

Electives 5

See a business advisor for a list of approved electives.

**See note.

TOTAL CREDITS **90**

*Business Law and Introduction to Law are two distinct subject areas with minimal (approximately 20 percent) content overlap. Please note: UW (all campuses) requires a course equivalent to: Intro to Law (MBMT 200) EWU, CWU, WSU (all campuses), SMU, SPU require a course equivalent to: Business Law

Heritage, PLU, SU, and Walla Walla College 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.

**Four institutions have requirements for admission to the major that go beyond those specified above that students can meet by careful selection of the elective course:

UW (all campuses) requires a course equivalent to Management Information Systems (MIS 250)

Gonzaga requires a course equivalent to Management Information Systems (BMIS 235)

PLU requires a course equivalent to Computer Applications (CSCE 120), or equivalent course or skills test

SPU requires a course equivalent to Spreadsheet (BUS 1700), or equivalent course or skills test

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.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I or	
BUS 119	Business Communication or	
ENGL 110	Industrial Communication	5

Computation*

BUS 104 (was BSAD 104)	Business Mathematics	5
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Human Relations/Social Sciences

BUS 144 (BSAD 126)	Management of Human Relations	5
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PROGRAM REQUIREMENTS

ACCT 101	Introduction to Accounting Concepts	5
BUS& 101 (was BSAD 110)	Introduction to Business	5
BUS 150 (was BSAD 164)	Customer Service/Mgmt.	5
BUS 165 (was BSAD 115)	Salesmanship	5
CS 108 (was CIS 108)	Internet Fundamentals	1
CS 109 (was CIS 109)	Fundamentals of PowerPoint	1
CS 110 (was CIS 110)	Intro to Microcomputer Applications	3
CS 121 (was CIS 120)	Introduction to Spreadsheets	5

TOTAL CREDITS **45**

*MATH 92, Elementary Algebra, or higher-level math courses may be substituted for BUS 104 (was BSAD 104).

Business Management

■ ASSOCIATE IN APPLIED SCIENCE — TRANSFER

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.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I or	
BUS 119 (was BSAD 190)	Business Communications	5

Computation

BUS 104 (was BSAD 104*)	Business Math Applications	5
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Human Relations/Social Sciences /Diversity*

BUS 144 (was BSAD 126)	Management of Human Relations	5
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Natural Sciences/Humanities

	From distribution list	5
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Health

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

PROGRAM REQUIREMENTS

ACCT 101	Introduction to Accounting Concepts or	
ACCT& 201 (was ACCT 231)	Principles of Accounting I	5
BUS& 101 (was BSAD 110)	Introduction to Business	5
BUS 150 (was BSAD 164)	Customer Service/Management	5
BUS 165 (was BSAD 115)	Salesmanship	5
BUS& 201 (was BSAD 251)	Business Law	5
BUS 240 (was BSAD 240)	Principles of Supervision	5
BUS 244 (was BSAD 260)	Human Resource Mgmt.	5
BUS 245 (was BSAD 275)	Principles of Management	5
BUS 259 (was BSAD 111)	Starting/Managing a Small Business	5
BUS 264 (was BSAD 263)	Principles of Marketing	5
BUS 294	Career Success	2
CS 121 (was CIS 120)	Introduction to Spreadsheets	5
ECON 105	Intro to Economics or	
ECON& 201 (was ECON 205)	Micro Economics	5
Technical Electives		5–6

TOTAL CREDITS 90

*MATH 92, Elementary Algebra, or higher-level math courses may be substituted for BUS 104 (was BSAD 104).

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.

GENERAL EDUCATION REQUIREMENTS

Communications

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

Computation

MATH 112	College Algebra	5
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Human Relations/Diversity

BUS 144 (was BSAD 126)	Management of Human Relations	5
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Social Sciences

BUS 201& (was BSAD 251)	Business Law	5
ECON 105	Intro to Economics or	
ECON& 201 (was ECON 205)	Micro Economics	5

Natural Sciences

	From distribution list	5
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Humanities

	From distribution list	5
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Health

HLTH 100	Occupational Safety and Health	3
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PROGRAM REQUIREMENTS

ACCT& 201 (was ACCT 231)	Principles of Accounting I	5
BUS& 101 (was BSAD 110)	Introduction to Business	5
BUS 150 (was BSAD 164)	Customer Service/Management	5
BUS 165 (was BSAD 115)	Salesmanship	5
BUS 240 (was BSAD 240)	Principles of Supervision	5
BUS 245 (was BSAD 275)	Principles of Management	5
BUS 259 (was BSAD 111)	Starting/Managing a Small Business	5
BUS 264 (was BSAD 263)	Principles of Marketing	5
CS 121 (was CIS 120)	Introduction to Spreadsheets	5
Technical Electives		2

TOTAL CREDITS 90

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 “e-tailers” 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.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I <i>or</i>	
BUS 119	Business Communications	5
<small>(was BSAD 190)</small>		

Computational

BUS 104	Business Math (or higher)	5
<small>(was BSAD 104)</small>		

Computational

BUS 144	Management of Human Relations	5
<small>(was BSAD 126)</small>		

PROGRAM REQUIREMENTS

ACCT 101	Intro to Accounting Concepts	5
BUS 159	Principles of Retailing	5
<small>(was BSAD 160)</small>		
BUS 244	Human Resource Management	5
<small>(was BSAD 260)</small>		
BUS 245	Principles of Management	5
<small>(was BSAD 275)</small>		
BUS 264	Principles of Marketing	5
<small>(was BSAD 263)</small>		
CS 110	Intro Microcomputer Applications	3
<small>(was CIS 110)</small>		
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.

CONTENT AREAS

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

TOTAL MINIMUM CREDITS **36**



Business Technology

Administrative Assistant and 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

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computation

BUS 104 Business Math Applications 5
(was BSAD 104)

Human Relations/Social Sciences/Diversity

BUS 144 Management of Human Relations **or**
(was BSAD 126)

BUS 150 Customer Service 5
(was BSAD 164)

Natural Sciences/Humanities

From distribution list 5

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM CORE

ACCT 101 Introduction to Accounting Concepts 5

BUS 119 Business Communications 5
(was BSAD 190)

BTEC 104 Introduction to Business Technology 5

BTEC 106 Proofreading Skills 2

BTEC 111 Intermediate Word Processing 5

BTEC 112 Advanced Word Processing 5

BTEC 211 Machine Transcription 3

CS 130 Introductory Database Applications 5
(was CIS 130)

TOTAL CREDITS 58

In addition to the General Education and Program Core requirements, complete one of the two options listed below to earn an AAS degree:

Administrative Assistant

BUS& 101 Intro to Business 5
(was BSAD 110)

BTEC 113 Applied Word Processing & Desktop Publishing 5

BTEC 125 Filing 3

BTEC 130 Electronic Calculators 2

BTEC 260 Office Procedures 5

BTEC 294 Career Success 2

CS 111 Intro to Windows 4
(was CIS 150)

CS 121 Intro to Spreadsheets 5
(was CIS 120)

Elective ACCT, BUS (was BSAD), BTEC **or** CS (was CIS) elective 3

TOTAL CREDITS 34

TOTAL MINIMUM AAS DEGREE CREDITS 92

Medical Administrative Support

BTEC 125 Filing 2

BTEC 130 Electronic Calculators 1

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 3

BTEC 182 Medical Terminology II 3

BTEC 185 Medical Machine Transcription 3

BTEC 186 Advanced Medical Machine Transcription 3

BTEC 294 Career Success 2

CS 121 Intro to Spreadsheets 5
(was CIS 120)

Elective Social Sciences Elective 5

TOTAL CREDITS 36

TOTAL MINIMUM AAS DEGREE CREDITS 94

■ CERTIFICATE OF PROFICIENCY

Four Certificates of Proficiency are available in Business Technology. Complete courses for the option you choose. The first three options share the same General Education Requirements:

GENERAL EDUCATION REQUIREMENTS

Communications

BUS 119 Business Communications **or**
(was BSAD 190)

ENGL& 101 English Composition I 5

Computation

MATH 091 Pre-Algebra **or**

BUS 104 Business Math Applications 5
(was BSAD 104)

Human Relations/Social Sciences

BUS 144 Management of Human Relations **or**
(was BSAD 126)

BUS 150 Customer Service/Management 5
(was BSAD 164)

TOTAL CREDITS 15

Administrative Support

GENERAL EDUCATION REQUIREMENTS 15

BTEC 101 Basic Word Processing/Formatting 5

BTEC 104 Introduction to Business Technology 5

BTEC 106 Proofreading 2

BTEC 111 Intermediate Word Processing 5

BTEC 112 Advanced Word Processing 5

BTEC 125 Filing 1

BTEC 130 Electronic Calculators 1

BTEC 211 Machine Transcription 2

BTEC 260 Office Procedures 5

BTEC 294 Career Success 2

TOTAL CREDITS 48

Medical Reception

GENERAL EDUCATION REQUIREMENTS		15
BTEC 101	Basic Word Processing/Formatting	5
BTEC 104	Introduction to Business Technology	5
BTEC 106	Proofreading	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	3
BTEC 182	Medical Terminology II	3
BTEC 294	Career Success	2
TOTAL CREDITS		47

Medical Transcription

GENERAL EDUCATION REQUIREMENTS		15
BTEC 106	Proofreading	2
BTEC 111	Intermediate Word Processing	5
BTEC 112	Advanced Word Processing	5
BTEC 125	Filing	3
BTEC 171	Medical Reception Procedures	3
BTEC 181	Medical Terminology I	3
BTEC 182	Medical Terminology II	3
BTEC 185	Medical Machine Transcription	3
BTEC 186	Adv Medical Machine Transcription	3
TOTAL CREDITS		45

Medical Billing and Coding Specialist

GENERAL EDUCATION REQUIREMENTS		
Communications		
BUS 119 (was BSAD 190)	Business Communications or	
ENGL& 101	English Composition I	5
Computation		
BUS 104 (was BSAD 104)	Business Math Applications or	
MATH 105	Mathematics for Health Sciences	5
Human Relations/Social Sciences		
BUS 144 (was BSAD 126)	Management of Human Relations or	
BUS 150 (was BSAD 164)	Customer Service/Management	5
PROGRAM REQUIREMENTS		
BTEC 104	Introduction to Business Tech or	
CS 110 (was CIS 110)	Intro to Microcomputer Applications	5 or 3
BTEC 130	Electronic Calculators	1
BTEC 161 (Part I)	Intro to ICD-9 Coding in the Medical Office	4
BTEC 162 (Part II)	Intro to ICD-9 Coding in the Medical Office	4
BTEC 164	Legal Aspects of the Medical Office	2
BTEC 169	Intro. To Basic CPT Coding	3
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
BIOL& 170 (was BIOL 120)	Human Biology or	
MEDA 120	Survey of Human A & P	5
TOTAL CREDITS		52-54



Chemical Dependency Studies

Get a working knowledge of theory and practice as a health care provider to clients who are experiencing chemical abuse/dependence. Placement testing is required before entering the program; additional courses may be required. Take CDS courses in the recommended sequences. See the CDS advisor for course sequences, additional certification requirements, changes mandated by Washington State, and additional information.

■ ASSOCIATE IN APPLIED SCIENCE

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 100 English Fundamentals or higher 5

Computation

MATH 092 Elementary Algebra or higher 5

Human Relations/Social Sciences

PSYC& 100 Intro to General Psychology 5
(was PSYC 111)

Natural Sciences

BIOL& 100, 170 (was BIOL 120),
BIOL& 241, 242 (was BIOL 221, 222),
CHEM& 100, or CHEM& 121 (was CHEM 111) 5-6

Diversity

SOC& 101 Intro to Sociology *or*
(was SOCY 110)

SPCH 109 Intercultural Communication 5

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM REQUIREMENTS

CDS 101* Intro to Chemical Dependency Counseling 3

CDS 102* Intro to Theories/Counseling of
Chemically Dependent Clients 3

CDS 107 Adolescent Developmental Issues and
Chemical Dependency 3

CDS 110* Alcohol/Drug Pathophysiology
and Pharmacology 3

CDS 111* Record Keeping and Case Management 3

CDS 113 Treatment Principles of Chemical
Dependency 3

CDS 121* Ethical Issues in Chemical Dependency
Counseling 3

CDS 201 Dynamics of the Family and Chemical
Dependency Counseling 3

CDS 202 Chemical Dependency Counseling
with Diverse Populations 3

CDS 203 Relapse Prevention and Intervention 3

CDS 215* Group Counseling: Theories/Application 3

CDS 220 Co-occurring Disorders:
Mental Health Disorders in CDS 3

CDS 288 Cooperative Work Experience/
Field Placement I (5 credits/quarter) 10

CDS 289 Cooperative Work Experience Seminars/
Field Placement II (1 credit/quarter) 2

PSYC& 200 Lifespan Psychology 5
(was PSYC 205)

CDS 105 Chemical Dependency/Domestic Violence 3

CDS 106 Prevention/Intervention Specialist 3

CDS 108 Running School-Based Support Groups 3

TOTAL CREDITS 90-91

*You must complete these courses, along with math, English, psychology, and natural science requirements to be eligible for your fieldwork 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 ARTS AND SCIENCES

■ ASSOCIATE IN SCIENCES — TRANSFER

Undergraduate Studies for Future Secondary Chemistry Teachers

■ ASSOCIATE IN CHEMISTRY EDUCATION — TRANSFER OPTION 1/MAJOR RELATED PROGRAM

Note: For this degree, specific grade requirements vary from course to course and among transfer institutions. Check with the transfer advisors. Some baccalaureate institutions require physics with calculus. It is up to you to check their specific major requirements the year before you transfer.

PROGRAM REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

ENGL 102 English Composition 5

Mathematics

MATH& 151 Calculus I *and* 5

MATH& 152 Calculus II *and* 5

MATH& 153 Calculus III *or*

MATH 210 Elements of Statistics 5

Humanities/Social Science/Diversity

PSYC& 100 General Psychology and ten more credits
(was PSYC 111) with no more than ten credits from any
one discipline 15

PRE-MAJOR REQUIREMENTS

CHEM& 161 General Chem w/Lab I 5
(was CHEM 151)

CHEM& 162 General Chem w/Lab II 5
(was CHEM 152)

CHEM& 163 General Chem w/Lab III 5
(was CHEM 153)

CHEM& 261 Organic Chem w/Lab I 5
(was CHEM 251)

CHEM& 262 Organic Chem w/Lab II 5
(was CHEM 252)

CHEM& 263 Organic Chem w/Lab III 5
(was CHEM 253)

PHYS 251 General Physics I 5

PHYS 252 General Physics II 5

PHYS 253 General Physics III 5

Electives

EDUC& 205 Intro to Education w/Field Experience 5
(was EDUC 110)

TOTAL CREDITS 90 MINIMUM

Also see Associate in Bioengineering and Chemical Engineering under Engineering.

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 Completion option focusing just on technical drawing and computer aided drafting is a great way to upgrade job skills. The Certificate of Proficiency program includes additional studies in other aspects of design and manufacturing.

■ CERTIFICATE OF PROFICIENCY

GENERAL EDUCATION REQUIREMENTS

Social Sciences/Human Relations

BUS 144 Management of Human Relations recommended (was BSAD 126) 5

Communications

(ENGL 100, 110, or ENGL& 101) 5

Computation

MATH 099 Intermediate Algebra (or higher level math) 5

Health

HLTH 100 Occupational Safety and Health 3

Natural Sciences

TECH 100 Principles of Technology 5

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 and Architectural Graphics 3

MFG 115 Manufacturing Processes 5

MFG 130 Materials Science 5

TOTAL CREDITS 45

■ CERTIFICATE OF COMPLETION

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 and Architectural Graphics 3

MFG 115 Manufacturing Processes **or**

MFG 130 Materials Science 5

TOTAL CREDITS 17

Computer Science

Begin studies for a bachelor’s degree in Computer Science. Qualify for entry-level employment as a computer support specialist, utilizing skills in networking, programming and application by successfully completing program requirements and select areas of emphasis. You can also update your current computer skills by taking individual courses in an area of interest.

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2

If you want to transfer to a university to major in computer science consider completing this degree. Be sure to work with an advisor, as many universities have different requirements.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition 5

Computation

MATH& 151 Calculus I 5

MATH& 152 Calculus II 5

Humanities/Social Science/Diversity

See the Distribution List for Humanities and Social Science classes that meet this requirement.

Minimum of 5 credits in Humanities, minimum of 5 credits in Social Science, and an additional 5 credits in either Humanities or Social Science 15

PRE-MAJOR REQUIREMENTS

CS 170 Fundamentals of Computer Programming (was CIS 180) 5

CS 270 Data Structures I (was CIS 280) 5

CS 280 Advanced Data Structures (was CIS 284) 5

CS 275 Object Oriented Programming in Java (was CIS 285) 5

PHYS 251 General Physics I 5

PHYS 252 General Physics II 5

PHYS 253 General Physics III 5

MATH& 153 Calculus III 5

MATH 215 Discrete Structures 5

MATH 220 Linear Algebra 5

Electives** 10

TOTAL CREDITS 90

WSU transfer students must also take CS 285 (was CIS 235) Programming Tools, CS 281 (was CIS 282) Digital Design and CS 282 (was CIS 283) Microprocessors in order to transfer as a junior—15 credits.

A “Learning Experience” 5-credit course that evaluates the student’s knowledge, skills, attitudes, and values must be completed after earning 60 credits. A list of courses that will meet this requirement will be available from departmental advisor, and may also satisfy a Pre-Major requirement if included in the list above.

**Electives—Consult with a departmental advisor for remaining credits to be taken to earn a total of 90 credits.

Computing Specialist

■ ASSOCIATE IN APPLIED SCIENCE

To complete an AAS degree, complete general education requirements, program core requirements, and any two of the four Certificates of Completion listed below. If your two Certificates of Completion total only 25 credits, you will need to take one additional course from the Certificates of Completion listed to complete your AAS degree.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition 5

Computation

MATH 99 Intermediate Algebra or higher (excluding MATH 121/122) 5

Human Relations/Diversity/ Social Science

BUS 144 Management of Human Relations *or* (was BSAD 126)

SOC& 101 Introduction to Sociology 5 (was SOCY 110)

Humanities/Natural Science

CS 170 Fundamentals of Computer Programming 5 (was CIS 180)

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM CORE REQUIREMENTS

CS 100 Introduction to Information Systems 5 (was CIS 100)

CS 102 Internet and Web Page Design 5 (was CIS 102)

CS 144 Principles of PC Operating Systems 3

CS 121 Intro to Spreadsheets 5 (was CIS 120)

CS 130 Introductory Database Applications 5 (was CIS 130)

CS 211 Networking Basics 5 (was CIS 211)

CS 260 Network Security *or* (was CIS 240)

CS 264 Computer Forensics 5

CS 245 Computer Configuration and Maintenance 6 (was CIS 251)

CS 288/289 Cooperative Education 2

TOTAL AAS CREDITS 92-95

■ ASSOCIATE IN APPLIED SCIENCE — TRANSFER

Complete all of the same requirements listed for the AAS except for the computation requirement. Complete the following computation requirement for the AAS-T degree: MATH& 107 or higher, excluding MATH 121/122.

TOTAL AAS-T CREDITS 92-95

■ CERTIFICATE OF COMPLETION

If you are looking to upgrade your skills, you can complete a Certificate of Completion by completing courses listed in a certificate block.

Help Desk Technician

BTEC 145	Intro to MS Word	5
BTEC 148	Outlook	2
BUS 150	Customer Service	5
(was BSAD 164)		

TOTAL CREDITS 12

Networking

CS 212	Local Area Networks: Theory & Application	5
CS 213	Local Area Networks: Theory & Application	5
CS 249	Advanced Operating Systems	5
(was CIS 252)		

TOTAL CREDITS 15

Web Development

ART 162	Beginning Photoshop Design	3
CS 230	Database Development	5
(was CIS 230)		
CS 175/275	Event-Driven Programming <i>or</i>	
(was 185/285)		
	Object-Oriented Programming in Java	5

TOTAL CREDITS 13

Programming

CS 175	Event-Driven Programming	5
(was CIS 185)		
CS 270	Data Structures I	5
(was CIS 280)		
CS 275	Object-Oriented Programming in Java	5
(was CIS 285)		

TOTAL CREDITS 15

Also see Associate in Computer and Electrical Engineering and Associate in Electrical Engineering and Computer Engineering Technology listed under Engineering.



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 with an Associate in Applied Science degree in Criminal Justice. People working within those areas can use the program to enhance their skills.

■ ASSOCIATE IN APPLIED SCIENCE

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
ENGL 102	English Composition	5
SPCH 110	Intro to Public Speaking	5

Computation

MATH 092	Elementary Algebra	5
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Human Relations/Social Sciences*

PSYC& 100 (was PSYC 111)	General Psychology	5
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Natural Sciences/Humanities

From distribution list		5
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Diversity

SOC& 101 (was SOCY 110)	Intro to Sociology	5
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Health

HLTH 106	Health Today	2
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PROGRAM REQUIREMENTS

BUS& 201 (was BSAD 251)	Business Law	5
CJ& 101* (was ADMJ 186*)	Intro to Criminal Justice	5
CJ 110* (was ADMJ 182*)	Criminal Law	5
CJ 154* (was ADMJ 154*)	American Legal System	5
CJ 181 (was ADMJ 181)	Report Writing for Law Enforcement	3
CJ 183* (was ADMJ 183*)	Administration of Justice	5
CJ 260* (was ADMJ 260*)	Physical Evidence & Criminalistics	5
CS 110 (was CIS 110)	Microcomputer Applications	3
POLS& 202 (was POLS 106)	American Government	5
POLS 220	Law and Social Issues	5
Electives	See Criminal Justice advisor for electives	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 (was ADMJ 100), Basic Law Enforcement, for the three courses. The training commission curriculum consists of 450 hours of classroom instruction.

Diesel/Heavy Equipment Technology

The Diesel/Heavy Equipment Technology program prepares students for careers in any industry that utilizes trucks, excavators, bulldozers, other heavy equipment, or industrial equipment utilizing diesel power and hydraulic devices. Graduates find work with truck and heavy equipment dealers, railroads, and marine operations using tug and fishing boats. You may also work in industrial maintenance, auto, and RV repair. LCC's Diesel/Heavy Equipment Technology program is one of the few accepted for membership in the National Fluid Power Association.

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

■ ASSOCIATE IN APPLIED SCIENCE

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110	Industrial Communication recommended	5
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Computation

MATH 092	Elementary Algebra or higher	5
(MATH 106 Industrial Mathematics recommended)		

Human Relations/Social Sciences/Diversity

BUS 144	Management of Human Relations recommended (was BSAD 126)	5
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Natural Science

TECH 100	Adv Principles of Technology or	
MFG 130	Materials Science recommended	5

Health

HLTH 100	Occupational Health and Safety	3
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PROGRAM REQUIREMENTS

(You may complete some of these requirements through an approved high school Tech Prep program.)

(DHET sections previously ADT sections)

DHET 100* (was ADT 100*)	Essentials of Mechanics	5
DHET 101 (was ADT 101)	Electrical Systems I	5
DHET 102 (was ADT 102)	Electrical Systems II	10
DHET 104 (was ADT 104)	Vehicle Climate Control	6
DHET 111 (was ADT 111)	Hydraulic Brakes	5
DHET 115	Air Brake Systems	5
DHET 125 (was ADT 207)	H.D. Chassis Maintenance	10
DHET 141 (was ADT 205)	Hydraulics I	4
DHET 142 (was ADT 210)	Hydraulics II	6
DHET 210 (was ADT 223)	Diesel Engine Rebuild	16
DHET 215 (was ADT 226)	Heavy Duty Engine Performance	15
DHET 220 (was ADT 206)	H.D. Power Trains	10
DHET 230	Advanced Shop Practices	5

TOTAL CREDITS 120

*Note: Program advisor may recommend substituting COLL 100 (College Success) if you have basic mechanical experience.

Heavy Equipment Preventive Maintenance

■ CERTIFICATE OF PROFICIENCY

(This certificate is a shorter route to an entry-level job.)

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110 Industrial Communications 5

Computation

MATH/TECH 070 Review of Math Fundamentals or higher 5

Human Relations/Social Sciences

BUS 144 Management of Human Relations recommended (was BSAD 126) 5

PROGRAM REQUIREMENTS

Any DHET Courses approved by program advisor 45
(was ADT)

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 AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Early Childhood Education

Preschools, licensed in-home care, childcare centers, and Head Start/Early Childhood Education and Assistance programs offer many opportunities. If you want a career working with preschool children, you can get training and experience through LCC's Early Childhood Education Program. You may be required to pay for the required criminal background check and proof of a negative tuberculin (TB) skin test.

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

■ ASSOCIATE IN APPLIED SCIENCE

GENERAL EDUCATION REQUIREMENTS

Communications

(Must include ENGL& 101 English Composition I) 10

Computation

BUS 104 Business Math Applications *or* (was BSAD 104)

MATH 092 Elementary Algebra or higher 5

Human Relations/Social Sciences

PSYC& 100 General Psychology 5
(was PSYC 111)

PSYC& 200 Lifespan Psychology 5
(was PSYC 205)

Natural Sciences/Humanities

From distribution list 5

Diversity

EDUC& 205 Intro to Education w/Field Experience recommended (was EDUC 110) 5

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM REQUIREMENTS

ECED 109 Literature and Language Development for Young Children 3

ECED 115 Health, Safety, & Nutrition for Young Children 3

ECED 119 Guidance Techniques for Young Children 3

ECED 126,127,128 Practicum I, II, III 9

ECED 130 Introduction to Early Childhood Education 3

ECED 204 Music & Movement for Young Children 3

ECED 215 Early Childhood Curriculum Development 3

ECED 216 Family System 3

ECED 219 Math, Science, & Computers for Young Children 3

ECED 220 Arts & Crafts for Young Children 3

ECED 260 Practicum IV 9

EDUC& 114 Child Development 3
(was ECED 114)

EDUC& 203 Exceptional Child 3
(was ECED 210)

Electives 3-5

TOTAL CREDITS 92-94



■ ASSOCIATE IN APPLIED SCIENCE — TRANSFER

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
ENGL 102	English Composition	5
SPCH 110	Intro to Public Speaking	5

Quantitative Skills

(MATH 099 proficiency required through course completion or placement assessment)

MATH 121	Math for Elementary Teachers I	5
MATH 122	Math for Elementary Teachers II	5

Humanities

DRMA& 101 (was DRAM 100)	Intro to Theatre	5
MUSC 100	Fundamentals of Music	5

Natural Science (must be lab course)

ASTR 110	Descriptive Astronomy or	
BIOL& 100 (was BIOL 100)	Survey of Biology or	
ERSI 104	Intro to Earth Sciences	5

Social Science

PSYC& 100 (was PSYC 111)	General Psychology or	
PSYC& 200 (was PSYC 205)	Lifespan Psychology	5
SOC& 100 (was SOCY 110)	Intro to Sociology	5

PROGRAM REQUIREMENTS

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

Child Development and Learning including Typical and Atypical

ECED 130	Intro to Early Childhood	3
EDUC& 114 (was ECED 114)	Child Development	3
EDUC& 203 (was ECED 210)	Exceptional Child	3

Child Guidance

ECED 119	Guidance Techniques for Young Children	3
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Family and Community Relationships

ECED 216	Family Systems	3
SOC 209 (was SOCY 209)	Sociology and the Family	5

Diversity, Inclusion, Multicultural

EDUC& 205 (was EDUC 110)	Intro to Education w/Field Experience	5
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Health, Safety, and Nutrition

ECED 115	Health, Safety, and Nutrition for Young Children	3
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Observation, Assessment and Evaluation

ECED 126	Practicum I	3
ECED 127	Practicum II	3

Professionalism

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

Practicum/Field Experience (suggested min. 300 hours)

ECED 128	Practicum III	3
ECED 260	Practicum IV	9

Curriculum Development & Implementation

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

TOTAL MINIMUM CREDITS 100

■ CERTIFICATE OF COMPLETION

ECED 109	Literature and Language Development for Young Children	3
ECED 115	Health, Safety, and Nutrition for Young Children	3
ECED 119	Guidance Techniques for Young Children	3
ECED 126, 127, 128	Practicum I, II, III	9
ECED 130	Intro to Early Childhood	3
ECED 204	Music and Movement for Young Children	3
ECED 219	Math, Science, and Computers for Young Children	3
ECED 220	Arts and Crafts for Young Children	3
EDUC& 114 (was ECED 114)	Child Development	3
EDUC& 203 (was ECED 210)	Exceptional Child	3
ENGL 100	English Fundamentals or	
ENGL& 101	English Composition I	5
HLTH 100	Occupational Safety and Health	3

TOTAL CREDITS 44

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 AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

■ ASSOCIATE IN SCIENCES — TRANSFER

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 AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Education

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. 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.

See Biology, Chemistry, Mathematics, Physics and Science fields of study for programs in secondary education.

■ ASSOCIATE IN ELEMENTARY EDUCATION — DIRECT TRANSFER AGREEMENT / MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

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

Quantitative Skills

(MATH 099 proficiency required through course completion or placement assessment)

MATH 121	Math for Elementary Teachers I	5
MATH 122	Math for Elementary Teachers II	5

Humanities/Diversity

SPCH 110	Intro to Public Speaking	5
10 additional credits from the following list: art, music, literature, or drama		10

Social Science (see note 2)

HIST& 126 (was HIST 116)	World Civilization I or	
HIST& 127 (was HIST 117)	World Civilization II or	
HIST& 128 (was HIST 118)	World Civilization III and	5
HIST& 136 (was HIST 156)	U.S. History I or	
HIST& 137 (was HIST 157)	U.S. History II and	5

10 additional credits from the following list:
economics, geography, political science, psychology (ECON& 201 or 202, PSYC& 100 or 200, POLS& 202, or POLS 107 recommended)

Natural Science

5 credits biological sciences		
5 credits geology or earth science		
5 credits physical science (chemistry or physics)		
Two of the above must be with lab		15

Other (see note 3)

CS 110 (was CIS 110)	Intro to Microcomputer Applications	3
EDUC& 205 (was EDUC 110)	Intro to Education w/Field Experience	5

Electives

12
Select electives from this recommended list of content courses to meet endorsement competencies and/or academic majors: social sciences, humanities, sciences, or mathematics.

TOTAL MINIMUM CREDITS 90

Notes:

1. 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.

2. To fulfill social science requirements, students are encouraged to take “Protest, Power, & Persuasion” combining HIST& 137 (was HIST 157) and POLS& 202 (was POLS 106) to meet state requirements during winter quarter

3. If the student can demonstrate computer literacy in software programs including word processing, PowerPoint, spreadsheets, in addition to being proficient on the Internet, he/she does not need to take CS 110 (was CIS 110).

4. WSU, CWU, and SM require PSYC& 200–Lifespan Psychology.

5. Students must take the WEST-B test in order to apply to teacher preparation programs. Plan to test prior to the final quarter to allow sufficient time for scoring.

6. Where the degree allows for student choice in classes, it is the student’s responsibility to contact the potential transfer institution regarding their choices.

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.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 100	English Fundamentals or	
ENGL& 101	English Composition I	5

Computation

MATH 099	Intermediate Algebra or	
MATH 121	Math for Elementary Teachers I	5

Human Relations/Social Sciences

PSYC& 100 (was PSYC 111)	General Psychology	5
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PROGRAM REQUIREMENTS

CS 110 (was CIS 110)	Intro to Microcomputer Applications	3
EDUC 115	Education & the Law	3
EDUC 119 (was EDUC 114)	Curriculum & Instruction	2
EDUC& 203 (was ECED 210)	Exceptional Child	3
EDUC& 205 (was EDUC 110)	Intro to Education w/Field Experience	5
EDUC 214	Instructional Strategies	3
EDUC 215	Classroom Management	3
PSYC& 200 (was PSYC 205)	Lifespan Psychology	5

Electives

ART& 100 (was ART 110),
ECED 204, ECED 220, or MUSC 100 3–5

TOTAL 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 ARTS AND SCIENCES

Bioengineering and Chemical Engineering

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2/ MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Mathematics

MATH& 151 Calculus I 5
 MATH& 152 Calculus II 5
 MATH& 153 Calculus III 5
 MATH 240 Differential Equations 5

Humanities/Social Science/Diversity

Minimum 5 credits in Humanities, minimum 5 credits in Social Sciences. 5 additional credits in either Humanities **or** Social Sciences from the distribution list 15
 (Economics course recommended)

PRE-MAJOR REQUIREMENTS

CHEM& 161 General Chem w/Lab I **and** 5
 (was CHEM 151)
 CHEM& 162 General Chem w/Lab II **and** 5
 (was CHEM 152)
 CHEM& 163 General Chem w/Lab III **and** 5
 (was CHEM 153)
 CHEM& 261 Organic Chem w/Lab I **or**
 (was CHEM 251)
 CHEM& 262 Organic Chem w/Lab II 5
 (was CHEM 252)
 CS 270 Intro to Data Structures 5
 (was CIS 280)
 PHYS 251 General Physics I and 5
 PHYS 252 General Physics II and 5
 PHYS 253 General Physics III 5

Electives

Select two electives as appropriate for intended major and intended baccalaureate institution:

BIOL 201 General Biological Science I
 BIOL 202 General Biological Science II
 CHEM 262& Organic Chemistry **or**
 (was CHEM 252)
 CHEM& 263 Organic Chemistry
 (was CHEM 253)
 ENGL& 235 Technical Writing
 (was ENGL 220)
 ENGR& 204 Electrical Circuits
 (was ENGR 215)
 ENGR& 224 Engineering Thermodynamics
 (was ENGR 260)
 MATH 220 Linear Algebra 10

TOTAL MINIMUM CREDITS 90

Computer and Electrical Pre-Engineering

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2/ MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Mathematics

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/Diversity

Minimum 5 credits in Humanities, minimum 5 credits in Social Science. 5 credits additional in either Humanities **or**
 Social Sciences from the distribution list 15
 (Economics course is recommended)

PRE-MAJOR REQUIREMENTS

CHEM& 161 General Chem w/Lab I 5
 (was CHEM 151)
 CS 170 Fundamentals of Computer Prog 5
 (was CIS 180)
 CS 270 Data Structures I 5
 (was CIS 280)
 PHYS 251 General Physics I 5
 PHYS 252 General Physics II 5
 PHYS 253 General Physics III 5
 ENGR& 204 Electrical Circuits 5
 (was ENGR 215)

Electives

Select two electives as appropriate for intended major and intended baccalaureate institution:

BIOL& 170 Human Biology
 (was BIOL 120)
 BIOL 201 General Biological Science I
 ENGR& 214 Statics
 (was ENGR 122)
 ENGR& 224 Engineering Thermodynamics
 (was ENGR 260)
 ENGL& 235 Technical Writing 10
 (was ENGL 220)

TOTAL MINIMUM CREDITS 90

Electrical Engineering and Computer Engineering Technology

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2/ MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
ENGL& 235 (was ENGL 220/ENGR 220)	Technical Writing	5

Mathematics

MATH& 151	Calculus I and	5
MATH& 152	Calculus II and	5
MATH& 153	Calculus III or	
MATH 210	Elements of Statistics	5

Humanities/Social Science/Diversity

Minimum 5 credits in Humanities, minimum 5 credits in Social Science. 5 additional credits in either Humanities **or** Social Sciences from the distribution list 15
(Economics course recommended)

PRE-MAJOR REQUIREMENTS

CHEM& 161 (was CHEM 151)	General Chemistry w/Lab I	5
CS 170 (was CIS 180)	Fundamentals of Computer Programming	5
CS 270 (was CIS 280)	Data Structures I	5
CS 281 (was CIS 282)	Digital Design	5
ENGR& 204 (was ENGR 215)	Electrical Circuits	5
PHYS 151	Introductory Physics I and	
PHYS 152	Introductory Physics II and	
PHYS 153	Introductory Physics III or	
PHYS 251	General Physics I and	
PHYS 252	General Physics II and	
PHYS 253	General Physics III	15
(PHYS 251, 252, and 253 preferred)		
Electives		10
Select two electives as appropriate for intended major and intended baccalaureate institution.		
MATH& 153	Calculus III or	
MATH 210	Elements of Statistics may count as electives	

TOTAL MINIMUM CREDITS 90

Mechanical/Civil/Aeronautical/Industrial Materials Science/Pre-Engineering

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2/ MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
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Mathematics

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/Diversity

Minimum 5 credits in Humanities, minimum 5 credits in Social Science. 5 additional credits in either Humanities or Social Science from the distribution list 15

PRE-MAJOR REQUIREMENTS

CHEM& 161 (was CHEM 151)	General Chem w/Lab I	5
CHEM& 162 (was CHEM 152)	General Chem w/Lab II	5
CS 270 (was CIS 280)	Data Structures I	5
ENGR& 214 (was ENGR 122)	Statics	5
ENGR& 215 (was ENGR 261)	Dynamics	5
ENGR& 225 (was ENGR 254)	Mechanics of Materials	5
PHYS 251	General Physics I	5
PHYS 252	General Physics II	5
PHYS 253	General Physics III	5
Electives		15
Select three electives as appropriate for intended major and intended baccalaureate institution:		
ENGL& 235 (was ENGL/ENGR 220)	Technical Writing	
ENGR& 121 (was ENGR 111)	Engineering Graphics	
ENGR& 204 (was ENGR 215)	Electrical Circuits	
ENGR& 224 (was ENGR 260)	Mechanics of Thermodynamics	
ENGR& 225 (was ENGR 254)	Mechanics of Materials	

TOTAL MINIMUM CREDITS 105

Mechanical Engineering

■ ASSOCIATE IN SCIENCES — TRANSFER OPTION 2/ MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
ENGL& 235 (was ENGL/ENGR 220)	Technical Writing	5

Mathematics

MATH& 151	Calculus I	5
MATH& 152	Calculus II	5
MATH& 153	Calculus III or	
MATH 210	Elements of Statistics	5

Humanities/Social Science/Diversity

Minimum 5 credits in Humanities, minimum 5 credits in Social Science. 5 additional credits in either Humanities or Social Science from the distribution list 15

PRE-MAJOR REQUIREMENTS

CHEM& 161	General Chem w/Lab I (was CHEM 151)	5
ENGR& 121	Engineering Graphics I (was ENGR 111)	3
ENGR& 122	Engineering Graphics II (was ENGR 112)	3
PHYS 101	Introductory Physics I and	
PHYS 102	Introductory Physics II and	
PHYS 103	Introductory Physics III or	
PHYS 251	General Physics I and	
PHYS 252	General Physics II and	
PHYS 253	General Physics III	15

(PHYS 251, 252, and 253 preferred)

Electives 25

Select five electives as appropriate for intended major and intended baccalaureate institution:

ECON& 201 (was ECON 205)	Micro Economics or	
ECON& 202 (was ECON 206)	Macro Economics	
ENGR& 214 (was ENGR 122)	Statics	
ENGR& 215 (was ENGR 261)	Dynamics	
ENGR& 225 (was ENGR 254)	Mechanics of Materials	
MATH& 153 (was MATH 153)	Calculus III or	
MATH 210	Elements of Statistics	
SPCH 110	Introduction to Public Speaking	

TOTAL MINIMUM CREDITS 91

Note: This degree is only applicable for students planning to attend Central Washington University, Eastern Washington University or Western Washington University.

English

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Environmental Studies

Environmental Studies reflect our growing awareness of human impact on the natural world and the need to mitigate those effects to sustain a healthy life. Students who plan a career in environmental policy and law, urban planning, environmental ethics and environmental advocacy can complete coursework for transfer to a bachelor's degree program.

■ ASSOCIATE IN SCIENCES — TRANSFER



Fire Science Technology

Prepare for occupations and advancement in modern fire service with LCC's Fire Science Technology program, which 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

GENERAL EDUCATION REQUIREMENTS

Communications

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

Computation

MATH 099	Intermediate Algebra or higher	or	
MATH 106	Industrial Mathematics		5

Human Relations/Social Sciences/Diversity

BUS 144	Management of Human Relations		5
<small>(was BSAD 126)</small>			

Natural Sciences

CHEM& 100	Preparatory Chemistry	or	
PHYS& 100	Physics for Non-Sci Majors		5

Health

HLTH 100	Occupational Safety and Health		3
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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	Emergency Service Rescue		5
FISC 205	Fire Investigation / Cause Determination		3
FISC 206	Hazardous Materials Operations		3
FISC 207	Fire Apparatus & Pumping Equipment		3
FISC 210	Building Construction for Fire Protection		3
FISC 215	Fixed Systems and Extinguishers		3
FISC 255	Fire Fighting Tactics and Strategy		3
FISC 288	Cooperative Education		14
FISC 289	Cooperative Education Seminar		1
Electives*			7

TOTAL CREDITS 90

*Elective credits may be waived for EMT training. Recommended electives: FISC 170, 129, 220, 224

Fire Prevention Specialist

■ CERTIFICATE OF PROFICIENCY

Prepare for employment in public and private fire organizations with this program.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I		5
SPCH 110	Introduction to Public Speaking		5

Computation

MATH 099	or higher or		
MATH 106	Industrial Math		5

Human Relations/Social Sciences*

BUS 144	Management of Human Relations		5
<small>(was BSAD 126)</small>			

PROGRAM REQUIREMENTS

FISC 101	Introduction to Fire Prevention		3
FISC 105	Fundamentals of Fire Prevention		3
FISC 110	Fire Science I		3
FISC 205	Fire Cause Determination		3
FISC 206	Hazardous Materials Operations		3
FISC 210	Building Construction for the Fire Service		3
FISC 215	Fixed Systems and Extinguishers		3
FISC 288/289	Cooperative Education		9

TOTAL CREDITS 50

■ CERTIFICATES OF COMPLETION

Fire Inspector

FISC 105	Fundamentals of Fire Prevention		3
FISC 110	Fire Science I		3
FISC 206	Hazardous Materials Operations		3
FISC 210	Building Construction for the Fire Service		3
FISC 215	Fixed Systems and Extinguishers		3
FISC 288/289	Cooperative Education (Internship)		3

TOTAL CREDITS 18

Fire Investigator

FISC 110	Fire Science I		3
FISC 205	Fire Cause Determination		3
FISC 206	Hazardous Materials Operations		3
FISC 210	Building Construction for the Fire Service		3
FISC 288/289	Cooperative Education (Internship)		3

TOTAL CREDITS 15

Public Education Specialist

FISC 101	Introduction to Fire Protection		3
FISC 105	Fundamentals of Fire Prevention		3
FISC 110	Fire Science I		3
FISC 288/289	Cooperative Education (Internship)		3
SPCH 110	Intro to Public Speaking		5

TOTAL CREDITS 17



Geography

See Earth Science

Geology

See Earth Science

Health Occupations

The Health Occupations program provides training for entry-level healthcare employees, with certificates for those who are already working or not yet working in healthcare.

The National Healthcare Foundation Skills Standards for the Core Curriculum will be met. Once you have satisfactorily completed both levels of the program with experience and produced a portfolio per requirements, you may take the National Health Science Assessment and be certified by national Consortium on Health Science and Technology Education and the National Occupational Competency Testing Institute.

■ CERTIFICATE OF COMPLETION

Health Occupations Core for the Employed Healthcare Worker – Total Credits 6

Health Occupations Core for the Unemployed Healthcare Worker – Total Credits 12

PROGRAM REQUIREMENTS

Employed Healthcare Worker

AH 101	Health Care Foundations I	1
AH 102	Health Care Foundations II	1
AH 112*	Body Structure, Function and Terminology I	1
AH 131	Health Care Communication Skills I	1
AH 132	Health Care Communication Skills II	1
BTEC 181	Medical Terminology I	1

TOTAL CREDITS 6*

*Students who are not currently certified in BLS, First Aid and HIV must also take AH 100 and HLTH 100.

PROGRAM REQUIREMENTS

Unemployed Healthcare Worker

AH 100	Bloodborne Pathogens & Infection Control	1
AH 101	Healthcare Foundations I	1
AH 102	Healthcare Foundations II	1
AH 112*	Body Structure, Function and Terminology I	1
AH 131	Health Care Communication Skills I	1
AH 132	Health Care Communication Skills II	1
BTEC 181	Medical Terminology I	1
HLTH 100	Occupational Safety and Health	3
COOP 288/289	Cooperative Work Experience	2

TOTAL CREDITS 12

*BIOL& 170 (was BIOL 120), BIOL& 241 (was BIOL 221) or BIOL& 242 (was BIOL 222) with a grade of C or better may be substituted for AH 112.

History

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

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Individualized Certificate Program

The Individualized Certificate Program (ICP) offers you an opportunity to pursue a custom-designed worksite-based learning program that is not available through current apprenticeship or college programs. Work closely with the ICP advisor, 360.442.2332, to ensure courses meet program requirements.

■ CERTIFICATE OF COMPLETION (up to 44 credits)

■ CERTIFICATE OF PROFICIENCY (45 or more credits)

PROGRAM REQUIREMENTS

Math

MATH 091 Pre-Algebra or higher, as recommended 5

Human Relations

See advisor for courses 5

Communications

BUS 119	Business Communications or	
(was BSAD 190)		
ENGL 100	English Fundamentals or	
ENGL& 101	English Composition I or	
ENGL 110	Industrial Communications	5
HLTH 100	Occupational Safety and Health	3
ICP 288*	ICP Cooperative Work Experience	3 – 17
ICP 289	ICP Seminar	3
Electives	See ICP advisor for approved electives	

TOTAL CREDITS VARIES BY PROGRAM

*Work experience varies to match the program requirements, and will range from 3 to 17 credits, only 15 of which are transferable.

Law – Preprofessional

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.

Machine Trades

Prepare for a job as a machinist, millwright, 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

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110 Industrial Communication recommended 5

Computation

MATH 092 Elementary Algebra or higher 5
(MATH 106 Industrial Mathematics recommended)

Human Relations/Social Sciences/Diversity

BUS 144 Management of Human Relations recommended (was BSAD 126) 5

Natural Sciences

MFG 130 Materials Science recommended 5

Health

HLTH 100 Occupational Safety and Health 3

PROGRAM REQUIREMENTS

BLPT 150 Machinists Blueprint Reading 5
MASP 107 Machining for Related Occupations
and/or

MASP 111 Machine Shop I 10

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 4

MFG 230 Computer Integrated Manufacturing 4

TOTAL CREDITS 98

■ CERTIFICATE OF PROFICIENCY

The Machine Trades certificate program is another route to employment as a machinist, millwright, tool and die maker, or other occupation related to manufacturing. Graduates may work as advanced apprentice machinists, machine operators, or programmers.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110 Industrial Communications recommended 5

Computation

MATH 092 Elementary Algebra or higher 5
(MATH 106 Industrial Mathematics recommended)

Human Relations/Social Sciences

BUS 144 Management of Human Relations recommended (was BSAD 126) 5

Health

HLTH 100 Occupational Safety and Health 3

Computer Numerical Control (CNC)

BLPT 150 Machinists Blueprint Reading 5

MASP 107 Machining for Related Occupations
and/or

MASP 111 Machine Shop I 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

MFG 115 Manufacturing Processes 5

MFG 230 Computer Integrated Manufacturing 4

TOTAL CREDITS 68

Machinist

BLPT 150 Machinists Blueprint Reading 5

MASP 107 Machining for Related Occupations
and/or

MASP 111 Machine Shop I 10

MASP 112 Machine Shop II 10

MASP 113 Machine Shop III 10

MASP 114 Machine Shop IV 10

MFG 115 Manufacturing Processes 4

WELD 152 Introduction to Arc Welding 6

TOTAL CREDITS 73



Manufacturing

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.

Advanced Manufacturing Technology

■ ASSOCIATE IN APPLIED SCIENCE

The Advanced Manufacturing Technology AAS degree program prepares graduates to work in a wide variety of manufacturing positions. Students acquire a wide range of skills and knowledge applicable to a number of different industries. In addition, it prepares them for future opportunities to gain specialized skills and move into more advanced technical positions.

PROGRAM REQUIREMENTS

Communications

ENGL 100, 101, or 110 (ENGL 110 recommended) 5

Computational

MATH 092 Elementary Algebra or higher 5

Social Science/Human Relations/Diversity

BUS 144 Management of Human Relations 5

Natural Science

TECH 100 Principles of Technology **or**
MFG 130 Materials Science 5

Health

HLTH 100 Occupational Health and Safety **or**
MFG 105 Industrial Safety 3

TOTAL RELATED INSTRUCTION: 23

PROGRAM MAJOR REQUIREMENTS

BLPT 150 or 160 - Blueprint Reading 5
CS 110 Intro to Microcomputer Applications 3
DRFT 107 Technical Graphics 3
MASP 107 and/or 111 - Machine Shop 10
MFG 115 Manufacturing Processes 5
MFG 120 Quality Assurance 4
MFG 140 Industrial Hydraulics 4
MFG 205 Work Teams In Industry 3
MFG 230 Computer Integrated Manufacturing 4
PMFG 110 Industrial Maintenance Fundamentals 5
PMFG 150 Electrical/Electronic Fundamentals 5
PMFG 151 Process Technology Equipment 5
PMFG 152 Process Technology Systems 5
PMFG 201 Electrical Control Equipment 3
PMFG 202 Electric Motors 2
PMFG 210 Advanced Industrial Maintenance 5
WELD 105 Related Welding 6

TOTAL PROGRAM MAJOR CREDITS 77
TOTAL CREDITS FOR AAS DEGREE 100

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.

PROGRAM REQUIREMENTS

Communications

ENGL 100, 101, or 110 (ENGL 110 recommended) 5

Computational

MATH 092 Elementary Algebra or higher 5

Social Science/Human Relations/Diversity

BUS 144 Management of Human Relations 5

Health

HLTH 100 Occupational Health and Safety **or**
MFG 105 Industrial Safety 3

TOTAL RELATED INSTRUCTION 18

PROGRAM MAJOR REQUIREMENTS

CS 110 Intro to Microcomputer Applications 3
MFG 120 Quality Assurance 4
MFG 140 Industrial Hydraulics 4
MFG 205 Work Teams In Industry 3
PMFG 110 Industrial Maintenance Fundamentals 5
PMFG 150 Electrical/Electronic Fundamentals 5
PMFG 151 Process Technology Equipment 5
PMFG 152 Process Technology Systems 5
PMFG 201 Electrical Control Equipment 3
PMFG 202 Electric Motors 2
PMFG 210 Advanced Industrial Maintenance 5

TOTAL PROGRAM MAJOR CREDITS 44

TOTAL CREDITS FOR CERTIFICATE OF PROFICIENCY 62



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 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.

PROGRAM REQUIREMENTS

Communications

ENGL 100, 101, or 110 (ENGL 110 recommended) 5

Computational

MATH 092 Elementary Algebra or higher 5

Social Science/Human Relations/Diversity

BUS 144 Management of Human Relations 5

Health

HLTH 100 Occupational Health and Safety *or*

MFG 105 Industrial Safety 3

TOTAL RELATED INSTRUCTION 18

PROGRAM MAJOR REQUIREMENTS

BLPT 150 or 160 - Blueprint Reading 5

MASP 107 and/or 111 - Machine Shop 10

MFG 115 Manufacturing Processes 5

WELD 105 Related Welding 6

One of the following courses:

DRFT 107 Technical Graphics 3

TECH 100 Principles of Technology 5

MFG 130 Materials Science 5

MFG 230 Computer Integrated Manufacturing 4

WELD 158 Welding Theory and Fabrication 3 - 5

TOTAL PROGRAM MAJOR CREDITS 29 - 31

TOTAL CREDITS FOR CERTIFICATE OF PROFICIENCY 47 - 49

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.

PROGRAM MAJOR REQUIREMENTS

HLTH 100 Occupational Health and Safety *or*

MFG 105 Industrial Safety 3

MFG 115 Manufacturing Processes 5

16 CREDITS FROM THE FOLLOWING LIST:

MATH/TECH 091 Pre-Algebra or higher 5

MFG 140 Industrial Hydraulics 4

MFG 205 Industrial Safety 2

PMFG 110 Industrial Maintenance Fundamentals 5

MASP 107 and/or 111 - Machine Shop 10

WELD 105 Related Welding 6

TOTAL CERTIFICATE CREDITS 24

Mathematics

Mathematics supplements studies in engineering, chemistry, physics and other natural sciences as well as business programs. Students can complete the first two years of mathematics studies toward a bachelor's degree and can also specialize in math education.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Undergraduate Studies for Future Secondary Math Teachers

■ ASSOCIATE IN MATH EDUCATION — DIRECT TRANSFER AGREEMENT/MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

ENGL 102 English Composition 5

Quantitative Skills

MATH& 151 Calculus I 5
(was MATH 151)

Humanities/Diversity

SPCH 110 Intro to Public Speaking and 5

10 credits selected from the Humanities distribution list.

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 in performance/skills courses are allowed. 10

Natural Science

MATH& 152 Calculus II 5
(was MATH 152)

5 credits of science (phys, chem., geol, or biol.) 5

5 credits of lab science (phys, chem., geol, or biol.) 5

Social Science/Diversity

PSYC& 100 General Psychology 5
(was PSYC 111)

10 credits selected from the Social Science distribution list.

No more than 10 credits allowed from any one discipline. 10

Other

EDUC& 205 Intro to Education w/Field Experience 5
(was EDUC 110)

MATH& 153 Calculus III 5
(was MATH 153)

MATH 154 Calculus IV 3

MATH 220 Linear Algebra 5

Plus 12 additional credits selected from the distribution list defined by the receiving institution as fully transferable. 12

TOTAL MINIMUM CREDITS 90

Medical Assisting

Medical assistants work with physicians and other health care providers, contributing support services in the office or laboratory. Prerequisites include MATH 070 or higher and ENGL 100 or higher, both with a grade of C or better. You must also pass a BTEC keyboarding exam or complete BTEC 101 with a grade of C or better.

Work closely with your program advisor to plan your quarterly schedule, as MEDA classes are offered just once yearly and must be taken in sequence. You may take other required courses out of sequence as long as prerequisites are met. No person found guilty of a felony is eligible to take the certification examination without a waiver from the AAMA certifying board.

■ ASSOCIATE IN APPLIED SCIENCE

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I or	
BUS 119	Business Communications and	
(was BSAD 190)		
ENGL 102	English Composition	10

Computation

MATH 105	Mathematics for Health Sciences	5
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Human Relations

PSYC& 100	General Psychology	5
(was PSYC 111)		

Natural Sciences/Humanities

From distribution list		5
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Diversity

From distribution list		5
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PROGRAM REQUIREMENTS

BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedures	4
BTEC 173	Computers in the Medical Office	3
MEDA 101	Medical Vocabulary or	
BTEC 181	Medical Terminology I	3
MEDA 102	Medical Vocabulary II or	
BTEC 182	Medical Terminology II	3
MEDA 120	Survey of Human Anatomy & Physiology or	
BIOL& 241/242	Human Anatomy and Physiology	6-12
(was BIOL 221, 222)		
MEDA 121	Health Care Law	1
MEDA 122	Health Care Ethics and AIDS Education	2
MEDA 145	Medical Laboratory Techniques	4
MEDA 146	Invasive Procedures	2
MEDA 161/162	Examining Room Procedures I/II	6
MEDA 164	Medication Administration & Injection	1
MEDA 165	Medications in Medical Assisting & Diseases	3
MEDA 190	Medical Assisting Externship	6
MEDA 195	Medical Assisting Seminar	1
Electives*		14

TOTAL CREDITS 92-98

*To complete your degree, the electives must be courses numbered 50 and above. Of those, 5 credits must be from the social science or natural science transfer degree distribution list. For this degree, CHEM& 100 can be added to this list. The balance of your electives may come from any distribution or elective list. Math courses may not be used.

■ CERTIFICATE OF PROFICIENCY

PREREQUISITES

MATH 070 (or higher) with a grade of C or better
 ENGL 100 (or higher) with a grade of C or better
 Pass BTEC keyboarding exam or complete BTEC 101 with a grade of C or better.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101	English Composition I or	
BUS 119	Business Communications	5
(was BSAD 190)		

Computation

MATH 105	Mathematics for Health Sciences	5
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Human Relations/Social Sciences

PSYC& 100	General Psychology	5
(was PSYC 111)		

PROGRAM REQUIREMENTS

MEDA 101	Medical Vocabulary or	
BTEC 181	Medical Terminology I	3
MEDA 102	Medical Vocabulary II or	
BTEC 182	Medical Terminology II	3
BTEC 171	Medical Reception Procedures	3
BTEC 172	Medical Office Procedures	4
BTEC 173	Computers in the Medical Office	3
MEDA 120	Survey Human Anatomy & Physiology or	
BIOL& 241/242	Human Anatomy and Physiology	6-12
(was BIOL 221, 222)		
MEDA 121	Health Care Law	1
MEDA 122	Health Care Ethics and AIDS Education	2
MEDA 145	Medical Laboratory Techniques	4
MEDA 146	Invasive Procedures	2
MEDA 161/162	Examining Room Procedures I/II	6
MEDA 164	Medication Administration and Injections	1
MEDA 165	Medication in Medical Assisting/Diseases	3
MEDA 190	Medical Assisting Externship	6
MEDA 195	Medical Assisting Seminar	1

TOTAL CREDITS 63-69

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 medicine, medical technology, dentistry, pharmacy or veterinary 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.

Music

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Contemporary Musicianship & Audio Production

■ ASSOCIATE IN APPLIED SCIENCE

This two-year program is designed to provide students without prior formal training in music an understanding of modern digital and analogue recording techniques, music production and marketing, and modern pop/rock music theory. Students will also be required to study privately on their instrument(s)/and/or voice and participate in weekly performances of popular music ensembles.

In their audio production courses students will learn to use hardware and software to record, store and digitally edit musical examples culminating in the production of a professional quality demo CD. As their final project in the program students will pre-sent in a public forum their finished CD recording of a musical ensemble. The CD will be of professional, commercial quality, complete with appropriate artwork and liner notes.

GENERAL EDUCATION REQUIREMENTS

Communications

BUS 119 Business Communications (recommended) 5

Computation

BUS 104 Business Math Applications (recommended) 5

Social Science/Human Relations

PSYC& 100 General Psychology (recommended) 5
(was PSYC 111)

Health

HLTH 106 Health Today *or* 2-3
HLTH 100 Occupational Safety & Health

Humanities/Natural Science/Diversity

MUSC 119 American Music (recommended) 5

PROGRAM REQUIREMENTS

MUSC 100	Fundamentals of Music	5
MUSC 106	Group Piano Instruction	2
MUSC 131, 132, 133, 231, 232, 233		
(was 116 and 216)	Musicum Practicum I thru VI	6
MUSC 126, 226	Applied Music	5
MUSC 161	Digital Audio I	5
MUSC 162	Digital Audio II	5
MUSC 163	Digital Audio III	5
MUSC 181	Contemporary Musicianship and Applications I	3
MUSC 182	Contemporary Musicianship and Applications II	3
MUSC 183	Contemporary Musicianship and Applications III	3
(was 281)		
MUSC 261	Advanced Audio Production I	5
MUSC 262	Advanced Audio Production II	5
MUSC 263	Advanced Audio Production III	5
MUSC 281	Contemporary Musicianship and Applications IV	3
MUSC 282	Contemporary Musicianship and Applications V	3
MUSC 284	AAS Degree Project	3

Recommended Electives

BUS& 101	Intro to Business <i>and</i>	
(was BSAD 110)		
CS 110	Intro to Microcomputer Applications	8
(was CIS 110)		

TOTAL CREDITS

96-97

■ CERTIFICATE OF PROFICIENCY

GENERAL EDUCATION REQUIREMENTS

Communications

BUS 119 Business Communications (recommended) 5

Computation

BUS 104 Business Math Applications (recommended) 5

Social Science/Human Relations

PSYC& 100 General Psychology (recommended) 5

PROGRAM REQUIREMENTS

CS 110	Intro to Microcomputer Applications	3
(was CIS 110)		
MUSC 100	Fundamentals of Music	5
MUSC 106	Group Piano Instruction	2
MUSC 131, 132, 133		
(was 116)	Musicum Practicum I thru III	3
MUSC 126	Applied Music	2
MUSC 161	Digital Audio I	5
MUSC 162	Digital Audio II	5
MUSC 163	Digital Audio III	5
MUSC 181	Contemporary Musicianship and Applications I	3
MUSC 182	Contemporary Musicianship and Applications II	3

TOTAL CREDITS

51

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 accredited by the National League for Nursing Accrediting Commission.

■ ASSOCIATE IN APPLIED SCIENCE

Practical Nurse Level

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computational

MATH 099 Intermediate Algebra 5

Social Science

PSYC& 100 General Psychology 5
(was PSYC 111)

Natural Science

BIOL& 241 Human Anatomy and Physiology 6
(was BIOL 221)

Health

NURS 101 Nursing Foundations 5

PROGRAM REQUIREMENTS (FOUR QUARTERS)

AH 101 Health Care Foundations I 1

AH 102 Health Care Foundations II 1

AH 131 Health Care Communication Skills I 1

AH 132 Health Care Communication Skills II 1

BIOL& 242 Human Anatomy and Physiology 6
(was BIOL 222)

BIOL& 260 Microbiology 5
(was BIOL 257)

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 Family Nursing – Clinical 5

PSYC& 200 Lifespan Psychology 5
(was PSYC 205)

TOTAL CREDITS 81

Note: Student will receive a Certificate of Proficiency after completing the Practical Nurse Level.

Registered Nurse Level

PRACTICAL NURSE REQUIREMENTS 81

PROGRAM REQUIREMENTS (THREE QUARTERS)

AH 230 Management Issues in Healthcare 1

ANTH& 206 Cultural Anthropology **or**

SOC& 101 Intro to Sociology 5
(was SOCY 110)

CHEM& 121 Intro to Chemistry 5
(was CHEM 111)

NURS 201 Advanced Comprehensive Nursing I 5

NURS 202 Advanced Comprehensive Nursing II 5

NURS 203 Advanced Comprehensive Nursing III 5

NURS 221 Advanced Comp Nursing Clinical I 5

NURS 222 Advanced Comp Nursing Clinical II 5

NURS 223 Advanced Comp Nursing Clinical III 5

TOTAL CREDITS 122

Registered Nurse - LPN to RN Campus Based

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computational

MATH 099 Intermediate Algebra 5

Social Science

PSYC& 100 General Psychology 5
(was PSYC 111)

Diversity

ANTH& 206 Cultural Anthropology **or**

SOC& 101 Intro to Sociology 5

Natural Science

BIOL& 241 Human Anatomy and Physiology 6
(was BIOL 221)

PROGRAM REQUIREMENTS

LPN license issued by another state accepted as fulfillment of Health Requirement as long as transfer student graduated from a nursing board approved nursing program as meeting NURS 101, 102, 103, 104, 111, 112, 113, 114 and AH 101, 102, 131, and 132. Accepted LPN license equivalent to 44 credits.

AH 230 Management Issues in Healthcare 1

BIOL& 242 Human Anatomy and Physiology 6
(was BIOL 222)

BIOL& 260 Microbiology 5

CHEM& 121 Intro to Chemistry 5

NURS 201 Advanced Comprehensive Nursing I 5

NURS 202 Advanced Comprehensive Nursing II 5

NURS 203 Advanced Comprehensive Nursing III 5

NURS 209 Nursing Processes 2

NURS 221 Advanced Comp Nursing Clinical I 5

NURS 222 Advanced Comp Nursing Clinical II 5

NURS 223 Advanced Comp Nursing Clinical III 5

PSYC& 200 Lifespan Psychology 5

TOTAL CREDITS 124 MINIMUM

Registered Nurse - LPN2RN

Lower Columbia College's LPN to RN (LPN2RN) online option of the nursing program provides an accessible means for working LPNs to return to college. The program can be completed on a full-time or part-time basis.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computational

MATH 099 Intermediate Algebra 5

Social Science

PSYC& 100 General Psychology 5
(was PSYC 111)

Diversity

ANTH& 206 Cultural Anthropology **or**
SOC& 101 Intro to Sociology 5

Natural Science

BIOL& 241 Human Anatomy and Physiology 6
(was BIOL 221)

PROGRAM REQUIREMENTS

LPN license issued by another state accepted as fulfillment of Health Requirement as long as transfer student graduated from a nursing board approved nursing program as meeting NURS 101, 102, 103, 104, 111, 112, 113, 114 and AH 101, 102, 131, and 132. Accepted LPN license equivalent to 44 credits.

BIOL& 242 Human Anatomy and Physiology 6
(was BIOL 222)

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 MINIMUM

Registered Nurse - RONE Rural Outreach Nursing Education

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL& 101 English Composition I 5

Computational

MATH 099 Intermediate Algebra 5

Social Science

PSYC& 100 General Psychology 5
(was PSYC 111)

Cultural Diversity

ANTH& 206 Cultural Anthropology **or**
SOC& 101 Intro to Sociology 5

Natural Science

BIOL& 241 Human Anatomy and Physiology 6
(was BIOL 221)

Health

NURS 101 Fundamentals of Nursing Theory 5

PROGRAM REQUIREMENTS

AH 101 Healthcare Foundations I 1

AH 102 Healthcare Foundations II 1

AH 131 Health Care Communication Skills I 1

AH 132 Health Care Communication Skills II 1

BIOL& 242 Human Anatomy and Physiology 6
(was BIOL 222)

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 Nursing Foundations I - Clinical 5

NURS 113 Nursing Foundations II - Clinical 5

NURS 114 Nursing Foundations 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 MINIMUM

Nursing Assistant–Certified

■ CERTIFICATE OF COMPLETION

NURS 090 Nursing Assistant 8



Philosophy

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Physical Education

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.

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Physics

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN SCIENCES — TRANSFER

Undergraduate Studies for Future Secondary Physics Teachers

■ ASSOCIATE IN PHYSICS EDUCATION — TRANSFER OPTION 1/MAJOR RELATED PROGRAM

GENERAL EDUCATION REQUIREMENTS

Communications

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

Mathematics

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

Humanities/Social Science/Diversity

PSYC& 100 (was PSYC 111)	General Psychology	5
SPCH 110	Intro to Public Speaking	5
	5 additional credits from distribution list.	5
Three different subject areas required. No more than 5 credits of performance classes allowed.		

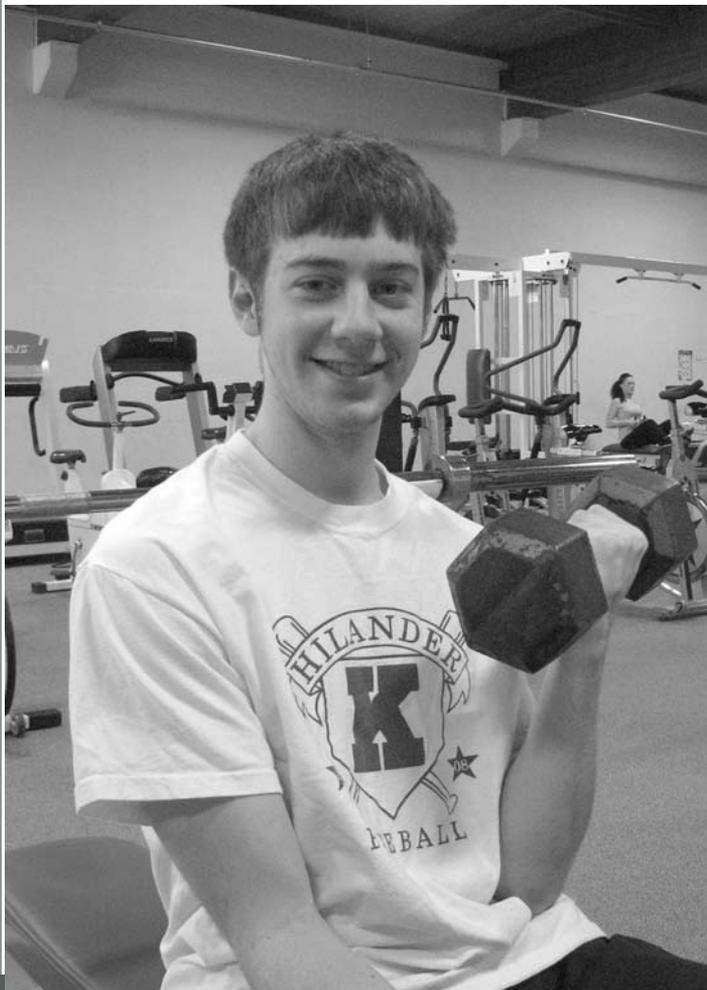
PRE-MAJOR REQUIREMENTS

CHEM& 161 (was CHEM 151)	General Chem w/Lab I	5
CHEM& 162 (was CHEM 152)	General Chem w/Lab II	5
CS 170 (was CIS 180)	Fundamentals of Computer Programming	5
MATH& 153 (was MATH 153)	Calculus III	5
MATH 154	Calculus IV	3
MATH 220	Linear Algebra	5
MATH 240	Differential Equations	5
PHYS 251	General Physics	5
PHYS 252	General Physics	5
PHYS 253	General Physics	5

Electives

EDUC& 205 (was EDUC 110)	Intro to Education w/Field Experience	5
	5 additional credits from the distribution list.	5

TOTAL CREDITS 93 MINIMUM



Political Science

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Psychology

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Science Education

Undergraduate Studies for Future Secondary General Science Teachers

■ ASSOCIATE IN GENERAL SCIENCE EDUCATION — TRANSFER OPTION 1/MAJOR RELATED PROGRAM

GENERAL EDUCATION REQUIREMENTS

Communications

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

Mathematics

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

Humanities/Social Science/Diversity

PSYC& 100 (was PSYC 111)	General Psychology	5
SPCH 110	Intro to Public Speaking	5

PRE-MAJOR REQUIREMENTS

CHEM& 161 (was CHEM 151)	General Chemistry w/Lab I and	
CHEM& 162 (was CHEM 152)	General Chemistry w/Lab II and	
CHEM& 163 (was CHEM 153)	General Chemistry w/Lab III and/or	
BIOL 201	General Biological Science and	
BIOL 202	General Biological Science and	
BIOL 203	General Biological Science and/or	
PHYS 101	Introductory Physics I and	
PHYS 102	Introductory Physics II and	
PHYS 103	Introductory Physics III and/or	
PHYS 251	General Physics I and	
PHYS 252	General Physics II and	
PHYS 253	General Physics III and/or	
GEOL 117	Geology of Earth's Surface and	
GEOL 118	Historical Geology and	
MATH 210	Elements of Statistics	45–50
Electives		
EDUC& 205 (was EDUC 110)	Intro to Education w/Field Experience	5
	5 additional credits from distribution list.	5

TOTAL MINIMUM CREDITS 90

Sociology

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.

■ ASSOCIATE IN ARTS AND SCIENCES

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT

Speech

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.

■ ASSOCIATE IN ARTS — DIRECT TRANSFER AGREEMENT



Technology

■ ASSOCIATE IN TECHNOLOGY — DIRECT TRANSFER AGREEMENT/MAJOR RELATED PROGRAM

PROGRAM REQUIREMENTS

Communications

ENGL& 101	English Composition I	5
ENGL& 235 (was ENGL 220)	Technical Writing	5

Quantitative Skills

MATH 150	Precalculus	5
MATH 215	Discrete Structures	5

Humanities/Diversity

SPCH 110	Introduction to Public Speaking <i>and</i>	5
10 credits from Humanities distribution list, with no more than 5 credits from world language and no more than 5 credits in a performance skills class (marked with an * on the distribution list).		10

Social Science

Select from at least two disciplines, no more than 10 credits in a single discipline.	15
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Natural Science

CHEM& 161 (was CHEM 151)	General Chem w/Lab I	5
CS 170 (was CIS 180)	Fundamentals of Computer Programming	5
PHYS 101	Introductory Physics	5

Technology

ENGR& 121 (was ENGR 111)	Engineering Graphics I	3
ENGR& 122 (was ENGR 112)	Engineering Graphics II	3

Electives

20 credits of electives – courses selected appropriate for intended major and intended bachelor's Institutions such as: PHYS 102, PHYS 103	20
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TOTAL MINIMUM CREDITS 91

Notes: This degree is only applicable for students who are planning to attend Central Washington University, Eastern Washington University or Western Washington University.

A maximum of 10 elective 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.

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. You must successfully complete the Washington Association of Building Officials (WABO) Qualification Test before an AAS degree in welding can be awarded.

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110	Industrial Communications recommended	5
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Computation

MATH 106	Industrial Mathematics recommended	5
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Human Relations/Social Sciences/Diversity

BUS 144	Management of Human Relations recommended (was BSAD 126)	5
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Natural Sciences/Humanities

MFG 130	Materials Science <i>or</i>	
TECH 100	Advanced Principles of Technology	5

Health

HLTH 100	Occupational Safety & Health (recommended)	3
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PROGRAM REQUIREMENTS

BLPT 160	Blueprint Reading for Welders	5
CS 110 (was CIS 110)	Intro to Microcomputer Applications	3
WELD 151	Introduction to Oxy-Acetylene	6
WELD 152	Introduction to Arc Welding	10
WELD 158	Welding Theory & Fabrications	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 or 075	Welding Certification	0

TOTAL CREDITS 94

The following certificate program helps you prepare for employment in manufacturing or maintenance:

■ CERTIFICATE OF PROFICIENCY

GENERAL EDUCATION REQUIREMENTS

Communications

ENGL 110	Industrial Communications	5
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Computation

MATH 106	Industrial Math	5
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Human Relations/Social Sciences

BUS 144 (was BSAD 126)	Management of Human Relations	5
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Health

HLTH 100	Occupational Safety and Health	3
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PROGRAM REQUIREMENTS

BLPT 160	Blueprint Reading for Welders	5
CS 110 (was CIS 110)	Intro to Microcomputer Applications	3
WELD 151	Introduction to Oxy-Acetylene	6
WELD 152	Introduction to Arc Welding	10
WELD 158	Welding Theory and 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 you 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 Science.
NSA	Course meets distribution credit in Natural Science only for AAS and AAS-T degrees.
NSL	**Course meets distribution credits in Natural Science 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.

Adult Basic Education (ABE)

ABE 010 1-20 credits Beginning ABE Literacy Reading-Level 1

Strengthen basic academic skills in order to enhance 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 1-20 credits Beginning ABE Literacy Writing-Level 1

Strengthen basic academic skills in order to enhance 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 1-20 credits Beginning ABE Literacy Math-Level 1

Strengthen basic academic skills in order to enhance 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 1-20 credits Beginning ABE Literacy Reading & Writing Level 1

Strengthen basic academic skills in order to enhance 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 **1-20 credits****Beginning ABE Literacy Integrated-Level 1**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****Beginning ABE Literacy Computer Technology & Job Readiness-1**

Strengthen English communication skills in order to enhance 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 **1-20 credits****Beginning ABE Literacy-Spanish Integrated-Level 1**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 **1-20 credits****ABE Beginning Basic Education Reading-Level 2**

Strengthen basic academic skills in order to enhance personal, social, and workplace environments in a beginning basic education reading course.

Prerequisite: CASAS Appraisal Exam and CASAS Appraisal score of 201 to 210, or instructor.

ABE 021 **1-20 credits****ABE Beginning Basic Education Writing-Level 2**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Beginning Basic Education Math-Level 2**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Beginning Basic Education Reading & Writing-Level 2**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Beginning Basic Education Integrated-Level 2**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Beginning Basic Education Computer Technology & Job Readiness-2**

Strengthen English communication skills in order to enhance 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 **1-20 credits****ABE Beginning Basic Education-Spanish Integrated-Level 2**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Reading-Level 3**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Writing-Level 3**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Math-Level 3**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Reading & Writing-Level 3**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Integrated-Level 3**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Computer Technology & Job Readiness-3**

Strengthen English communication skills in order to enhance 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 **1-20 credits****ABE Low Intermediate Basic Education Spanish Integrated-Level 3**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Reading-Level 4**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Writing-Level 4**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Math-Level 4**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Reading & Writing-Level 4**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Integrated-Level 4**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education Computer Technology & Job Readiness-4**

Strengthen English communication skills in order to enhance 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 **1-20 credits****ABE High Intermediate Basic Education-Spanish Integrated-Level 4**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education Reading-Level 5**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education Writing-Level 5**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education Math-Level 5**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education Reading & Writing-Level 5**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education Integrated-Level 5**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Computer Technology & Job Readiness-5**

Strengthen English communication skills in order to enhance 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 **1-20 credits****ABE Low Adult Secondary Education-Spanish Integrated-Level 5**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 **1-20 credits****ABE High Adult Secondary Education Reading-Level 6**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Adult Secondary Education Writing-Level 6**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Adult Secondary Education Math-Level 6**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Adult Secondary Education Reading & Writing-Level 6**

Strengthen basic academic skills in order to enhance 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 **1-20 credits****ABE High Adult Secondary Education Integrated-Level 6**

Strengthen basic academic skills in order to enhance 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 1-20 credits**ABE High Adult Secondary Education
Computer Technology & Job Readiness-6**

Strengthen English communication skills in order to enhance 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 1-20 credits**ABE High Adult Secondary Education
Spanish Integrated-Level 6**

Strengthen basic academic skills for native Spanish speakers in order to enhance 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 1-3 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 072 1-20 credits**I-BEST Academic Support**

A low intermediate-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 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 Reading Score of 211 or instructor permission.

Accounting (ACCT)

ACCT 101 5 credits**Introduction to Accounting Concepts**

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 070 or TECH 070 or higher with a grade of C or better.

ACCT 150 5 credits**Payroll Accounting and Business Tax Reporting**

Provides 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 092 and ACCT 101 or instructor permission.

ACCT& 201 5 credits**Principles of Accounting I**

(was ACCT 231)(was titled Financial Accounting I)

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 092. No previous accounting courses are required.

ACCT& 202 5 credits**Principles of Accounting II**

(was ACCT 232)(was titled Financial 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 (was ACCT 231) with a grade of C or better.

ACCT& 203 5 credits**Principles of Accounting III**

(was ACCT 233)(was titled Financial 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 measures.

Prerequisite: ACCT& 202 (was ACCT 232) with a grade of C or better and basic spreadsheet skills.

ACCT 241 4 credits**Computerized Accounting Concepts**

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, ACCT& 201 (was ACCT 231) or instructor permission.

ACCT 260 **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 (was ACCT 232) with a grade of 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 **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 101 **1 credits**
Healthcare Foundations I

An introduction to health care career opportunities, the history of health care, the structure and function of health care systems and foundational skills for health care including professional employability skills, problem solving and change strategies. This course is part of the Allied Health preparation for the healthcare occupations (Health Occupations Core).

AH 102 **1 credit**
Healthcare Foundations II

An introduction to legal, ethical, regulatory and safety issues in health care. This course is part of the Allied Health preparation for the healthcare occupations (Health Occupations Core).

Prerequisite: Must have received a grade of C or better in AH 101.

AH 112 **1 credit**
Body Structure, Function and Terminology I

Basic anatomy and function are 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 and the dean.

AH 131 **1 credit**
Health Care Communication Skills I

(was titled Therapeutic Communications I)

An introductory content on the communication process in health care settings. Principles of communication, therapeutic communication skills, barriers to effective communication, principles of verbal and written reporting in health care and techniques for acquiring employment are introduced. This course is part of the Allied Health preparation for the healthcare occupations (Health Occupations Core).

AH 132 **1 credit**
Health Care Communication Skills II

(was titled Therapeutic Communications II)

An Introduction to complex communication in health care settings. Topics Include communication with clients who have complex needs, conflict resolution, team work, health care Informatics, and cultural competency.

This course is part of the Allied Health preparation for the healthcare occupations (Health Occupations Core).

Prerequisite: Must have received a grade of C or better in AH 131, or equivalent.

AH 230 **1 credit**
Management Issues in Health Care

Explores leadership, management, legal, ethical, and research issues essential to nursing practice.

Prerequisite: Instructor permission required to enroll.

Anthropology (ANTH)

ANTH& 205 **5 credits**
Biological Anthropology **NS**
 (was ANTH 206)

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 **5 credits**
Cultural Anthropology **SS**
 (was ANTH 205)

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. This may be offered as a Capstone course. See page 26 for Capstone prerequisites. Meets the associate's degree cultural diversity requirement.

Art (ART)

ART& 100 **3-5 credits**
Art Appreciation **H**

(was ART 110) (was titled Intro to Art Appreciation)
 Introduces basic art vocabulary and concepts, and provides a basis for understanding and appreciating art from a variety of cultures and time periods through slide lectures, demonstrations, discussion, and field trips. Students cannot earn credit for both this course and ART 114. Meets the associate's degree cultural diversity requirement.

ART 101 **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.

ART 102 **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 the instructor permission.

ART 103 **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. Includes some independent projects.

Prerequisite: ART 102 or instructor permission.

ART 106 **5 credits**
Basic Design **H, P**

Introduces the theory and fundamentals of visual organization through the explanation of black and white media.

ART 107 **5 credits**
Basic Design **H, P**

Introduces the theory and application of color to specific two-dimensional and three-dimensional design problems.

ART 108 **3 credits**
Basic Design

Introduces three-dimensional form and space with emphasis on materials, spatial composition, and fabrication.

ART 111 **3 credits**
Beginning Painting **H, P**

Introduces the use of oil and acrylic painting media and the study of traditional painting concepts and techniques.

ART 112 **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 **3 credits**
Advanced 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 114 **3-5 credits**
Introduction to Art Appreciation:
Study Abroad **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 slide lectures, demonstrations, discussion, and field trips. Students cannot earn credit for both this course and ART 100 (was ART 110).

ART 119 **3 credits**
Watercolor Painting **H**

Introduces transparent and opaque techniques of watercolor painting. Color, composition, and technical control are emphasized.

ART 151 **3 credits**
Beginning Black & White Photography **H, P**

Covers the fundamentals of 35mm camera operation, exposure and focusing controls, film processing, and making black & white photographic prints for presentation. Includes composition, group critiques, and exposure to great works of photography. Requires 35mm camera with adjustable focusing, aperture, and shutter.

ART 152A **3 credits****Intermediate Black & White Photography - Studio** **H, P**

Further explores camera vision and pushes the limit of camera controls to create black & white photographic images. Students explore film speeds, advanced exposure control, and film testing, and will gain more understanding and control over lighting. Focused on studio photography. Students will also refine camera and darkroom skills and participate in photo critiques.

Prerequisite: ART 151 or instructor permission.

ART 152B **3 credits****Intermediate Black & White Photography Documentary Photography** **H, P**

Provides students who have completed ART 151 the opportunity to further advance their camera, darkroom, and critiquing skills. Learn how to utilize film speeds, exposure control, and 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 **3 credits****Advanced Photographic Techniques**

A continuation of photography experiences in studio, documentary, and fine-art applications.

Prerequisite: ART 152A or ART 152B or instructor permission.

ART 162 **3 credits****Beginning Photoshop Design**

Introduces Adobe Photoshop and principles of graphic design. Includes menus, palettes, tools, layers, masks, channels, image correction, manipulation techniques and vector graphics. Presents digital imagery concepts, legal aspects, ethics and development of photo design awareness. Emphasizes skill building applicable to photography, web site design, illustration, design portfolios and design aesthetics.

Prerequisite: Basic computer skills required.

ART 164 **5 credits****Beginning Video Production Design**

Lecture/demonstration and hands-on operation of digital video equipment. It introduces Adobe Premiere, Inscrber and principles of video production and presents basic design principles as applied to video.

Prerequisite: Basic computer skills are recommended.

ART 165 **3 or 5 credits****Intermediate Video Production Design**

Lecture/demonstration and hands-on operation of digital video equipment. It continues work with Adobe Premiere, Inscrber, principles of video production and intermediate design principles as applied to video. It adds instruction in Aftereffects and the use of a full production suite (VT4) for live video production design.

Prerequisite: Satisfactory completion of ART 164 or instructor permission.

ART 166 **3 or 5 credits****Advanced Video Production Design**

Lecture/demonstration and hands-on operation of digital video equipment in studio and field projects. It continues work with Adobe Premiere, Inscrber, principles of video production, introducing advanced skills and techniques. It develops advanced design principles applied to video production and introduces Light Wave 3D Animation and the creation of special effects.

Prerequisite: ART 165 or Instructor permission.

ART 171 **3 credits****Printmaking-Etching**

Introduces basic techniques of etching, relief printing, and monotypes. For beginning students.

ART 206 **5 credits****Arts of the Americas** **H**

An introduction to the diversity of American art, past and present. Studies the development of artistic themes and styles in the Americas and analyzes works in a variety of media. Includes work by Native American, Euro-American and Latin American artists. Course includes field trips, slide lectures and seminars. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

ART 207 **5 credits****Arts of the World** **H**

Introduces non-western arts. Focuses on selected art forms and types from Africa, Asia, Oceania, and the Middle East. Studies and analyzes ideas and issues, past and present, expressed in the arts of diverse cultures, and contrasts and compares work in a variety of media. Course includes field trips, slide lectures, and seminars. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

ART 208 **5 credits****Arts of the Northwest** **H**

Introduces the arts of the Northwest, past and present. Studies and analyzes works in a variety of styles and media and notes the diverse sources used by contemporary Northwest artists. Course includes field trips, slide lectures and seminars. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

ART 226 **5 credits****History of Art** **H**

Establishes a basis for judgment for sculpture, painting, and architecture through a survey of the purposes and development of art from 35,000 B.C. to 500 A.D. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

ART 227 **5 credits**
History of Art **H**
 Studies shifting forms and purposes in the visual arts, establishing a basis for critical judgment in sculpture, painting, and architecture through a survey of art from 500 A.D. to A.D. 1600. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

ART 228 **5 credits**
History of Art **H**
 Studies the history of Western art from 1500 A.D. through the mid-20th Century, including evaluation of contemporary sculpture, painting, and architecture as a product of its time and place. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

ART 241 **3 credits**
Beginning Ceramic Art, Pottery **H, P**
 Begins with study of ceramic materials, including techniques of hand construction and wheel throwing.

ART 242 **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 **3 credits**
Advanced Ceramic Art, Pottery
 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 **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 **1-3 credits**
Art Studio Lab—Photography
 Provides lab opportunity in photography for students who have completed ART 151 or higher.
 Prerequisite: ART 153 or Instructor permission.

Astronomy (ASTR)

ASTR 110 **5 credits**
Descriptive 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)

(was ADT)

AMTC 100 **5 credits**
Essentials of Mechanics
 (was ADT 100)
 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 **5 credits**
Electrical Systems I
 (was ADT 101)
 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.

AMTC 102 **10 credits**
Electrical Systems 2
 (was ADT 102)
 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, distributor-less, and breaker point ignition systems.
 Prerequisite: AMTC 101 (was ADT 101) or instructor permission.

AMTC 104 **6 credits**
Vehicle Climate Control
 (was ADT 104)
 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 **5 credits**
Hydraulic Brakes
 (was ADT 111)
 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 instructor permission.

AMTC 112 **3 credits**
Antilock Brakes and Traction Control
 (was ADT 112)
 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 (was ADT 111) or instructor permission.

AMTC 121 **5 credits****Gas Engines I**

(was ADT 121)

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 **5-10 credits****Gas Engines II**

(was ADT 122)

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 (was ADT 121) or instructor permission.

AMTC 200 **5 credits****Internship**

(was ADT 200)

Provides paid or unpaid work experience in the discipline (Automotive or Diesel) that the student is majoring in. The class will give the students hands-on experience to familiarize them with work in an industrial setting.

Prerequisite: 36 credits or more of AMTC (was ADT) courses or instructor permission.

AMTC 201 **10 credits****Fuels and Emissions**

(was ADT 201)

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. Third in a series of four courses.

Prerequisite: AMTC 101 (was ADT 101) and AMTC 102 (was ADT 102) or instructor permission.

AMTC 202 **10 credits****Computer Engine and Controls**

(was ADT 202)

Presents theory of operation, diagnosis and repair techniques of computer controlled electronic engine systems.

Prerequisite: AMTC (was ADT) 101, 102, and 201 or instructor permission.

AMTC 215 **8 credits****Suspension and Alignment**

(was ADT 215)

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 **8 credits****Automatic Transmission**

(was ADT 216)

Studies hydraulic principle of pressure and force multiplication, operation, diagnosis and repair of automotive automatic transmissions and transaxles.

AMTC 217 **6 credits****Powertrains**

(was ADT 217)

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****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 laboratory.

BIOL 130 **5 credits****Plants of the Pacific Northwest****NSL**

Surveys natural groups of vascular plants and emphasizes native and exotic species and families represented in the Pacific Northwest flora. Plant morphology, taxonomy, principles of systematics and biogeography will be introduced. Evolutionary, genetic and reproductive patterns in plants will also be studied. Laboratory is included, with field trips. Students will gain practical experience in plant identification, recognition of plant communities, and collection, preservation, and labeling of voucher specimens.

BIOL 150 **5 credits****Human Genetics and Society****NSL**

Introduction to Human Genetics by interweaving classical genetics concepts with major genetic “issues” including genetic diversity, the human genome, biotechnology, and genetic disorders. Laboratory includes the use of activities, specimens, and biotechnology equipment to further expand on DNA structure and identification along with further problem solving.

BIOL& 170 **5 credits**
Human Biology **NS**
 (was BIOL 120)
 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 201 **5 credits**
General Biological Science **NSL**
 Introduces the first course in a three-quarter sequence for science majors. Topics of study explore the form and function of plants and animals at the cellular and sub-cellular levels of organization, including the chemical basis of life, metabolism, cell biology, genetics, and molecular biology. Laboratory is included.
Prerequisite: CHEM& 161 (was CHEM 151) or CHEM& 121 (was CHEM 111) or instructor permission.

BIOL 202 **5 credits**
General Biological Science **NSL**
 Continues principles of biology, with emphasis upon the organismal level of organization, including a comprehensive coverage of basic anatomy and physiology of plants and animals. Laboratory is included.
Prerequisite: BIOL 201 or instructor permission.

BIOL 203 **5 credits**
General Biological Science **NSL**
 Explores higher levels of, organization, including the diversity of life, origins, and classification of living organisms; evolutionary theory, principles and consequences, ecology; behavior and population dynamics. Laboratory is included.
Prerequisite: BIOL 202 or instructor permission.

BIOL& 241 **6 credits**
Human Anatomy and Physiology I **NSL**
 (was BIOL 221)
 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 (BIOL& 241 and 242) is taken at LCC.
Prerequisite: BIOL& 170 (was BIOL 120) or equivalent, or instructor permission.

BIOL& 242 **6 credits**
Human Anatomy and Physiology II **NSL**
 (was BIOL 222)
 Continues the study of the structure and function of the human body. Units of study include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems, and fluid and electrolyte balance. Laboratory is included. This course may not be transferable unless the entire sequence (BIOL& 241 and 242) is taken at LCC.
Prerequisite: BIOL& 241 (was BIOL 221) with a C- or better, or instructor permission.

BIOL& 260 **6 credits**
Microbiology **NSL**
 (was BIOL 257)
 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& 241 (was BIOL 221) or BIOL 201 with a C- or better or instructor permission.

Blueprint (BLPT)

BLPT 120 **3 credits**
Basic Blueprint Reading
 General information in reading and understanding plans and drawings that will be useful to vocational students with any major. 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.

BLPT 150 **5 credits**
Machinists Blueprint Reading
 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 **5 credits**
Blueprint Reading for Welders
 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 instructor permission.

Business Administration (BUS)

(was BSAD)
BUS& 101 **5 credits**
Introduction to Business **SS**
 (was BSAD 110)
 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 **5 credits****Business Math Applications**

(was BSAD 104)

Explores the use of basic mathematical processes to solve business applications. Topics include percentages, simple interest, compound interest, annuities, markups, markdowns, payroll, trade and cash discounts, banking, and solving problems with equations and formulas.

Prerequisite: MATH 091 or TECH 091 with a grade of C or better or instructor permission.

BUS 118 **5 credits****Ethics in Management**

(was BSAD 135)

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 **5 credits****Business Communications**

(was BSAD 190)

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 with a C or better or placement test into ENGL& 101.

BUS 144 **5 credits****Management of Human Relations** **SSA**

(was BSAD 126)

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 associate's degree cultural diversity requirement.

BUS 150 **5 credits****Customer Service/Management**

(was BSAD 164)

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 associate's degree cultural diversity requirement.

BUS 159 **5 credits****Principles of Retailing**

(was BSAD 160)

Surveys retailing principles and concepts and studies store management, merchandise management, pricing, customer services, advertising, and display.

BUS 165 **5 credits****Salesmanship**

(was BSAD 115)

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 **5 credits****Business Law** **SS**

(was BSAD 251)

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

BUS 206 **5 credits****Statistical Methods** **NS**

(was BSAD 206)

Introduces 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 with a grade of C or better.

BUS 207 **3 credits****Statistical Projects** **NS**

(was BSAD 207)

Provides an opportunity to apply the statistical processes learned in MATH 210/BUS 206 by designing a statistical project. Topics may include nonparametric statistics, sampling techniques, design of experiments and data analysis. This course, in conjunction with MATH 211 may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: MATH 210 or BUS 206 (was BSAD 206) with a grade of C or better or concurrent enrollment in MATH 210 or BUS 206.

BUS 240 **5 credits****Principles of Supervision**

(was BSAD 240)

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 **5 credits****Human Resource Management**

(was BSAD 260)

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 **5 credits****Principles of Management**

(was BSAD 275)

Offers 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 **5 credits****Starting/Managing a Small Business**

(was BSAD 111)

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. Students are required to develop and present a feasibility plan and business plan for a proposed business.

Prerequisite: ACCT 101, BUS& 101 (was BSAD 110), and CS 121 (was CIS 120) with a grade of C- or better, or instructor permission.

BUS 264 **5 credits****Principles of Marketing**

(was BSAD 263)

Presents marketing functions and their roles in the economic process, emphasizing marketing systems, product planning, promotion, and sales.

Prerequisite: BUS& 101 (was BSAD 110) or instructor permission.

BUS 265 **5 credits****Advertising**

(was BSAD 270)

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 **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.

Prerequisite: Program advisor permission.

Business Technology (BTEC)**BTEC 100** **1-3 credits****Computer Keyboarding**

Introduces keyboarding using the microcomputer 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 **1-5 credits****Basic Word Processing/Formatting**

Emphasizes skill building, proofreading, basic word processing concepts including letters, memos, tables and basic reports.

Prerequisite: BTEC 100 with a grade of C or better or instructor permission.

BTEC 104 **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 **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: BTEC 100 with grade of C or better or instructor permission.

BTEC 106 **1-2 credits****Proofreading Skills**

Builds skills in finding, marking, and correcting errors in business communications. Provides special techniques for locating errors.

Prerequisite: ENGL 100 or ENGL& 101 or BUS 119 (was BSAD 190), each with a grade of C or better or instructor permission.

BTEC 109 **1 credit****MS Office 2007 Upgrade**

Introduces new concepts of the MS Office 2007 Suite. Students will learn through hands-on application in word processing, spreadsheet design, graphic presentation, and database management.

Prerequisite: Experience in MS Office 2003.

BTEC 111 **5 credits****Intermediate Word Processing**

Increases students' knowledge of Microsoft Word through classroom instruction and guided practice including tables, columns, reports, mail merge, fliers, graphics, styles, templates, macros, and file management. Students will 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 **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 113 **5 credits****Applied Word Processing & Desktop Publishing**

Provides project-based applications that integrate word processing, spreadsheets, databases, accounting, desktop publishing and business communications to build and reinforce document-processing skills. Communication, problem-solving, and organizational skills are emphasized to prepare students for the workplace.

Prerequisite: BTEC 112 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 **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 **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 **1-5 credits****Introduction to MS Word**

Introduces 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 147 **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, Design Gallery, Page Wizard, and drawing tools to create professional-looking publications. This class is offered in a lab environment.

Prerequisite: BTEC 145 with a grade of C or better or instructor permission.

BTEC 148 **1-2 credits****Introduction to Outlook**

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 covered include email, contacts, schedule management, and instant messaging.

BTEC 161 **4 credits****Intro to ICD-9 Coding in the Medical Office (Part I)**

Teaches the rules and guidelines utilized in the assignment of ICD-9 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 a grade of C or better or instructor permission.

BTEC 162 **4 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-9 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 **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 169 **3 credits****Introduction to Basic CPT Coding**

Introduces the rules and guidelines of Current Procedural Terminology (CPT) coding, which is utilized in the reimbursement of outpatient procedures and surgeries. Students will learn how to use the CPT coding book. Course also introduces the evaluation and management processes used for physician reimbursement and the government regulations regarding CPT coding.

Prerequisite: BTEC 162 with a grade of C or better or instructor permission.

BTEC 171 **3 credits****Medical Reception Procedures**

Provides a foundation of basic knowledge and skills for employment in a doctor's office or clinic. Topics include reception techniques, medical records and related laws, appointment scheduling, telephone use and message taking, and office maintenance.

BTEC 172 **4 credits****Medical Office Procedures**

Provides instruction and practice for advanced administrative support skills employed 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 instructor permission, MATH 070 or TECH 070 instructor permission, and BTEC 171, each with a grade of C or better.

BTEC 173 **3 credits****Computers in the Medical Office**

Prepares students for administrative tasks in health care practices. Using computer software students learn to input patient information, schedule appointments and handle billing and insurance claims.

Prerequisite: BTEC 172 with a grade of C or better.

BTEC 181 **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 **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. Electronic media are used.

Prerequisite: BTEC 181 or MEDA 101 each with a grade of C or better.

BTEC 185 **1-3 credits****Medical Machine Transcription**

Provides intensive transcription practice from actual hospital medical records or prerecorded tapes of medical case histories, admissions, operative reports, and other materials used by the medical profession.

Prerequisite: BTEC 101 and either BTEC 182 or MEDA 102, each with a grade of C or better.

BTEC 186 **1-3 credits****Advanced Medical Machine Transcription**

Continues to develop students' medical transcription skills. Students transcribe from actual hospital medical records.

Prerequisite: BTEC 185 with a grade of C or better.

BTEC 211 **1-3 credits****Machine Transcription**

Develops correct techniques for operating a transcribing machine while emphasizing spelling, punctuation, grammar, document formatting, and related word processing techniques.

Prerequisite: BTEC 101 and either BUS 119 (was BSAD 190) or ENGL& 101 each with a grade of C or better or instructor permission.

BTEC 231 **1-3 credits****Legal Terminology/Transcription**

Provides instruction in legal terminology including definitions of terms and correct pronunciation. Further practice is provided through required transcription of dictated legal material.

Prerequisite: BTEC 101 with a grade of C or better or instructor permission.

BTEC 260 **5 credits****Office Procedures**

Serves the needs of Business Technology students completing their BTEC program. Students will practice and enhance essential skills for today's modern office including teamwork, time management, employment preparedness, basic bookkeeping, critical thinking, office technology, communication, and cultural diversity awareness to prepare them for transition from school to work.

Prerequisite: BTEC 112, BUS 119 (was BSAD 190), and BUS 104 (was BSAD 104) each with a grade of C or better or instructor permission.

BTEC 294 **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 **3 credits****Introduction to Chemical Dependency Counseling**

Introduction to basic theories of drug/alcohol use and abuse, and 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 is the primary course for students interested in a career counseling the chemically dependent.

CDS 102 **3 credits****Introduction to Theories and Counseling of Chemically Dependent Clients**

Introduction 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 C or better.

CDS 105 **3 credits****Chemical Dependency/ Domestic Violence**

Develop a basic understanding of social problems and legal issues relative to domestic violence and its impact on children and families. Cross-listed with HOFL 105.

CDS 106 **3 credits****Prevention/Intervention Specialist**

(was CDS 206)

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 permission required for others to enroll.

CDS 107 **3 credits****Adolescent Developmental Issues and Chemical Dependency**

(was CDS 207)

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 **3 credits****Running School-Based Support Groups**

(was CDS 108)

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 **3 credits****Alcohol/Drug Pathophysiology and Pharmacology**

(was CDS 211)

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 (was CDS 213) with a C or better.

CDS 111 **3 credits****Record Keeping and Case Management**

Introduction 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 with a C or better.

CDS 113 **3 credits****Treatment Principles of Chemical Dependency**

(was CDS 213)

Provides a working knowledge of treatment principles and models. It will explore the anatomy of addiction and the principles and process of treatment. This includes principles of relapse, relapse prevention and stages of recovery.

CDS 121 **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 **3 credits****Dynamics of the Family and Chemical Dependency**

Introduction 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 (was CDS 211) or obtain instructor permission.

Prerequisite: CDS 101, 102, 113 (was 213), and 215 with a C or better.

CDS 202 **3 credits****Chemical Dependency Counseling with Diverse Populations**

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(was 213), and 121 or instructor permission.

CDS 203 **3 credits****Relapse Prevention and Intervention**

Designed to educate the chemical dependency counselor on all aspects of the relapse process. This includes assessment, education, and intervention, relapse treatment plans, family involvement, and stress management.

Prerequisite: CDS 101, 102, and 113 (was 213) or instructor permission.

CDS 215 **3 credits****Group Counseling: Theories and Application**

Theory and the practice of group counseling with chemical dependent clients and the 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 (was 213) with a C or better.

CDS 220 **3 credits****Co-Occurring Disorders:
Mental Health Disorders In CDS**

Examines the mental/emotional alterations and their impact on the client with chemical dependency. Use of current edition of the Diagnostic and Statistical Manual as it relates to diagnosis.

Prerequisite: Instructor permission.

CDS 235 **3 credits****Advanced Family Counseling**

Major theories of families and family therapy. Application of selected theories will be adapted to the chemically dependent family therapy.

Prerequisite: Must be a practicing counselor in the State of Washington or have instructor permission.

CDS 240 **3 credits****Compulsive Sexual Behavior**

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** **5 credits****Preparatory Chemistry** **NSA**
(was titled Introductory Chemistry)

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 **5 credits****Chemical Concepts w/lab** **NSL**

(was CHEM 105)

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 091 or TECH 091.

CHEM 120 **5 credits****Nutrition** **NS**

Offers a scientific approach to the study of nutrition, which includes anatomy, chemical breakdown and metabolism, weight management, disease processes, and relation to lifestyle.

CHEM& 121 **5 credits****Intro to Chemistry** **NSL**

(was CHEM 111) (was titled Basic General Chemistry)

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 091 or TECH 091 or instructor permission.

CHEM& 131 **5 credits****Intro to Organic/Biochem** **NSL**

(was CHEM 112) (was titled Organic Chemistry)

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 (was CHEM 111) or CHEM& 161 (was CHEM 151).

CHEM& 161 **5 credits****General Chem w/Lab I** **NSL**

(was CHEM 151) (was titled General Chemistry)

An in-depth study of chemistry formulas and equations, mathematics, gas laws, atomic theory, 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. Competence in algebra is necessary.

CHEM& 162 **5 credits****General Chem w/Lab II** **NSL**

(was CHEM 152) (was titled General Chemistry)

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 is included.

Prerequisite: CHEM& 161 (was CHEM 151).

CHEM& 163 **5 credits****General Chem w/Lab III** **NSL**

(was CHEM 153) (was titled General Chemistry)

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 (was CHEM 152).

CHEM 231 **5 credits****Quantitative Analysis**

Study 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 (was CHEM 153).

CHEM& 261 **5 credits****Organic Chem w/Lab I**

(was CHEM 251) (was titled Organic Chemistry)

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 (was CHEM 153) or instructor permission.

CHEM& 262 **5 credits****Organic Chem w/Lab II**

(was CHEM 251) (was titled Organic Chemistry)

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 (was CHEM 251).

CHEM& 263 **5 credits****Organic Chem w/Lab III**

(was CHEM 253) (was titled Organic Chemistry)

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 (was CHEM 252).

College Success (COLL)**COLL 093** **1 credit****Test Taking**

(was INDV 093)

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. This is a pre college-level lab course designed to teach students how to become test wise.

COLL 094 **1 credit****Note Taking**

(was INDV 094)

Prepares students to effectively take lecture notes. Techniques include active listening, looking for main ideas, using signal words, and organizing notes. This is a pre college-level lab course designed to improve students' ability to take effective lecture notes.

COLL 096 **1 credit****Textbook Reading Techniques**

(was INDV 096)

Provides techniques that improve the ability to read and comprehend college textbooks. Skills include pre-reading, skimming, scanning, marking, highlighting, and annotating. This is a pre college-level lab course designed to improve students' ability to read college level material.

COLL 100 **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.

COLL 191**5 credits****Introduction to Tutoring**

(was INDV 191)

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. The course is intended for students who have reading and writing skills at or above the ENGL 075 (was INDV 075) level.

Computer Science (CS)**CS 100****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 101**3 credits****Introduction to Internet Theory and Application**

Introduces Internet history and concepts: development, controlling organizations, standards, usage, and other issues. Application topics include email, FTP, browsers, search methods, and web sites. The course project is the development of a web site.

Prerequisite: Proficiency with keyboard and mouse.

CS 102**5 credits****Intermediate 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 web pages.

Prerequisite: CS 108 and CS 110 or equivalent or instructor permission.

CS 104**5 credits****Intermediate Web Page Design**

(was CIS 104)

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, CS 170 (was CIS 180) or equivalent, or instructor permission.

CS 105**1 credit****Windows Fundamentals**

(was CIS 105)

An introduction to Microsoft's Windows operating system. Students learn to use the mouse; find, move, copy, rename, and delete user files; find "lost" files; and use basic Windows programs. (See CS 110)

CS 106**1 credit****Word Processing Fundamentals**

(was CIS 106)

An introduction to word processing, using Microsoft Word to type text and create documents, correct and delete text, work with margins, format, print, retrieve, save, and use other basic word processing functions. (See CS 110)

CS 107**1 credit****Spreadsheet Fundamentals**

(was CIS 107)

An introduction to electronic spreadsheets, using Microsoft Excel to create, retrieve, and work with basic spreadsheets, enter and edit data, create formulas to calculate values, print, format, and use other basic spreadsheet function.

CS 108**1 credit****Internet Fundamentals**

(was CIS 108)

An introduction to the Internet. A Web browser is used to access the World Wide Web, to send and receive email messages, to search for information, and to perform other basic Internet functions.

CS 109**1 credit****Fundamentals of PowerPoint**

(was CIS 109)

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.

CS 110**3 credits****Introduction to Microcomputer Applications**

(was CIS 110)

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**4 credits****Intro to Windows**

(was CIS 150)

An introduction to the study of the Microsoft Windows operating systems. Presents fundamental concepts of a Microsoft Windows client operating systems, such as file management and customizing a graphical user interface (GUI).

CS 121 **5 credits****Introduction to Spreadsheets**

(was CIS 120)

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.

Prerequisite: BTEC 104 or CS 110, and MATH 092 or BUS 104, or instructor permission.

CS 122 **5 credits****Advanced Spreadsheet Applications**

(was CIS 220)

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 CS majors and business students who are ready for a challenging spreadsheet class.

Prerequisite: CS 121 (was CIS 120) with a grade of C or better, or instructor permission.

CS 130 **5 credits****Introductory Database Applications**

(was CIS 130)

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 (was CIS 120) with a grade of C or better, or instructor permission.

CS 144 **3 credits****Principles of PC Operating Systems**

An introduction to the study of microcomputer operating systems using both graphical environment and command line. This course is designed to prepare students with IT profession entry-level skills in operating systems. Topics covered include OS fundamentals, installation, diagnosis, configuration, and troubleshooting for the Windows and Linux operating systems.

CS 170 **5 credits****Fundamentals of Computer Programming** **NS**

(was CIS 180)

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 092 with a grade of C or better and knowledge of Windows is required or instructor permission.

CS 175 **5 credits****Event-Driven Programming**

(was CIS 185)

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 (was CIS 180) with a grade of C or better or instructor permission.

CS 208 **5 credits****Introduction to Management Information Systems**

(was CIS 260)

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 (was BSAD 110), ENGL& 101, or instructor permission. CS 110 recommended.

CS 211 **5 credits****Networking Basics**

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 **4 credits****Local Area Networks: Theory and Application**

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 **4 credits****Local Area Networks: Theory and Application**

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**

Introduction to 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 (was CIS 180) and CS 249 (was CIS 252) or instructor permission.

CS 230 **5 credits****Database Development**

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 (was CIS 180) or instructor permission.

CS 245 **6 credits****Computer Configuration and Maintenance**

(was CIS 251)

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 **5 credits****Advanced Operating Systems**

(was CIS 252)

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 111 (was CIS 150) and CS 170 (was CIS 180) each with a grade of C or better or instructor permission.

CS 260 **5 credits****Introduction to Network Security**

(was CIS 240)

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.

Prerequisite: CS 211 (was CIS 211) with a grade of C or better or instructor permission.

CS 264 **5 credits****Computer Forensics**

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 (was CIS 251) and CS 249 (was CIS 252).

CS 270 **5 credits****Data Structures I** **NS**

(was CIS 280) (was titled Introduction to Data Structures)

Detailed study of structured and object-oriented programming, including algorithms, searching and sorting, and data structures using the programming language C++.

Prerequisite: MATH 099 and CS 170 (was CIS 180) both with a grade of C or better or instructor permission.

CS 275 **5 credits****Object-Oriented Programming in Java**

(was CIS 285)

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 (was CIS 180) with a grade of C or better or instructor permission.

CS 280 **5 credits****Advanced Data Structures**

(was CIS 284)

Detailed study of advanced data structures, including the analysis of algorithms and object-oriented programming using the programming language C++.

Prerequisite: CS 270 (was CIS 280) and MATH 112 or instructor permission.

CS 281 **5 credits****Digital Design**

(was CIS 282)

Introduction to the design and implementation of combinational and sequential digital circuits and systems.

Prerequisite: MATH 112 and CS 270 (was CIS 280).

CS 282 **5 credits****Microprocessors**

(was CIS 283)

Introduction to the architecture of microprocessors, microcontrollers, microcomputers and assembly language programming.

Prerequisite: MATH 112, CS 270 (was CIS 280), CS 280 (was CIS 284), and CS 281 (was CIS 282) with a grade of C or better or instructor permission.

CS 285 **5 credits****Programming Tools**

(was CIS 235)

Covers tools and techniques which facilitate programming and debugging, including debuggers, profilers, scripting, and C and C++ programming under the Linux operating systems.

Prerequisite: CS 270 (was CIS 280) with a grade of C or better or instructor permission.

Cooperative Education**288** **1-4 credits****Cooperative Work Experience**

In partnership with your instructor and your employer, you will develop learning objectives to apply theories, concepts, and methods studied in the classroom to a practical work environment for your field of study.

Prerequisite: Complete 9 credits of your program required courses, with at least a 2.0 GPA.

289 **1 credit****Cooperative Classroom Seminar**

The classroom seminar option complements your Cooperative Work Experience (288) and helps you to prepare for future employment. Prepare for job interviews, write an effective resume, learn job search skills and build your employment portfolio.

289 **1 credit****Cooperative Independent Seminar**

Focuses on work-related topics and you will write a research paper to complement your work experience. This seminar option is more flexible for students with a full class schedule.

Criminal Justice (CJ)

(was Administration of Justice - ADMJ)

CJ 100 **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 **5 credits**

Introduction to Criminal Justice

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 **5 credits**

Criminal Law

(was ADMJ 182)

Focuses on an explanation of criminal law principles including a discussion of crimes against person and property.

CJ 154 **5 credits**

The American Legal System

Introduction to the philosophy of our legal system as well as how the various actors within the system interrelate.

CJ 181 **3 credits**

Report Writing for Law Enforcement

Prepares to write effective and concise police reports. Strong emphasis is placed on observation, note taking, and narrative skills.

CJ 183 **5 credits**

The 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 a study of U.S. Supreme Court decisions affecting law enforcement.

CJ 260 **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

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 **2 credits**

Introduction to Dance

H,P

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 and rhythmic awareness. The student will be required to wear casual, comfortable clothing, able to move in. Dance shoes are optional and students may participate barefoot.

Dance 105 **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. Course designed for students studying or pre-majoring in drama, music, and elementary education. Useful class for students who have never had the opportunity to explore movement.

Diesel & Heavy Equipment Technology (DHET)

DHET 100 **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 preventive/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 **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 **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, distributor-less and breaker point ignition systems.

Prerequisite: DHET (was ADT) 101 or instructor permission.

DHET 104 **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 **5 credits****Hydraulic Brakes**

Covers the theory of hydraulics, fundamentals of manual, power, drum, and disc brake systems.

DHET 115 **5 credits****Air Brake Systems**

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 **5 credits****Heavy Duty Chassis Maintenance**

(was ADT 207)

Offers training in the repair, maintenance, and diagnosis of heavy equipment and truck frames, steering, suspension, wheels, tires and undercarriage.

DHET 141 **4 credits****Hydraulics I**

(was ADT 205)

Studies the basic principles, operation, and maintenance of mobile hydraulic systems.

DHET 142 **6 credits****Hydraulics II**

(was ADT 210)

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 (was ADT 205) or MFG 140 (was MFG 240) or concurrent enrollment.

DHET 200 **5 credits****Internship**

Provides paid or unpaid work experience in the discipline (Automotive or Diesel) that the student is majoring in. The class will give the students hands-on experience to familiarize them with work in an industrial setting.

Prerequisite: 36 credits or more of DHET (was ADT) courses or instructor permission.

DHET 210 **16 credits****Diesel Engine Rebuild**

(was ADT 223)

Studies the operation, maintenance, repair, and overhaul of diesel engines used in heavy equipment. Required course for all Diesel/Heavy Equipment Technology majors. Not designed to be an elective, developmental, or meet the needs of the distribution list.

Prerequisite: DHET 100 (was ADT 100).

DHET 215 **15 credits****Heavy Duty Engine Performance**

(was ADT 226)

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.

Prerequisite: DHET 102 (was ADT 102) or instructor permission.

DHET 216 **5 credits****Auto/Diesel Tune Up and Performance**

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 (was ADT 102) or instructor permission.

DHET 220 **10 credits****Heavy Duty Power Trains**

(was ADT 206)

Study of the principles of operation, maintenance, problem diagnosis, and repair of clutch systems, manual transmission, automatic transmission, power take-off, transfer cases, drivelines, 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 (was ADT 102), DHET 141 (was ADT 205), and DHET 142 (was ADT 210), or instructor permission.

DHET 230 **5 credits****Advanced Shop Practices**

Review of key skills learned in previous diesel program courses and reinforces industry shop practices. Emphasis will be placed on time management and documentation. Designed as a course for Diesel AAS students.

Prerequisite: Completion of 60 DHET credits.

Drafting (DRFT)

DRFT 107

1-3 credits

Technical Graphics

Involves 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

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

1-3 credits

Advanced Technical Graphics

Involves 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 either/or ENGR& 121 (was ENGR 111).

DRFT 252

1-3 credits

3-D Computer Aided Drafting

Involves 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

3 credits

Survey of Civil and Architectural Graphics

Introduction to 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 either/or ENGR& 121 (was ENGR 111) or instructor permission.

Drama (DRMA)

(was DRAM)

DRMA& 101

5 credits

Introduction to Theatre

H

Focuses on how drama reflects and shapes community attitudes. The course looks at the historical developments of theatre in both western and non-western cultures. Particular attention is given to how the theatre through the written play and the visual presentation of a play shapes our perceptions, reflects biases or challenges our American perception of the world. Students read plays from representative world cultures, write papers and discuss them in seminar. The Center Stage production for the quarter focuses on a single play and uses the acting, directing, producing, designing, historical and social context to illustrate the complex nature of taking a play from the printed page to the stage. The student writes a critical paper on the production, discusses it in seminar and writes a review on the production values and the contextual content of the play.

DRMA 106, 107, 108

5 credits

Introduction to Acting

H, P

Provides practical participatory approach involving movement for the stage, voice production, improvisations, and scene work. Group work is stressed to free each person 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

5 credits

Stage Crafts

Explores the technical areas involved in producing a play from design to construction to finished production by lecture and practical application of skills in selected technical fields. Practical experience is gained in sets, costumes, lights, and by serving on stage crew for the current Center Stage production.

DRMA 121

5 credits

Introduction to Costume Design

Covers beginning design concepts from a historical perspective. Includes costume history, design, and sewing techniques. Experience is gained through construction, fitting, and final alteration of costumes for the current Center Stage production. No prior experience is necessary.

DRMA 196, 197, 198, 296, 297, 298 **1-5 credits**

Rehearsal and Performance

Offers credit and experience to 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

5 credits

Acting

Emphasizes development and application of basic 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.

Prerequisite: DRMA 106, 107, or 108, or instructor permission.

DRMA 210 **5 credits****Masks**

Introduces masks as a tool 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 body awareness, and develop outward expressions through physicalization, improvisation and scene work.

DRMA 215C **5 credits****Masks of the World** **H**

Studies how masks are used in various societies. The application of the neutral mask leads to character masks and cultural masks. Explores the duality of mask and actor and the relationship that exists between them. The mask creates forms that reflect our culture. Seminar discusses art, theatre and cultural aspects of mask and the interrelationships that exist in individual societies. Student actors must have had at least three major roles in Center Stage productions, audition for and get a role in, and complete the current production. This is a Capstone course. See Capstone prerequisites on page 26.

DRMA 255C **5 credits****Theatre Project** **H**

Studies production style, history, playwrights, character analysis, motivation, relationships and external influences upon playwrights and the plays they write. Students participate in the current Center Stage production, either as an actor or in a technical capacity, applying an understanding of the interrelationships of art, drama, history, and psychology to the play. The current production determines course emphasis. Student actors who take the course must have had major roles in at least three Center Stage productions, and must audition for and be cast in the current production. Students in artistic and technical areas must have the instructor's permission. All students must participate in and complete the current Center Stage production. This is a Capstone course. See Capstone prerequisites on page 26.

Early Childhood Education (ECED)

APPED 090 **1 credit****Introduction to Apprenticeship**

Introduces beginning apprentices to apprenticeship training, state requirements, apprentice responsibilities, and various training and educational options.

ECED 070 **1 credit****Math Methodology for Educators I**

Strengthens understanding of arithmetic on whole numbers and fractions to prepare the student to teach math standards to children age birth through age 8. This is the first class in a four part series designed to assist students in their ability to apply math in meaningful ways into their teaching strategies.

Prerequisite: Concurrent enrollment in MATH 070 or TECH 070 required.

ECED 091 **1 credit****Math Methodology for Educators II**

Strengthens understanding of arithmetic of pre-algebra concepts including operations on signed numbers, algebraic expressions, solving and using simple equations, ratio and proportions, exponents, measurements, geometry, statistics, and graphing using the Cartesian coordinate system to prepare the student to teach math standards to children age birth through age 8. This is the second class in a four part series designed to assist students in their ability to apply math in meaningful ways into their teaching strategies.

Prerequisite: MATH 070 or TECH 070 with a grade of C or better. Concurrent enrollment in MATH 091 or TECH 91 required.

ECED 092 **1 credit****Math Methodology for Educators III**

Strengthens understanding of arithmetic of basic algebra skills including properties of real numbers, inequalities, graphing, and factoring to prepare students to teach math standards to children age birth through age 8. This is the third class in a four part series designed to assist students in their ability to apply math in meaningful ways into their teaching strategies.

Prerequisite: MATH 091 or TECH 091 with a grade of C or better. Concurrent enrollment in MATH 092 required.

ECED 099 **1 credit****Math Methodology for Educators IV**

Strengthens 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. This is the fourth class in a four part series designed to assist students in their teaching strategies.

Prerequisite: MATH 092 with a grade of C or better. Concurrent enrollment in MATH 099 required.

ECED 102 **1 credit****Building Bridges Early Childhood Guidance**

Information and training regarding child guidance techniques. Course includes two 5-hour seminars and weekly site assistance from trained mentors in the field of early childhood education.

Prerequisite: Instructor permission required.

ECED 105 **2 credits****Caring for Infants and Toddlers**

Analyze and apply developmentally appropriate practices for infants/toddlers. Introduces basic infant/toddler practices in the following competency areas: infant/toddler growth, development and learning, social emotional development, safety and health, learning environments, guidance techniques, and language/communication.

ECED 109 **3 credits****Literature and Language Development for Young Children**

Provides an understanding and working knowledge of methods to foster language development in young children. Examines 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.

ECED 110 **2 credits****Basics of Childcare**

Provides a 20-hour guidebook that meets the Washington State Training and Registry System (STARS) essential foundations for childcare. Designed to meet basic training outcomes for personnel in early childhood and school-age childcare centers as mandated by the Washington State Legislature and outlined by Washington State Training and Registry System.

ECED 115 **3 credits****Health, Safety and Nutrition for Young Children**

Identification of 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 119 **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.

Prerequisite: EDUC& 114 (was ECED 114) or instructor permission.

ECED 126 **3 credits****Practicum 1**

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 ages 2 to 6. 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 **3 credits****Practicum II**

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 **3 credits****Practicum III**

Refines and extends skills acquired in Practicum I and II and continues to develop competencies required of persons with primary responsibility for groups of young children. Skills are practiced in an early childhood setting. Students also meet with the instructor in weekly seminar sessions.

Prerequisite: ECED 126 and 127 with a grade of C or better or instructor permission.

ECED 130 **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 204 **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 205 **3 credits****Management and Operations of Early Childhood Centers**

Studies principles and management of day-care centers. Emphasis in on laws and regulations for childcare centers and programs, including facilities, equipment, and materials, program planning, scheduling, staffing, and record keeping.

Prerequisite: ENGL& 101 and all ECED 100 level courses and EDUC& 114 (was ECED 114) with a grade of C or better, or instructor permission.

ECED 209 **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 permission required.

ECED 215 **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.

Prerequisite: ECED 130.

ECED 216 **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 **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**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**1-9 credits****Practicum IV**

Offers the opportunity for students to gradually assume the role of head teacher with a group of young children. Students plan the curriculum, attend parent meetings, coordinate staff responsibilities, and attend agency staff meetings. Students meet individually with the instructor to assess their program.

Prerequisite: ENGL& 101 and all ECED 100-level courses and EDUC& 114 (was ECED 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****NS**

Presents a holistic view of Earth (our environment) 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. Man's part in the global ecosystem is analyzed, as is our dependence on natural resources.

ERSI 109**5 credits****Energy and Our Planet: Earth Sciences****NSL**

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. Laboratory included.

Economics (ECON)**ECON 105****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**5 credits****Micro Economics****SS**

(was ECON 205 & 207)

(was titled Principles of Microeconomics)

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 092 or BUS 104 and ENGL& 101 or BUS 119 (was BSAD 190).

ECON& 202**5 credits****Macro Economics****SS**

(was ECON 206) (was titled Principles of Macroeconomics)

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 (was ECON 205/207) with a grade of C or better.

ECON 208C**5 credits****International Economics****SS**

Surveys the theoretical approach to the study of international trade, its effects upon national economies, motivations to trade, and gains to be made from national and regional specialization and trade. International financial institutions and their role in influencing the values of national currencies, national policies encouraging or discouraging free trade, and the role of the Pacific Northwest in international trade are considered. This is a Capstone course. See Capstone prerequisites on page 26.

Education (EDUC)

APPED 090 **1 credit**

Introduction to Apprenticeship

Introduces beginning apprentices to apprenticeship training, state requirements, apprentice responsibilities, and various training and educational options.

EDUC 109 **1 credit**

Learning Styles and Multiple Intelligences

Introductory study of learning styles and Howard Gardner's theory of multiple intelligences.

EDUC& 114 **3 credits**

Child Development

(was ECED 114)

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 **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 **2 credits**

Curriculum and Instruction

(was EDUC 114)

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 **3 credits**

Exceptional Child

(was ECED 210)

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.

Prerequisite: ECED 130 or EDUC& 205 (was EDUC 110) or instructor permission.

EDUC 204 **3 credits**

Community College Teaching

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 **5 credits**

Intro to Education w/Field Experience

(was EDUC 110)

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 associate's degree cultural diversity requirement.

EDUC 206 **3 credits**

Course Organization and Curriculum

Development

(was EDUC 205)

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 **3 credits**

Instructional Strategies

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 **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 5 credits

Engineering Problems

(was ENGR 121)

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, 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.

ENGR& 121 1-3 credits

Engineering Graphics I

(was ENGR 111)

Involves 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 1-3 credits

Engineering Graphics II

(was ENGR 112)

Involves 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 (was ENGR 111) or instructor permission.

ENGR& 123 1-3 credits

Engineering Graphics III

(was ENGR 113)

Involves 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 (was ENGR 111) and ENGR& 122 (was ENGR 112) or instructor permission.

ENGR& 204 5 credits

Electrical Circuits

(was ENGR 215)

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. This course is cross-listed with ENVS 210. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: Algebraic, writing, and presentation skills; a previous distribution science course (e.g., PHYS& 100) would be helpful.

ENGR& 214 5 credits

Statics

(was ENGR 122)

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 5 credits

Dynamics

(was ENGR 261)

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 (was ENGR 122), MATH& 152, and PHYS 251, or instructor permission.

ENGR& 224 5 credits

Thermodynamics

(was ENGR 260) (was titled Engineering 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 (was ENGR 122), PHYS 251, and MATH& 152 or instructor permission.

ENGR& 225 5 credits

Mechanics of Materials

(was ENGR 254)

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 (was ENGR 122), concurrent enrollment in MATH& 152 and PHYS 252, or instructor permission.

English (ENGL)

ENGL 065

5 credits

Reading and Writing Basics

(was INDV 065)

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 069

1-5 credits

Second Language Grammar and Writing

(was INDV 069)

Provides opportunity to improve skills in writing grammatically complete sentences, paragraphs, and short essays. Topics address writing process and grammar usage. This individualized course may be used to satisfy the high school English equivalency requirement.

ENGL 072

1-2 credits

Sentence and Paragraph Structure

(was INDV 072)

Provides opportunity to improve skills in writing complete and coherent sentences and paragraphs. Sentence patterns, paragraph development, and paragraph unity are also presented. This individualized course may be used to satisfy the high school English equivalency requirement.

ENGL 073

1-2 credits

The Three-Part Formal Essay

(was INDV 073)

Presents an opportunity for improvement in short essay writing. Topics include introduction, body, conclusion, and transitions. This individualized course may be used to satisfy the high school English equivalency requirement.

ENGL 075

5 credits

Reading and Writing Improvement

(was INDV 075)

Provides instruction in improving students' reading and writing. Students will be taught how to use steps of the writing process to achieve clear expression and, at the same time, taught how to improve literal and critical reading comprehension skills. Students needing additional remediation will complete individualized reading, spelling and/or grammar punctuation modules in the learning lab.

Prerequisite: Students must have COMPASS scores of 69-80 in reading to enroll in this course or completion of ENGL 065 (was INDV 065) with a grade of C or better.

ENGL 091

1 credit

Basic Spelling

(was INDV 091)

Provides a review of basic spelling patterns including consonant and vowel sounds, blends, plurals, and common confusing words. An initial diagnostic test will determine the individual student's placement.

ENGL 092

1 credit

Advanced Spelling

(was INDV 092)

Provides a review of more advanced spelling patterns to include silent letters, plurals, possessives, doubling consonants, and the "i before e" rule. An initial diagnostic test will determine the individual student's needs.

ENGL 095

1 credit

Vocabulary Building

(was INDV 095)

Improves general speaking and writing vocabulary. Skills are developed to help determine the meaning of unfamiliar words.

ENGL 099

1-3 credits

Self-paced Learning Lab Practicum

(was INDV 099)

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

5 credits

English Fundamentals

Introduces college-level writing skills, such as selecting a topic, generating and organizing ideas, revising, editing, and proofreading. Students needing additional preparation in writing skills may enroll in this class before ENGL& 101.

ENGL& 101

5 credits

English Composition

Part One of the composition sequence. Introduces first-year college reading and writing skills to include thesis discovery, development, support and documentation, 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 with a grade of C or better.

ENGL 102

5 credits

English Composition

HA

Part Two of the composition sequence. Practices and develops first-year college 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

1 or 2 credits

Review of Grammar and Punctuation

(was INDV 104)

Offers an individualized opportunity for advanced skill work with verbs, subjects, modifiers, sentence construction, capitalization, and the following punctuation marks: comma, apostrophe, quotation marks, and semicolon.

ENGL 108 **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 and fulfills the requirements of the AA-DTA Humanities distribution list.

Prerequisite: ENGL 100 concurrent or passed.

ENGL 110 **5 credits**
Industrial Communication **H**

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 **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 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 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

ENGL 205 **5 credits**
Film and Drama Appreciation **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

Prerequisite: ENGL& 101 or instructor permission.

ENGL 231 **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 permission.

ENGL 232 **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 instructor permission.

ENGL 233 **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, ENGL 231, and 232 or instructor permission.

ENGL 234 **5 credits**
Creative Writing: Nonfiction **H**

Emphasizes the writing, constructive analysis, and revision of creative nonfiction, focusing on the personal essay and "New Journalism." Briefly examines the history of the forms and studies exemplary published works. Students use journaling and respond to other exercises to develop ideas from personal experience, write and revise essays, and critique one another's work.

Prerequisite: ENGL& 101 or instructor permission.

ENGL& 235 **5 credits**
Technical Writing **H**

(was ENGL 220/ENGR 220)

(was titled Technical and Workplace Writing)

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 239C **5 credits**
Creative Writing **H**
(was ENGL 235C)

Provides guidance in the writing and revising of individual projects in poetry, fiction, or personal nonfiction. Explores connections with the work of published writers in the same form or genre. Students critique each other's work and complement their creative projects with a research paper. This is a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: ENGL 231 or instructor permission.

ENGL 240 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
Prerequisite: ENGL& 101 or instructor permission.

ENGL 245 **5 credits**
Contemporary Literature **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Students will participate in seminars building to a researched term paper. Meets the associate's degree cultural 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 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
Prerequisite: ENGL 102 or instructor permission.

ENGL 270 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

English as a Second Language (ESL)

ESL 010 **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.

ESL 011 **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 **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 **1-20 credits**
Beginning ESL Literacy listening /Observing-Level 1
 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 **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 **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 **1-20 credits****Beginning ESL Literacy Intensive Oral Communication and Grammar-Level 1**

Develop and practice ESL Level 1 English grammar and uses 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 literacy ESL level.

Prerequisite: CASAS Appraisal Exam 180 and below.

ESL 020 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **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 **1-20 credits****High Intermediate ESL Intensive
Oral Communication and Grammar-Level 5**

Develop and practice ESL Level 5 English grammar and uses 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 **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 **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 **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 **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 **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 **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 **1-20 credits****Advanced ESL Intensive
Oral Communication and Grammar-Level 6**

Introduces and practices ESL Level 6 English grammar and uses intensive drill in pronunciation, stress, reduced forms, and intonation of the English language in essential daily speech patterns in formal and in-formal 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 **1-3 credits**
Educational Interview-ESL
 (was ESL 071)
 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.
Prerequisite: None.

ESL 072 **1-20 credits**
I-BEST Academic Support
 A high intermediate-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 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 Reading Score of 211 or instructor permission.

Environmental Studies (ENVS)

ENVS 110 **2 credits**
Intertidal Ecology & Wilderness Experience
 Provides a wilderness backpack camping experience and an ecological study of the rich community of life forms that occupy the rocky coastline between the low and high tide marks.

ENVS 120 **3 credits**
Natural History and Environment **NS**
 Draws from the rich spectrum of American nature and environmental literature from colonial times to the present to illustrate the scientific method, principles of ecology, and the human position in the natural world.
Prerequisite: ENGL& 101 or instructor permission.

ENVS 130 **3 credits**
Study Abroad: Tropical Ecosystems **NSL**
 Explores the ecology and diversity in the Costa Rican rain-forest or the Belize barrier reef, second largest in the world. Teaches principles of ecology as they reflect upon this still largely unspoiled reef, home of a diverse array of colorful marine organisms.

ENVS 150 **5 credits**
Environment and Society **NS**
 An introduction to the interdisciplinary field of environmental science based on major concepts from the biological, physical, and social sciences. Students examine the connection between the natural world and its inhabitants, especially humans. Emphasis is on environmental problems, including their impact on human societies, and possible solutions. Major topics covered are ecosystems, natural resources, pollutants, population, climate change, consumption, conservation and resource management, and environmental ethics. Local to global issues will be discussed. Meets the associate's degree cultural diversity requirement.

ENVS 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. This course is cross-listed with ENVS 210 and ENGR 210. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: Algebraic, writing, and presentation skills; a previous distribution science course (e.g., PHYS 100) would be helpful.

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). 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 consent of instructor, and MATH 099, and one or more of the following: BIOL& 100, ENVS 150, ERSI 104, GEOL 105 or GEOL 118, OCEA& 101.

Fire Science (FISC)

FISC 101 **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 **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 building inspections to locate hazards and recommend improvements. Students study fire prevention and education programs and conduct presentations.

FISC 109 **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 **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 **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 112 **5 credits****Intermediate Fire Fighting Skills**

Continues to develop basic fire fighting skills learned in FISC 111, in creasing technical knowledge of ground operations. Emphasis is placed on team skills performed as an evolution by an engine company, including ladder and hose evolutions, power tools, rescue practice and procedures.

Prerequisite: FISC 101 and FISC 111.

FISC 125 **3 credits****Emergency 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 **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 175 **6 credits****First Responder**

Introduces the concept of preliminary emergency medical care and teaches the skills needed to provide such care with a limited amount of equipment. Emphasizes the roles and responsibilities of the first responder, including acting as liaison with other emergency service personnel, recognizing the seriousness of patients’ conditions, and administering appropriate emergency medical care for life-threatening injuries.

Prerequisite: Instructor permission.

FISC 204 **5 credits****Report Writing for Fire Fighters**

This course provides technically specific writing skills for persons enrolled in Fire Science programs. Training will include the effective preparation of field reports, inspection reports, and various narratives. This writing process, research writing and editing for grammar and punctuation are reviewed.

FISC 205 **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 **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 **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 **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 **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 Fire Fighter 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 **3 credits****Fire Fighting Tactics and Strategy**

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.

French (FRCH)

(was FREN)

FRCH 110 **3 credits****Introduction to French Language and Culture** **H**

Surveys art and culture in France, introduces the French language, and provides a multicultural overview of the French speaking world. Students cannot earn credit for both FRCH 110 and FRCH 114.

FRCH 114 **3 credits****Intro to French Language and Culture: Study Abroad** **H**

Surveys art and culture in France, introduces the French language, and provides a multicultural overview of the French speaking world through study abroad.

FRCH& 121 **5 credits****French I** **H**

(was FREN 101)

Provides a foundation for communicative competency and oral proficiency in simple and correct French. Listening comprehension, speaking, writing, and reading skills will be stressed with a primary emphasis on comprehension and speaking in the present tense.

FRCH& 122 **5 credits****French II** **H**

(was FREN 102)

Continues development of a foundation for communication in French. Introduces past and future tenses.

Prerequisite: FRCH& 121 (was FREN 101) or one year of high school French.

FRCH& 123 **5 credits****French III** **H**

(was FREN 103)

Provides practice in pronunciation and translation of French. Listening and speaking are stressed.

Prerequisite: FRCH& 122 (was FREN 102) or two years of high school French.

FRCH& 221, 222, 223 **5 credits****French IV, V, VI**

(was FREN 201, 202, 203)

Reviews basic structure; expands conversation and reading skills. Thematic approach to contemporary French culture and literature.

Prerequisites:

For FRCH& 221 (was FREN 201) - FRCH& 123 (was FREN 103), 3-4 years of high school French or equivalent.

For FRCH& 222 (was FREN 202) - FRCH& 221 (was FREN 201), 3-4 years of high school French or equivalent.

For FRCH& 223 (was FREN 203) - FRCH& 222 (was FREN 202), 3-4 years of high school French or equivalent.

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 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 of 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 117 **5 credits**
Geology of Earth's Surface **NSL**
 Examines Earth's surface rocks, structures and processes including weathering, landslides, and erosion. Major topics include minerals, rocks, streams, glaciers, waves, coasts, deserts, ground water, geomorphology, and geologic resources. Laboratory work includes identification of rocks, interpretation of topographic maps, and recognition 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 170 **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 **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 **2 credits**
Health Today **SS**
 Analyzes a vast array of information on the dangers of risky health behavior and the benefits of healthy decisions as they affect 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 001 **1-5 credits**
Health
 Covers six topics in the areas of physical, mental, and emotional health.

HSC 010 **1-5 credits**
Introduction to Literature
 Covers the types and aspects of the novel. Students study chapters of popular classic novels and one of the novels in depth.

HSC 011 **1-5 credits**
Literature: The Short Story
 Provides instruction for students to learn to analyze the development of plot, character, point of view, mood, and theme. Includes writing plot summaries and answers to study questions.
 Prerequisite: 9th grade reading level

HSC 012 **1-5 credits**
Introduction to Writing
 Provides instruction and practice in proper sentence structure and paragraphing.

HSC 013 **1-5 credits**
Grammar and Writing
 Emphasizes development of detail and various forms of, organization in writing. Students use text materials based on diagnostic testing.

HSC 024 **1-5 credits**
Physical Geography
 Surveys physical geography that includes a lab component.

HSC 025 **1-5 credits**
Physical Ecology
 Surveys ecological concepts, which include using the scientific method for gathering data, exposure to scientific laws and theories, population dynamics, making careful observations, humans and the environment and basic theories of biodiversity.

HSC 030 **1-5 credits**
U.S. Government
 Surveys the United States system of government including the United States Constitution, the three branches of government, and the effect citizens have on governmental decisions.

HSC 031 **1-5 credits**
U.S. History I
 Surveys pre-colonial history through 1876 with a concentration on major issues, events and people in the developing American nation.

HSC 032 **1-5 credits****U.S. History II**

Provides a continuation of U.S. History I, covering the period from 1876 to present.

HSC 033 **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 035 **1-5 credits****Contemporary World Problems**

Surveys current world problems regarding the environment, health, and politics, and how they may influence future generations.

HSC 042 **1-5 credits****Consumer Finance**

Presents topics necessary for personal money management, including budgeting, banking, consumer credits, taxes, and the role of the consumer in the economy. This course is intended as an elective or a math course. Basic math skills are recommended.

History (HIST)**HIST& 116** **5 credits****Western Civilization I** **H**

(was HIST 106) (was titled Western Civ to 1500)

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**

(was HIST 107) (was titled Western Civ 1500 - 1850)

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 **5 credits****World Civilization I** **H**

(was HIST 116) (was titled World History to 1500)

Focuses on the origins, development, and cultural 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 cultures.

HIST& 127 **5 credits****World Civilization II** **SS**

(was HIST 117) (was titled World History 1500 - 1800)

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.

HIST& 128 **5 credits****World Civilization III** **SS**

(was HIST 118) (was titled World History 1800 - Present)

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.

HIST& 136 **5 credits****U.S. History I** **SS**

(was HIST 156) (was titled U.S. History to 1865)

Focuses on the causes and effects of social, cultural, political, intellectual and economic change. Attention will also be given to the events outside North America which contributed to the emergence of the United States.

HIST& 137 **5 credits****U.S. History II** **SS**

(was HIST 157) (was titled U.S. History 1865 - Present)

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 **5 credits****History of East Asia** **SS**

Surveys East Asian historical development from early in the nineteenth century to the present, focusing on China and Japan. 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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

HIST& 215 **5 credits****History of U.S. Women** **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

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 Head Start/ECEAP classrooms. Other options provided for students include parent seminars and independent parent/child projects.

HOFL 156 **1-5 credits**
Foster Parent/Day Care Home Operations

Improves understanding of child behavior, develops self-awareness and self-esteem, and enhances communication skills and image among licensed day-care home operators and foster parents.

Prerequisite: Instructor permission.

HOFL 160 **2 credits**
Divorce Recovery

Offers support and encouragement for the challenges and adjustments involved in the end of a relationship. Emphasis will be placed on understanding the process of loss, improving self-esteem, gaining effective communication skills, and developing positive adult relationships. Participants will be encouraged to establish goals for future growth.

HOFL 190 **3 credits**
Independent Living

Trains foster parents and Division of Children and Family Services social workers to advance the independent living skills of adolescents in the foster care system.

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 **2-7 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 thoughts and behaviors. Students will apply concepts in this interactive course to cultivate "Thought Patterns for a Successful Career.TM" 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 or 2 credits**
Career Planning

Launches students into an investigation of interests, values, and careers, followed by decision-making and goal setting. The class may be offered for 1 or 2 credits and emphasis in the content varies 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.

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 credit
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 each student's Individualized Academic Plan and personal needs will determine the class content.

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 2 or 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)

(was HUMN)

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 110 5 credits
Introduction to Cultures 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 associate's degree cultural 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. Students will explore, analyze, and discuss 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 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. Students will explore, analyze, and discuss the era's masterpieces from around the world as well as the historical and cultural influences of the Renaissance, the baroque period, 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. Students will explore, analyze, and discuss the era's masterpieces from around the world as well as the historical and cultural influences of the Romantic Era, colonialism, Freudian theory, World Wars I and II, totalitarianism, postmodernism, and the Information Age 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** **H**

Explores representative creation, flood, and death-resurrection myths and rituals from Egyptian, Mesopotamian, Hindu, Greek, Judeo-Christian, and North American sources. Addresses the symbol, myth, and ritual in general along with cultural similarities and differences. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

HUM 220 **1-10 credits****Arts Alive**

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.

Individualized Certificate Program (ICP)

288 **1-4 credits****Cooperative Work Experience**

You, your employer, and the ICP manager decide what you will learn during your on-site training. You will keep a journal of your experience and attend a weekly seminar to track your progress.

289 **1 credit****Classroom Seminar**

A weekly seminar to assist you in preparing for your cooperative work experience and for future employment. You will conduct informational interviews, prepare for job interviews, write an effective resume, learn job search skills, and create your employment portfolio.

Library (LIBR)

LIBR 101 **2 credits****Introduction to Library & Information Research** **H**

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 105 **2 credits****Finding and Evaluating Online Information** **H**

Increases familiarity with Internet searching, using specialized search engines, databases, and the deep web. Emphasis is on finding and evaluating Internet resources appropriate for various academic purposes based on established criteria. The course will help students prepare for concurrent research classes.

Prerequisite: College-level writing skills or completion of ENGL 100.

Machine Trades (MASP)

MASP 107 **2-6 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 such as turning, facing, and boring, and the basic operation of the vertical milling machine.

MASP 111 **2-10 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 **2-10 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 **2-10 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 **2-10 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 **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.

Prerequisite: MASP 114.

MASP 205 **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.

Prerequisite: MASP 204.

MASP 221 **2-10 credits****Basic Computer Numerical Control:
Machine Shop**

Introduces students through hands-on experience to the basic operations of CNC machines. Working with computer controlled mills and lathes, 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 **2-10 credits****Advanced Computer Numerical Control:
Machine Shop**

Furthers the student in hands-on applications of CNC operations

Prerequisite: MASP 205.

MASP 223 **2-6 credits****Advanced CNC Processes**

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. Non-traditional set-ups included.

Prerequisite: MASP 221 or MASP 222.

Manufacturing (MFG)

MFG 105 **3 credits****Industrial Safety**

Provides instruction on safety topics and practices specifically related to industrial work environments. Topics include 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 practices.

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 **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 **4 credits****Quality 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 **5 credits****Materials Science****NSA**

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 **4 credits****Applied Hydraulics**

Covers basic problems of hydraulics, fluids, power, hydraulics actuators, controls, pressures and circuits, and principles of industrial applications.

Prerequisite: Math 091 or higher or instructor permission.

MFG 205 **3 credits****Work Teams in Industry**

Explores the interpersonal skills, group roles, team structures, and 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 **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 **1 credit**
Review Math - Whole Numbers

(was INDV 050)

This course provides a review of basic concepts of addition, subtraction, multiplication, and division of whole numbers.

MATH 051 **1 credit**
Review Math - Fractions

(was INDV 051)

This course provides a review of basic concepts of mathematics. This course teaches addition, subtraction, multiplication, and division of fractions.

MATH 052 **1 credit**
Review Math – Decimals

(was INDV 052)

This course provides a review of basic concepts of mathematics. This course teaches addition, subtraction, multiplication, and division of decimal numbers.

MATH 053 **2 credits**
Review Math - Ratios, Proportions and Percents

(was INDV 053)

This course provides a review of basic concepts of mathematics. This course teaches ratios, proportions and percents.

MATH 070 **5 credits**
Review of Math Fundamentals

This course provides the student with a review of arithmetic operations on whole numbers, fractions and decimals. Covers applications of percent and proportions. To prepare the student for future math courses, introduces basic geometry and operations with signed numbers. Credit cannot be earned for both MATH 070 and TECH 070.

MATH 076 **1 credit**
Right Triangle Trigonometry

Includes theory and practical techniques of solving plane right triangles with the aid of a table of trigonometric functions. A background in algebra and geometry is helpful, but not mandatory.

Prerequisite: MATH 070 or TECH 070 with a grade of C or better.

MATH 091 **5 credits**
Pre-Algebra

This course is intended for students who need an exposure to or a review of pre-algebra concepts. It includes operations on signed numbers, algebraic expressions, solving and using simple equations, ratio and proportions, exponents, and measurement. Topics from elementary geometry, statistics and an introduction to graphing in the Cartesian coordinate are also included. Credit cannot be earned for both MATH 091 and TECH 091.

Prerequisite: MATH 070 or TECH 070 with a grade of C or better. Student may meet prerequisite by demonstrating ability through testing, prior experience or prior course work not at LCC.

MATH 092 **5 credits**
Elementary Algebra

This course is an introductory course for students without high school credit in algebra or for those students needing to refresh their algebra skills. It includes properties of real numbers, linear equations, inequalities, graphing, polynomials, factoring, rational expressions, roots and radicals, quadratic equations, and an introduction to functions.

Prerequisite: MATH 091 or TECH 091 with a grade of C or better.

MATH 093 **5 credits**
Geometry

Explores geometric sets, angles and triangles, proof, geometric inequalities, parallels, areas and volumes of plane and solid regions, similarity, circles, and spheres. Equivalent to one year of high school geometry. Designed for students with no geometry credits or for a review of geometry.

Prerequisite: MATH 092 with a grade of C or better, or one year of high school algebra.

MATH 099 **5 credits**
Intermediate Algebra

This course reviews concepts covered in Elementary Algebra in greater depth, including algebraic operations, equations and inequalities, graphs of polynomials, exponents, roots and radicals, functions, and an introduction to complex numbers and logarithms. Note: MATH 099 is not accepted by all baccalaureate institutions. Check with your advisor for further information.

Prerequisite: MATH 092 with a grade of C or better.

MATH 105 **5 credits**
Mathematics 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 070 or TECH 070 with a grade of C or better.

MATH 106 **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 091 or TECH 091 with a C or better or instructor permission.

MATH& 107 **5 credits**
Math in Society **NS**

(was MATH 130)

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 **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 **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 121 **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 Washington State University CTEP requirements for future teachers of grades K-8.

Prerequisite: MATH 099 with a grade of C or better. (MATH& 107 (was Math 130) is recommended.)

MATH 122 **5 credits**
Math for Elementary Teachers II **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 Washington State University CTEP requirements for future teachers of grades K-8.

Prerequisite: MATH 121 with a grade of C or better. (MATH& 107 (was MATH 130) is recommended.)

MATH 125 **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 112 with a grade of C or better.

MATH& 148 **5 credits**
Business Calculus **NS**

(was titled Essentials of Calculus)

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 **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 **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 **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 **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 **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 **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 with a grade of C or better.

MATH 211 **3 credits**
Statistical Projects **NS**

Provides an opportunity for students to apply the statistical processes learned in MATH 210/BUS 206 by designing their own statistical project. Topics may include nonparametric statistics, sampling techniques, design of experiments and data analysis. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
Prerequisite: MATH 210 or BUS 206 with a grade of C or better or concurrent enrollment in MATH 210 or BUS 206.

MATH 215 **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 **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 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.
Prerequisite: MATH& 153 with a grade of C or better.

Medical Assisting (MEDA)**MEDA 101** **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.

MEDA 102 **3 credits****Medical Vocabulary II**

Continues the focus of MEDA 101 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 **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 of ENGL 100 and MATH 070 or TECH 070, and acceptance into the Medical Assisting program.

MEDA 121 **1 credit****Healthcare Law**

Introduces the legal relationships of physicians and patients, professional liability, physician's public duties, and the role of medical office personnel in risk management. Covers the basic principles of psychology, which includes the developmental stages of the life cycle along with heredity, cultural, and environmental influences on behavior. Includes mental health issues and treatments.
Prerequisite: ENGL 100 and MATH 070 or TECH 070, and current enrollment in the Medical Assisting program.

MEDA 122 **2 credits****Healthcare Ethics and AIDS Education**

Introduces business structures in health care and the different medical specialties as well as standards of conduct, individual responsibilities, and professional attitudes necessary for medical office personnel. Examines ethical issues relating to health care. Provides seven hours of AIDS education, which meets state requirements.
Prerequisite: ENGL 100, MATH 070 or TECH 070, MEDA 121, and current enrollment in the Medical Assisting program.

MEDA 145 **4 credits****Medical Laboratory Techniques**

Provides students with skills necessary to work in a physician's office laboratory. Focuses on quality control, record keeping, specimen collection, processing and disposal, urinalysis, hematology, blood chemistry, immunology, and microbiology. Students enrolled in this course must show documentation for the hepatitis B vaccine series.
Prerequisite: MEDA 120 or BIOL& 241 (was BIOL 221) and BIOL& 242 (was BIOL 222), ENGL 100 or higher, and current enrollment in the Medical Assisting program

MEDA 146 **2 credits****Invasive Procedures**

Provides students the knowledge and helps them develop the expertise to perform and document phlebotomy and intradermal injections. This course is part of the educational requirement for categories A, C, and E of the Law relating to Health Care Assistants, teaches to the scope of practice according to this law. Students enrolled in this course must show documentation for the hepatitis B vaccine series.

Prerequisite: MEDA 120 or BIOL& 241 (was BIOL 221) and BIOL& 242 (was BIOL 222), MATH 105, ENGL 100 or higher, and current enrollment in the Medical Assisting Program.

MEDA 161 **3 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.

Prerequisite: ENGL 100 and MATH 070 or TECH 070, and current enrollment in the Medical Assisting program.

MEDA 162 **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: BTEC 101, MATH 105, MEDA 120 or BIOL& 241 (was BIOL 221) and BIOL& 242 (was BIOL 222), MEDA 161, and current enrollment in the Medical Assisting program.

MEDA 164 **1 credit****Medication Administration and Injections**

Provides students the knowledge and helps them develop the expertise to administer and document oral, subcutaneous, intramuscular, intradermal, otic, ophthalmic, and rectal medications. This course is part of the educational requirement for categories A, C, and E of the state law relating to Health Care Assistants, and teaches to the scope of practice outlined in this law.

Prerequisite: MEDA 101 or BTEC 181; MEDA 120 or BIOL& 241 (was BIOL 221) and BIOL& 242 (was BIOL 222); MATH 105, MEDA 161 and current enrollment in the Medical Assisting program.

MEDA 165 **3 credits****Medications in Medical Assisting & Diseases**

Develops an understanding and knowledge of common diseases and pathology. Students will become knowledgeable about diagnostic and treatment modalities, and become efficient in using drug reference materials. This course is part of the educational requirement for categories A, C, and E of the state law relating to Health Care Assistants, and teaches to the scope of practice outlined in this law.

Prerequisite: MATH 105, MEDA 120 or BIOL& 241 (was BIOL 221) and BIOL& 242 (was BIOL 222), MEDA 161 and 162 and current enrollment in the Medical Assisting program.

MEDA 190 **6 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.

MEDA 195 **1 credit****Medical Assisting Seminar**

Brings together students currently in externships to discuss issues as they arise in the work place. Also provides an opportunity to introduce advanced topics in medical assisting or healthcare, and to augment those subjects covered with guest speakers. Discussion and practice for the AAMA/AMA certification exam is included.

Prerequisite: All previous MEDA courses.

Music (MUSC)**MUSC 100** **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 tonebells, recorders, and guitars.

MUSC 101, 102, 103 **5 credits****Theory and Musicianship** **H**

Covers fundamentals, including keys, clefs, scales, intervals and triads, four-part-writing in root position and inversions; non-harmonic tones; the melodic line, major and minor keys, rhythm and syncopation; introduction to diatonic seventh chords; secondary dominants; modulation; analysis and keyboard harmony; and creative writing. Sight singing, dictation, and ear training are included.

MUSC& 105 **2, 3 or 5 credits****Music Appreciation** **H**

(was MUSC 110)

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. Meets the associate's degree cultural diversity requirement.

MUSC 106, 107, 108, 206, 207, 208 **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.

MUSC 111, 112, 113 **1 credit****Computer Assisted Theory Laboratory**

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 115 **3 credits****Live Ensemble Recording**

Focuses on types of microphones, pros and cons of stereo pair miking patterns and the role of acoustics on microphone selection and placement.

MUSC 117 **2-5 credits****Music Cultures of the World** **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 associate's degree cultural diversity requirement.

MUSC 119 **5 credits****American Music** **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 associate's degree cultural diversity requirement.

MUSC 126, 226 **1 credit****Applied Music**

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. May be repeated three times for credit. 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 **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. The course may be repeated for credit up to seven quarters.

Prerequisite: Audition or approval by instructor.

MUSC 131, 132, 133, 231, 232, 233 **1 credit****Musicum Practicum I - VI**

(was MUSC 116, 216)

Students attend and participate in weekly concerts of popular music presented by musical ensembles/soloists.

Prerequisite: Students should be prepared to perform publicly either as a member of a musical ensemble or as a soloist.

MUSC 134 **2-5 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 **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 140 **2 credits****Concert Choir** **H, P**

Includes performing at college convocations, local organizations, college Christmas programs, and a spring concert. Participation in all performances and activities is required. Various styles of choral literature are studied. The course may be repeated for credit up to seven quarters.

Prerequisite: Instructor permission.

MUSC 144 **2 credits****Vocal Ensemble** **H, P**

Offers performance of selected music from many types of choral idioms in a small vocal ensemble. The course includes performing at local organizations, departmental concerts, and, usually, a spring tour. Participation in all activities and performances is required. The course may be repeated for credit up to seven quarters. A-Chamber Singers; B-Jazz Vocal Ensemble.

Prerequisite: Instructor permission.

MUSC 145 **1 credit****Beginning Voice**

Presents beginning vocal instruction, including development of basic skills, tone production, breathing, diction, rhythm, song interpretation, and song repertoire. The course may be repeated for credit up to seven quarters.

MUSC 150 **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 **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 **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 **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 **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 **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.

Prerequisite: Instructor permission required.

MUSC 181 **3 credits****Contemporary Musicianship and Applications I**

The course introduces students to music theory and musicianship as related to popular (American) music. Included is basic ear training in musical styles, form and structure.

MUSC 182 **3 credits****Contemporary Musicianship and Applications II**

Integrates music theory, musicianship and basic MIDI operations. This course continues the development of musicianship and applications from MUSC 181.

Prerequisite: MUSC 100 or MUSC 101 or MUSC 181.

MUSC 183 **3 credits****Contemporary Musicianship and Applications III**

Integrates music theory, and musicianship utilizing a MIDI interface. This course continues the development of musicianship and applications from MUSC 181 and 182.

Prerequisite: MUSC 101 or MUSC 181 or MUSC 182.

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 201, 202, 203 **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.

Prerequisites:

MUSC 201 - Concurrent enrollment in MUSC 211;

MUSC 202 - Concurrent enrollment in MUSC 212;

MUSC 203 - Concurrent enrollment in MUSC 213.

MUSC 209 **5 credits****The Blues Culture** **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

MUSC 211, 212, 213 **1 credit****Computer Assisted Theory Laboratory**

Supplements the musicianship portion of the MUSC 201, 202, and 203 course work. Includes melodic, harmonic, and rhythmic dictation drills at advanced levels.

Prerequisites:

MUSC 211 - Concurrent enrollment in MUSC 201;

MUSC 212 - Concurrent enrollment in MUSC 202;

MUSC 213 - Concurrent enrollment in MUSC 203.

MUSC 261 **5 credits****Advanced Audio Production I**

Mix-down of multi-track project begins. Students will begin to assemble the components of a final recording portfolio. Lab is included.

Prerequisite: Concurrent enrollment in MUSC 161 or 162.

MUSC 262 **5 credits****Advanced Audio Production II**

Continued study of the theories and mechanics of recording audio signals to a digital medium. Introduction to MIDI, MMC, SMPTE, synthesis and digital sampling. Use of these concepts in a multi-track environment prior to final mix-down. Creation of final pre-mastered stereo image. Lab is included.

Prerequisite: Concurrent enrollment in MUSC 161, 162, or 261.

MUSC 263 **5 credits****Advanced Audio Production III**

Application of final mastering processes and promotional material to CD for portfolio presentation. Students will finish creating their final recorded work, which will be presented in a public performance. Lab is included.

Prerequisite: Concurrent enrollment in MUSC 161, 162, 261, or 262. Co-requisite: MUSC 284.

MUSC 281 **3 credits****Contemporary Musicianship and Applications IV**

This course continues the study of music theory and musicianship as related to popular (American) music, reviewing and building on the concepts/skills developed in MUSC 181, MUSC 182 and MUSC 183. Included are melodic dictation, extended and altered chords, non-chord tones, rhythmic dictation and notation, and a survey of pop/rock music from c. 1950-1970 along with continued study of MIDI integration.

Prerequisite: MUSC 181, 182, and 183 or MUSC 101 and 102.

MUSC 282 **3 credits****Contemporary Musicianship and Applications V**

This course continues the study of music theory and musicianship as related to popular (American) music, reviewing and building on the concepts/skills developed in MUSC 281. Included are song-writing, harmonic progressions, rhythm dictation, advanced MIDI production and synthesis, and trends in popular music since the 1970's.

Prerequisite: MUSC 181, 182, 183, and 281 or MUSC 101 and 102.

MUSC 284 **3 credits****AAS Degree Project**

The audio production program culminates with this course. Students complete their final portfolio, which includes their master CD, all pertinent documentation, and a business and marketing plan. The final examination is a public presentation of their completed CD with appropriate discussion and critique.

Prerequisite: MUSC 262 and MUSC 282, Co-requisite: MUSC 263.

MUSC 296, 297, 298 **3 credits****History of Music**

Studies history and development of western art music from Middle Ages to the present and analyzes compositions from the various musical style periods.

Prerequisite: MUSC 103.

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 (was BIOL 221), PSYC& 100 (was PSYC 111), MATH 099, all with a grade of C or higher. Concurrent enrollment or prior completion of BIOL& 242 (was BIOL 222).

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 (was BIOL 257), all with a grade of C or higher.

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 a grade of C or higher.

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 client.

Prerequisite: BIOL& 241 (was BIOL 221), PSYC& 100 (was PSYC 111), MATH 099, all with a grade of C or higher. Concurrent enrollment or prior completion of BIOL& 242 (was BIOL 222).

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 121 **2 credits****Nursing Foundations—Review**

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 101 and NURS 111.

NURS 122 **2 credits****Basic Nursing I—Review**

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 102 and NURS 112.

NURS 123 **2 credits****Basic Nursing II—Review**

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 103 and NURS 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**

(was NURS 211)

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 the LPN program; AH 101, 102, 131, and 132 or equivalent. Completion of or concurrent enrollment in CHEM& 121 (was CHEM 111).

NURS 202 **5 credits****Advanced Comprehensive Nursing II**

(was NURS 212 and 213)

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, gastro-intestinal, and behavioral health disorders.

Prerequisite: NURS 201/221. Completion of or concurrent enrollment in SOC& 101 (was SOCY 110) or ANTH& 206 (was ANTH 207).

NURS 203 **5 credits****Advanced Comprehensive Nursing III**

(was NURS 214)

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: NURS 202/222 and concurrent enrollment in NURS 223.

NURS 209 **2 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 101, 102, 131, and 132 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 231 **2 credits****Advanced Comprehensive Nursing I—Review**

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 201 and NURS 221.

NURS 232 **2 credits****Advanced Comprehensive Nursing II—Review**

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 202 and NURS 222.

NURS 233 **2 credits****Advanced Comprehensive Nursing III—Review**
(was NURS 225)

Provides additional learning opportunities to enhance the knowledge and skills presented in NURS 203 and NURS 223.

LPN2RN Online Program Classes

Lower Columbia College's online distance education LPN to RN nursing program was developed to enable working LPNs to return to college. The program can be completed on a full-time or part-time basis. During Fall, Winter, and Spring quarters, the program will provide short, self-paced theory courses. A traditional clinical session is offered summer quarter. For more information, go to lowercolumbia.edu/lpn2rn. Each of the nursing classes below is open only to admitted LPN to RN students.

NURS 240 **3 credits****Management of Care**

Provides an introduction to Registered Nurse practice. Concepts of leadership and management will be included. Nursing delivery systems, standards of care, quality management, and evidence-based practice will be described. The course will culminate with an in-depth review and application of the nursing process. First in 9-part course sequence.

Prerequisite: Admission to LPN2RN online option.

NURS 241 **3 credits****Safe, Effective Care Environment**

Provides the student with the skills to promote achievement of patient outcomes by providing and directing nursing care that enhances the care delivery setting in order to protect patients, families, significant others, and other health care personnel. Topics include safety, infection control, health promotion, and health maintenance. Second in 9-part course sequence.

Prerequisite: NURS 240 or concurrent enrollment.

NURS 242 **3 credits****Health Throughout the Lifespan**

Provides the student with the ability to direct nursing care that incorporates understanding of expected growth and development principles, prevention and/or early detection of health problems, and strategies to achieve optimal health for patients across their lifespan. Third in 9-part course sequence.

Prerequisite: NURS 241 or concurrent enrollment.

NURS 243 **3 credits****Behavioral Health**

Provides the student with knowledge to direct nursing care that promotes and supports the emotional, mental, and social well-being of patients and their families. Fourth in 9-part course sequence.

Prerequisite: NURS 242 or concurrent enrollment.

NURS 244 **3 credits****Physiological Health I**

Using a body systems approach, this course provides the student with the opportunity to promote physical health and wellness throughout the lifespan by providing nursing care and comfort, reducing risk potential, and managing health problems. Topics include nursing management of the patient with disorders of the respiratory, cardiovascular, peripheral vascular and lymphatic, neurologic, urinary/renal, hepatobiliary/pancreatic, digestive/gastrointestinal systems and acid-base/fluid imbalance. Fifth in 9-part course sequence.

Prerequisite: NURS 243 or concurrent enrollment.

NURS 245 **3 credits****Physiologic Health II**

Using a body system approach, this course continues to provide the student with the opportunity to promote physical health and wellness throughout the lifespan by providing nursing care and comfort, reducing risk potential, and managing health problems. Topics include nursing management of the patient with a disorder of the musculoskeletal, dermatologic, immunologic, metabolic/endocrine, hematologic, reproductive, visual/auditory systems and cancer. Sixth in 9-part course sequence.

Prerequisite: NURS 244.

NURS 246 **2 credits****Skills Laboratory**

Provides the student with practice opportunities in the skills laboratory. Seventh in 9-part course sequence.

Prerequisite: NURS 244. May be taken concurrently with NURS 245.

NURS 247 **10 credits****Clinical Practicum**

Provides the student with opportunities to apply theoretical principles of nursing to practice in a variety of clinical health-care settings. The focus of this course is on managing the nursing care of the patient experiencing complex acute and chronic illness. This course is designed to further the student's understanding of roles of the registered nurse in the role of caregiver, decision maker, user of information technology/communications, teacher, manager of care/collaborator, possessor of professional values/behaviors, developer of professional role, researcher, and leader.

Prerequisite: NURS 246.

NURS 248 **5 credits****Advanced Clinical Practicum**

Provides the student with opportunities to apply theoretical principles of nursing to practice in a clinical healthcare setting. The course is a comprehensive product of the nursing student's general education and nursing didactic and clinical experiences. Students are placed in selected healthcare settings in which they can practice the beginning role of the registered nurse. The course focuses on moving students toward autonomous professional nursing practice within a consistent clinical setting. Ninth in 9-part course sequence.

Prerequisite: NURS 246; course offered sequentially after NURS 247 but may be concurrently enrolled.

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** **5 credits****Introduction to Philosophy** **H**

(was PHIL 200)

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: ENGL& 101.

PHIL 120 **5 credits****Critical Reasoning** **NS**

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: ENGL& 101.

PHIL 260 **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: ENGL& 101.

Physical Education (PHED)**PHED 104, 204** **1 credit****Pilates and Stretch**

Strength and flexibility exercises are practiced with Pilates routines to create a balanced and effective program, emphasizing core strength, posture, balance, and toning.

PHED 105 **1 credit****Pilates & Yoga - Beginning**

Pilates & 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 **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.

Prerequisite: for PHED 210-PHED 110, 126, 128, 140, 141 or 146.

PHED 114 **1.5 credits****Ultimate Frisbee**

Introduces the skills and techniques basic to Ultimate Frisbee, including offensive and defensive play, strategies, etiquette and rules of the game. Ultimate Frisbee is a fast-paced, non-contact team sport, combining parts of soccer, football and basketball.

PHED 121 **1 credit****Beginning Foil Fencing**

Presents the skills, strategies, rules and physical conditioning for the competitive or leisure pursuit of fencing.

PHED 122 **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 **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 cardio-respiratory endurance through participation.

PHED 128, 228 **1-2 credits****Weight Training**

Improves strength, physical conditioning, and performance through correct use of universal equipment, free weights and cardio-respiratory 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 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. Students will attend this class at the Mark Morris pool.

PHED 135, 235 **1-2 credits****Fitness Walking**

Utilizes walking in developing the health-related components of physical fitness. Emphasis will be placed on cardio respiratory endurance through low-impact, moderate intensity exercise.

PHED 140, 240 **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 **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 **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 **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 **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 **2 credits****Applied Soccer—Women**

Provides students the opportunity to demonstrate soccer skills, strategies, rules of play, and to participate in a conditioning program.

Prerequisite: Instructor permission.

PHED 152, 252 **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 160, 260 **1 credit****Baseball**

Enables students the opportunity to learn basic baseball skills, strategies and rules of play. A strict baseball-conditioning program will be emphasized. Fall quarter.

PHED 162, 262 **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 **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 **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 **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 **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 **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**

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 **3 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 109** **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 whole sequence. Includes lab.

Physics (PHYS)**PHYS& 100** **5 credits****Physics: Non-Science Major****NSL**

(was titled Concepts of Physics)

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 091 or TECH 091 or equivalent or instructor permission.

PHYS 101 **5 credits****Introductory Physics I****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 and MATH 076 (Math Lab) or equivalent working knowledge of elementary algebra and right triangle trigonometry, or instructor permission.

PHYS 102 **5 credits****Introductory Physics II****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 101, MATH 099 and MATH 076 (Math Lab) or instructor permission.

PHYS 103 **5 credits****Introductory Physics III****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. Student lab investigations feature landmark experiments of the 20th Century.

Prerequisite: PHYS 102 or instructor permission.

PHYS 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. This course is cross-listed with ENVS 210 and ENGR 210. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: Algebraic, writing, and presentation skills; a previous distribution science course (e.g., PHYS& 100) would be helpful.

PHYS 251 **5 credits**
General Physics I

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 252 **5 credits**
General Physics II

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 251, MATH& 152 or instructor permission.

PHYS 253 **5 credits**
General Physics III

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 252 or instructor permission.

Process Control Manufacturing (PMFG)

PMFG 110 **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, bushings, seals, and lubrication systems. Safety procedures including lockout/tag out of electrical/mechanical energy systems, sketching using ANSI standards, layout and machinery installation, and basic troubleshooting techniques are also covered.

PMFG 150 **5 credits**
Electrical and Electronic Fundamentals

An introduction to 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 092 or concurrent enrollment or instructor permission.

PMFG 151 **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 of control, instrumentation, control equipment, PLCs, process and instrumentation diagrams, and equipment fault identification and troubleshooting.

Prerequisite: MATH 092 and PMFG 150 strongly recommended.

PMFG 152 **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 **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 **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 **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.

Political Science (POLS)**POLS 107** **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 **5 credits****American Government** **SS**

(was POLS 106)

(was titled American Political Institutions)

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 **5 credits****International Relations** **SS**

(was POLS 108)

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.

Psychology (PSYC)**PSYC& 100** **5 credits****General Psychology** **SS**

(was PSYC 111)

(was titled Introduction to General Psychology)

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 **5 credits****Lifespan Psychology** **SS**

(was PSYC 205) (was titled Developmental Psychology)

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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: PSYC& 100 (was PSYC 111) or instructor permission.

PSYC 204 **5 credits****Applied Psychology** **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: PSYC& 100 (was PSYC 111) or instructor permission.

PSYC 209 **5 credits****Interviewing Techniques**

Studies techniques of active listening and responding, and emphasizes the development of communication skills for those considering the social service field or related helping professions.

Prerequisite: PSYC& 100 (was PSYC 111).

PSYC 214 **5 credits****Psychology of Adjustment** **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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: PSYC& 100 (was PSYC 111) or instructor permission.

PSYC& 220**5 credits****Abnormal Psychology****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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Prerequisite: PSYC& 100 (was PSYC 111) or instructor permission.

PSYC 240**3 credits****Compulsive Sexual Behavior**

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. Cross-listed with CDS 240.

Sociology (SOC)

(was SOCY)

SOC& 101**5 credits****Introduction to Sociology****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 associate's degree cultural diversity requirement.

SOC 209**5 credits****Sociology and the Family****SS**

Provides study of the family as the basic societal institution. Several approaches are used including comparing past and present patterns, cultural variations of families, effects of social change upon the family, and a discussion of how the family might increase its own stability and best fulfill the needs of its members and society. This may be offered as a Capstone course. See Capstone prerequisites on page 26. Meets the associate's degree cultural diversity requirement.

Prerequisite: SOC& 101 (was SOCY 110) or instructor permission.

SOC 210**5 credits****Human Sexuality****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. This may be offered as a Capstone course. See Capstone prerequisites on page 26.

Spanish (SPAN)**SPAN 097****2 credits****Spanish: Present Tense Verbs**

(was INDV 097)

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**1 credit****Spanish Grammar for Beginners: Agreement of Nouns and Modifiers**

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**3-5 credits****Introduction to Spanish in the Workplace**

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**3-5 credits****Introduction to Spanish in the Workplace**

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**3-5 credits****Spanish in the Workplace**

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 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 105 or equivalent.

SPAN 107**3-5 credits****Spanish in the Workplace**

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 110 **3 credits****Introduction to Spanish Language and Culture H**

Surveys cultural attributes of the Spanish-speaking world, which includes Spain and the Americas. Provides an overview of language, art, literature, music, history, geography, and customs. Addresses contemporary issues pertaining to an intercultural world.

SPAN 114 **3 credits****Introduction to Spanish Language and Culture: Study Abroad H**

Surveys cultural attributes of the Spanish-speaking world, which includes Spain and the Americas. Provides an overview of language, art, literature, music, history, geography, and customs. Addresses contemporary issues pertaining to an intercultural world through study abroad.

SPAN& 121 **5 credits****Spanish I H**

(was SPAN 101) (was titled Elementary Spanish)
Introduces Spanish, emphasizing basic vocabulary and points of language used in contemporary Spanish-speaking cultures. Meets the associate's degree cultural diversity requirement.

SPAN& 122 **5 credits****Spanish II H**

(was SPAN 102) (was titled Elementary Spanish)
Provides continuation of basic principles offered in SPAN 121 (was SPAN 101). Accumulates vocabulary, reinforces basic grammar, and increases fluency. Meets the associate's degree cultural diversity requirement.

Prerequisite: SPAN& 121 (was SPAN 101) with a grade of C or better or two years of high school Spanish.

SPAN& 123 **5 credits****Spanish III H**

(was SPAN 103) (was titled Elementary Spanish)
Provides further development of basic skills. Accumulates vocabulary, reinforces basic grammar, introduces new grammatical principles, and increases fluency. Meets the associate's degree cultural diversity requirement.

Prerequisite: SPAN& 122 (was SPAN 102) with a grade of C or better or three years of high school Spanish.

SPAN& 221 **5 credits****Spanish IV H**

(was SPAN 201) (was titled Intermediate Spanish)
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**

(was SPAN 202) (was titled Intermediate Spanish)

Continues to build communication skills, accumulate vocabulary, and increase fluency, with added emphasis on literacy.

Prerequisite: SPAN& 221 (was SPAN 201) or equivalent.

SPAN& 223 **5 credits****Spanish VI H**

(was SPAN 203) (was titled Intermediate Spanish)

Continues to build communication skills, accumulate vocabulary, and increase fluency, with added emphasis on literacy.

Prerequisite: SPAN& 222 (was SPAN 202) or equivalent.

Speech (SPCH)**SPCH 104** **3 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 **5 credits****Intercultural Communication H**

Examines the intercultural aspects of the communication process. Emphasizes the significance of communicating a cross cultural lines in today's world, cultural identity, behaviors and values, historical context, language and nonverbal expression, intercultural transitions, and conflict. Focuses on the application of theory and skills designed to increase competence in intercultural communication. Meets the associate's degree cultural diversity requirement.

SPCH 110 **5 credits****Intro to Public Speaking HA**

Examines the planning, development, and delivery of speeches. Emphasis is given to effective structure and support of informational and persuasive messages, audience analysis, language use, verbal and nonverbal presentation skills, and listening. Self-critiques are also stressed.

SPCH 126, 127, 128 226, 227, 228 **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 competitive intercollegiate tournaments.

SPCH 136, 137, 138, 236, 237, 238 **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 204 **5 credits**
Small Group Communication **H**
 Principles and processes of small groups and development skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing. Includes analysis and evaluation of project-based small group work.
Prerequisite: ENGL& 101 or ENGL 102 or instructor permission.

SPCH 205 **3 credits**
Persuasion **H**
 Studies the art of persuasion, both its theory and practice, as an instrument to motivate human behavior. Students work with application of logical, emotional and ethical proof in the process of developing persuasive speeches.

SPCH 210 **3 credits**
Argumentation **H**
 Includes principles of argumentation, investigation, and analyses of propositions; location of issues; use and tests of evidence, reasoning, and logic; detection of fallacies; structure of arguments, including making briefs; and methods of refutation and rebuttal.

SPCH 290 **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 070 **5 credits**
Review of Math Fundamentals
 Provides the student with a review of arithmetic operations on whole numbers, fractions and decimals. Covers applications of percent and proportions. To prepare the student for future math courses, introduces basic geometry and operations with signed numbers. Credit cannot be earned for both TECH 070 and MATH 070.

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 090 **5 credits**
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 091 **5 credits**
Pre-Algebra
 Intended for students who need an exposure to or a review of pre-algebra concepts. It includes operations on signed numbers, algebraic expressions, solving and using simple equations, ratio and proportions, exponents, and measurement. Topics from elementary geometry, statistics and an introduction to graphing in the Cartesian coordinate system are also included. Credit cannot be earned for both TECH 091 and MATH 091.
Prerequisite: MATH 070 or TECH 070 with a grade of C or better or instructor permission. Student may meet pre-requisite by demonstrating ability through testing, prior experience or prior course work not at LCC.

TECH 100 **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 105 **2-6 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 free welding.

WELD 151 **2-6 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 **2-10 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 **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 **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 **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 **2-10 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 **2-10 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 **2-10 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.

WELD 259 **2-10 credits**

Pipe Welding

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 151, 152, 254, 255, 256, or current WABO or AWS card, 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 full-time instructors, affiliate part-time faculty and many key staff responsible for fulfilling the college's mission.



Administration

President

Dr. James L. McLaughlin (1997)

B.A., M.S., University of Akron; Ed.D., New Mexico State University

Vice-Presidents

Laura E. Brener (2007)

Vice President of Instruction

B.A., M.A., State University of New York at Stony Brook

Mary L. Harding (1974)

Vice President for Student Success

B.A., University of Washington; M.Ed., Portland State University

Ellen K. Peres (2004)

Vice President for Administrative Services

B.S., M.B.A., University of Redlands

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

Jon Kerr (2008)

Dean of Instructional Programs

B.A., M.A., Central Washington University

Helen Kuebel (1989)

Assistant Dean for Allied Health and Nursing

B.S.N., University of Michigan; M.S.N., Catholic University of America, Washington D.C.

Department Directors

Margit Brumbaugh (2002)

Executive Director, LCC Foundation

B.A., University of Washington

Dennis J. Farland (1974)

Director, Budget and Finance

A.A., Lower Columbia College; B.A., Central Washington University

Marisa Greear (2004)

Director, Financial Aid

A.A., Lower Columbia College; B.S., Western Baptist College; M.P.A., Walden University

Susan Groth (2008)

Director, College Relations and Marketing

B.A., University of Washington

Wendy Hall (2003) Director,

Institutional Research, Planning and Assessment

B.A., Whitman College; M.P.A., University of Washington

Richard Hamilton (2001)

Director of Campus Services

B.A., Washington State University

Jason P. Hosenev (2000)
Director, Student Support Services

A.A., Clark College; B.S., Warner Pacific College; M.Ed., Concordia University–Portland, OR

Sandy Junker (2000)
Director, Head Start/ECEAP

B.S., Linfield College

John Krause (2001)
Associate Vice President for Career & Student Services

B.S., University of Wisconsin–Madison; M.A. University of Wisconsin–Madison

Lynn Lawrence (1996)
Director of Enrollment Services/Registrar

A.A., Centralia College; B.A., Central Washington University

Ray Lindsey (2008)
Director, Information Services and Systems Analyst

A.A., Lower Columbia College; B.S., Linfield College

Therese Montoya (1992)
Director, Advising and Testing

A.A., Mt. San Antonio Junior College; B.A., California State University–Chico; M.Ed., Washington State University

Kirc Roland, (2001)
Athletics Director

B.A., San Diego State University

Nolan K. Wheeler (1994)
Director, Human Resource Services

A.A., Lower Columbia College; B.A., Western Washington University; M.B.A., University of Phoenix

Full Time Faculty**Timothy Allwine (2006), Business**

B.S., Miami University; M.B.A., University of Montana

Richard Atkins (2000), Fire Science

A.A., Clark College; B.A., The Evergreen State College

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), History, Political Science

B.A., Willamette University; M.A., Columbia University

Mark E. Bergeson (1980), Speech

A.A., Diablo Valley College; B.A., M.A., San Francisco State University; M.Ed. Counseling and Guidance, Oregon State University.

Harold A. Blair (1980), Mathematics, Metallurgy

A.A., Lower Columbia College; B.S., University of Washington

Patrick Boerner (1979), Student Support Services

B.A., Western Washington University; M.S., Portland State University

Stephen A. Byman (1985), Automotive Technology, ITEC Program Coordinator

A.A., Lower Columbia College; B.T., Oregon Institute of Technology

Randal D. Byrum (2006), Welding

A.T.A., Lower Columbia College

Rita Catching (2003), 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 (1997), Business Technology

B.A., University of Washington; M.A., University of Portland

George A. Dennis (1976), Developmental Education

B.A., Western Washington University; M.A., University of Oregon

Donald D. Derkacht (2002), Computer Information Systems

B.S. and M.S.E.E., Washington State University

James Dillinger (2008), Diesel

A.A.S., Lower Columbia College

Dawn M. Draus (2003), Mathematics

B.S. and M.S., Northern Arizona University

Michael J. Dugaw (1973), Speech/Forensics, History

B.A., University of Portland; M.A. Washington State University

Ken Ecklund (1997), Diesel/Heavy Equipment

A.A.S., Blue Mountain Community College; B.S., Oregon Institute of Technology

Patrick G. Ellsberg (1983), Business

A.A., College of Marin; B.S., California State College–Chico; M.B.A., University of California

Louise Emerson (1994), English, Spanish

B.A., B.A., M.A., Central Washington University

Allan R. Evald (1991), Welding

A.A., Walla Walla Community College

Greg Finkas (2007), Nursing

A.A.S., Lower Columbia College; B.S., Western States Chiropractic College; Doctor of Chiropractic, Western States Chiropractic College; M.S.N., University of Washington

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

Joseph L. Green (1986), English

B.A., California State University—Long Beach; M.A., Western Washington University

Dale E. Groff (2007), Music

B.S., Portland State University; M.Ed., Portland State University

Jeanne L. Hamer (2002), Nursing

A.A.S., Lower Columbia College; BSN, Washington State University; M.S.N., Washington State University

George W. Henderson (1977), Counseling

B.S., Offerbein College; M.Ed., Gonzaga University

Armando L. Herbelin, Ph.D. (2002), Chemistry

B.S., Oregon State University; Ph.D., University of Washington

Joan L. Herman (2004), English

B.A. and M.A., University of Oregon

Klint D. Hull (2004), English

B.A. and M.A., Eastern Washington University

Karen L. Joiner (1993), Nursing

A.A., Lower Columbia College; B.S.N., The University of the State of New York; M.S., University of Portland

Marlene Jones (2009), Nursing

A.A. Clatsop Community College; B.S.N., Oregon Health Sciences University

Richard M. Kelley (1971), Philosophy

B.A., Sacred Heart Seminary; S.T.B., S.T.L., Gregorian University, Rome; Ed. Spec., Michigan State University

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), Reading, Literature

B.A., Washington State University; M.A., California State University

**Colleen A. Lemhouse (2004), Education Instructor/
Early Learning Center Director**

B.S., Portland State University; M.S., University of Oregon

Nadine Lemmons (2004), Business Technology

A.A.S., Lower Columbia College

Peteris Livin, Ph.D. (2008), Physics/Engineering

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

Gary B. Meyer (1990), English

B.A., University of New Mexico; M.A., Eastern Washington University

Rhonda L. Meyers (1988), Biology, Medical Assisting

A.A., Lower Columbia College; B.S., Oregon State University; M.I.T., St. Martin's University; M.L.S., University of Maryland

Tamara R. Norton (2003), Nursing

A.A., Lower Columbia College; B.S.N. and M.S.N., Washington State University

Gary B. Nyberg, Ph.D. (1979), Music

B.A., University of Idaho; M.M., University of Wisconsin—Madison; Ph.D., Brigham Young University; Diplomate in Conducting, University of Calgary

Michael D. O'Connor (1975), Electronics Technology

B.A., Western Washington University

**Charlotte C. Persons (1992), Adult Basic Education,
English as a Second Language**

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), Mathematics

B.S., University of Illinois, M.A., State University of New York Brockport

J. Carmen Robinson (1992), Reference Librarian

B.A., California State College; M.L.S., University of Arizona

David L. Rosi (2003), Computer Information Systems

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), Biology

A.A., Lower Columbia College; B.S., M.S., Washington 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

Kelly Smith (1994), Physical Education, Men's Baseball Coach

B.A., Washington State University; M.A., Portland State University

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

Mary E. Stone (1981), Counseling

B.A., M.S., University of Nebraska-Kearney

Michael J. Strayer (1980), Psychology

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**Lenore A. Vest (1982), Mathematics**

B.A., M.S.T., Portland State University

Annette M. Ward (2004), Nursing

B.S.N., Oregon Health Sciences University; M.S.N., University of Phoenix

Marguerite "Nonnie" Weaver (2001), Sociology

B.A., Hunter College; M.S.W., Walla Walla College

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B.S., Linfield College; M.Ed., City University

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B.S. and M.S., Oregon State University; M.S., Colorado State University; Ph.D., Oregon State University

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B.A., University of Washington; M.Ed., University of Massachusetts

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B.S., Oklahoma Baptist University; M.S., University of Oklahoma; F.N.P., University of Wyoming

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Affiliate Part-Time Faculty

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B.A., University of Redlands; M.A., California State University, Fresno.

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B.A., California State University, Sacramento

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M.A., University of Glasgow

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B.A., Central Washington University

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Paris Conservatory

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A.A., Lower Columbia College; B.A., The Evergreen State College

James Woodworth (1985), Computer Information Systems, Mathematics

B.A., Whitworth College; M.S., Portland State University

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

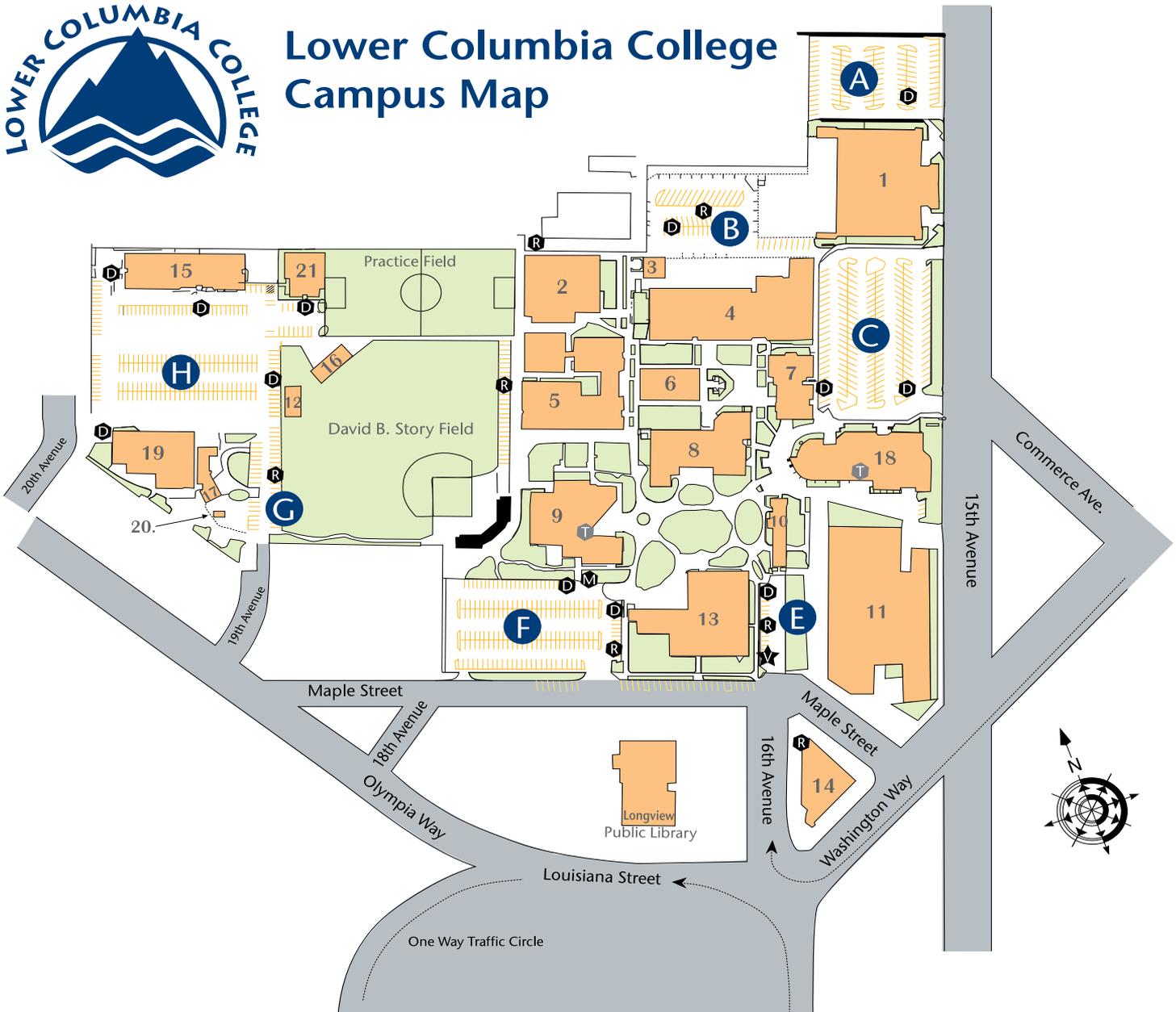
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Lower Columbia College Campus Map



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 E

- A - H** Parking Lots
- D** Disabled Parking
- R** Reserved Parking
- M** Motorcycle Parking
- T** Telephones
- ★** Visitors

- | | | |
|-------------------------------------|--|---|
| 1. Don Talley Building (DTV) | 9. Alan Thompson Library (LIB) | 16. Batting Barn |
| 2. Truman Myklebust Gymnasium (GYM) | 10. Instructional Office Building (IOB) | 17. Head Start Admin.
(former RSVP Center-RSV) |
| 3. Steam Plant (SPL) | 11. Rose Center for the Arts (RCA) | 18. Student Center (STC) |
| 4. Vocational Building (VOC) | 12. International Center (INC) | 19. Campus Services Building (CMS) |
| 5. Applied Arts Building (AAR) | 13. Main Building (MAN) | 20. Greenhouse (GHS) |
| 6. Science Building (SCI) | 14. Administration Building (ADM) | 21. Head Start East Building (HSE) |
| 7. Physical Science Building (PSC) | 15. Head Start/
Home & Family Life Center (HFL) | |
| 8. Admissions Center (ADC) | | |

Note: Buildings are not physically numbered. The numbers on this map are for key purposes only.



Celebrating 75 Years of Serving Our Community

Opening in 2008, the Rose Center for the Arts, a premiere facility for arts performances and exhibits, and arts education, is the newest building on the Lower Columbia College campus. (above)

In its early years, Lower Columbia Junior College held classes in the Longview Public Library (left), at R.A. Long High School and other local buildings.

Lower Columbia College began offering classes on the present campus with the completion of the Main Building in 1950. (below)



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