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Linn-Benton
COMMUNITY COLLEGE

2014-2015 CATALOG

www.linnbenton.edu

2014–2015 General Catalog

Linn-Benton
COMMUNITY COLLEGE

2014–15 Academic Calendar	Summer 2014	Fall 2014	Winter 2015	Spring 2015
Registration begins	See LBCC web site or your WebRunner account			
Classes begin	June 23	September 29	January 5	March 30
Final exams	Last week of class	December 8-10	March 16-18	June 8-10
Commencement Ceremony	-	-	-	June 11
Last day of term	August 28	December 12	March 20	June 12

For more information, see quarterly Schedule of Classes or linnbenton.edu/academiccalendar

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Catalog Information

The information contained in the current LBCC Catalog and quarterly Schedule of Classes reflects an accurate picture of Linn-Benton Community College at the time of publication. However, conditions can and do change. Therefore, the college reserves the right to make any necessary changes in the matters discussed herein, including procedures, policies, calendar, curriculum, course content, emphasis and cost. Students enrolling in LBCC classes are subject to rules, limits and conditions set forth in the current General Catalog; Schedule of Classes; the Student Rights, Complaints, Freedoms and Responsibilities Policy; and other official publications of the college.

Gainful Employment Information (GE)

The Federal Government requires colleges to report the following information on our certificate programs that are not part of an associate degree program. Visit http://public.tableausoftware.com/views/GE/CostofAttendance to review information on occupations associated with the programs, cost of attendance, loan debt for completers, on-time completion rates, and employment placement.

Nondiscrimination Policy

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 at http://po.linnbenton.edu/BPsandARs/

If you feel you have been discriminated against in any interaction at Linn-Benton Community College or have been harassed by another person while at LBCC please contact us immediately based on the following:

A student complaint about another student – contact: Lynne Cox, 541-917-4806, coxly@linnbenton.edu

A student complaint about an LBCC staff member – contact: Scott Rolen, 541-917-4425, rolens@linnbenton.edu

An LBCC staff member complaint about another staff member or student– contact:
Scott Rolen, 541-917-4425, rolens@linnbenton.edu

Disability Accommodations

The Office of Disability Services (ODS) provides reasonable accommodations, academic adjustments and auxiliary aids to ensure that qualified students and guests with disabilities have access to classes, programs and events at Linn-Benton Community College.

Students are responsible for requesting accommodations in a timely manner. To receive appropriate and timely accommodations from LBCC, please give the Office of Disability Services as much advance notice of your disability and specific needs as possible, as certain accommodations such as sign language interpreting take days to weeks to have in place.

Contact Disability Services at Linn-Benton Community College, RCH-105, 6500 Pacific Blvd. SW, Albany, Oregon 97321, phone 541-917-4789 or via Oregon Telecommunications Relay TTD at 1-800-735-2900 or 1-800-735-1232.

College Overview

Each year, more than 22,000 students take at least one class at Linn-Benton Community College, nearly 7,000 attending full time, making LBCC one of the largest community colleges in Oregon. About 30 percent of local high school graduates come directly to LBCC after graduation. The average age of our full-time students is 23.

Established in 1966 as a two-year public college, students attend LBCC for many reasons: to earn an associate's degree or a transfer degree to a four-year college program; to obtain employment training; to improve existing employment skills; or to enrich their lives through continuing education.

LBCC's 104-acre Albany campus is located just 10 miles east of Corvallis. Students can access academic support in the Learning Center and Library on campus. The college has a campus bookstore, a small theater, a student-run coffee house, and a gym and recreation areas for student use. Dining facilities include a cafeteria, a cafe and the Santiam Restaurant operated by students in the Culinary Arts program.

The Benton Center in Corvallis, and centers in Lebanon and Sweet Home, offer credit and non-credit classes to students. The LBCC Horse Center houses the Equine Management program just 1.5 miles north of the Albany campus.

Parking at the college is free, with designated spaces to accommodate the needs of people with disabilities. Your student ID gives you access to free public transportation between LBCC and downtown Albany, Corvallis, Philomath, Lebanon, Sweet Home and other communities in East Linn County.

Mission Statement

To engage in an education that enables all of us to participate in, contribute to, and benefit from the cultural richness and economic vitality of our communities.

Core Themes

Educational Attainment
Cultural Richness
Economic Vitality

Values

- Opportunity: We support the fulfillment of potential in ourselves and each other.
- Excellence: We aspire to the highest ideal with honesty and integrity.
- Inclusiveness: We honor and embrace the uniqueness of every individual, and promote the free and civil expression of ideas, perspectives and cultures.
- Learning: We commit to the lifelong pursuit of knowledge, skills, and abilities to improve our lives and our communities.
- Engagement: We openly and actively connect as students, faculty, staff and community.

Governance and Accreditation

Supported by tuition, local property taxes and state revenue, the college is directed by an elected, seven-member board of education.

Linn-Benton Community College is accredited by the Accrediting Commission of the Northwest Association of Colleges and Universities. Courses are approved by the Higher Education Coordinating Commission, and lower-division courses are approved for transfer to colleges and universities in the Oregon University System. To review LBCC's accreditation status, contact the President's Office at 541-917-4200.

Retention, Graduation Rates

In compliance with the Student Right-To-Know and Campus Security Act (Public Law 101-542), retention and graduation rates are available at *linnbenton.edu/student-right-to-know*.

How to Get Started—Admission

Admissions Office/First Stop Center:

Takena Hall 115, 541-917-4811, or admissions@linnbenton.edu or www.linnbenton.edu/admissions1

LBCC maintains an "open door" admission policy, meaning that anyone who is at least 18 years old is eligible to enroll in classes regardless of educational background. If you are registering for fewer than 8 credits without financial aid, you do not need to complete the admission process and, in most instances, you do not need to take a placement test unless you are taking reading, writing or math courses. You may simply complete a Student Data Form or Registration Request Form and register for the desired class at any time during Open Registration. Before you can receive a certificate or degree, you must become admitted, by completing the admission process

Whether you choose to be admitted or you simply want to enroll in a class or two, it is a good idea to meet with an academic advisor. To locate the appropriate advisor, please visit www.linnbenton.edu/go/advising.

Students Seeking Degrees or Certificates

If you're working toward a degree or certificate, intend to register for 8 or more credits or have applied for financial aid, you must complete the admission process. As a fully admitted student, you will be eligible for Priority Registration as either a full-time or part-time student and be considered for federal financial aid, if you applied. Registration is on a first-come, first-served basis. For all programs, the college reserves the right to give higher priority to district residents.

Students Not Seeking Degrees or Certificates

If you want to take classes but are not seeking a degree or certificate, you don't need to be admitted. You can simply register for your classes any time during open registration. First-time students must submit a Student Data Form or Registration Request form to begin. Forms are available online or at Registration service counters. (Note: Some courses require all or part of the CPT or have pre-requisites required before registration is allowed.)

Transfer Students

LBCC accepts college-level credits from regionally accredited colleges and universities. The guide for determining acceptability is Transfer Credit Practices of Designated Educational Institutions, published by AACRAO, and Practices and Accrediting Institutions of Post-secondary Education, published by ACE.

To transfer credits, have previous school(s) send Admissions an official transcript and submit a Transfer Credit Evaluation Request Form located at www.linnbenton.edu/go/forms. Evaluations are reviewed in order of submission. Results are posted to your transcript viewable in your WebRunner student account. Credit Evaluations takes 6 to 8 weeks. Plan ahead.

If you wish to transfer credits from a foreign college or university, you must have the credits evaluated by an external evaluation service. Contact the Admissions Office for a list of approved credential evaluation services.

International Students

International students must complete the admission process for international students. Application deadlines are noted on the application. LBCC admits F-1 and M-1 visas.

Programs for High School Age Students

LBCC continues to expand opportunities for high school-age students through partnerships with area public and private high schools. In addition to formal partnerships, LBCC offers a variety of other programs, courses, and activities for high school youth. Three of the formal programs are:

- Alternative Learning Opportunities—The student is referred to LBCC by his or her high school and takes classes on campus. For more information, call 541-917-4629.
- College Now—High school students receive college credit for college-level coursework they complete in high school. The courses are taught by high school teachers certified by LBCC. For more information, call 541-917-4236.
- Expanded Options—Expanded Options provides eligible high school students opportunities for early entry into post-secondary education. It also emphasizes specific provisions and priorities for at-risk students and drop outs. See your high school counselor for requirements to be part of the EOP; deadlines may vary.

Please visit this web site for more opportunities for high school age students: linnbenton.edu/highschool-connections

Students Younger than Age 18

Credit classes: If you are 16 or 17 years old, haven't completed high school and/or don't hold a GED, you must file a Campus High School Programs form before you can take a credit class (forms are available online, at the First Stop Center in Takena Hall, and from high school counselors). Students under the age of 16 are eligible to enroll only by exception. Contact Campus High School Programs for more information, 541-917-4629.

To take a non-credit class, you do not need to submit a Campus High School Programs form, but you do need the instructor's permission. If you are 16 or 17 years old and want to take GED preparation classes, you must provide evidence of exemption from compulsory attendance or home schooling, or be referred by your high school through use of the Campus High School Programs form.

Destination Graduation

As a requirement for admission, all new students (under 24 credits) are required to enroll in LBCC's mandatory first-year college success course, Destination Graduation (DG). DG is a one-credit course designed to introduce LBCC students to institutional resources and expectations, develop student commitment, and provide support to new students throughout their first term at LBCC. Students also are assigned to their Academic Advisor through DG. Faculty academic advising is provided to students at no cost throughout their college career at LBCC.

LBCC/OSU Degree Partnership Program

You can dually enroll at both Linn-Benton Community College and Oregon State University by completing one application process through OSU. This saves you time and money; it also gives you access to classes and services at both institutions.

The cost of services at the institution where you currently take courses is included in your tuition and enrollment fees; in addition, you can purchase services at the partner institution. If you are taking courses at both institutions, you have access to student fee-based services at LBCC and OSU including OSU's Dixon Recreation Center, Student Health Center, University Counseling and Psychological Services and University Housing.

Financial aid is available to qualified students who are dually admitted. For further information about the DPP program, contact the Degree Partnership Office at 541-917-4237 or visit the LBCC web site at linnbenton.edu/degree-partnership.

In addition to the LBCC/OSU Degree Partnership Program, LBCC partners with other four-year schools to provide transfer ease. Opportunities exist for both traditional enrollment and completion of a BA or BS through distance education. Go to www.linnbenton.edu/go/transfer-connections for more information about specific programs and schools.

LBCC Oregon Institute of Technology Dual Enrollment

Start your bachelor's degree at Linn-Benton Community College and finish at Oregon Institute of Technology. The LBCC/OIT dual enrollment agreement provides an opportunity for students to complete one application process for enrollment at LBCC and/or OIT, allowing students to access services at both institutions. Many dually enrolled students enroll concurrently at both institutions to fulfill their educational goals and needs. LBCC and OIT have degree programs that maximize credit transfer for students. OIT is a 4-year public university with programs in Klamath Falls and Portland. The dual enrollment program is open to all U.S. citizens and residents.

Special Admission Programs

Some LBCC programs have stringent admission requirements, which were set to administer the college's resources effectively and to ensure that each student has a reasonable chance of success. These programs include:

- Dental Assisting
- Diagnostic Imaging
- Nursing
- Occupational Therapy Assistant
- Pharmacy Technician
- Phlebotomy
- Polysomnography
- Veterinary Assistant

Special admission programs often require prerequisite courses or skills assessments. Placement scores used as assessment for special admission programs are valid for five years. For most programs, qualified in-district applicants receive priority in the selection process. (Note: The LBCC district does not include all of Linn and Benton counties.) A student who does not meet a requirement for a special admission program may appeal by filing a petition, available in the Admissions Office. Petitions are reviewed by faculty members, who make recommendations to the Director of Enrollment Services/Registrar. Requirements, application dates and deadlines are subject to annual change. Admission requirements and application materials for each program must be downloaded from www.linnbenton.edu/go/forms (see Special Admission Bulletins).

Dental Assistant

The Dental Assistant program is offered once each year, beginning fall term and ending the following summer. To be accepted, you must have your application and transcripts on file by a specified date; supply proof of high school graduation or GED; successfully complete CS 120 Digital Literacy; place into RD 120 on the reading portion of the Computerized Placement Test (CPT) or successfully complete RD 115 Advanced College Reading and Learning Strategies; place into WR 121 or successfully complete WR 115 Introduction to College Writing; place into Math 60 or successfully complete MTH 020; and attend a mandatory applicant information session. Students admitted to the program must meet additional requirements prior to the first day of classes. Students are financially responsible for immunizations, criminal background check, lab fees and CPR/First Aid certification.

Note: Occupational health hazards include wearing masks and latex gloves. Applicants with breathing or skin disorders should meet with the Dental Assistant advisor prior to applying for admission.

In addition, dental assisting can intensify carpal tunnel syndrome. Applicants with this condition also should meet with the Dental Assistant advisor prior to applying for admission.

Nursing Admissions

Applicants for the two-year Nursing program, which begins each fall term, must submit an application, and other college transcripts by a specified date; complete LBCC's reading portion of the Computerized Placement Test (CPT); and complete MTH 095 Intermediate Algebra, WR 121 English Composition, BI 231 Human Anatomy and Physiology, and have a valid Oregon CNA license. Eligible applicants are ranked on a point system. See the current Nursing Bulletin for point system information at www.linnbenton.edu/go/forms. Students admitted to the program must meet additional departmental requirements prior to the first day of classes. The admission procedure is reviewed annually for the ADN program and therefore subject to change. Students are financially responsible for immunizations, criminal background check, drug screening and certification fees.

Regional Programs

The LBCC Board of Education has designated the following as Regional Programs, allowing out-of-state students to pay in-state tuition for the first term of their enrollment or set residency preferences based on the region served:

- Agriculture
- Animal Technology
- Animal Technology: Horse Management
- Horticulture
- Diagnostic Imaging
- Mechatronics
- Refrigeration/Heating/Ventilation/Air Conditioning

How to Get Started—Registration

Registration Office
Takena Hall 115, 541- 917-4811

To Register for Classes

If you are a continuing, admitted student, you will be assigned a priority registration time each term based on the number of credits you have earned at LBCC plus your currently registered LBCC credits. See the quarterly Schedule of Classes for registration times and information about the registration process.

Students who have not completed the admission process can register for 0–8 credits during Open Registration times. You will be asked to use your Social Security number as your initial student identification number to complete the Student Data form. A student ID will be generated for you. You may view this number on your WebRunner student account.

Wait List Procedures

If a class is full, you may sign up for available Wait List openings. You are charged tuition for a Wait List registration. You will not be billed if you are not registered in the class by the add/drop deadline. Prior to the first day of class, students are automatically moved from Wait List to registered status as space becomes available. To find out whether you have achieved "registered" status, view your status in your WebRunner student account. During the Add period, an instructor can add you from

the Wait List to the class by signing a Schedule Change form (also called an Add/Drop form), which you then submit to Registration before the Add deadline (Monday of Week Two). Late registrations are subject to a $25 fee. Instructors may drop you from the Wait List if you do not attend the first day of the class. If you are still on the Wait List on the last day of the Add period, you will be dropped from the Wait List and your tuition for that class will be refunded. Refunds are made after the Add/Drop period is over.

How to Understand Course Numbers

All lower-division transfer and career and technical courses are taught at a college level. Courses with letter prefixes and numbers of 100 or higher (for example, WR 121, BI 103, MTH 111) usually transfer to a four-year institution. However, some career and technical courses also have numbers of 100 or higher.

Letter-prefix courses that have numbers below 100 or numbers that include a decimal point (for example, MTH 065 or BA 2.530) generally will not transfer to a four-year institution. However, there are some exceptions; see your advisor concerning transferability.

You are not limited to taking all transfer or all career and technical classes; you may mix and match them depending on your program. Consult your advisor.

If a course number is changed from a career and technical number to a transfer level number, the transfer level number will appear on your permanent record only if you took the class after the change was approved.

Prerequisites

Many courses require pre-requisites (other completed courses) prior to enrolling. Check the "Course Description" section of this catalog for prerequisites before you register. If you are uncertain about whether you have met a specific prerequisite, check your unofficial transcripts in your WebRunner student account, ask your advisor or the instructor of that class. If you have not met the prerequisite, you may be prevented from registering or withdrawn from the course.

To Change Your Schedule

To change your schedule in any way, you may use your WebRunner student account or submit a Schedule Change at the Registration Office. For classes that require an instructor's signature, you must submit a Schedule Change at the Registration Office.

During the first week of the term, you must have the instructor's written permission to add a course that is full. Registration deadlines for shorter classes are printed in the schedule.

If you are changing to another section of a course — whether for cancellation of the class or for any other reason — you must fill out a Schedule Change form.

You have until the end of the seventh week of each term to officially withdraw from a full-term class and earn a "W" grade. Withdrawal deadlines for shorter classes are printed in the schedule. (Note: "W" grades are considered non-completion grades for academic standing and financial aid.)

To Audit a Class

If you want to audit a class (take it without receiving credit) you can request audit status either at the time you register or during the Add period for that class. Instructors reserve the right to disenroll students who do not have the prerequisite for the course they want to audit. The fees for auditing are the same as regular enrollment. You are encouraged to discuss your learning goals for the class with the instructor prior to selecting the audit. Auditing students are expected to fully participate in class activities. The instructor is under no obligation to grade or record the student's work. An "AU" grade will be recorded on the transcript.

Academic Information and Regulations

Academic Calendar

The college operates on a term system (also called a quarter system). Fall term begins in late September and ends in early December. Winter term begins in early January and runs until mid-March, and Spring term begins in late March and ends in mid-June. Summer term runs from late June until late August. See linnbenton.edu/academiccalendar

Credit Hours and Credit Loads

Generally speaking, a class that meets one hour a week for one term with an expected homework load of two hours outside of class will be a one-credit class (whether distance education or in class work). Classes that meet three hours per week with six hours of outside homework will yield three credits. A lab class usually yields one credit for each two or three hours of lab time. Remember, most classes require two hours of homework in addition to each class hour. In our Program Descriptions, we suggest curricula that will allow you to complete the program in one or two years; if you are working or have outside commitments, you may need to extend that timeline. To earn a transfer degree in two years, you should schedule an average of 15 credits per term to accumulate 90 credits in six terms. Fifteen credits translates to an average of a 45- hour work week. You may take no more than 20 credits in any single term without a counselor's approval. The time required to complete a program may vary according to your preparation when you enter school and the availability of classes.

Grading System

A	Excellent work; 4 quality points per credit.
B	Above average work; 3 quality points per credit.
C	Average work; 2 quality points per credit.
D	Below average work; 1 quality point per credit.
F	Failing work; 0 quality points per credit.
IN	Incomplete work (not computed in GPA).
P	Pass, C or above, credit earned (not computed in GPA).
W	Withdrawal; no credit earned (not computed in GPA).
NP	No pass; no credit earned (not computed in GPA).
AU	Audit; no credit earned (not computed in GPA).
R	Repeated; followed by original grade (not computed in GPA).
Z	Academic renewal.

Grade Point Average (GPA) is calculated by dividing total quality points by total hours. (Grades not included in GPA are Z, IN, W, P, NP, AU and repeated grades preceded by R.) Transcripts show current GPA (one term) and cumulative GPA (all classes taken at LBCC). You can obtain your grades via your WebRunner student account.

Honor Roll

If you obtain a term grade point average of 3.50 or better with no incompletes and have completed a 12-credit load or more of graded LBCC classwork (not including P/NP) for that quarter, you are placed on the Honor Roll.

Immunizations

The Oregon College Immunization Law requires that community college students born on or after Jan. 1, 1957, and in the allied health, intercollegiate sports or early childhood education program receive two doses of measles vaccinations.

Academic Probation and Suspension

Students registered for 12 or more credits at the beginning of the third week of the quarter are subject to academic standing regulations. Students are placed on probation if their term grade point average drops below 2.00 for the term, and/or a student doesn't complete 70 percent of their credits.

A student on probation for two consecutive terms is subject to suspension for one term. After one term, the student is eligible to enroll full-time and is considered to be on third term probation. After third term probation, a student will be suspended for one year if they are not making progress towards good academic standing.

Repeating a Class

In general, you cannot repeat a class for additional credit. Exceptions are noted under the individual course descriptions section of this catalog. Any course completed with a grade below a "C" may be repeated for grade replacement and GPA recalculation. Any course completed with a grade of a "B" or "C" may be repeated once for grade replacement and GPA recalculation. Any student desiring a grade replacement for GPA recalculation must initiate the process by filing a request form at the Registration Office. Any replacement grade will replace all previous grades for that course number. Any grade replaced will be preceded by an "R" on the transcript and removed from credit and GPA totals.

Pass/No-Pass Option

A course designation of "OPT" indicates that you have the option of taking the course for a letter grade or on a pass/no-pass (P/NP) basis. It is your responsibility to check the class schedule to determine whether a class has the P/NP option. Requests for "P" grades may be processed through the Registration Office, through the instructor or through your WebRunner student account. It is not advisable to choose the "P" grade for major coursework in your field of study. If you are planning to transfer to a four-year institution, you should check that institution's requirements regarding "P" grades. The maximum number of "P" credits allowed toward a degree is 16, not including those with an obligatory "P" grade.

Incomplete Rule

If you take an incomplete in a class ("IN" grade), you must complete the coursework by the end of the following term. (Students completing work for a spring term class have until the end of fall term.) If you fail to complete the work, you will receive a default grade, which is usually an "F" grade. "IN" grades normally are not awarded in variable credit classes.

Graduation: Standards of Progress

See the "Graduation Requirements" section of this catalog.

Withdrawing from School

If you find you can no longer attend classes, you should officially withdraw from school. Students who withdraw within the refund period may expect a tuition refund. A grade of "W" will not be recorded if the withdrawal is processed before the drop deadline (through the second Monday of the term). A grade of "W" will be recorded for classes dropped after the refund period and before the withdrawal deadline (by the end of the 7th week). (Note: "W" grades are considered non-completion grades for academic standing and financial aid. Also see "Refunds" and "Withdrawal Deadlines" in the Schedule of Classes.)

Transferring LBCC Credits

Lower-division credits can be transferred from LBCC to most colleges throughout the United States. Lower-division students may transfer up to 124 credit hours to schools in the Oregon University System. If you are planning to transfer credits to another college or university, you are encouraged to work with an LBCC advisor in planning an appropriate transfer program. It is also recommended that you coordinate your plan with that institution. Your transcript can be obtained at www.linnbenton.edu/admissions/transcripts.

Credit by Examination

If you believe you already have mastered the material presented in a course listed on LBCC's Course Challenge List, you can stop by the Student Assessment Center and apply for Credit by Examination. To apply, you must be currently enrolled in a credit class or you must have completed 12 credits at LBCC. You must submit your application by Monday of week 2 of a term, and you must complete the examination by the end of the seventh week of that same term.

Before you take the exam, you must pay a nonrefundable processing fee consisting of 30 percent of the tuition per challenged course per credit hour. An additional testing fee may be required. For details about Credit by Examination, stop by the Student Assessment Center or call 541-917-4781.

College Level Examination Program

LBCC is an approved center for administration of the College Level Examination Program (CLEP). In addition, LBCC accepts most CLEP scores for college credit, which may be posted to transcripts under "advanced standing." CLEP examinations are administered through the Student Assessment Center. For a list of tests accepted at LBCC, stop by the Assessment Center or call 541-917-4781. Accepted tests for credit toward a degree will be posted to transcripts under Advanced Standing.

Advanced Placement Tests

Students who complete college-level work in high school under the Advanced Placement Program sponsored by the College Entrance Examination Board and who receive satisfactory grades (3, 4 or 5) on examinations administered by the board may, upon admission, be granted comparable credit toward a degree. All examinations are subject to review and approval by the appropriate college division. Students must request that official Advanced Placement scores be forwarded to the Admissions Office. For further information, contact the Admissions Office.

Student Educational Records

Transcripts and Records

Unofficial transcripts can be obtained from your WebRunner student account for free. Official student transcripts may be ordered online through your WebRunner student account, via the National Student Clearinghouse by selecting the link from the WebRunner, (you can also log onto the National Student Clearinghouse at www. studentclearinghouse.org) or use our Transcript Request Form from the online Registration Forms and Applications page.

Transcripts cost $5 for the first copy and $1 for each additional copy ordered at the same time, regardless of whether they are official or unofficial. (These fees are subject to change.) It takes up to five business days to process a transcript order. Rush orders (guaranteed processing in less than five days) cost $10 for the first and $1 for each additional ordered at the same time. There is an additional $1 charge to have a transcript faxed. Students have access to transcripts and records as outlined in 'The Student Records and Disclosure of Student Records Policy 7040.' Official records belonging to a student who has failed to make an installment tuition payment, repay an emergency loan, or other debt or obligation to

the college will not be released, either to the student or to another institution, as long as the obligation is outstanding.

Records Information

Linn-Benton Community College follows the Federal Health Education and Welfare Guidelines for the Family Educational Rights and Privacy Act of 1974 as amended (Pell-Buckley amendment) and the Oregon Administrative Rules regarding Privacy Rights and Information Reporting in Community Colleges in regard to educational records.

Federal legislation gives students the right to inspect and review their educational records as defined in LBCC Board Policy # 7040. If you believe your records contain information that is inaccurate, misleading or in violation of your rights, you may ask the college to amend the record. If the college denies this request, you will be informed of this decision and of your right to a hearing. Further, you may file a complaint with the U.S. Department of Education by contacting the Family Policy and Regulations Office, U.S. Department of Education, Washington, D.C. 20202.

Directory Information

In accordance with the Family Educational Rights and Privacy Act, LBCC considers the following to be directory, therefore public, information: student's name; address; telephone listing; email; major field of study; participation in officially recognized activities and sports; weight and height of sports team members; dates of enrollment; enrollment status; school or division of enrollment; and degrees and awards received. If you do not want the above information released, file a Directory Deletion Form at the Registration Office. Information will not be released without consent except as per Oregon Administrative Rules (for example, in case of federal audit).

Social Security Number

OAR 559-004-0400 authorizes Linn-Benton Community College to ask you to provide your Social Security number. The number will be used by the college for reporting, research, and record keeping. Your number will also be provided by the college to the Oregon Community College Unified Reporting System (OCCURS), which is a group made up of all community colleges in Oregon, the State Department of Community Colleges and Workforce Development and the Oregon Community College Association. OCCURS gathers information about students and programs to meet state and federal reporting requirements. It also helps colleges plan, research, and develop programs. This information helps the colleges to support the progress of students and their success in the workplace and other education programs.

OCCURS or the college may provide your Social Security number to the following agencies or match it with records from the following systems:

- State and private universities, colleges, and vocational schools, to find out how many community college students go on with their education and to find out whether community college courses are a good basis for further education;
- The Oregon Employment Department, which gathers information, including employment and earnings, to help state and local agencies plan education and training services to help Oregon citizens get the best jobs available;
- The Oregon Department of Education, to provide reports to local, state and federal governments. The information is used to learn about education, training, and job market trends for planning, research, and program improvement.
- The Oregon Department of Revenue and collection agencies only for purposes of processing debts and only if credit is extended to you by the college.
- The Internal Revenue Service for 1098T reporting.
- The College Board, if you take the Accuplacer Placement test, for educational research purposes. State and federal law protects the privacy of your records. Your number will be used only for the purposes listed above.
- The National Student Clearinghouse for loan deferment and student record services.

Student Rights, Responsibilities and Conduct

The college's board of education has established policy relating to student rights, freedoms, responsibilities and due process. This policy outlines the rules for student conduct and describes the procedures for due process and for filing a complaint. See policy at www.linnbenton.edu/go/studentrights. All students should read and know this policy. It sets out expectations for the LBCC Community.

Students in the LBCC/OSU Degree Partnership Program are held accountable to conduct standards at both institutions. LBCC and OSU may each intervene in cases of misconduct, particularly in issues involving health and safety. Students are given opportunity for due process; those found in violation of conduct codes may receive sanctions from each institution. Linn-Benton Community College and Oregon State University reserve the option to decide that only one institution will process a case of misconduct.

Student Consumerism Information

In accordance with 34 CFR Part 668, you have the right to know certain information about LBCC, including a variety of academic information, financial assistance information, institutional information, information on completion or graduation rates, institutional security policies and crime statistics, and financial support data. For details, see www.linnbenton.edu/about-lbcc/policies/student-right-to-know.

Tuition and Fees

The amount of tuition you pay is determined by your residency and by the number of credit hours you are taking. The chart is this section will help you determine the amount of tuition you owe. You should be aware that some classes charge a fee in addition to tuition and this is listed in the course description within the Schedule of Classes each term. You can check your bill online via your WebRunner student account.

Residency Policy

Tuition rates and fee schedules differ for students who reside in Oregon, students who do not live within the state or bordering states, and for international students. You pay resident tuition if you have lived in Oregon for at least 90 continuous days immediately preceding the term and can demonstrate your intent to establish a permanent home, or if you have been granted asylum or are a refugee, an immigrant or a permanent resident of California, Idaho, Washington or Nevada. For detailed information and a list of acceptable documents to show proof of residency, see the Residency Form at www.linnbenton.edu/forms.

In addition, the LBCC Board of Education has designated some programs as Regional Programs, allowing out-of-state students to pay in-state tuition for the first term of their enrollment (These programs are listed under Regional Programs in this catalog). For subsequent terms, these students must establish and meet LBCC's residency requirements to qualify for in-state tuition.

Student Activity and Program Fee

Student tuition and fees are published at linnbenton.edu/tuitionandfees

At time of printing: Each student is assessed fee for student activities, programming and student governance. Income derived from the fee supports co-curricular activities and programs, including artist and lecturer guest appearances, clubs and organizations, intramurals and a variety of recreational and social activities. More information is available at the Student Life and Leadership Office in the Student Union. Note: These fees are subject to change. OSU Degree Partnership students may pay a DPP student services fee if not registered for credit classes at LBCC. Payment of this fee allows their ID card to be validated and gives them access to all LBCC services.

Course Materials and Activity Fees

Some courses have additional fees. These fees are indicated in the Schedule of Classes. Fees vary from course to course and may not be refunded if you drop the class.

Student Costs

Individual costs vary according to course of study, transportation requirements, housing and other factors. Here are some examples of average costs for nine months (three terms):

Single (At Home)	**Average Cost***
Tuition & Fees	$4,161
Books & Supplies	$1,563
Rent, Utilities & Food	$2,427
Transportation	$1,596
Personal Expenses	$1,416
Total	$11,163

Single (Away from Home)	**Average Cost***
Tuition & Fees	$4,161
Books & Supplies	$1,563
Rent, Utilities & Food	$7,197
Transportation	$1,596
Personal Expenses	$1,416
Total	$15,933

**Tuition figures are provided only as rough estimates and are subject to change by the LBCC Board of Education. Current tuition rates may be found in the quarterly schedule of classes or at www.linnbenton.edu/go/tuitionandfees. Additional tuition charges are assessed for nonresident and foreign students. Books and supply costs vary greatly.*

Tuition Refunds

To receive a tuition refund, students must formally drop the class between the time of registration and the drop with a refund deadline described in the schedule below:

1. One day classes: the day prior to the first day of class;
2. One week classes: the day prior to the second class meeting;
3. Two weeks or longer classes: the Monday of the second week of the class.

Definition of a week is Monday 12:00 a.m. through Sunday 11:59 p.m. Refunds will be for 100 percent of the tuition paid for the class.

For classes cancelled by the college, a full refund will be issued or the student may enroll in another class.

Students on wait lists who have not been registered into the class by the end of the first week of the term will be removed from the wait list and any refund will be credited to their account.

Students dropped by instructors by Involuntary Withdrawal (AR 7035-03) for non-attendance during the refund period will have any eligible refund credited to their account.

Students who are members of the military and ordered to active duty will be allowed to receive a full refund, or a tuition and fees credit for courses that they are unable to complete by their activation date or are ineligible for an incomplete grade [ORS 341.531; ORS 341.532]. Financial aid and other third party educational benefits will be lawfully reassessed based on Department of Education and/or Veterans Administration rules. The student may be required to return some of the aid to LBCC pursuant to state or federal aid rules.

Students may receive full or partial tuition refunds or credit for paid tuition and fees should the college be required to cancel classes as the result of a natural disaster, act of war or terrorism, or a pandemic. The college will decide how and when to reimburse students dependent on the timing, severity, and impact of the event.

General Student Fees

General fees paid by students enrolling in credit classes are refunded in full when a course is dropped within the refund period or when a class is canceled.

Program Fees

Fees charged to students in a program are refunded based on deadlines and procedures established by the program.

Credit Course Fees

Course fees are refunded when a student drops the course before the first day of the course.

Extended Refund Requests for Credit Course Tuition & Fees

Students who experience situations that are serious and compelling may petition for a refund of tuition. General student fees and course fees are not refunded after the refund period. Petitions for an extended refund are reviewed by the Registrar.

Community Education Fees

Course Fees

To receive a course fee refund, students must formally drop the class between the time of registration and the respective deadlines following:

1. Classes meeting 4 weeks or less: the Monday prior to the first day of class.
2. Classes meeting 5 weeks or longer: the Monday of the second week of the class.

Supply Fees

Fees paid for individual lessons or consumable supplies related to the course are non-refundable unless LBCC cancels the course and the student is unable to enroll in the same course.

Extended Refund Requests for Community Education Fees

Requests for an extended refund of Community Education fees after the refund deadline are submitted to the Director of Community Education.

Financial Aid

Financial Aid Office
Takena Hall 117, 541-917-4850
www.linbenton.edu/financial–aid

Financial aid at LBCC provides an opportunity for students to attend college who cannot pay the full cost of a college education. Funds are intended to supplement family and student resources through loans, grants and/or part-time employment. You can obtain information regarding the availability of financial aid online at www.linnbenton.edu/financial-aid or at the Financial Aid Office. Veterans' educational benefits are provided through this office.

Standard Tuition and Fees Schedule (Please see notes below)

Classes Taken for Credit

Residency	Credit Tuition	Student Activity Fee	Transportation and Safety Fee	Technology Fee	Total Tuition & Fees
In-state (OR, CA, ID, WA, NV) per credit	$93.80	$1.70	$1.00	$2.00	$98.50
Out-of-state (except OR, CA, ID, WA, NV) per credit	$203.80	$1.70	$1.00	$2.00	$208.50
Foreign/International per credit	$239.80	$1.70	$1.00	$2.00	$244.50

Per Student Charge for Associated Students of LBCC Fee: 1 to 5 credits: $3.80 • 6 or more credits: $7.60

Non-Credit Classes: The cost is listed with each class in the printed Schedule of Classes.

Non-Instructional Fees
Application for Admission: $30 (included Placement Test)
Photo ID Card: $10
Placement Test (CPT): Varies (see linnbenton.edu/go/student-assessment for current fees)
Official Copy of LBCC Transcript: $5 for first copy; $1 for each additional copy ordered at the same time
Unofficial Copy of LBCC Transcript: $5 for first copy; $1 for each additional copy ordered at the same time; free from WebRunner student account
Course Materials and Activity Fees (some courses): Varies

- Faxed transcripts are an additional $1; additional $10 for processing in less than five business days.
- **Tuition and fees are subject to change by the LBCC Board of Education.**
- To qualify for in-state tuition rates, you must be a permanent resident of Oregon, California, Idaho, Nevada or Washington.
- You must pay out-of-state tuition rates if your permanent residence is outside the states of Oregon, California, Idaho, Nevada or Washington. See residency policy on page 8.
- International–You must pay international tuition rates if you are a citizen of another country and require an I-20 to attend college or have another non-immigrant status. International students do not become residents, regardless of the length of their residency within the state.

Differential Tuition: Certain CTE and lab courses have tuition that is 21% higher than the standard, resident rate. Please check the tuition and fees page on the LBCC website for a full list of programs and courses that have additional tuition.

Student Eligibility Requirements

You may be eligible for financial aid if you:

- are an admitted and enrolled student, whether full- or part-time;
- are enrolled in an eligible program at least one year in length that leads to a degree or certificate (some exceptions apply);
- have registered with the Selective Service (if required to do so);
- have a high school diploma or GED;
- are not attending an elementary or secondary school;
- are a United States citizen or an eligible noncitizen;
- are not in default of any federal loan program;
- do not owe a refund on any federal grant program.

For the Federal Direct and PLUS Loan programs, you must be enrolled at least half time (six credit hours). For a Pell Grant, you must be an admitted, degree-seeking student enrolled in one or more credit hours. For the Oregon Opportunity Grant, you must be a resident of Oregon for a year prior to the start of school and be enrolled at least half time (six credit hours).

Program Eligibility Requirements

Eligible programs need to be at least one year in length (some exceptions apply) and must lead to a degree or certificate. Eligible one-year programs must provide training to prepare students for "recognized occupations" as defined in the Dictionary of Occupational Titles.

Accelerated Certificate Training Programs

The U.S. Department of Education has certified several accelerated certificate training programs (defined as less than one year in length) as eligible to participate in federal student aid programs. Students may be eligible to participate in the Pell Grant and Direct Loan programs. Annual grant and loan limits are prorated based on the length of the programs. The accelerated certificate training programs are not eligible for the Oregon Opportunity Grant or Federal Work Study. The approved programs are:

- Pharmacy Technician
- Polysomnography
- Phlebotomy
- Veterinary Assistant

Application Procedures

Before you can be considered for financial aid, you must be admitted to LBCC (even if you are attending less than full time). See Admissions in this catalog for more information.

You may apply for aid at any time throughout the year; however, financial aid funds are limited. If you apply after February 1, you may find that some programs no longer have funds. If you are applying for a federal or state grant, a work program or loan, you must complete a Free Application for Federal Student Aid (FAFSA) application form. LBCC uses the FAFSA to determine the amount a family and student can contribute to the cost of a college education. The use of this federally approved aid application assures every applicant fair and consistent treatment. Application forms are available on the Internet at www.fafsa.gov.

You, the applicant, must complete the application form and submit it to the FAFSA Central Processor, who forwards the information to the schools listed on the application. No processing fee is charged. We strongly recommend your FAFSA be submitted and all outstanding requirements completed by the Priority Deadlines published at www.linnbenton.edu/financial-aid.

After LBCC receives the FAFSA data electronically from the Central Processor, our financial aid staff will begin determining your eligibility for aid. See LBCC's Financial Aid Process at www.linnbenton.edu/financial aid. They may require additional information such as proof of independence, tax return transcripts or information regarding aid received at other institutions. You will be notified by email (personal email and later LBCC-assigned email) concerning your eligibility. Allow 10 to 12 weeks from submission of all required documents for the entire process from application to award. You may track your progress through your WebRunner student account.

Transfer Students

Transfer students applying for federal financial aid must notify the financial aid office of any credits they have transferred from a prior college and request a transfer credit evaluation and degree audit from the Registrar's Office.

Academic Standards and Eligibility

To receive financial aid, you must fulfill the standards of satisfactory academic progress. Additionally, if you are not in good standing with the institution (i.e., if you are on academic or disciplinary suspension), you will not be eligible for further aid or certification until you have been removed from suspension. A copy of this Financial Aid Satisfactory Academic Progress policy is available at the Financial Aid Office and online at www.linnbenton.edu/financial-aid in the "Academic Standards area."

Financial Aid Disbursement Policy

Financial aid is direct deposited to a student's bank account (or sent out by check, upon request) after the add/drop period (Monday of 2nd week, 5 p.m.) of each term. Typically, this means aid monies are received during the second week of each term. Before financial assistance can be disbursed, you must:

- be admitted (completed the admissions process)
- sign and return to the Financial Aid Office a "Disbursement Form"
- enroll for six (6) or more credit hours (except for Pell Grants)
- maintain satisfactory academic progress.

Note: If your aid was based on full-time attendance and you elect to register for fewer credit hours, your financial aid will be adjusted automatically to reflect the reduction in course load.

Students admitted into the LBCC/OSU Degree Partnership Program may have their credit hours taken at both schools combined to determine their eligibility for federal, state and institutional financial aid. Financial aid is available for qualified students who are dually admitted. For further information about the DPP program, contact the Admissions office at OSU, 541-737-4411 or LBCC Admissions at 541-917-4811 or visit www.linnbenton.edu/degree-partnership.

Withdrawal Information

U.S. Department of Education regulations mandate that federal financial aid recipients "earn" their aid by attending and participating in class. Recipients cannot earn all of their aid funds unless they maintain attendance and class participation for more than 60 percent of each term they receive aid.

Students that completely withdraw from or stop attending all classes before 61 percent of the term has expired have not earned all their aid and will be required to repay some or all of the aid disbursed to them. The percent of funds that was not earned is the same as the percent of the term not attended. The college also is required to return the funds we deducted from your financial aid for tuition and fees (institutional charges) at the same percentage rate. Example: If you attend only 59 percent of the term, then you did not earn 41 percent of your financial aid, and it must be repaid. In addition, the college must return 41 percent of your tuition and fees. You must repay the college 41 percent of your tuition and fees that it was required to return to the federal government. You will not be permitted to re-enroll at LBCC until this amount is paid in full. Federal aid that the college is required to return for "unearned" tuition and fees will be returned to financial aid programs that you received aid from in the following order:

- Unsubsidized Direct Loan
- Subsidized Direct Loan
- Direct PLUS Loan
- Federal Pell Grant
- Federal SEOG Grant
- Other federal financial aid programs, excluding Federal Work Study

You can repay federal loans under the terms and conditions of the promissory note for the loan. However, a grant repayment must be repaid within 45 days. If the grant repayment has not been repaid in full within 45 days, the college will forward the debt to the U.S. Department of Education for collection. You will not be permitted to re-enroll at LBCC nor will you be eligible to receive federal financial aid (including loans) from any higher education institution in the country until the grant has been repaid. For a complete copy of the federal aid repayment policy or if you have any questions, please contact the LBCC Financial Aid Office.

2014–15 Year: 60% of Financial Aid Earned Dates for Each Term

August 3, 2014 - Summer 2014
November 12, 2014 - Fall 2014
February 18, 2015 - Winter 2015
May 13, 2015 - Spring 2015

Veterans Affairs

Veterans Affairs Office:
Takena Hall 117, 541-917-4858

The Veterans Specialist is also the LBCC VA School Certifying Official who assists student veterans, current military service personnel, and eligible dependents with VA Educational Benefits. The Specialist reports enrollment information, academic progress and graduation to the VA. Academic advising, counseling, and referral for veterans are available. The type of educational benefits varies. For details, visit the Veterans Specialist in Veterans Affairs, www.gibill.va.gov or www. linnbenton.edu/veterans/veterans-education-resources.

Student Responsibilities

- Complete the admission process for LBCC.
- Bring your VA Certificate of Eligibility and DD 214 to the LBCC Veterans Office to begin receiving benefits.
- Complete and submit the LBCC Veterans Office entrance forms to get your file started. Forms are available at the LBCC Veterans window in Takena Hall.
- Submit the Course Completion Verification Form every term. This form lists the classes the student is registered for classes.
- Notify the LBCC Veterans Office of any changes; including class schedule changes, address or name change and change of major or program.

LBCC Veterans Office Responsibilities

- Verify that the classes the student is enrolled in apply to the completion of their declared degree program.
- Submit the student's enrollment certification to the VA.
- Notify the student of any enrollment issues.
- Report dropped classes and unsatisfactory grades to the VA.
- Adhere to the Satisfactory Academic Progress standards established by LBCC.
- Notify and report students on Academic Probation and Suspension who fall below LBCC Academic Standards

Transfer of Military Credit

Veterans should submit a copy of their SMART or AARTS transcripts to the Admissions Office for college credit. Veterans who submit their military transcripts will automatically receive 3 credits toward the PE 231 Lifetime Health & Fitness requirement. Veterans who have not submitted their transcripts may submit a copy of the DD 214 to the Admissions Office to receive the same credits.

Satisfactory Academic Standards & Progress

The law requires that educational assistance benefits to Veterans and other eligible persons be discontinued when the student ceases to make satisfactory progress toward completion of their training objective.

The Veterans Office follows the same Satisfactory Academic Policy guidelines as the Financial Aid Office but with their own probation and appeal process.

The Veterans Office will evaluate the student's classes each term to verify they apply toward the completion of the student's declared program. Any classes that do not qualify toward the completion of a degree will not be certified with the VA and will be the student's responsibility to cover those tuition expenses.

Veterans Academic Probation

At the end of each term, the student veteran's grades will be evaluated. Students who fall below a 2.0 GPA or the 70% completion rate will be placed on Academic Probation. Students will be notified by mail. This is a warning and does not affect their benefits for the next term. They have the following term to clear the probation and move back into good standing or drop down into Academic Suspension. To clear Academic Probation, the student veteran must complete 100% of their enrolled classes with a 2.0 GPA or better.

Veterans Academic Suspension

A student veteran on Academic Probation who does not succeed the following term is placed on Academic Suspension and will be notified by mail. Veterans do have the option to complete the appeal process, but they will not be certified to receive benefits until it is approved. If the appeal is not approved or the student has already received an appeal before, they will need to complete a term on their own. After a successful term without benefits, they may request an evaluation to be re-instated.


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Financial Aid Programs and Sources*

	Eligibility Requirements	Amounts Available	Special Information
GRANTS			
Federal Pell Grants	• Be an undergraduate student at a 2- or 4-year public or private college that participates in the federal Title 4 programs. • Admitted, degree-seeking students enrolled for one or more credits may be eligible.	• Amounts are based on financial need as defined by FAFSA. • Awards are based on expected family contribution.	• The Department of Education will send you a Student Aid Report (SAR) indicating your eligibility.
Oregon Opportunity Grants	• Complete and submit the FAFSA. • Be an Oregon resident. • Be an undergraduate student at a 2- or 4-year public or private college that participates in the federal Title 4 programs. • Be enrolled at least half time (six or more credits per term) in a certificate- or degree-granting program Fall Term.	• Beginning 2012-2013, the amount for eligile students is based on financial need and meeting the filing deadline as published by the Oregon Student Access Commission. Half of published amount is awarded to eligible students enrolled in 6-11 credits.	• Oregon Opportunity Grants are transferrable to other Oregon institutions and are renewable for a maximum of 12 quarters. • Amounts are awarded by Oregon Student Access Commission. • Grant is not available for summer terms.
Federal Supplemental Educational Opportunity Grants (SEOG)	• Be an undergraduate student at a 2- or 4-year public or private college that participates in the federal Title 4 programs. • You must prove an exceptional financial need as defined by FAFSA. • Be enrolled at least half time (6 or more credits per term) in a certificate- or degree-granting program.	• $220 per term of attendance. • $660 total for the year.	• SEOG is linked with Pell Grant eligibility.
WORK STUDY			
Federal Work Study Program	• Undergraduate students and students who have bachelor's degrees are eligible to participate. • Be enrolled at least half time (six or more credits per term) in a certificate- or degree-granting program.	• Students are paid current minimum wage for work performed. Higher wages are paid to returning student workers and for jobs requiring certain skills.	• Employment during the school term may not exceed 20 hours per week. • When possible, the student is placed in a job compatible with his or her career goal.
STUDENT LOANS			

Federal Direct student loans are available; however, THEY ALL REQUIRE REPAYMENT. Think before you borrow, and borrow only what you need for educational expenses; convenience now may result in financial hardship later. Failure to repay student loans results in a damaged credit rating and makes credit difficult to obtain in the future. Federal regulations require that subsequent loan disbursements be returned to the U.S. Department of Education if at any time you enroll for and complete less than six (6) credit hours during the period of the loan as indicated on your Direct Loan application. Your loan application will be voided, and you must start the loan application process

Federal Direct Student Loans	• Eligibility is determined by the FAFSA. • Be enrolled at least half time (six or more credits per term) in a certificate- or degree-granting program. • Effective July 31, 2013, there will be a new limit on eligibility for Direct Subsidized Loans for new borrowers on or after July 1, 2013. New borrowers who begin their college enrollment on or after July 1, 2013 will not have access to subsidized loan funds beyond 150% of the credits required for their degree or certificate program.	• Loans of up to $3,500 per year are available to first-year students through the U.S. Department of Education. • Students in the second year of their programs (45+ credits) may borrow up to $4,500 per academic year.	• You must first apply for a Pell Grant by completing the FAFSA. • A separate application is required for this program. • You are strongly encouraged to apply for grants administered by the state aid agencies in your state of legal residence. • Nonresidents may pick up the addresses of their state grant programs from LBCC's Financial Aid Office. • A 1% loan origination fee is charged. This rate may be affected by federal legislation. • The interest rate on a Federal Direct Loan is fixed at 6.8 percent. • Effective through June 30, 2014, interest will begin to accrue after you cease to be enrolled at least half time. • Loan repayment begins six months after you cease to be enrolled at least half time.

** Information subject to change.*

	Eligibility Requirements	Amounts Available	Special Information
STUDENT LOANS–CONT.			
Unsubsidized Federal Direct Student Loans	• Students who are not eligible for subsidized Federal Direct Loans are eligible for unsubsidized loans, regardless of need. • Be enrolled at least half time (six or more credits per term) in a certificate- or degree-granting program.	• Dependent students may borrow up to an additional $2,000 yearly. • Independent students may borrow up to an additional $6,000 yearly. • Students may borrow up to the same limits as their Federal Direct Loan limits less any subsidized loan received.	• Loan conditions are similar to the subsidized Federal Direct Loan except that the borrower is responsible for the interest on the loan while attending school. • The interest rate on an unsubsidized Federal Direct Loan is fixed at 6.8 percent.
Federal Plus Loans	• These loans are available to parents of dependent undergraduate students regardless of need. • Loans require credit check • FAFSA must be filed. • Be enrolled at least half time (six or more credits per term) in a certificate- or degree-granting program.	• Parents may borrow up to the difference between the student's estimated cost of attendance and any financial assistance annually for each dependent student. • There is no longer an aggregate maximum under this program. • The amount of Federal PLUS is limited by the amount of other aid the student receives. The loan amount cannot exceed the difference between the cost of attendance and estimated financial assistance.	• Your FAFSA aid application must be completed and processed before your eligibility for the PLUS Loan can be determined. • Federal PLUS loans may be used to substitute for the family contribution. • Federal PLUS loan checks are co-payable to the parent and the school and must be disbursed in at least two installments. • Interest is fixed at 7.9 percent. • There is no federal interest subsidy on PLUS Loans. • A 4% loan origination fee is charged. • Repayment of principle and interest begins 60 days after disbursement; if the parent borrower qualifies for a deferment, repayment of principle only is deferred. Interest must be paid unless it is capitalized by the lender. • Applications available at the Financial Aid office and its Web site: *www.linnbenton.edu/financial-aid.*
Eldon Schafer Student Loan Fund	• Provides loans to students with short-term needs.	• Students may borrow up to $200 beginning the first day of the term through the ninth week of the term. • Determined by donor	• No loans will be made during final exam week or between terms. Only one loan per student per term is permitted. • A $5 loan fee is charged. • Loans must be repaid by the end of the sixth week of the term. • Applications are available at the Business Office.
SCHOLARSHIPS/OTHER			
Scholarships	• Determined by donor		• Scholarship information is available from the Financial Aid office and its Web site: *www.linnbenton.edu/financial-aid.*
Tuition Reduction for the Unemployed	• District residents who attend part time and are unemployed are eligible to apply.	• 50 percent tuition reduction for up to six credits of enrollment.	• Application available at Registration Office and Extended Learning centers.
Golden Age Program	• Oregon residents 62 years of age or older are eligible.	• 25 percent tuition reduction.	• Inquire at time of registration for classes at Albany campus or Centers.
Career Information System (CIS) Aid Sort	• Computer program identifies thousands of national, state and local sources of scholarships, loans and other awards.	• Amount varies.	• Call the Career Center, 541-917-4780, for an appointment at the computer to use AID SORT.

Warning! If you receive federal and/or state aid based on inaccurate information, you will have to pay it back; you also may have to pay fines and fees. If you purposely give false or misleading information on any documents used to determine your aid eligibility, you may be fined $20,000, sent to prison, or both.

Student Services-Academic Support

Admissions/First Stop Center

Takena Hall - 115, 541-917-4811, admissions@linnbenton.edu, linnbenton.edu/admissions

The First Stop Center in Takena Hall provides a central location for obtaining LBCC information, referral and directions. Our staff are here to help increase student awareness of and access to support services.

Student ID Card

Admissions, Takena Hall - 115, Monday – Friday

You will need a valid LBCC student photo identification card to use many of LBCC's services, including the Library, the Business Office, Assessment Center, Learning Center and Bookstore. A valid student ID card allows you free rides on public transportation and entitles you to discounts on certain merchandise or services in the community. You must be a registered student in order to obtain an ID card for a one time non-refundable $10 fee. Each term you register, you can renew your card for free by bringing it with your class schedule to Admissions.

Advising

linnbenton.edu/career-services/advising

New students are assigned a specific advisor, based on their declared major, as part of participation in the Destination Graduation class, a required class held during newly admitted students' first term. Students who have not yet decided on a specific major are assigned a counselor as their advisor. Students can find the name of their advisor in their WebRunner account, once the first term begins. Academic advisors assist students in developing an education plan which takes into account the student's career goals and major. Students are expected to meet with their advisor each term and whenever they have questions. Students play an important role in forming a productive relationship with their academic advisor, and are expected to schedule appointments ahead of time and come prepared to the appointment.

Student Assessment Office/ Placement Testing

RCH-111, 541-917-4781, linnbenton.edu/student-assessment

Before registering, all newly admitted full-time students are required to take the Computerized Placement Test (CPT) to determine appropriate class placement or prequest to have the exam waived based on prior completion of appropriate college courses. Part-time students who are registering for math or writing classes also must take the CPT or request to have it waived. Appointments are made online for the CPT at linnbenton.edu/student-assessment. Contact the Office of Disability Services to arrange test accommodations. The Assessment Office also offers a variety of other tests for students and community members. They include:

- General Education Development (GED) test for the certificate of high school equivalency
- College Level Exam Program (CLEP) test for college credit by examination
- Course challenges that enable students to earn college credit by examination without completing regular credit coursework;
- Proctored exams
- LBCC course make-up tests

New Student Success Options in Mathematics

LBCC has designed the following courses to refresh skills prior to taking a course or perhaps accelerate students to the appropriate transfer-level mathematics course. Students should check with their academic advisor when making a decision about an appropriate mathematics pathway.

SS1.127 Math Boot Camp is a one-week, one-credit course that runs prior to the start of each term aimed at giving students time to refresh math skills for an upcoming course or to work on improving math placement. Math Boot Camp is designed for students who have been placed into MTH 020, 060, 065, or 095 and is designed to be an intense review of past knowledge, not a time to learn new material. Students will be guided by a mathematics instructor using online software to work through the review of skills and concepts.

MTH 015 Math Fast Track is a 10-week, five-credit course for students who have perhaps been out of school a while and forgotten some math skills. Students in Math Fast Track work at a faster pace than in other courses, with the goal of increasing their math placement by more than one class in a single term. To be successful in Math Fast Track, a student must be motivated and must have ample time outside of class dedicated to working on the material. Students and their instructor will determine a timeline for completing work. Math Fast Track is taught using online software to relearn forgotten math skills.

MTH 098 Foundations for Contemporary Math is a 10-week, five-credit course that is an alternate path to MTH 105, a transfer-level mathematics course. For students pursuing a degree whose mathematics requirement can be satisfied by MTH 105, this pathway (MTH 098) will prepare you for success in MTH 105 in just one term. Students on this pathway take MTH 098 instead of the traditional algebra sequence. This course, therefore, is only for those students who do not need MTH 111, or any class for which MTH 111 is a prerequisite, in their degree plans. Students should check with their academic advisor about taking advantage of this alternate path. Please note:

- MTH 098 is NOT for students who need to take MTH 111.
- Students taking MTH 098 should sign up for MTH 105 for the following term.
- MTH 098 is a 5-credit course that requires active participation from every student.
- Excel and computer access will be needed throughout.
- Exams will be taken outside of class in a testing center.
- The student should have taken algebra in high school.
- Forgotten math skills will be recovered when needed, so there is no prerequisite.
- A reading placement of at least RD 090 is recommended.
- If the student has been out of high school algebra for several years then it is recommended that the student take MTH 020 and MTH 060 before taking MTH 098.

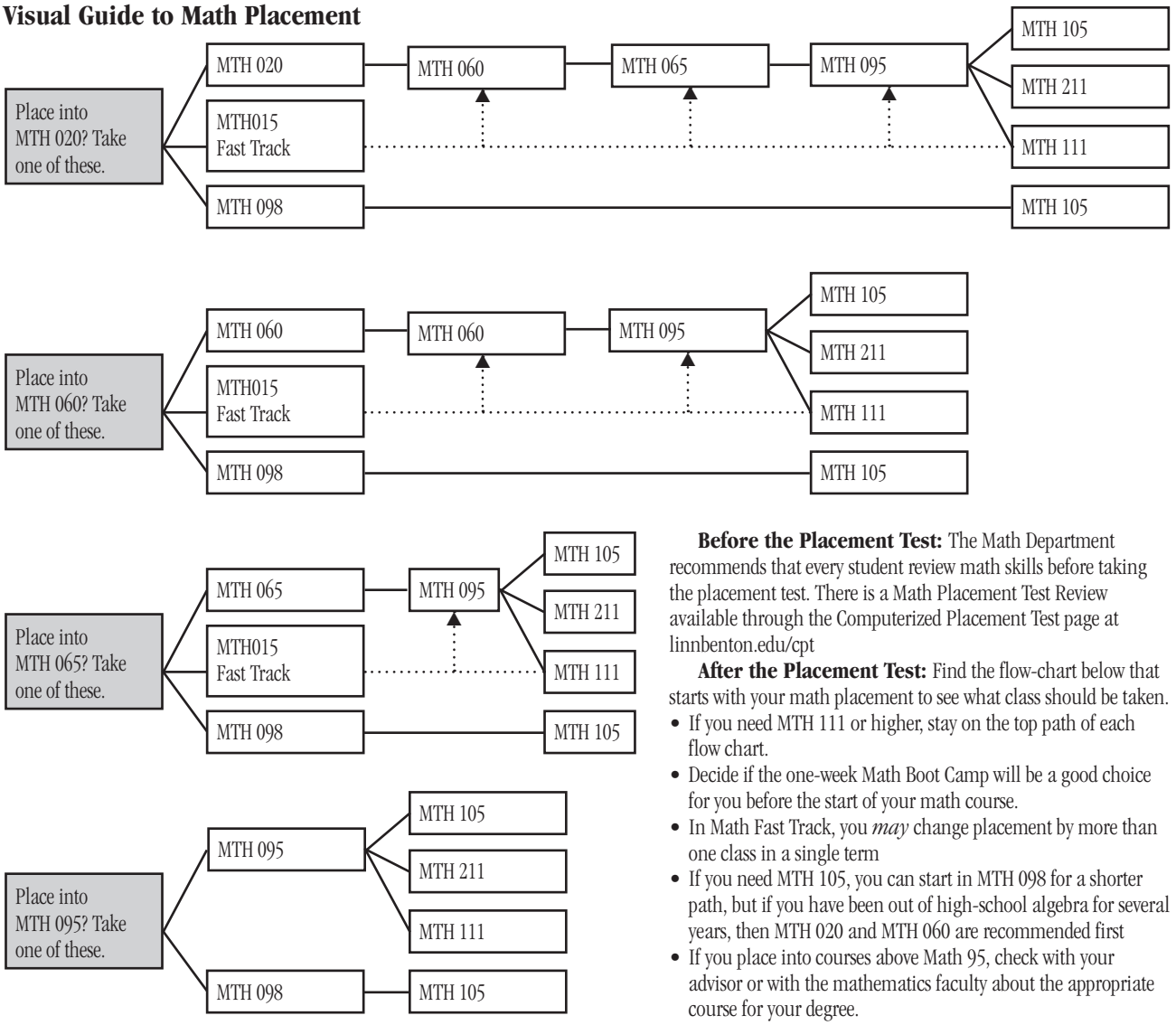
Please see the Visual Guide to Math Placement on the next page for more information.

Career and Counseling Center – Counseling Services

Takena Hall 101, 541-917-4780, linnbenton.edu/career-services

The primary goal of Counseling Services is to provide opportunities for students' to clarify and attain their educational and personal goals. Counselors are committed to each student's academic success and deliver a range of free services including academic, career, and personal counseling. Counseling services are also available at the Benton, Lebanon, and Sweet Home Centers.

Visual Guide to Math Placement



Before the Placement Test: The Math Department recommends that every student review math skills before taking the placement test. There is a Math Placement Test Review available through the Computerized Placement Test page at linnbenton.edu/cpt

After the Placement Test: Find the flow-chart below that starts with your math placement to see what class should be taken.

- If you need MTH 111 or higher, stay on the top path of each flow chart.
- Decide if the one-week Math Boot Camp will be a good choice for you before the start of your math course.
- In Math Fast Track, you *may* change placement by more than one class in a single term
- If you need MTH 105, you can start in MTH 098 for a shorter path, but if you have been out of high-school algebra for several years, then MTH 020 and MTH 060 are recommended first
- If you place into courses above Math 95, check with your advisor or with the mathematics faculty about the appropriate course for your degree.

Career and Counseling Center – Career and Student Employment Services

Takena Hall 101, 541-917-4780, linnbenton.edu/studentemployment

The primary goal of Career and Employment Services is to provide assistance with career information and job search. Career and Employment Specialists are committed to student success and deliver a range of free services including career testing, career exploration, and job search techniques. LBCC students and alumni may also access information about part-time, full-time, temporary, or permanent job opportunities by registering on LBCC's Student Employment referral service. Career and Employment Services are also available at the Benton and Lebanon Centers.

General Education Development (GED®)

Luckiamute Center, 541-917-4710, linnbenton.edu/absd

See "Diplomas" in the Programs of Study section of this catalog.

Adult Basic Education (ABE/GED®)

Luckiamute Center, 541-917-4710, linnbenton.edu/absd

The ABE/GED® program offers a variety of classes to adults who want to improve their basic skills, or prepare to take the GED® exam. Instruction is varied, and the emphasis is on a positive learning environment. Day and evening classes are available on the Albany campus and at the Benton, Sweet Home and Lebanon centers. Every new student must attend an orientation and pay a $30 enrollment fee at the time of registration. If you need extra help, you may be able to get a private tutor during class time.

If you are under 18, you must present either a signed Release from Compulsory Attendance (ORS 339.30) or an Underage Enrollment form, which you can obtain from your local school district. New students must attend an orientation before enrolling in classes.

English for Speakers of Other Languages (ESOL)

The English for Speakers of Other Languages (ESOL) program is presented by the English Language and Culture Institute in partnership with LBCC. ELCI provides instruction for students with a wide range of English language proficiency and personal needs. For information, contact ELCI at 541-918-8800.

Disability Services

Red Cedar Hall, RCH-105, Voice: 541-917-4789,
linnbenton.edu/ds

The Office of Disability Services (ODS) plans accommodations for LBCC students and event guests who are eligible for services. ODS staff members offer disability-related information, planning and advocacy. A variety of services (i.e., test accommodations, including college placement tests, sign language interpreting, alternate formats, note taking) are customized, based on disability documentation provided by the student. LBCC does not test or diagnose disabilities. If you seek disability accommodations, complete ODS "Getting Started" forms and submit copies of your disability documentation. Forms may be picked up at RCH-114 or online at linnbenton.edu/ds/forms. Initial documentation is the student's responsibility and may take days to weeks. For information on any disability-related matter,

contact ODS at 541-917-4789 or email ODS@linnbenton.edu. Telephone Service for Hearing and Speech Impaired Students and staff may use the Oregon Telecommunication Relay Service (OTRS) at 1-800-735-2900. Disability Services offers a semi-quiet testing space and provides assistive technology and software designed to support students with disabilities. A few of the thigns ODS offers include:

- Adjustable and accessible computers
- Assistive Technology
- Test accommodations
- Notes and alternate format pick up for students receiving disability accommodations.

The Learning Center—Albany Campus

Willamette Hall 200, 541-917-4684 ,
linnbenton.edu/learning-center

The Learning Center provides students with academic assistance in an informal study area. Students will find a supportive environment designed to help them succeed – tables and chairs, good lighting, whiteboards, group study rooms, and various tools and equipment – and a welcoming and professional staff. Students may eat or drink in the study areas.

Services include:

Math Assistance: The drop in Math Desk provides a supportive place where students can get help with all LBCC mathematics courses. Calculators and math videos for some courses are available to checkout in the Library. Instructional assistants are always available to answer questions about mathematics or calculators.

Writing Assistance: Two services: Writing Center assistants clarify how to organize and develop essays for writing assignments in any class, including scholarship applications. The College Skills Zone emphasizes grammar, punctuation and sentence structure. Through the Learning Center's website, students may also register to use the Online Writing Lab (OWL). Written responses are provided in 24-48 hours during normal operating hours.

Computer Lab Support: Find assistance with word processing, Internet access and email questions. Wireless Internet access is provided throughout the facility.

College Skills Zone: Students can drop in to discover learning strategies that will improve their ability to study, read textbooks and take tests.

Student Work Area: A coin-operated copy machine and other office supplies are available.

Math Testing Center: Instructors for below 100 level college preparatory mathematics, writing, or reading/learning strategy courses may make arrangements for their students to take tests in a quiet testing environment. A student Photo ID is required. Cell phones are prohibited. Lockers are provided.

Tutoring: Students may register for free individual tutoring appointments at the Tutoring Center. Once registered, students may schedule tutoring sessions online using the TutorTrac program. In addition, the Math Angle offers drop-in math tutoring with a learning strategy emphasis for students enrolled in Math 15 through Math 97. Weekly Tutor Assisted Study Support (TASS) sessions to review course concepts are offered when there is sufficient student interest. Students may pre-register for tutoring each term by following the links at the Learning Center or Tutoring Center websites.

Student Services-Student Support

Bookstore

Calapooia Center, CC-114, 541-917-4950, bookstore.linnbenton.edu

The LBCC Bookstore carries texts and supplemental materials for courses taken on all campuses. The bookstore also offers art and school supplies, gifts, insignia sportswear, computer software, electronics, general interest books and convenience store merchandise. Bookstore hours are 7:30 a.m. to 4:30 p.m., Monday through Thursday, 7:30 a.m. to 3:30 p.m. Friday. Visit our website for online ordering, book buyback information, store closure dates, extended hours, store events and more. Textbooks and supplemental materials for classes offered at Benton Center and Lebanon Center are also available at their respective locations. Lebanon Center also carries textbooks and supplemental materials for Sweet Home courses.

Campus Public Safety

RCH-119, 541-917-4440, (541-926-6855 after hours),
linnbenton.edu/public-safety

The Campus Safety Office is open Monday through Friday, 7:30 a.m. to 5:15 p.m. Campus Security Officers can be reached 24 hours a day by calling 541-917- 4440 or 541-926-6855, or using a designated Campus Security phone. Dial 411 if calling direct from campus phones.

Child Care

541-917-4898, linnbenton.edu/familyresources/pcdc/oncampuschildcare

LBCC partners with Kidco Head Start to offer comprehensive infant/ toddler and preschool options to full-time LBCC students. Our program serves children from birth to 5 years old. Families must meet federal Head Start guidelines. The center operates five days a week; 7:30 – 5:30 for our infant/toddler children and 8:45 – 3:05 for our 3, 4 and 5-yearolds. Applications are available by phone by calling Family Connections at 541-917-4899 or Kidco Head Start at 541-451-1581.

Child Care – Family Connections

Luckiamute Center 132; 541-917-4899, 1-800-845-1363;
email: connect@linnbenton.edu

If you need child care, are having difficulty with your current child care arrangement, or want to ask questions of a child care specialist, call or stop by Family Connections, Luckiamute Center. Family Connections staff can also help with referrals to parent education, recreation, or other family support programs in the community. This program is supported by the Associated Students of LBCC so students are not charged for services, and includes the Lifespan Respite Program, serving families with children with special needs and those caring for elders.

Computer Labs

linnbenton.edu/computer-resources-and-labs

All full- or part-time LBCC students and staff are eligible to use the student computer labs for course-related learning and research. Computer labs are available on the LBCC Albany campus and the centers in Corvallis, Lebanon and Sweet Home. The labs are open various times. For lab locations, hours, hardware and a list of software available, check online or call the lab:

- Albany Campus, F-204, Forum Lab – 541-917-4470
- Albany Campus, Willamette Hall, Learning Center Lab – 541-917-4698
- Albany Campus, Willamette Hall, Library – 541-917-4638
- Corvallis- Benton Center, BC-222, Learning & Career Center – 541-757-8944, ext. 5101
- Lebanon Center – 541-259-5817
- Sweet Home Center – 541-367-6901

Library

Willamette Hall • linnbenton.edu/library
Circulation and Evening: 541-917-4638
Reference: 541-917-4645
Department Chair: 541-917-4641

The LBCC Library provides resources and services for the instructional, research, and general information needs of students, faculty, staff, and local residents. The Library provides comfortable open space for collaborative work, study rooms, and a beautiful reading room.

Located in Willamette Hall on the main Albany campus, the Library collection integrates a large collection of books, reserve textbooks, and multimedia items as well as drop in computer workstations and a computer lab. Materials not held in the Library's collection may be obtained for LBCC students, faculty, and staff at no charge through interlibrary loan. Our many databases help you locate scholarly journal articles, electronic books, magazines, videos, and other sources. Off campus access to these databases is available to LBCC students, faculty, and staff. Librarians are available to provide research help at the reference desk or during instructor-scheduled library classes.

The Student Help Desk provides assistance with student computing and technical needs, including e-learning (Moodle), student email accounts, wi-fi access, Pay4Print, and other common software.

Materials not held in the Library's collection may be obtained for LBCC students, faculty and staff at no charge through interlibrary loan.

Lost and Found - See Campus Safety

Parking

RCH-119, 541-917-4440

Parking for students, staff and visitors is free and available on a firstcome, first-served basis. Some parking areas are designated for specific use. Unauthorized overnight parking is prohibited. Parking permits are available at no charge from the Campus Security Office; although permits are not required, they are highly recommended.

A pamphlet outlining parking and traffic rules is available from Campus Security. Improperly parked vehicles are subject to a fine, and vehicles parked for an extended period of time are subject to towing at the owner's expense.

Temporary disabled parking permits can be obtained from the Campus Security Office. However, it is recommended that individuals obtain an Oregon Department of Motor Vehicle Disabled Permit, if applicable.

Student Life and Leadership

Student Union, 541-917-4457,
linnbenton.edu/student-life-and-leadership

Becoming involved with clubs and co-curricular programs can enhance your college experience. LBCC has many active clubs, and students are free and encouraged to form their own clubs to reflect their own interests. Examples of clubs and co-curricular programs include Campus Recreation, Performing Arts, Vocal Music, Remote Operated Vehicle Team, Equestrian Team, Gay-Straight Alliance, Active Minds Club, Veteran's Club, Ultimate Frisbee Club, Students for Life Club, and Phi Theta Kappa Honor Society. Student activities, organizations and campus recreation are open to all students.

Student Leadership Council: Student Government and Programming:

The Student Leadership Council gives you the opportunity to serve on college committees, participate in student government and coordinate student activities. Student leaders hold positions on the SLC through an appointment process. An admitted student who meets eligibility requirements is eligible to hold a position. SLC positions range from event planning to student advocacy and governing. Students who serve on SLC are eligible to receive tuition grants. Contact Student Life and Leadership at 541-917-4457.

Department of Equity, Diversity & Inclusion (EDI)

F-220, 541-917-4461, linnbenton.edu/dac

EDI focuses on creating a campus that embraces equity and the uniqueness of every individual while promoting the free and civil expression of ideas, perspectives and cultures. The Diversity Achievement Center serves as a welcoming space where all can come to explore and engage acceptance and honor difference, diversity and inclusion in all of its complexities.

Publications

LBCC students publish a newspaper, The Commuter, which has won awards for excellence. If you are interested in participating, contact the English Department or The Commuter Office on the second floor of the Student Union building.

Benton Center

Administrative Office, 541-757-8944, ext. 5105,
bcinformation@linnbenton.edu
linnbenton.edu/go/benton-center

Regional Director for Benton County
Jeff Davis, 541-757-8944, ext. 5104, *jeff.davis@linnbenton.edu*

Director of Community Education:
Chris Nystrom, 541-757-8944 ext.5120, *chris.nystrom@linnbenton.edu*

Benton Center Coordinator
Toni Morrison, 541-757-8944 ext. 5105 , *morrist@linnbenton.edu*

The Benton Center brings LBCC's quality education directly to Benton County residents. Conveniently located in the heart of Corvallis, the Benton Center offers a wide range of programs that include:

- Lower division transfer classes for both day and evening students
- Professional technical training
- GED preparation
- Business technology and accounting skills
- Basic training in math, writing and computer skills
- Business development and contract training
- A pre-school cooperative and parenting classes
- Noncredit lifelong learning classes for all Benton County residents through Community Education in art, fitness, foreign languages, computer training and more

The Benton Center offers many of the credit courses necessary for transfer to OSU and other four-year colleges. LBCC and OSU students can take classes at either institution (or both) through our Degree Partnership program. The transfer courses offered at the center are the same comprehensive courses offered at other LBCC sites. Detailed course descriptions can be found in this catalog. A current schedule of Benton Center classes can be found on the college Web site and in the printed schedule of classes.

The Benton Center supports its students with services including advising, placement testing, registration, and a bookstore. Career counseling and college advising are available free of charge at the center. Call 541-757-8944, ext. 5101 to set up an appointment.

The Benton Center is located at 757 Polk Street, Corvallis, 97330. The center can be reached by calling 541-757-8944. Send email questions to *bcinformation@linnbenton.edu*.

Linn Centers

Regional Director for Linn County:
Gary Price, 541259-5808, *gary.price@linnbenton.edu*

Director of Community Education:
Chris Nystrom, 541-757-8944 ext. 5120, *chris.nystrom@linnbenton.edu*

Coordinator, Albany Community Education:
Linda Milligan, 541-917-4840, linda.milligan@linnbenton.edu

Coordinator, Lebanon and Sweet Home Centers:
Mary Sue Reynolds, 541-259-5807, *reynolm@linnbenton.edu*

linnbenton.edu/albany-community-ed
linnbenton.edu/lebanon-center
linnbenton.edu/sweet-home-center

The Lebanon and Sweet Home Centers provide direct access to educational programs to East Linn County residents. The centers provide comfortable, welcoming environments for first-time students and those returning to college. Among the programs offered are:

- Lower division transfer classes for both day and evening students
- Adult basic skills and GED preparation
- Business technology and accounting skills

- Basic training in math, writing and computer skills
- Health occupations
- Professional technical training
- Small business development
- Parenting classes
- Noncredit lifelong learning classes for all Linn County residents through Community Education in art, fitness, foreign languages, computer training and more

The transfer courses offered at the centers are the same comprehensive courses offered at other LBCC sites. Detailed course descriptions can be found in this catalog. A current schedule of Lebanon and Sweet Home Center classes and hours of operations can be found on the college Web site and in the current printed schedule of classes.

The Lebanon and Sweet Home Centers support students with services including advising, registration and tuition payments, financial aid information, placement testing, labs, tutoring , an academic support/learning center and a bookstore.

Call 541-259-5801 in Lebanon or 541-367-6901 in Sweet Home to set up an appointment.

The Lebanon Center is located at 44 Industrial Way, Lebanon, Oregon 97355, 541-259-5801 and the Sweet Home Center is located at 1661 Long Street, Sweet Home, Oregon, 541-367-6901. Send email questions to lebanon@linnbenton.edu or sweethome@linnbenton.edu.

The Albany Community Education Office, located in Takena Hall, T-205, on the Albany Campus, offers workshops and classes for professional development, personal growth, and lifelong learning. Classes are offered at various sites within the greater Albany area in cooperation with community organizations. The office also coordinates Driver Education, Motorcycle Safety, and Tractor Safety throughout Linn and Benton counties. A current schedule of Albany Community Education classes and hours of operation can be found on the college Web site and in the current printed schedule of classes.

Resources for Families

These departments/programs offer information and assistance to parents interested in helping their children develop into healthy adults. Classes for parents, child care providers and educators are offered each term.

Family Connections

Program Contact:
Jerri Wolfe, 541-917-4899; 1-800-845-1363; email: connect@linnbenton.edu

For families, Family Connections offers comprehensive information, education and advice on: child care, short-term respite care, parenting, family activities and support groups in Linn and Benton counties.

For child care providers, Family Connections offers a variety of evening and weekend classes and short term training. These classes are designed to assist child care providers in meeting state training requirements, to participate in the Oregon Registry, to aid in program improvement, or to enroll in LBCC's certificate or degree programs through the Childhood Care and Education programs.

Parent Advice Line provides consultations by phone at 1-800-845- 1363 or 541-917-4899.

Parenting Education

Program Contact: Jerri Wolfe, 541-917-4891
Additional Faculty: Cyrel Gable

The Parenting Education Department promotes the development of knowledge and skills for strong families through classes, workshops and home visits. Programs are offered throughout Linn and Benton counties and serve parents and other primary caregivers and professionals working with parents.

Community Parenting Program

Parent/Child Classes. Parents of babies through adolesents can attend classes with their children in many communities in Linn and Benton counties. Parents discuss parenting topics and join in activities while their children learn and grow with other children.

Parenting Classes. A wide variety of classes and workshops are offered in partnership with schools and community organizations in Linn and Benton counties. Classes are designed to enhance parent-child relationships, strengthen parenting skills, and prevent and correct problem behaviors in children.

Parenting Educator Training

The Parenting Education Department offers training for professionals working with parents in a parenting educator role. The Parent Educator listserv (PEC) provides information on upcoming classes and up-to-date information on new resources, research, and best practices in parenting education.

Community Collaborations

The Parenting Education Department facilitates the Parenting Success Network, a coalition of organizations in Linn and Benton counties dedicated to strengthening and supporting families. The coalition seeks to promote positive parenting practices, normalize parenting education, build a coordinated system of parenting education and improve the access to and quality of all parenting education opportunities. More information at: parentingsuccessnetwork.org

Other Learning Opportunities

Distance Education

Manager: Steve Smith; Willamette Hall 110, 541-917-4604

LBCC's distance education courses allow students to earn degrees or upgrade existing skills at their own convenience. Students who find it difficult to attend a course on campus have an alternative that gives them the flexibility of pursuing their educational goals by utilizing the Internet. This technologies deliver educational opportunities directly to the student, whether in the home, in the workplace or in a distant community. LBCC has taught distance education classes to more than 20,000 students since 1979. Please refer to the Distance Education pages of the quarterly Schedule of Classes for a list of these courses.

Registration Information

Students register for distance learning classes the same way they do for regular LBCC courses. For complete class information: linnbenton.edu/distance-education. Distance learning students may become fully admitted to LBCC.

Students may apply for admission, take placement tests, complete orientation, use advising and register for classes online.

Admission forms are available at linnbenton.edu/admissions. Click on "Forms" and select "Application for Admission." Complete the application and mail it with the $30 application fee.

Schedule your Computerized Placement Test: linnbenton.edu/ student-assessment. Tests must be proctored. Appointments are required. The math, reading or writing placement test is required of all admitted students and non-admitted if you choose to take a math, reading or writing course as a part-time student. If you believe you already possess course skills, you may request to have the test(s) waived by completing a Petition to Waive form (available at the Admissions Web site) and by submitting documentation of previous college coursework.

Cooperative Work Experience

Takena Hall 101, 541-917-4787, linnbenton.edu/cwe

Cooperative Work Experience (CWE) provides you with the opportunity to earn up to 14 credits for working or volunteering in a job related to your LBCC program of study. This allows you to explore an occupation, gain work experience, make professional contacts and apply classroom knowledge to real-world settings. You may be exposed to work methods not taught in the classroom and have access to equipment not typically available in the college laboratory. A primary focus of CWE is to reinforce classroom theory and provide learning experiences not available in the classroom.

All students in CWE register also in WE 202 CWE Seminar, an opportunity to share work- related experiences and an opportunity for the CWE coordinator to monitor student progress.

If you are interested in building Cooperative Work Experience into a program at LBCC, discuss it with your program advisor and the CWE coordinator to plan the most appropriate term for registration. You should plan your CWE the term before you begin working and allow ample time for locating a training site.

Service Learning

Takena Hall T-101, 541-917-4787, linnbenton.edu/cwe

Service Learning is another way of earning credit for experience outside the classroom. Like Cooperative Work Experience, Service-Learning allows you to gain experience related to your major. The distinction is that Service-Learning allows you to apply your skills working with community partner non-profits in addressing real community needs. In addition to identifying learning outcomes,

you engage in faculty-led, guided reflection activities designed to promote critical thinking, citizenship and civic responsibility. The reflection may take the form of discussion, oral presentations or a reflective journal.

If you are interested in receiving credit for Service Learning, please contact the Service Learning Coordinator the quarter before you wish to register to allow time to discuss your interests and goals and to find a Service Learning site. Students may also participate in service projects sponsored by LBCC Student Life and Leadership. Some instructors also choose to incorporate Service Learning into their curriculum.

Reserve Officer Training Corps

ROTC Coordinator:

Rich Horton, 541-917-4791; Takena Hall 101

In cooperation with Oregon State University, LBCC provides an opportunity for men and women to participate in courses that are part of Reserve Officers Training Corps program while attending LBCC. All the courses are taught on the OSU campus. Students pay regular LBCC tuition rates to participate in the course work.

Through a program of instruction coordinated with the normal academic curriculum, ROTC selects and prepares individuals to serve as officers in the regular and reserve components of the Army and Air Force. ROTC strives to develop students morally, mentally and physically; cultivate in them a capacity for leadership; and to provide them with the basic working knowledge required of a young officer.

Aerospace Studies (Air Force ROTC)

Air Force ROTC allows you to compete for a commission as an officer in the United States Air Force. Opportunities exist for well-qualified students from all fields. Scholarship opportunities are especially bright for students with majors related to science, engineering and mathematics. The Air Force is particularly interested in students who are leaning toward careers as pilots or navigators. Two- and four-year programs are available.

Army ROTC

This program offers eligible men and women the opportunity to compete for commissions as officers in the United States Army. Basic and advanced programs with multiple entry points can be tailored to your needs. If you are interested in an aviation career, you will have the opportunity to become an officer pilot in fixed or rotary wing aircraft. Merit scholarship opportunities exist for students in any approved academic discipline, particularly in engineering, science, business and social science.

Workforce Education- Health Occupations

Contact:
Ann Buchele, 541-917-4932

Nursing Assistant Program
Regional High School Health Occupations Program

Program Director, Faculty: Chelle Pokorney, 541-917-4516

Educational opportunities include Nursing Assistant level one and CNA level two and Certified Medication Aide training for community partners. This program also oversees coordination of the Regional High School Health Occupations programs for High Schools in Linn and Benton county.

Jobs Program

Faculty:
Beth Graham, 541-917-4875

Work Experience Coordinators:
Barb Newton, 541-259-5827 (Lebanon)
Connie Lenderman, 541-757-4277 (Corvallis)
Sally Kohler, 541-791-5844 (Albany)

Program Assistant:
Teri Nightingale 541-917-4870

The JOBS (Job Opportunities and Basic Skills) Program offers participants a unique opportunity to explore options available to them as they make life and career transitions. Staff members work closely with other college departments and community organizations to provide educational, professional, technical and counseling services as part of their comprehensive job training and educational programs.

The goal of the JOBS Program is to enable individuals to make the transition from public assistance to self-sufficiency. Students are referred by the Oregon Department of Human Services and work with college faculty to develop individual programs that help prepare them for full-time, unsubsidized employment. Instructional areas include life and career planning; adult basic education; short-term, intensive professional/technical training; work site training; job search instruction and job retention and career development.

Accelerated Short-Term Training

Faculty: Marty Schulz, 541-917-4934

Accelerated short-term trainings are certificate programs that focus on specific skills for entry level positions in the health-care field. These state-approved certificate programs are offered one time per year, depending on the local job market and the number of interested students. A group of 16 to 24 students completes the program together and attends class for approximately 30 to 40 hours each week.

The advertised price includes tuition, fees, books and supplies. Costs range from $4,500 to $8,500. and are subject to change.

Workforce Education- Workforce Training

Contact: Gary Price, 541-917-4589

Fire Science

Contact: 541-917-4974

Fire Science classes are available to paid and volunteer firefightersbased on demand.

Small Business Development Center

Faculty: Barbara Bessey, 541-917-4930

The Small Business Development Center (SBDC) provides assistance to entrepreneurs through the entire life cycle of their small business including start-up advice, business planning, funding acquisition, financial management and marketing strategies. The SBDC provides confidential 1:1 business advising, offers workshops on numerous business topics and can help business owners locate resources in the community. Through its MicroEnterprise and Small Business Management programs the SBDC offers intensive business skills development as well as monthly access to instructors and advisors. The LBCC SBDC is jointly sponsored by the College, the Small Business Administration, Oregon Business Development Dept and various grants from local businesses and municipalities.

Customized Employee Training and Professional Skills Development

Faculty: Joseph Bailey, 541-917-4935; Karin Magnuson, 541-917-4276

It's a great time to develop or upgrade your workplace skills. We provide customized training whenever and wherever it is needed. Business and Employer Services' Customized Training has the expertise and resources to develop and deliver training based on the needs of businesses and industry. Topics and services that can increase the performance of people in your organization include leadership, supervision, planning, facilitation, coaching, on-the-job training skills, lean manufacturing and lean office.

Workplace Skills Development offers quality, affordable and convenient professional skills development options for businesses and individuals through half-day supervision, communication, effective workplace relationships and customer service skills workshops. We also offer safety training, traffic control-flagger, wildland firefighter basic training and many other offerings.

LBCC DEGREES AND CERTIFICATES

Associate of Science (AS) • Associate of Applied Science (AAS) • Associate of Arts Oregon Transfer (AAOT) • 1-Year & Short-Term (ST) certificates

	AS	AAS	AAOT	1-YR	ST
Agricultural Sciences					
Agricultural Business Management	•				
Agricultural Sciences	•				
Animal Science	•				
Animal Technology		•			
Animal Technology/ Horse Management		•			
Crop Production		•			•
Equine Science	•				
Horticulture	•	•		•	
Profitable Small Farms				•	
Business					
Accounting Clerk				•	
Accounting Technology		•			
Administrative Medical Assistant		•			
Administrative Office Professional		•			
Business Administration	•		•		
Economics	•		•		
Healthcare Office Specialist				•	
Legal Administrative Assistant		•			
Merchandising Management	•				
Office Specialist				•	
Office Technology Skills					•
Retail Management					•
Computers					
Basic Networking					•
Computer Info. Systems: Health Informatics		•			
Computer Science	•				
Digital Imaging & Prepress Tech.				•	
Graphic Design		•			
Network & Systems Administration		•			
Social Media Technology					•
Systems Administration					•
Web/Database Technology		•			

	AS	AAS	AAOT	1-YR	ST
Criminal Justice					
Criminal Justice		•	•		
Juvenile Corrections				•	
Culinary Arts					
Culinary Arts		•			
Nutrition & Food Service Systems	•				
Education					
Child & Family Studies		•		•	•
Elementary Education	•		•		
Human Services	•				
Human Development & Family Science	•				
Instructional Assistant, Library					•
Health and Medical					
Coding & Reimbursment Specialist				•	
Dental Assistant				•	
Diagnostic Imaging		•			
Exercise & Sport Science	•		•		
Health Management & Policy	•				
Health Promotion & Behavior	•				
Medical Assistant		•			
Nursing		•			
Occupational Therapy Assistant		•			
Pharmacy Technician					•
Phlebotomy Technician					•
Polysomnographic Technology					•
Veterinary Assistant					•
Industrial					
Apprenticeship		•		•	•
Automotive Technology		•			
Civil Engineering Technology				•	
CNC Machinist					•
Construction & Forestry Equipment Technology		•			
Drafting & Engineering/Graphics Tech		•			
Industrial & Bldg Mechanic/Green Tech				•	

	AS	AAS	AAOT	1-YR	ST
Heavy Equipment/Diesel Technology		•			
Machine Tool Technology		•		•	
Mechatronics Industrial Automation Technology		•			•
Water, Environment and Technology		•			•
Welding & Fabrication Technology		•		•	
Liberal Arts & Communication					
Anthropology	•				
Art	•		•		
Communication	•				
English	•				
Foreign Language	•		•		
History	•				
Journalism/Mass Communications	•				
Liberal Studies	•				
Music	•		•		
Political Science	•				
Psychology	•				
Sociology	•				
Theater	•		•		
Math, Sciences & Engineering					
Biological Sciences	•				
Chemistry	•				
Engineering	•				
Environmental Sciences	•				
Food and Fermentation Science	•				
General Science	•				
Geology	•				
Mathematics	•				
Physics	•				
Also Available:					
Occupational Skills Training					•
AAOT (no emphasis)					
Undecided:					
Assoc. of General Studies (AGS)					
Oregon Transfer Module (OTM)					

LBCC ASSOCIATE OF SCIENCE DEGREES LEADING TO OSU DEGREES

LBCC Associate of Science Degree	OSU Degree
Agricultural Business Management	Environmental Economics & Policy (BS)
	Agricultural Business Management (BS)
Agricultural Sciences	Crop and Soil Science (BS)
	Agricultural Sciences (BS)
	Horticulture (BS)
Animal Science	Animal Sciences (BS)
Anthropology	Anthropology (BA or BS)
Art	Apparel Design (BS)
	Applied Visual Arts (BFA)
	Art (BA or BS)
	Interior Design (BS)
Biological Sciences	Biology (BS)
	Bioresource Research (BS)
	Botany (BS)
	Food Science & Technology (BS)
	Forest Management (BS)
	Microbiology (BS)
	Zoology (BA)
Biological Sciences or Chemistry or Physics	Biochemistry & Biophysics (BS)
Biological Sciences or Physics	Radiation Health Physics (BS)
Business Administration	Accounting (BS)
	Business Administration (BA or BS)
	Business Information Systems (BA, BS)
	Finance (BA, BS)
	Management (BA, BS)
	Marketing (BA, BS)
Chemistry	Chemistry (BA or BS)
Communication	Speech Communication (BA or BS)
Computer Science	Computer Science (BA or BS)
Economics	Economics (BA or BS)
Education*	Elementary: Human Development & Family Sciences or General Science or Liberal Studies (BA or BS)
	*Secondary: Academic subject major (BA or BS)
Engineering	Chemical Engineering (BS)
	Civil Engineering (BS)
	Construction Engineering Management (BA or BS)
	Ecological Engineering (BS)
	Electrical & Computer Engineering (BS)
	Environmental Engineering (BA or BS)
	Forest Engineering (BS)
	Forest Engineering – Civil Engineering (BS)
	Industrial Engineering (BS)
	Manufacturing Engineering (BS)
	Mechanical Engineering (BS)
	Nuclear Engineering (BS)
English	English (BA)

LBCC Associate of Science Degree	OSU Degree
Equine Science	Animal Sciences (BS)
Exercise & Sport Science	Exercise and Sport Science (BS)
Food & Fermentation Science	Enology and Viticulture Option (BS)
	Fermentation Science Option (BS)
	Food Science Option (BS)
General Science	General Science (BS)
Health Management & Policy	Public Health (BS)
Health Promotion & Behavior	Public Health (BS)
History	History (BA)
Horticulture	Horticulture (BS)
Journalism/Mass Communication	** (BA or BS)
Liberal Studies	Anthropology (BA or BS)
	Art (BA or BS)
	Communication (BA or BS)
	Economics (BA or BS)
	English (BA or BS)
	Ethnic Studies (BA or BS)
	Foreign Languages & Literatures (BA or BS)
	History (BA or BS)
	Liberal Studies (BA or BS)
	Music (BA or BS)
	Philosophy (BA or BS)
	Political Science (BA or BS)
	Psychology (BA or BS)
	Sociology (BA or BS)
Mathematics	Mathematics (BS)
Merchandising Management	Merchandising Management (BS)
Music	Music (BA or BS)
Nutrition & Food Sciences	Nutrition & Food Service Systems (BS)
Physics	Physics (BA or BS)
Political Science	Political Science (BA or BS)
Psychology	Psychology (BA or BS)
Sociology	Sociology (BA or BS)
Theater	Speech Communication Theater Arts Option (BA or BS)

*Education: Students who are interested in secondary education need an academic subject major and need to see an Education advisor. Students interested in either elementary or secondary teaching may also elect to complete an academic subject major and a double degree in Education.

**Journalism/Mass Communication: Students who complete the AS degree in Journalism should plan to complete the Liberal Studies degree at OSU. Contact the Journalism advisor at LBCC or the Liberal Studies advisor at OSU for a complete list of recommended courses.

Degrees

Associate of Applied Science

The Associate of Applied Science degree is intended primarily to lead students directly to employment in a specific career. Awarded to students who complete the requirements of a specified, two-year career and technical program, this degree is offered in a number of interest areas. (See the degrees and certificates chart.)

Associate of Arts Oregon Transfer

The Associate of Arts Oregon Transfer degree (AAOT), which is offered without a designated major, will satisfy the lower-division general education requirements of any institution in the Oregon University System (but not necessarily school, department or major requirements with regard to courses or GPA). You may work with your advisor to concentrate your studies in an area of interest.

For purposes of the Oregon AAOT degree, no student with a disability shall be denied the degree or the benefits flowing therefrom with respect to admission and matriculation at a state university because the student has been granted an academic adjustment or program modification in any course required for the AAOT degree. This provision includes course substitutions when granted as a disability accommodation in the manner prescribed by the student's community college. This provision may not necessarily apply to major specific course requirements or prerequisites.

Associate of Science Oregon State Direct Transfer (with an emphasis in a specific area)

The college offers an Associate of Science degree (AS), a lower-division degree intended to facilitate a transfer to Oregon State University.

Associate of General Studies

The Associate of General Studies (AGS) degree is awarded to students who complete a two-year curriculum, which may include lower-division collegiate and/or career and technical coursework. You may earn an Associate of General Studies degree in any program of study available at LBCC. Please refer to the Major Codes section of the quarterly Schedule of Classes for a complete listing of options. For degree requirements, see the end of each degree section.

Certificates

The chart at the beginning of this section lists the certificates that LBCC offers. Certificates are awarded to students who complete specific requirements within a career and technical major. Refer to the "Program Descriptions" section for these requirements. General certificates require a specified number of credit hours. Students must have a grade point average of at least 2.00 in required courses to earn a one-year certificate.

Career Pathways Certificates

Career Pathways Certificate of Completion is an Oregon community college credential comprised of 12-44 credits that are wholly contained in an approved Associate of Applied Science (AAS) Degree or an independent Certificate of Completion (45+ credits). Career pathways help guide students towards a specific profession by providing a defined list of courses offering expert training. The various courses help lead students to completion certificates and/or degrees that identify the student as being qualified to work in a particular field. Each pathway program at LBCC provides a "roadmap" that graphically shows the certificate or degree requirements and employment outlook (with related links) that will lead students to their desired education and employment goals.

Oregon Transfer Module

The Oregon Transfer Module is 45 credits of an associate degree. It is not a degree or certificate. Completing the Oregon Transfer Module allows students to seamlessly transfer 45 credits of general education requirements to any Oregon community college, Oregon university system institution, or participating Oregon independent college or university. The receiving institution may specify additional coursework that is required for a major or for degree requirements or to make up the difference between the Transfer Module and the institution's total General education requirements. For module requirements, see the end of each degree section.

Diplomas

Two LBCC programs enable students to obtain a high school diploma or high school equivalent.

Adult High School Diploma (AHSD)

LBCC is authorized by the state of Oregon to issue a competency-based adult high school diploma to adults (age 16 or older) who meet high school graduation requirements established by the college. Information about the AHSD program is available through the Alternative Learning Opportunities Office, the Counseling Center or Extended Learning centers. Applications are available from the Admissions Office.

General Education Development (GED)

GED preparatory classes are offered for adults who want to improve their general knowledge and skills in writing, reading, math, science or social studies. Individualized study and group work are provided. There is a $30 enrollment fee, and you may need to purchase texts and study materials. New students must attend a GED orientation before enrolling. If you already have a GED or high school diploma, you may still attend classes to upgrade your skills.

Destination Graduation

HD 120 Destination Graduation is a one-credit class for all newly admitted students (entering LBCC with less than 24 credits). Destination Graduation is a support class for students, designed to provide students with resources and strategies that will lead to a successful academic career. It is also through Destination Graduation that students are assigned their faculty Academic Adviser. Destination Graduation is an institutional requirement and registration upon matriculation is enforced.

General Graduation Requirements

Requirements for degrees, certificates and diplomas are subject to approval of the LBCC Board of Education, the Oregon Department of Education and the Department of Community College and Workforce Development.

Graduation is not automatic; you must submit an application for graduation by the end of the fourth week of the term prior to your graduation term. Application forms are available at the Admissions Office/First Stop Center in Takena Hall. Deadline dates for submitting an application for graduation are published in the Schedule of Classes each term.

General Requirements (apply to degrees, certificates and diplomas):

- You need to be admitted to the college.
- The awarding of a credential becomes official only when graduation information has been posted to your transcript.
- You need to complete program requirements from any of the last five catalog years in which you earned at least one credit.
- Credential requirements may not be combined from multiple years.
- You need to meet all graduation requirements of the credential program.

Degrees:

- You need to earn a minimum of 24 LBCC credits of which at least 15 must be in your major field; for AAOT, minimum of 12 of which 8 meet requirements (The second part of these requirements may be waived in some instances). No credits granted for prior learning can be applied towards meeting this requirement.
- At least 24 (12 for AAOT) of your last 35 credits needs to be earned at LBCC.
- You need to have a 2.00 accumulative GPA.
- You need to complete a minimum of 70 percent of all credits attempted. Grades of "F," "NP," "IN" and "W" are non-completion grades.
- To earn more than one degree or to major in more than one field, you need to complete an additional 24 credits for each program beyond those required for the first degree.
- The maximum number of "P" credits allowed is 16, not including those with an obligatory "P" grade.
- A maximum number of 24 non-traditional credits beyond any required by a given program can be used towards a degree. See the non-traditional credit section of this catalog for more information.

Two-Year Certificate:

- You need to earn at least 24 LBCC credits toward the certificate. No credits granted for prior learning can be applied towards meeting this requirement.
- Up to 24 prior learning credits may be used to meet requirements.
- You need to have a 2.00 GPA based on the LBCC courses completed for the program.
- The maximum number of "P" credits allowed is 16, not including those with an obligatory "P" grade.

One-Year Certificate:

- You need to earn at least 12 LBCC credits toward the certificate. No credits granted for prior learning can be applied towards meeting this requirement.
- Up to 12 prior learning credits may be used to meet requirements.
- You need to have a 2.00 GPA based on the LBCC courses completed for the program.
- The maximum number of "P" credits allowed is 8, not including those with an obligatory "P" grade.

Less-Than-One-Year Certificate:

- You need to earn all credits toward the certificate from LBCC.
- No credit for prior learning credits may be used to meet requirements.
- You need to have a 2.00 GPA based on the LBCC courses completed for the program.

Adult High School Diploma (AHSD):

- You need to earn a "C" or above on all courses used to complete the diploma.

Graduation Requirements for Specific Degrees

For Graduation Requirements for specific degrees, see the following sections in this catalog:

- Requirements for Associate of Applied Science degree
- Requirements for Associate of Arts (Oregon Transfer) degree
- Requirements for Associate of Science degree

Please note:

- Liberal Arts Core Requirements are included in the Associate of Science degree section
- Requirements for Associate of General Studies degree and the requirements for Oregon Transfer Module are listed at the end of each degree section

Associate of Science Degree Requirements

The Associate of Science degree is a transfer degree intended especially to facilitate a transfer to Oregon State University and is an agreement between Oregon State and Linn-Benton Community College to provide transfer of LBCC coursework to OSU. Students who complete this degree and are accepted to OSU will be admitted as having completed all lower-division general education (Baccalaureate Core) requirements but not necessarily school, department, or major requirements with regard to courses or GPA. Students are encouraged to consult with an advisor at OSU.

Students who intend to transfer to Oregon State University are encouraged to apply to the Degree Partnership Program (DPP) as soon as they are eligible. This is a program that allows students to be dually-enrolled at LBCC and OSU, while receiving financial aid from either institution based on their total credits. Students enrolled in DPP are considered to be students at both institutions, even if they are only attending classes at one. This means that changes to academic programs at OSU will not negatively affect LBCC students who are enrolled in DPP. It also allows DPP students taking classes at LBCC to have access to OSU advisors to plan their academic path. To find out more about eligibility and applying to DPP, go to http://linnbenton.edu/degree-partnership, or email dpp@linnbenton.edu.

For students not transferring to OSU, AS degree credits transfer to all four-year institutions on a course-by-course basis. The assignment of LBCC credit to particular requirements of other schools is made by the institution to which the transfer is being made.

GENERAL EDUCATION OUTCOMES

Listed below are the general education requirements for the AS degree. Specific courses that meet these requirements are listed in this catalog and are available from program advisors.

WRITING/COMPOSITION

As a result of completing the General Education Writing sequence, a student should be able to:

- Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
- Locate, evaluate, and ethically utilize information to communicate effectively.
- Demonstrate appropriate reasoning in response to complex issues.

COMMUNICATION

As a result of successfully completing the Communication General Education requirements, a student should be able to:

- Engage in ethical communication processes that allow people to accomplish goals.
- Respond to the needs of diverse audiences and contexts; and build and manage personal and community relationships.

MATHEMATICS

As a result of taking General Education Mathematics courses, a student should be able to:

- Use appropriate mathematics to solve problems in related disciplines or real life applications.
- Effectively communicate mathematics using language appropriate to the audience.

HEALTH & PHYSICAL EDUCATION

As a result of completing the General Education Health, Wellness and Fitness course, a student should be able to:

- Recognize key determinants of health and wellness.
- Be able to design a comprehensive wellness program for physical fitness, nutrition, and/or stress management using a selected process of behavior change.
- Demonstrate the ability to evaluate or assess key indicators of health such as blood pressure, body composition, blood lipids, blood glucose, cardiorespiratory fitness, muscular strength and muscular endurance, and flexibility.

BS/PS: BIOLOGICAL & PHYSICAL SCIENCES

As a result of taking Biological and Physical Sciences Perspective courses, a student should be able to:

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner.
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CD: CULTURAL DIVERSITY

As a result of taking a designated Cultural Diversity Perspective courses, a student will be able to:

- Understand and respect cultural differences by articulating an understanding of the historical basis of cultural ideas, behaviors, and issues of inequality; or relating how their cultural background influences their reactions to or interactions with others.

DPD: DIFFERENCE, POWER & DISCRIMINATION

As a result of taking Difference, Power & Discrimination Perspective courses, a student should be able to:

- Analyze historical and contemporary inequities in society.
- Discuss strategies that would facilitate more equitable societies.

LA: LITERATURE & THE ARTS

As a result of taking Literature and the Arts Perspective courses, a student should be able to:

- Interpret and engage in the Literature and the Arts, making use of the creative process to enrich the quality of life.
- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

SPI: SOCIAL PROCESSES & INSTITUTIONS

As a result of successfully completing the Social Processes and Institutions Perspective requirements, a student will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.

WC: WESTERN CULTURE

As a result of taking Western Culture Perspective courses, a student should be able to:

- Communicate an understanding of the cultural and/or historical contexts in Western culture, connections with other disciplines, and relevance to their own lives.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

FOREIGN LANGUAGE REQUIREMENT

Students transferring to any Oregon public four-year institution must complete two terms (8 credits), or demonstrate equivalent proficiency in a foreign language prior to transferring. In addition, students who plan to earn a Bachelor of Arts degree must complete a total of six terms (24 credits), or demonstrate equivalent proficiency, in a foreign language prior to graduating with their Bachelors degree. Students interested in studying Spanish may complete these requirements at LBCC.

SKILLS COURSES

WRITING/COMPOSITION (6 CREDITS)

WR 121 English Composition (3 credits)
Also select one writing course from the following:
JN 216 News Reporting & Writing (3 credits)
WR 122 English Composition: Argumentation (3 credits)
WR 123 English Composition: Research (3 credits)
WR 185 Understanding English Grammar (3 credits)
WR 227 Technical Writing (3 credits)
WR 241 Creative Writing: Short Fiction Workshop (3 credits)
WR 242 Creative Writing: Poetry Workshop (3 credits)
WR 243 Creative Writing: Script Writing Workshop (3 credits)

COMMUNICATION (3 CREDITS)

COMM 111 Fundamentals of Speech (3 credits)
COMM 112 Intro to Persuasion (3 credits)
COMM 218 Interpersonal Communication (3 credits)

HEALTH & PHYSICAL EDUCATION (3 CREDITS)

PE 231 Lifetime Health & Fitness (3 credits)

MATHEMATICS (4 CREDITS)

MTH 105 Introduction to Contemporary Mathematics (4 credits)
MTH 111 College Algebra (5 credits)
MTH 112 Trigonometry (5 credits)
MTH 211 Fundamentals of Elementary Mathematics I (4 credits)
MTH 241 Calculus for Bio/Management/Social Sciences (4 credits)
MTH 245 Math for Biological/Management/Social Sciences (4 credits)
MTH 251 Differential Calculus (5 credits)

PERSPECTIVE COURSES

No more than two courses (or lecture/lab combinations) from any one subject area may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different subject area than GEO courses listed under any other Perspective category. Choose one Biological Science lecture/lab combination, one Cultural Diversity, one Literature and the Arts, one Physical Science lecture/lab combination, one Social Processes and Institutions, one Western Culture, one Difference, Power, and Discrimination, plus one additional lecture/lab combination from either Physical Science or Biological Science.

BS: BIOLOGICAL SCIENCES (4 CREDITS)

Select one of the following Biological Science courses:
ANS 121 Introduction to Animal Science (4 credits)
BI 101 General Biology (4 credits)
BI 102 General Biology (4 credits)
BI 103 General Biology (4 credits)
BI 200 Principles of Ecology: Field Biology (4 credits)
BI 211 Principles of Biology (4 credits)
BI 212 Principles of Biology (4 credits)
BI 213 Principles of Biology (4 credits)
BI 234 Microbiology (4 credits)
CSS 205 Soils: Sustainable Ecosystems (4 credits)

PS: PHYSICAL SCIENCES (4 CREDITS)

Select one of the following Physical Science courses:
CH 112 Chemistry for Health Occupations (5 credits)
CH 121 College Chemistry (5 credits)
CH 122 College Chemistry (5 credits)
CH 123 College Chemistry (5 credits)
CH 201 Chemistry for Engineering Majors I (5 credits)
CH 202 Chemistry for Engineering Majors II (5 credits)
CH 221 General Chemistry (5 credits)
CH 222 General Chemistry (5 credits)
CH 223 General Chemistry (5 credits)
CSS 205 Soils: Sustainable Ecosystems (4 credits)
G 101 Introduction to Geology (4 credits)
G 102 Introduction to Geology (4 credits)
G 103 Introduction to Geology (4 credits)
G 201 Physical Geology I (4 credits)
G 202 Physical Geology II (4 credits)
G 203 Historical Geology (4 credits)
GEOG 121 Physical Geography (4 credits)
GS 104 Physical Science: Principles of Physics (4 credits)
GS 105 Physical Science: Principles of Chemistry (4 credits)
GS 106 Physical Science: Principles of Earth Science (4 credits)
GS 108 Oceanography (4 credits)
PH 104 Descriptive Astronomy (4 credits)
PH 201 General Physics (5 credits)
PH 202 General Physics (5 credits)
PH 203 General Physics (5 credits)
PH 211 General Physics with Calculus (5 credits)
PH 212 General Physics with Calculus (5 credits)
PH 213 General Physics with Calculus (5 credits)

BIOLOGICAL & PHYSICAL SCIENCES (4 CREDITS)

Also select an additional course from either list above (physical science or biological science).

CD: CULTURAL DIVERSITY (3 CREDITS)

Select three credits from the following:
ANTH 210 Comparative Cultures (3 credits)
ANTH 232 Native North Americans (3 credits)
ART 207 Indigenous Art of the Americas (3 credits)
ENG 207 Non-Western World Literature: Asia (3 credits)
ENG 208 Non-Western World Literature: Africa (3 credits)
ENG 209 Non-Western World Literature: The Americas (3 credits)
ENG 215 Latino/a Literature (3 credits)
ENG 257 African-American Literature (3 credits)
GEOG 202 World Geography: Latin America & the Caribbean (3 credits)
GEOG 203 World Geography: Asia (3 credits)
GEOG 204 World Geography: Africa & the Middle East (3 credits)
HST 157 History of the Middle East & Africa (3 credits)
HST 158 History of Latin America (3 credits)
HST 159 History of Asia (3 credits)
MUS 108 Music Cultures of the World (3 credits)
R 101 Introduction to Religious Studies (3 credits)
R 102 Religions of Western World (3 credits)
R 103 Religions of Eastern World (3 credits)
WS 280 Global Women (3 credits)

DPD: DIFFERENCE, POWER & DISCRIMINATION (3 CREDITS)

Select three credits from the following:
EC 220 Contemporary U.S. Economic Issues (3 credits)
ENG 220 Literature of American Minorities (credits)
HDFS 201 Contemporary Families in the U.S. (3 credits)
HST 201 U.S. History: Colonial & Revolutionary (3 credits)
HST 202 U.S. History: Civil War & Reconstruction (3 credits)
HST 203 U.S. History: Rise to World Power (3 credits)
SOC 206 General Sociology: Social Problems & Issues (3 credits)
SOC 222 Marriage Relationships (3 credits)

LA: LITERATURE & THE ARTS (3 CREDITS)

Select three credits from the following:

ART 102 Understanding Art (3 credits)
ART 204 History of Western Art (3 credits)
ART 205 History of Western Art (3 credits)
ART 206 History of Western Art (3 credits)
ENG 104 Literature: Fiction (3 credits)
ENG 106 Literature: Poetry (3 credits)
ENG 107 Western World Literature: Classical (4 credits)
ENG 109 Western World Literature: Modern (4 credits)
ENG 110 Film Studies (3 credits)
ENG 201 Shakespeare (4 credits)
ENG 202 Shakespeare (4 credits)
ENG 204 British Literature: Early (3 credits)
ENG 205 British Literature: Middle (3 credits)
ENG 206 British Literature: Modern (3 credits)
ENG 207 Non-Western World Literature: Asia (3 credits)
ENG 208 Non-Western World Literature: Africa (3 credits)
ENG 209 Non-Western World Literature: The Americas (3 credits)
ENG 215 Latino/a Literature (3 credits)
ENG 220 Literature of American Minorities (3 credits)
ENG 221 Children's Literature (3 credits)
ENG 253 American Literature: Early (4 credits)
ENG 255 American Literature: Modern (4 credits)
ENG 261 Science Fiction (3 credits)
MUS 105 Introduction to Rock Music (3 credits)
MUS 161 Music Appreciation (3 credits)
TA 147 Introduction to Theater (3 credits)

SPI: SOCIAL PROCESSES & INSTITUITIONS (3 CREDITS)

Select three credits from the following:

ANTH 103 Introduction to Cultural Anthropology (3 credits)
EC 201 Introduction to Microeconomics (4 credits)
EC 202 Introduction to Macroeconomics (4 credits)
HDFS 200 Human Sexuality (3 credits)
HDFS 201 Contemporary Families in the U.S. (3 credits)
HE 210 Introduction to Health Services (3 credits)
HE 225 Social & Individual Health Determinants (4 credits)
HST 101 History of Western Civilization (3 credits)
HST 102 History of Western Civilization (3 credits)
HST 103 History of Western Civilization (3 credits)
PE 212 Sociocultural Dimensions of Physical Activity (3 credits)
PS 201 Introduction to American Politics & Government (3 credits)
PS 204 Introduction to Comparative Politics (3 credits)
PS 205 Introduction to International Relations (3 credits)
PSY 201 General Psychology (4 credits)
PSY 202 General Psychology (4 credits)
PSY 231 Human Sexuality (3 credits)
SOC 204 General Sociology: Introduction to Sociology (3 credits)
SOC 205 General Sociology : Institutions & Social Change (3 credits)

WC: WESTERN CULTURE (3 CREDITS)

Select three credits from the following:

ART 204 History of Western Art (3 credits)
ART 205 History of Western Art (3 credits)
ART 206 History of Western Art (3 credits)
EC 215 Economic Development of the U.S. (4 credits)
ENG 107 Western World Literature: Classical (4 credits)
ENG 109 Western World Literature: Modern (4 credits)
ENG 110 Film Studies (3 credits)
ENG 201 Shakespeare (4 credits)
ENG 202 Shakespeare (4 credits)
ENG 204 British Literature: Early (3 credits)
ENG 205 British Literature: Middle (3 credits)
ENG 206 British Literature: Modern (4 credits)
ENG 253 American Literature: Early (4 credits)
ENG 255 American Literature: Modern (4 credits)
HST 101 History of Western Civilization (3 credits)
HST 102 History of Western Civilization (3 credits)
HST 103 History of Western Civilization (3 credits)
HST 150 Science & Culture in the Western Tradition (3 credits)
HST 201 U.S. History: Colonial & Revolutionary (3 credits)
HST 202 U.S. History: Civil War & Reconstruction (3 credits)
HST 203 U.S. History: Rise to World Power (3 credits)
HUM 101 Intro to Humanities: Prehistory /Mid Ages (3 credits)
HUM 102 Intro to Humanities: Renaissance/Enlightment (3 credits)
HUM 103 Intro to Humanities: Romantic/Contemp (3 credits)
PE 212 Sociocultural Dimensions of Physical Activity (3 credits)
PHL 201 Introduction to Philosophy (3 credits)
PHL 202 Elementary Ethics (3 credits)
PHL 215 History of Western Philosophy (3 credits

LIBERAL ARTS CORE REQUIREMENTS

The liberal arts core requirements are a requirement of the College of Liberal Arts at Oregon State University. Transfer students in the following programs have this requirement: Art, Economics, English, Foreign Language, Journalism and Mass Communications, Liberal Studies, Music, History, Psychology, Political Science, Sociology, Anthropology, Speech Communication, and Theater.

I. FINE ARTS (3 CREDITS)

Select one course from the following:

ART 102 Understanding Art (3 credits)
ART 115 Basic Design I: Composition (3 credits)
ART 131 Drawing I (4 credits)
ART 281 Painting II (4 credits)
MP 101 Symphonic Band (1 credits)
MP 141/241 Symphony Orchestra (1 credit)
MP 231 Chamber Choir (2 credits)
TA 147 Intro to Theater (3 credits)
TA 244 Stagecraft (3 credits)
TA 248 Fundamentals of Acting I (3 credits)
WR 241 Creative Writing Workshop: Short Fiction (3 credits)
WR 242 Creative Writing Workshop: Poetry (3 credits)

II. HUMANITIES (3 CREDITS)

Select one course from the following:

ART 204 Intro to Art History (3 credits)
ART 205 Intro to Art History (3 credits)
ART 206 Intro to Art History (3 credits)
ENG Any except 199 (3 credits)
HST Any except 198, 280, 298, 299 (3 credits)
PHL 202 Elementary Ethics (3 credits)
R 101 Intro to Religious Studies (3 credits)

III. NON-WESTERN CULTURE (3 CREDITS)

Select one course from the following:

ANTH 232 Native North Americans (3 credits)
GEOG 202 World Geography: Latin America & Caribbean (3 credits)
GEOG 203 World Geography: Asia (3 credits)
GEOG 204 World Geography: Africa and Middle East (3 credits)
MUS 108 Music Cultures of the World (3 credits)

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

IV. SOCIAL SCIENCES (3 CREDITS)

Select one course from the following:

ANTH 103	Introduction to Cultural Anthropology (3 credits)
ANTH 230	Time Travelers (3 credits)
EC 201	Intro to Microeconomics (4 credits)
EC 202	Intro to Macroeconomics (4 credits)
ENG 207	Non-Western World Literature: Asia (3 credits)
ENG 208	Non-Western World Literature: Africa (3 credits)
ENG 209	Non-Western World Literature: The Americas (3 credits)
HST 101	History of Western Civilization (3 credits)
HST 102	History of Western Civilization (3 credits)
HST 103	History of Western Civilization (3 credits)
HST 201	U.S. History: Colonial and Revolutionary (3 credits)
HST 202	U.S. History: Civil War and Reconstruction (3 credits)
HST 203	U.S. History: Rise to World Power (3 credits)
PS 201	Intro to American Politics and Government (3 credits)
PS 204	Intro to Comparative Politics (3 credits)
PS 205	Intro to International Relations (3 credits)
PSY 201	General Psychology (4 credits)
PSY 202	General Psychology (4 credits)
PSY 215	Intro to Developmental Psychology (3 credits)
PSY 216	Social Psychology (3 credits)
SOC 204	Intro to Sociology (3 credits)
SOC 205	Institutions and Social Change (3 credits)
SOC 206	Social Problems and Issues (3 credits)

V. Select one additional course (3 credits) from previous categories I-IV.

No credit may be used for more than one requirement. The College of Liberal Arts does not allow students to take courses in the same prefix as their major field of study to satisfy the Liberal Arts Core requirements.

Agricultural Business Management

www.linnbenton.edu/agricultural-sciences

The Agriculture Business Management curriculum is designed for students who want to complete their lower-division coursework prior to transferring to a four-year institution. It allows for completion of general education requirements, as well as the preparatory coursework for continued study in Agricultural Business Management or Environmental Economics and Policy.

The Associate of Science degree with an emphasis in Agriculture Business Management is a lower-division transfer program designed to assist students planning to transfer to Oregon State University or another four-year school with an Agricultural Business or Agricultural Economics Program. Students completing the degree requirements will be prepared to enroll in upper-division coursework. It is important that you identify the program requirements of the institution that you plan on transferring to and focus on those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the school you hope to attend to be sure you are taking the courses that will satisfy the lower-division program requirements at that university.

Program Requirements

This program is designed to be completed in two years; this assumes that the entering student has placed at or above the following levels on the Computerized Placement Test: WR 121 English Composition and MTH 095 Intermediate Algebra. It is advisable to take the test as early as possible. If developmental coursework is required, it may take longer than two years to complete the program.

Entering students will progress at a faster rate if they have a firm background in life and physical sciences as well as mathematics. Program completion requires math, chemistry, biology and other baccalaureate core perspectives courses. CH 221 General Chemistry requires that the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

Students intending to study Agricultural Business Management at Oregon State University are required to select and complete a minor that is appropriate to their professional goals and interests. The electives within the Associate of Science with an emphasis in Agriculture Business Management are intended to assist students in completing this OSU requirement. Students should select electives only after consulting with an advisor. For electives, students can choose from a varied cross-section of lower-division transfer courses in the field of agriculture. These courses provide practical instructional experiences in the areas of animal science, economics and crop production.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Agricultural Business Management will:

- Use business principles and technology successfully in the management of agricultural enterprises and/or as a transfer student.
- Use skills acquired to gain employment in an agriculturally related business.
- Effectively research an agricultural business or management related problem.
- Communicate effectively (written and oral) using appropriate industry vocabulary.
- Apply appropriate computational/accounting skills and utilize technology for successful money management and other record-keeping requirements.

TRANSFER

Associate of Science with an emphasis in Agriculture Business Management

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
AREC 211	Management in Agriculture	4
AREC 221	Marketing in Agriculture	3
BA 211	Principles of Accounting: Financial	4
BA 213	Principles of Accounting: Managerial	4
BA 226	Business Law	3
BI 101	*BS: General Biology or*	
BI 102	*BS: General Biology or*	
BI 103	*BS: General Biology*	*4*
	Biological or Physical Science	*4*
CH 121	*PS: College Chemistry or*	
CH 221	*PS:General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Communication	*3*
	Cultural Diversity	*3*
	Difference, Power, & Discrimination	*3*
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
EC 202	Introduction to Macroeconomics	4
	Literature & the Arts	*3*
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 241	Calculus for Biological/Management/Social Sciences	4
PE 231	*Lifetime Health & Fitness*	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing*	*3*
Select additional approved electives		*15*
	Total Credits Required:	**90**

Agricultural Sciences

www.linnbenton.edu/agricultural-sciences

The Agricultural Sciences curriculum is designed for students who want to complete their lower-division coursework prior to transferring to a four-year institution. It allows for completion of general education requirements, as well as preparatory coursework for continued study in agricultural sciences, crop science and rangeland resources.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

The Associate of Science degree with an emphasis in Agricultural Sciences is a lower-division transfer program designed to assist students planning to transfer to Oregon State University or another four-year school with an Agricultural Education Program. Students completing the degree requirements will be prepared to enroll in upper-division coursework. It is important that you identify the program requirements of the institution that you plan on transferring to and focus on those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the school you hope to attend to be sure you are taking the courses that will satisfy the lower-division program requirements at that university.

Program Requirements

This program is designed to be completed in two years; this assumes that the entering student has placed at or above the following levels on the Computerized Placement Test: WR 121 English Composition and MTH 095 Intermediate Algebra. It is advisable to take the test as early as possible. If developmental coursework is required, it may take longer than two years to complete the program.

Entering students will progress at a faster rate if they have a firm background in life and physical sciences as well as mathematics. Program completion requires math, chemistry, biology and other baccalaureate core perspectives courses. CH 221 General Chemistry requires that the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

The electives within the Associate of Science with an emphasis in Agricultural Sciences are intended to assist students in completing specific programs at Oregon State University within the College of Agriculture. Students should select electives only after consulting with an advisor.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Agricultural Sciences will:

- Effectively apply general agricultural skills and concepts within the agriculture industry and/or as a transfer student.
- Use skills acquired to gain employment in the agriculture industry.
- Communicate effectively (written and oral) using industry vocabulary.
- Apply appropriate computational/accounting skills and utilize technology for successful money management and other record keeping requirements.

TRANSFER

Associate of Science with an emphasis in Agricultural Sciences

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
AREC 211	Management in Agriculture	4
AREC 221	Marketing in Agriculture	3
BA 215	Survey of Accounting	4
BA 226	Business Law	3
BI 101	*BS: General Biology*	*4*
BI 102	*BS: General Biology*	*4*
BI 103	*BS: General Biology*	*4*
CH 121	*PS: College Chemistry or*	
CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
CH 122	College Chemistry (offered only at OSU) or	
CH 222	General Chemistry	5
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion*	*3*
CSS 205	Soils: Sustainable Ecosystems	4
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Literature & the Arts	*3*
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing or*	
WR 122	*English Composition: Argumentation or*	
WR 123	*English Compostion: Research*	*3*
Select additional approved electives		*14*
	Total Credits Required:	**90**

Animal Science

www.linnbenton.edu/agricultural-sciences

LBCC offers all of the lower-division transfer courses that a potential transfer student in Animal Science needs. These courses provide the proper background for those who wish to pursue a higher degree at a four-year institution. Valuable practical instruction assists students in meeting their objectives.

The Associate of Science degrees with emphases in Animal Science and Equine Science are a lower-division transfer programs designed to assist students planning to transfer to Oregon State University or another four-year school with an Animal Science or Equine Science Degree Program. Students completing the degree requirements will be prepared to enroll in upper-division coursework. It is important that you identify the program requirements of the institution that you plan on transferring to and focus on those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the school you hope to attend to be sure you are taking the courses that will satisfy the lower-division program requirements at that university.

Program Requirements

This program is designed to be completed in two years; this assumes that the entering student has placed at or above the following levels on the Computerized Placement Test: WR 121 English Composition and MTH 095 Intermediate Algebra. It is advisable to take the test as early as possible. If developmental coursework is required, it may take longer than two years to complete the program.

Students in this program will progress more quickly if they have a firm background in life sciences, physical sciences and math. Program completion requires math, chemistry and biology as well as courses in baccalaureate core perspectives. CH 221 General Chemistry requires that

the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

A cross-section of lower-division agriculture electives are available, providing practical instructional experiences in animal science, economics and crop production. The electives within the Associate of Science with an emphasis in Animal Science are intended to assist students in completing specific Animal Science Option areas at Oregon State University. Students should select electives only after consulting with an advisor.

Facilities

Classes are conducted in modern classrooms and laboratories that have microcomputers, microscopes and other lab equipment for student use. Emphasis is placed on "hands on" experience, and many classes utilize the local livestock producers for in-the-field laboratory exercises.

TRANSFER

Associate of Science with an emphasis in Animal Science

See the front of this section for graduation requirements for Associate of Science degree.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Animal Science will be able to:

- Effectively apply multiple species animal husbandry skills and concepts within the livestock industry and/or as a transfer student.
- Use skills acquired to gain employment in animal agriculture.
- Effectively research nutrition, management, marketing, health and reproduction issues.
- Communicate effectively (written and oral) using industry-specific vocabulary.
- Apply appropriate computational/accounting skills and utilize technology for successful money management and other record-keeping requirements.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
ANS 121	Introduction to Animal Science	4
ANS 207	Careers In Animal Agriculture	1
ANS 210	Feeds & Feed Processing	4
ANS 211	Applied Animal Nutrition	3
ANS 231	Livestock Evaluation	3
ANS 278	Genetic Improvement of Livestock	3
AREC 211	Management in Agriculture	4
AREC 221	Marketing in Agriculture	3
BI 211	*BS: Principles of Biology*	*4*
BI 212	Principles of Biology	4
BI 213	Principles of Biology	4
CH 121	*PS: College Chemistry or*	
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
CH 122	*PS: College Chemistry (offered only at OSU) or*	
CH 222	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
CH 123	College Chemistry (offered only at OSU) or	
CH 223	General Chemistry	5
	Communication	*3*
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
EC 201	*SPI: Introduction to Microeconomics* (Three credits apply toward general education requirements; one credit applies toward program.)	*3(1)*
	Literature & the Arts	*3*
MTH 111	*College Algebra* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
PE 231	*Lifetime Health & Fitness*	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
	Writing/Composition	*3*
Select additional approved electives		5
	Total Credits Required:	**90**

TRANSFER

Associate of Science with an emphasis in Equine Science

See the front of this section for graduation requirements for Associate of Science degree.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Equine Science will:

- Apply equine husbandry skills and concepts successfully as a transfer student.
- Research nutritional, basic management, marketing, health, reproduction and training issues in horses.
- Interact with professionals unique to the equine industry using appropriate vocabulary.
- Manage financial and record keeping operations using appropriate computational skills and technology.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
ANS 121	Introduction to Animal Science	4
ANS 210	Feeds & Feed Processing	4
ANS 211	Applied Animal Nutrition	3
ANS 220	Introductory Horse Science	4
ANS 221	Equine Conformation and Performance	2
ANS 222	Young Horse Training	2
ANS 223	Equine Marketing	2
ANS 278	Genetic Improvement of Livestock	3
BI 211	*BS: Principles of Biology* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
BI 212	Principles of Biology	4
BI 213	Principles of Biology	4
CH 121	*PS: College Chemistry or*	
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

CH 122	*PS: College Chemistry (offered only at OSU) or*	
CH 222	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
CH 123	College Chemistry (offered only at OSU) or	
CH 223	General Chemistry	5
COMM 218	*Interpersonal Communication*	*3*
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Literature & the Arts	*3*
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing*	*3*
Select additional approved electives		*7*
	Total Credits Required:	**90**

Anthropology

www.linnbenton.edu/social-science

The Associate of Science in Anthropology is for students interested in completing a bachelor's degree at Oregon State University in Anthropology. Students interested in this option are strongly encouraged to enroll in the Degree Partnership Program (DPP) as there may be lower division courses required by their chosen discipline that are only offered at Oregon State University (www.linnbenton.edu/degree-partnership). Students interested in the general transfer degree, the AA(OT) should follow the guidelines for that degree. If you know the college/university you will be attending, you should work with an advisor from that school to be sure you are taking appropriate courses at LBCC.

Students interested in completing a bachelor's degree in Anthropology at OSU will choose from one of four sub-disciplines as they move on to OSU: Physical (or Biological) Anthropology, Archeology, Linguistics, or Cultural Anthropology. Depending on the track followed, traditional career opportunities for Anthropology majors include positions in higher education, museums and field work. Anthropologists have also found employment opportunities with Hallmark, The United Nations, the U. S. Military, the Nature Conservancy, the American Medical Association, General Mills Foods and Mattel Toy Company.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in Anthropology will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.
- Understand and respect cultural differences by: articulating an understanding of the historical basis of cultural ideas, behavior, or issues of inequality, or by articulating how their cultural background influences their reactions to or interactions with others.
- Articulate an awareness of issues related to historical or contemporary inequities in U.S. society and propose methods that would facilitate a more equitable society.

TRANSFER

Associate of Science with an emphasis in Anthropology

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements and Electives 32

Course No.	Course Title	Credits
Fall Term - First Year		
COMM 112	*Introduction to Persuasion or*	
COMM 218	*Interpersonal Communication*	*3*
MTH 105	*Intro to Contemporary Math*	*4*
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
ANTH 103	Introduction to Cultural Anthropology	3
BI 200	*BS: Principles of Ecology*	*4*
HST 101	*WC: History of Western Civilization or*	
HST 102	*WC: History of Western Civilization or*	
HST 103	*WC: History of Western Civilization*	*3*
WR 123	*Research Writing or*	
WR 227	*Technical Writing*	*3*
Spring Term		
ANTH 210	Comparative Cultures	3
G 103	*PS: Intro to Geology or*	
G 203	*PS: Historical Geology or*	
GEOG 121	*PS: Physical Geography*	*4*
HST 157	*CD: History of Middle East & Africa or*	
HST 158	*CD: History of Latin Amercia or*	
HST 159	*CD: History of Asia or*	
WS 280	*CD: Global Women*	*3*
SOC 206	*DPD: General Sociology*	*3*
	Electives	3
Fall Term - Second Year		
ANTH 232	Native North Americans	3
ENG 207	*LA: Non-Western Lit: Asia or*	
ENG 208	*LA: Non-Western World Lit: Africa or*	
ENG 209	*LA: The Americas or*	
ENG 215	*LA: Latino/A Literature or*	
ENG 220	*LA: Literature of American Minorities or*	
ENG 257	*LA: African American Literature*	*3*
GEOG 121	*PS: Physical Geology or*	
GS 106	*PS: Physical Science*	*4*
PSY 201	General Psychology or	
PSY 202	General Psychology (LAC IV)	4
	Electives or Foreign Languarge	4
	(recommend SPN 101 First Year Spanish I)	
Winter Term		
ART 102	Understanding Art or	
TA 147	Intro to Theater (LACI)	3
EC 201	*SPI: Intro to Microeconomics or*	
PSY 231	*SPI: Human Sexuality*	*3-4*

PS 204	Intro to Comparative Politics (LACV)	3
	Liberal Arts Core II	3
	Electives or Foreign Languarge	4
	(recommend SPN 101 First Year Spanish I)	

Spring Term

ANTH 230	Time Travelers	3
ART 207	Indigenous Art of the Americas or	
MUS 108	Music Cultures of the World (LACIII)	3
	Electives	9
	Total Credits Required:	**90**

Art

www.linnbenton.edu/art

The art curriculum is designed to enrich student learning in visual art and develop skills for expressing ideas through art. Historical and cultural perspectives regarding visual expression are explored in all art courses. Lecture courses in Art History and Understanding Art embrace the realm of human experience presented through art. The art department offers an Associate of Science (AS) degree that is designed to help students transfer to Oregon State University. Students wishing to transfer to another institution should consider the AAOT degree. The AAOT is a general transfer degree. To make the best use of your time at LBCC, you should identify the university you hope to attend and study that school's art program requirements. You should plan your LBCC course work around the requirements of the university you plan to attend. The art department provides the opportunity for students to develop and refine their skills by offering studio classes in drawing, painting, ceramics, digital photography, compositional design, and three-dimensional design. Classes are open to all students. Some second-year classes have prerequisites. Studio classes may be repeated for credit if more experience is desired.

Ceramics courses are offered at the Benton Center where students may take two terms of ceramic studio courses, ART 154, and ART 254. For students interested in further study of ceramics, CWE and Special Projects courses are recommended. There are galleries for the exhibit of both student and professional art work.

Program Requirements

The program is designed to be completed in two years, but this assumes that the entering student has tested at or above the following levels on the Computerized Placement Test (CPT): WR121 English Composition and MTH 105 Introduction to Contemporary Mathematics or MTH 111 College Algebra.

Student Learning Outcomes

Students who successfully complete coursework in Art will:

- Discuss the form and content of specific works of art representing art and artists across time and cultures
- Demonstrate visual literacy in the use of the elements and principles of design
- Demonstrate competence in studio practices
- Apply the creative process in planning, designing and solving visual problems

TRANSFER

Associate of Science Degree with an Emphasis in Art

The Associate of Science (AS) Degree is designed for students transferring to Oregon State University. Classes that meet Art requirements at OSU are listed below. Students transferring to the College of Liberal Arts at OSU can earn degrees in Applied Visual Arts, Art, Art History or Fine Arts. Students transferring to Oregon State can also earn degrees in Apparel Design, Graphic Design, or Interior Design, which are part of the College of Business at OSU and thus subject to different requirements – please see your advisor for guidance on preparing for these degrees. Students who wish to transfer seamlessly into any art major at OSU should talk to their advisor as soon as possible about taking classes at both LBCC and OSU through the Degree Partnership Program (www.linnbenton.edu/degree-partnership).

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirements 6

See the front of this section for a list of Liberal Arts Core Requirements. These are courses required for degrees in the College of Liberal Arts at OSU. OSU does not allow students to take courses in their chosen discipline to meet this requirement. Although 15 credits are required before graduating from OSU, taking only six prior to transfer to OSU will allow students to complete the Pre-Portfolio Core in Art (below).

Program Requirements 47

Course No.	Course Title	Credits
Fall - First Year		
ART 120	Foundations in Digital Imaging Processes	4
ART 115	Basic Design: Composition or	
ART 131	Drawing I	4
MTH 105	*Intro to Contemporary Math (or higher)*	*4*
WR 121	*English Composition*	*3*
Winter Term		
ART 102	Understanding Art	3
ART 115	Basic Design I: Composition	4
ART 121	Computers in Visual Arts (3 credits) or	
ART 131	Drawing I (4 credits)	3-4
	Communication	*3*
	Writing/Composition	*3*
Spring Term		
ART 117	Basic Design: 3 Dimensional	4
ART 122	Foundations: 4-D	4
	Biological Science	*4*
	Liberal Arts Core (non Art prefix)	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Fall Term - Second Year

ART 204	History of Western Art	3
ART 234	Figure Drawing or	
ART 263	Digital Photography	4
	Literature & the Arts (non Art prefix)	*3*
PE 231	*Lifetime Health & Fitness*	*3*
	Physical Science	*4*
	Difference, Power & Discrimination	*3*

Winter Term

ART 205	History of Western Art	3
ART 281	Painting	4
	Biological/Physical Science	*4*
	Western Culture	*3*

Spring Term

ART 206	History of Western Art	3
ART 234	Figure Drawing or	
ART 263	Digital Photography	4
	Cultural Diversity (non Art prefix)	*3*
	Liberal Arts Core (non Art prefix)	3
	Social Processes & Institutions	*3*
	Total Credits	**96**

Associate of Science pathway to the College of Business (Apparel Design, Interior Design, or Graphic Design)

Students planning to transfer to departments in the College of Business should see their academic advisor as soon as possible to learn about the Degree Partnership Program (www.linnbenton.edu/degree-partnership).

Biological Sciences

www.linnbenton.edu/biology

In addition to offering the Associate of Science degree with an emphasis in Biological Sciences, the Biology Department provides a variety of courses to meet the needs and interests of at least four groups of students:

- Transfer students in majors other than science who take general biology courses to meet their perspectives or science requirement for an Associate of Arts, Associate of Science or bachelor's degree.
- Students who require specific biology courses in order to earn a degree or certificate. For example, students in the Nursing, Dental Assisting and Animal Technology programs are required to take courses such as Human Anatomy and Physiology, Nutrition or Microbiology.
- Science majors in fields such as biology, forestry, fisheries and wildlife, agriculture or pre-medicine who complete their first two years at LBCC, then transfer to a four-year institution. These students enroll in required courses such as Biology or Wildlife Conservation.
- Students who have a general interest in biology, natural history or the environment.

In biology courses, students learn to understand life processes, the diversity of life and the role and responsibility of humans in the natural environment. Most courses are laboratory or field oriented.

The Associate of Science degree with an emphasis in Biological Sciences is a lower-division transfer program designed to assist students planning to complete their baccalaureate studies in a biological science at Oregon State University, where baccalaureate degrees may be earned in biology, microbiology, botany, entomology, general science or zoology. Students completing the degree requirements will be prepared to enroll in upper-division coursework.

Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific biology, physical science and mathematics courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Program Requirements

LBCC's Associate of Science degree in Biological Sciences is designed to be completed in two years. This assumes that the entering student is prepared to take MTH 111 College Algebra, WR 121 English Composition, and CH 121 College Chemistry or CH 221 General Chemistry. If this is not the case, the student needs to allow extra time to complete this degree.

CH 221 General Chemistry, which is usually taken in the first term of Biological Sciences program, requires that the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Biological Science will:

- Use important concepts, methods, and equipment of biology, mathematics, chemistry and physics to understand and explain biological phenomena.
- Continue to learn about biology and living things, and acquire and apply knowledge in new situations.
- Appreciate the beauty, diversity, and complexity of life, and methods of science used to investigate it.
- Communicate clearly and creatively about scientific questions, and use methods of science to formulate and test hypotheses and devise explanations.
- Appreciate the human and environmental implications and impacts of biological phenomena.

TRANSFER

Associate of Science with an emphasis in Biological Sciences

See the front of this section for graduation requirements for the Associate of Science degree. The biological sciences and physical sciences requirements are met by the listed program requirements and shown in *italic*. Students in Pre-Vet, Pre-Med and Pre-Dental should take CH 221–223. Other areas may opt to take a 100 level chemistry sequence that is available through OSU . Students should talk with an advisor to determine which chemistry sequence is appropriate.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements: 48

Course No.	Course Title	Credits
BI 211	*BS: Principles of Biology*	*4*
BI 212	*BS: Principles of Biology*	*4*
BI 213	Principles of Biology	4

CH 121	*PS: College Chemistry or*	
CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
CH 122	College Chemistry (offered only at OSU) or	
CH 222	General Chemistry	5
CH 123	College Chemistry (offered only at OSU) or	
CH 223	General Chemistry	5
CH 241	Organic Chemistry	4
CH 242	Organic Chemistry	4
CH 243	Organic Chemistry	4
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
	Literature & the Arts[7]	*3*
MTH 251	*Differential Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 252	Integral Calculus	5
PE 231	*Lifetime Health & Fitness*	*3*
PH 201	General Physics or	
PH 211	General Physics with Calculus	5
PH 202	General Physics or	
PH 212	General Physics with Calculus	5
PH 203	General Physics or	
PH 213	General Physics with Calculus	5
	Social Processes & Institutions	*3*
	Communication	*3*
	Western Culture[7]	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing*	*3*
	Total Credits Required:	**91**

Business Administration

www.linnbenton.edu/business-management

The program leading to an Associate of Science degree with an emphasis in Business Administration is designed for students planning to transfer to Oregon State University to complete a baccalaureate degree in the College of Business. It is important that students check with a business transfer curriculum advisor before enrolling in these classes.

Program Requirements

Students expecting to graduate in two years should have a strong interest in the world of business; they should have sufficient skills in mathematics and writing to enroll in MTH 111 College Algebra and WR 121 English Composition.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in Business Administration will:

- Demonstrate the ability to utilize business computer applications and specifically, spreadsheet software for quantitative business analysis.
- Demonstrate math skills at the college level.
- Demonstrate effective oral and written communication skills and the ability to effectively work in teams.
- Understand the roles of marketing, management, finance, accounting, MIS, economics, law and ethics in the business environment.
- Be familiar with the multi-cultural and global environment.
- Utilize pre-business courses in upper-division classes.

TRANSFER

Associate of Science with an emphasis in Business Administration

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
Fall Term - First Year		
BA 101	Introduction to Business	4
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
BA 211	Principles of Accounting: Financial	4
CIS 125	Introduction to Software Applications	3
COMM 111	*Fundamentals of Speech*	*3*
	Western Culture	*3*
Spring Term		
BA 213	Principles of Accounting: Managerial	4
	Biological Science	*4*
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Literature & the Arts	*3*
Fall Term - Second Year		
BA 226	Business Law	3
BA 260	Entrepreneurship & Small Business Management	4
EC 202	Introduction to Macroeconomics	4
MTH 241	Calculus for Biological/Management/Social Sciences	4
Winter Term		
BA 275	Business Quantitative Methods	4
	Cultural Diversity	*3*
MTH 245	Math for Biological/Management/Social Sciences	4
	Physical/Biological Science	*4*
WR 122	*English Composition: Argumentation or*	
WR 123	*English Composition: Research or*	
WR 227	*Technical Writing*	*3*
Spring Term		
BA 291	Business Process Management	4
	Difference/Power/Discrimination	*3*
	Physical Science	*4*
Approved electives		3
BA 206	Principles of Management (3 credits)	
BA 218	Personal Finance Planning (3 credits)	
BA 222	Financial Management (3 credits)	
BA 223	Principles of Marketing (4 credits)	
BA 224	Human Resource Management (3 credits)	
BA 249	Retail Management (3 credits)	
	Total Credits Required:	**90**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Communication

www.linnbenton.edu/communication

The Communication Department offers students the opportunity to pursue expertise, or preparation for advanced study, in the field of communication. The department offers the Associate of Science degree for students planning to transfer to Oregon State University to complete a baccalaureate degree. To complete the AS degree and transfer to OSU, students will need to enroll in the Degree Partnership Program and take classes at both LBCC and OSU (www.linnbenton.edu/degree-partnership). Students should work with advisors at both LBCC and OSU. In addition, the department course offerings support institutional general education degree requirements in Communication. To make the best selection, check the Communication requirement for your particular degree and speak with a program advisor.

Recent studies confirm that in today's job market, employers rate effective communication skills as their number one priority. Students may benefit from taking COMM 100 Introduction to Speech Communication, as well as related classes in other disciplines. See a Communication advisor for assistance in choosing classes relevant to your career and personal interests.

Student Learning Outcomes

Students who successfully complete the Associate of Science degree with an emphasis in Communication will be able to, in all settings, engage in ethical communication processes that allow people to accomplish goals, respond to the needs of diverse audiences and contexts, and build and manage personal and community relationships.

TRANSFER

Associate of Science with an emphasis in Communication

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of the Liberal Arts Core Requirements.

Program Requirements 32

Course No.	Course Title	Credits
Fall Term - First Year		
COMM 111	*Fundamentals of Speech*	*3*
	Literature & the Arts	*3*
MTH 105	*Intro to Contemporary Mathematics (4) or*	
MTH 111	*College Algebra (5)*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 121	*English Composition*	*3*
Winter Term		
ANTH 103	*SPI: Introduction to Cultural Anthropology*	*3*
	Biological Sciences	*4*
COMM 112	*Introduction to Persuasion*	*3*
WR 123	*English Composition: Research*	*3*
Spring Term		
COMM 218	Interpersonal Communication	3
PE 231	*Lifetime Health & Fitness*	*3*
PSY 216	Social Psychology (LACIV)	3
	Physical Sciences	*4*
Fall Term - Second Year		
ANTH 210	*CD: Comparative Cultures*	*3*
	Biological & Physical Sciences	*4*
	Liberal Arts Core I	3
PE 185	Physical Education Activity Class	1
	Western Culture	*3*
Winter Term		
	Liberal Arts Core II	3
	Liberal Arts Core III	3
	Liberal Arts Core V	3
	Social Processes & Institutions	*3*
	Electives (OSU)	3
Spring Term		
	Electives (OSU)	24

Take an additional 24 credits at OSU through the Degree Partnership Program, in consultation with an OSU advisor in the College of Liberal Arts.

Total Credits Required: 90

Computer Science

www.linnbenton.edu/computer-systems

Computer Science is the study of programming, data storage and retrieval, computing machinery and the interaction with people. Graphics, artificial intelligence, robotics and expert systems are some of the products of computer science. This is an exciting career area that affects many aspects of our lives.

The Associate of Science (AS)Degree is designed for students planning to transfer to Oregon State University. Classes that meet Computer Science requirements at OSU are listed below. The LBCC Computer Science program provides students with the first two years of a four-year degree program. Upon successful completion of these requirements, the student receives an A.S. degree. For students choosing to go on to OSU, two options are listed that coordinate with the Computer Science degrees OSU offers.

Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific Computer Science courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Program Requirements

LBCC's program is designed to be completed in two years. This assumes, however, that the entering student is prepared to take MTH 112 Trigonometry or MTH 251 Differential Calculus (whichever is appropriate for the chosen option), CS 160 Orientation to Computer Science, and WR 121 English Composition. If this is not the case, the student needs to allow extra time to complete this degree.

Facilities

Students in the Computer Science program will spend considerable time in the computer lab working on networked microcomputers. The lab is well-equipped with modern hardware and software. Students have access to networked personal computers for completing assignments.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Computer Science will:

- Write programs using object-oriented data structures and object-oriented design; apply procedural programming paradigms to computer programs, and identify problems and design solutions to those problems.
- Develop algorithms to solve computer related problems and use various data structures as problem-solving tools. Those data structures will include arrays, stacks, queues, linked lists, tress and hash tables.
- Be able to work effectively and communicate in a professional environment, both in writing and verbally, to solve problems within a group, a team and individually.
- Be prepared to transfer to an OUS school as a junior in the Computer Science program.

TRANSFER

Associate of Science with an emphasis in Computer Science – Information Systems/ Applied Computer Science

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 48

Course No.	Course Title	Credits
Fall Term - First Year		
	Biological Science	*4*
CS 160	Orientation to Computer Science	4
WR 121	*English Composition*	*3*
	Western Culture	*3*
Winter Term		
CS 161	Introduction to Computer Science (Java)	4
	Literature & the Arts	*3*
MTH 112	*Trigonometry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 122	*English Composition: Argumentation*	*3*
Spring Term		
COMM 111	*Fundamentals of Speech*	*3*
CS 162	Introduction to Computer Science II (Java)	4
	Difference, Power & Discrimination	*3*
MTH 251	Differential Calculus	5
PE 231	*Lifetime Health & Fitness*	*3*
Fall Term - Second Year		
	Biological or Physical Science	*4*
CS 271	Computer Architecture & Assembly	4
	Cultural Diversity	*3*
MTH 252	Integral Calculus	5
Winter Term		
CS 133C	Programming in C	4
CS 275	Database Systems: SQL/Oracle	4
EC 201	*SPI: Introduction to Microeconomics*[2]	*3(1)*
	(Three credits apply toward general education requirements; one credit applies toward program.)	
MTH 231	Elements of Discrete Mathematics	4
Spring Term		
CS 260	Data Structures – Java	4
MTH 232	Elements of Discrete Mathematics	4
	Physical Science	*4*
	Total Credits Required:	**91**

TRANSFER

Associate of Science with an emphasis in Computer Science – Computer Systems

See the front of this section for graduation requirements for the Associate of Science degree. Students who will be pursuing the Computer Science - Computer Systems program at OSU should also take MTH 306 from OSU while enrolled at LBCC through the Degree Partnership Program (DPP).

General Education Requirements 43

Classes shown below in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements 53

Course No.	Course Title	Credits
Fall Term - First Year		
	Biological Science	*4*
CS 160	Orientation to Computer Science	4
MTH 251	*Differential Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 121	*English Composition*	*3*
Winter Term		
CS 161	Introduction to Computer Science (Java)	4
	Cultural Diversity	*3*
	Literature & the Arts	*3*
MTH 252	Integral Calculus	5
Spring Term		
COMM 111	*Fundamentals of Speech*	*3*
CS 162	Introduction to Computer Science II (Java)	4
PE 231	*Lifetime Health & Fitness*	*3*
WR 122	*English Composition: Argumentation*	*3*
	Difference, Power & Discrimination	*3*
Fall Term - Second Year		
MTH 254	Calculus	4
PH 211	*PS: General Physics with Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Social Processes & Institutions	*3*
	Western Culture	*3*
Winter Term		
CS 133C	Programming in C	4
CS 275	Database Systems: SQL/Oracle	4
MTH 231	Elements of Discrete Mathematics	4
PH 212	*PS: General Physics with Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Spring Term

CS 260	Data Structures – Java	4
ENGR 271	Digital Logic Design	4
MTH 232	Elements of Discrete Mathematics	4
PH 213	General Physics with Calculus	5
	Total Credits Required:	**96**

Economics

www.linnbenton.edu/business-management

The program leading to an Associate of Science degree with an emphasis in Economics is designed for students planning to transfer to Oregon State University's College of Liberal Arts to complete a baccalaureate degree in Economics. It is important that students check with the Economics transfer curriculum advisor before enrolling in these classes.

Program Requirements

Students expecting to graduate in two years should have a strong interest in the economy. They should have sufficient skills in mathematics and writing to enroll in MTH 111 College Algebra and WR 121 English Composition.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Economics will:

- Effectively use industry standard computer skills to accomplish tasks and enhance decision-making.
- Communicate effectively using oral, written and technology skills as appropriate.
- Work with team members and successfully interact with internal and external stakeholders.
- Assume a leadership role.
- Understand and utilize as necessary, economic theory as it applies in the areas of business and government.
- Apply learning to successfully complete a baccalaureate degree at a four-year university.
- Understand the multi-cultural, global environment of contemporary economics.
- Manage their own career prospects including internships and work experience.

TRANSFER

Associate of Science with an emphasis in Economics

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of the Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet this requirement.

Program Requirements: 34

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 125	Introduction to Software Applications	3
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
COMM 111	*Fundamentals of Speech*	*3*
EC 201	Introduction to Microeconomics	4
	Liberal Arts Core	3
MTH 241	Calculus for Biological/Management/Social Sciences	4
WR 227	*Technical Writing*	*3*
Spring Term		
	Biological Science	*4*
EC 202	Introduction to Macroeconomics	4
	Liberal Arts Core	3
	Social Processes & Institutions	*3*
Fall Term - Second Year		
EC 215	Economic Development of the U.S.	4
	Liberal Arts Core	3
MTH 245	Math for Biological/Management/Social Sciences	4
	Physical Science	*4*
	Western Culture	*3*
Winter Term		
BA 275	Business Quantitative Methods	4
EC 220	Contemporary U.S. Economic Issues: Discrimination	3
	Literature & the Arts	*3*
	Liberal Arts Core	3
Spring Term		
CIS 135S	Advanced Spreadsheets	3
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
	Physical/Biological Science	*4*
	Liberal Arts Core	3
	Total Credits Required:	**92**

Education

www.linnbenton.edu/education

The Education/Child and Family Studies Department offers programs for students who want to become preschool, elementary, middle, and secondary school teachers and instructional assistants. If you would like to become an instructional assistant, turn to the Instructional Assistant section of the catalog. If you want to become a preschool teacher, turn to the Child and Family Studies section.

The first step for students who wish to become a K–12 teacher is to see an Education advisor. Students who want to become K–12 teachers can take their first two years of coursework at LBCC, then transfer to a four-year university and work toward their teaching credential. Each College of Education at a University determines the unique path it requires its teaching candidates to take. The Education advisors at LBCC have the most current program information from local universities.

Determine your preferred grade level and/or subject area of teaching as soon as possible. Select the university that you would like to attend following your education at LBCC. These decisions will help you take the courses at LBCC that will most benefit you.

Programs that lead to teacher certification are available at many public and private higher education institutions in Oregon. If you plan to teach grades K–8, select the elementary education emphasis; to teach grades 6–12, you will need to complete a degree in a subject discipline.

Students planning to attend OSU will pursue the Associate of Science degree. Students who wish to attend WOU as an education major will complete an AAOT with specific WOU requirements. Students who wish to transfer to other universities will also complete the AAOT degree.

Program Requirements

This program is designed to be completed in two years, but this assumes that the entering student has prerequisite basic skills. If you did not achieve the minimum scores on the mathematics and writing portions of the Computerized Placement Test (CPT), you may be required to take pre-college courses that may extend completion of your degree beyond two years. Reading courses also may be advisable. The course requirements listed below do not include pre-college courses.

Most teacher preparation programs expect students to have experience working in public schools. ED 101A Observation and Guidance and ED 102A Education Practicum provide this. These classes also give you the opportunity to make final decisions about a teaching career, along with learning basic classroom skills. Public school placements must be arranged one term in advance. Check with your advisor to be ready to enroll in a practicum.

Fall Linked Classes

You may want to consider taking linked classes in your first term. Linked classes integrate the subjects and assignments of two courses. You will learn to communicate clearly, think logically and critically, get along with different kinds of people, and work both independently and in small groups. You'll learn important skills that will benefit you as a teacher by participating in these linked courses.

Student Learning Outcomes

Students who successfully complete an Associate of Science with an emphasis in Education will:

- Select a transfer institution that best meets their goal of becoming a K–12 teacher.
- Select meaningful coursework for transferring to that institution.
- Be prepared to apply to a College of Education within the transfer institution of their choice.

TRANSFER

Associate of Science with an emphasis in Human Development and Family Sciences

See the front of this section for graduation requirements for the Associate of Science degree.

• Child Development Option

Child Development is designed for students who prefer to pursue careers involving children birth through age 8 years and their families. Most courses focus on child development, working with young children, and family studies.

General Education Requirements: 43

Classes shown below in *italic* are general education requirements.

Program Requirements: 49

Course No.	Course Title	Credits
Fall Term - First Year		
HDFS 225	Infant and Child Development	4
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
HDFS 248	Learning Experiences for Children	3
Winter Term		
BI 101	*BS: General Biology*	*4*
HDFS 229	School Age and Adolescent Development	4
WR 227	*Technical Writing*	*3*
ED 152	Creative Activities/Dramatic Play	3
ED 252	Behavior Management or	
ED7.731	Positive Guidance of Young Children	3
Spring Term		
COMM 218	*Interpersonal Communication*	*3*
	Cultural Diversity	*3*
MTH 105	*Introduction to Contemporary Mathematics*	*4*
ED 101A	Observation and Guidance or	
ED 102A	Education Practicum or	
ED 179	Literature, Science and Math	3
ED 7.710	Principles of Observation	3
Fall Term - Second Year		
GS 104	*PS: Physical Science: Principles of Physics*	*4*
PSY 201	*SPI: General Psychology*	*4*
ED 101A	Observation and Guidance or	
ED 102A	Education Practicum	3
ED 282	Working with Children with Special Needs	3
Winter Term		
ENG 221	*LA: Children's Literature*	*3*
HDFS 201	*DPD: Contemporary Families in the U.S.*	*3*
PSY 202	General Psychology	4
SOC 204	Introduction to Sociology	3
HDFS 261	Working with Individuals and Families	3
Spring Term		
GS 106	*PS: Principles of Earth Science*	*4*
HDFS 200	Human Sexuality	3
HDFS 233	Professional Foundations in Early Childhood	3
	Western Cuture	*3*
HE220	Introduction to Epidemiology/Health Data Analysis	3
	Total Credits Required:	**92**

• Elementary Education Option

Elementary Education is designed for students who prefer to teach children in grades K–3. Most courses focus on child development, teaching methods, and family studies.

General Education Requirements: 43

Classes shown below in *italic* are general education requirements.

Program Requirements: 48

Course No.	Course Title	Credits
Fall Term - First Year		
ED 216	Purpose Struc & Function of Education in a Democracy	3
HDFS 200	Human Sexuality	3
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
BI 101	*BS: General Biology*	*4*
HDFS 225	Infant & Child Development	4
HST 201	*WC: U.S. History: Colonial and Rev or*	
HST 202	*WC: U.S. History: Civil War and Recon or*	
HST 203	*WC: U.S. History: Rise to World Power*	*3*
WR 227	*Technical Writing*	*3*
ED 252	Behavior Management	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Spring Term

COMM 218	*Interpersonal Communication*	*3*
HDFS 229	School Age and Adolescent Development	4
HST 201	U.S. History: Colonial and Rev or	
HST 202	U.S. History: Civil War and Recon or	
HST 203	U.S. History: Rise to World Power	3
HE220	Introduction to Epidemiology/Health Data Analysis	3
ED 101A	Observation and Guidance or	
ED 102A	Education Practicum	3

Fall Term - Second Year

GEOG 202	*CD: World Geography: Latin American and Caribbean or*	
GEOG 203	*CD: World Geography: Asia or*	
GEOG 204	*CD: World Geography: Africa and Middle East*	*3*
GS 104	*PS: Physical Sci: Prin of Physics*	*4*
MTH 211	*Fundamentals of Elementary Mathematics I*	*4*
PSY 201	*SPI: General Psychology*	*4*

Winter Term

HDFS 201	*DPD: Contemporary Families in the U.S.*	*3*
MTH 212	Fundamentals of Elementary Mathematics II	4
PSY 202	General Psychology	4
SOC 204	Introduction to Sociology	3
ED 219	Civil Rights and Multicultural Issues in Education	3

Spring Term

ENG 221	*LA: Children's Literature*	*3*
NUTR 225	General Human Nutrition (OSU course)	3
MTH 213	Fundamentals of Elementary Mathematics III	4
GS 106	*PS: Phy Sci: Prin of Earth Science*	*4*
	Total Credits Required:	**91**

Associate of Science with an emphasis in Elementary/Middle Education in Liberal Studies

Liberal Studies is designed for students who prefer to teach older children (grades 3–8). The majority of courses focus on liberal studies content areas, such as the humanities and the social sciences

General Education Requirements: **43**

Classes shown below in *italic* are general education requirements.

Liberal Arts Core **9**

See the front of this section. These are courses required for degrees in the College of Liberal Arts at OSU. OSU does not allow students to take courses in their chosen discipline to meet this requirement.

Program Requirements **40**

Course No.	Course Title	Credits

Fall Term - First Year

	Cultural Diversity	*3*
ED 216	Purpose, Structure and Function	3
ENG 106	Literature: Poetry (LAC)	3
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*

Winter Term

COMM 218	*Fundamentals of Speech*	*3*
ED 101A	Observation and Guidance	3
ED 252	Behavior Management	3
ENG 221	*LA: Children's Literature*	*3*
WR 122	*English Composition: Argumentation*	*3*

Spring Term

ED 102A	Education Practicum	3
ED 219	Civil Rights and Multicultural Issues in Education	3
ENG 104	Literature: Fiction	3
HDFS 201	*DPD: Contemporary Families in the U.S.*	*3*
SOC 204	*SPI: Introduction to Sociology*	*3*
NUTR 225	General Human Nutrition (OSU course)	3

Fall Term - Second Year

	Biological Science	*4*
HDFS 225	Infant & Child Development	4
HST 201	*WC: U.S. History: Colonial and Revolutionary*	*3*
MTH 211	*Fundamentals of Elementary Mathematics I*	*4*

Winter Term

HDFS 229	School Age and Adolescent Development	4
HST 202	U.S. History: Civil War and Reconstruction (LAC)	3
MTH 212	Fundamentals of Elementary Mathematics II	4
	Physical Science	*4*

Spring Term

	Biological/Physical Science	*4*
HST 203	U.S. History: Rise to World Power (LAC)	3
MTH 213	Fundamentals of Elementary Mathematics III	4
SOC 222	Marriage Relationships	3
	Total Credits Required:	**92**

Associate of Science with an emphasis in Elementary/Middle Education in General Science

General Science is designed for students who prefer to teach in the upper elementary grades or in a middle school, grades 4–9. The majority of courses focus on the biological and the physical sciences.

General Education Requirements: **43**

Classes shown below in *italic* are general education requirements.

Program Requirements **48**

Course No.	Course Title	Credits

Fall Term - First Year

BI 211	*BS: Principles of Biology*	*4*
CH 150	*PS: Prep for Chemistry*	*3*
MTH 211	Fundamentals of Elementary Mathematics I	4
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*

Winter Term

BI 212	Principles of Biology	4
ED 216	Purpose, Structure and Function	3
HST 101	*WC: History of Western Civilization or*	
HST 102	*WC: History of Western Civilization or*	
HST 103	*WC: History of Western Civilization*	*3*
MTH 212	Fundamentals of Elementary Mathematics II	4
WR 122	*English Composition: Argumentation*	*3*

Spring Term

BI 213	Principles of Biology	4
COMM 111	*Fundamentals of Speech or*	
COMM 218	*Interpersonal Communication*	*3*
ED 101A	Observation and Guidance or	
ED 102A	Education Practicum	3
MTH 213	Fundamentals of Elementary Mathematics III	4
PSY 201	*SPI: General Psychology*	*4*

Fall Term - Second Year

CH 221	*PS: General Chemistry*	*(4)*1

(Four credits apply toward general education requirements; one credit applies toward program.)

ED 219	Civil Rights and Multicultural Issues in Education	3

G 101	Introduction to Geology: The Solid Earth or	
G 102	Introduction to Geology: Surface Processes or	
G 103	Introduction to Geology: Historical Geology	4
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

Winter Term

ART 102	*LA: Understanding Art, or*	
ENG 106	*LA: Literature: Poetry, or*	
TA 147	*LA: Introduction to Theater*	*3*
CH 222	General Chemistry	5
G 101	Introduction to Geology: The Solid Earth or	
G 102	Introduction to Geology: Surface Processes or	
G 103	Introduction to Geology: Historical Geology	4
PSY 202	General Psychology	4

Spring Term

CH 223	General Chemistry	5
GEOG 202	*CD: World Geography: Latin America and Caribbean, or*	
GEOG 203	*CD: World Geography: Asia, or*	
GEOG 204	*CD: World Geography: Africa and Middle East*	*3*
HST 201	*DPD: U.S. History: Colonial and Revolutionary, or*	
HST 202	*DPD: U.S. History: Civil War and Reconstruction, or*	
HST 203	*DPD: U.S. History: Rise to World Power*	*3*
HDFS 229	School Age and Adolescent Development	4
	Total Credits Required:	**92**

Secondary Education

AS degree course requirements for students planning to teach grades 6–12 are determined by subject area. Students select a subject area emphasis such as English, mathematics, biological science, etc. Secondary students should have two advisors: one from Education and one from their subject area. See an Education advisor for information about the requirements to become a secondary teacher and for referral to a subject area advisor. Students will also need to complete the double degree in Education described below or a Master of Arts in Teaching.

• Double Degree Option

Students may elect to earn a double degree in Education at OSU. The student earns a primary or first degree in a content area such as Human Development & Family Sciences, Biology or Liberal Studies. The double degree is earned by completing an additional 40 credits beyond the primary degree. Six required credits of the double degree may be taken at LBCC; those classes are ED 216 Purpose, Structure and Function of Education in a Democracy, and ED 219 Civil Rights and Multicultural Issues in Education. In addition, take ED101A/ED102A to earn credit for a K–12 classroom experience.

Engineering

www.linnbenton.edu/engineering-transfer

The LBCC Engineering program provides an Associate of Science degree with an emphasis in engineering. The program provides a balanced pre-engineering curriculum to prepare students for transfer to a bachelor's degree program. The curriculum for this degree features a broad base of pre-engineering courses, a solid foundation in mathematics and the physical sciences and core requirements in general education.

The LBCC Engineering degree is a generic degree that fits many different engineering majors. Engineering students should take the basic courses listed below, and then choose the specific courses from the list of electives that are required by their engineering major. Students should refer to the engineering advising guides for the specific course requirements of each engineering major. The advising guides are available from engineering advisors and from the advising page link on the Engineering department website (http://www.linnbenton.edu/engineering-transfer).

The Associate of Science degree with an emphasis in Engineering is a lower-division program that transfers directly to Oregon State University. Students completing the degree requirements will be prepared to enroll in upper-division coursework.

Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific engineering, physical science, mathematics and biology courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Many students start at terms other than fall term and take night classes as well as day classes. Some students attend part time.

Program Requirements

Students entering the program with solid high school backgrounds in physics, chemistry and pre-calculus can expect to complete the program in two years. Students who need to complete any pre-calculus classes after their arrival on campus should expect to spend more than two years in the program. Many of the courses listed as fall term freshman courses have prerequisites. Entering students who are deficient in mathematics, chemistry, writing or reading commonly spend three years at LBCC before transferring to a four-year institution.

CH 201 Chemistry for Engineering Majors and CH 221 General Chemistry (depending upon the student's intended engineering area of emphasis) are usually taken in the first or second terms of the Engineering Transfer degree program. These courses require that the student possess a basic knowledge of chemistry prior to enrolling. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

Students should be prepared to purchase a scientific-type electronic calculator.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Engineering will:

- Apply knowledge of mathematics to formulate and solve engineering problems.
- Use computers to solve engineering problems.
- Properly set up and follow a process to solve engineering problems.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

TRANSFER

Associate of Science with an emphasis in Engineering

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements: 43

Classes shown below in *italic* are general education requirements.

Program Requirements: 66

Course No.	Course Title	Credits
	Biological Science	*4*
CH 201	*PS: Chemistry for Engineering Majors or*	
CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
CH 202	Chemistry for Engineering Majors II or	
CH 222	General Chemistry	5
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion*	*3*
ENGR 111	Engineering Orientation I	4
ENGR 112	Engineering Orientation II	4
	Literature & the Arts	*3*
MTH 251	*Differential Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 252	Integral Calculus	5
MTH 253	Calculus	4
MTH 254	Calculus	4
MTH 256	Applied Differential Equations	4
PH 211	*PS: General Physics with Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PH 212	General Physics with Calculus	5
PH 213	General Physics with Calculus	5
PE 231	*Lifetime Health & Fitness*	*3*
	Social Processes & Institutions	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing*	*3*
	Engineering Electives	24
	Total Credits Required:	**108**

Approved Electives

From the following list of approved electives, select courses that are required for your major at the institution you plan to attend.

A minimum of four elective courses must either have an ENGR prefix or be CEM 263, CH 241, or CH 242.

CEM 263 Plane Surveying (3 credits)
CH 223 General Chemistry (5 credits)
CH 241 Organic Chemistry (4 credits)
CH 242 Organic Chemistry (4 credits)
CH 243 Organic Chemistry (4 credits)
CS 161 Introduction to Computer Science I (4 credits)
CS 162 Introduction to Computer Science II (4 credits)
EC 201 Introduction to Microeconomics (4 credits)
EC 202 Introduction to Macroeconomics (4 credits)
ENGR 201 Electrical Fundamentals: DC Circuits (4 credits)
ENGR 202 Electrical Fundamentals: AC Circuits (4 credits)
ENGR 203 Electrical Fundamentals: Signals & Controls (4 credits)
ENGR 211 Statics (4 credits)
ENGR 212 Dynamics (4 credits)
ENGR 213 Strength of Materials (4 credits)
ENGR 242 Introduction to GIS (3 credits)
ENGR 245 Engineering Graphics: Civil (3 credits)
ENGR 248 Engineering Graphics: Mechanical (3 credits)
ENGR 271 Digital Logic Design (3 credits)
ENGR 272 Digital Logic Design Lab (1 credit)
MTH 255 Vector Calculus (4 credits)
MTH 265 Statistics for Scientists & Engineers (4 credits)

Note: Students majoring in Chemical Engineering, Environmental Engineering, and Bioengineering should take CH 221, CH 222 and CH 223 instead of CH 201 and CH 202.

Students majoring in Construction Engineering Management at OSU should take BA 215, BA 226, and BA 275 instead of MTH 253, MTH 254, MTH 256, CH 202, and PH 213

English

www.linnbenton.edu/english

Whether you plan to enter the sciences, a business or technical field or the liberal arts, your career success will be enhanced by strong communication skills. English majors planning to transfer to Oregon State University are advised to complete the Associate of Science degree. OSU provides a program of courses for those interested in the English major or a minor in English or writing, especially those who plan to teach English in the elementary or secondary schools, who plan to pursue graduate work in English, or both.

If you plan to transfer to the University of Oregon or any other state university, you should consider completing the AAOT degree. This is a general degree that needs to be tailored to the four year institution you plan to attend. Work with an English advisor to review the program requirements of the four year institution. You will want to enroll in these required classes while at LBCC to ensure that you are able to complete the Bachelor's degree in a timely manner.

Program Requirements

The English program welcomes students at all skill levels, from beginner to advanced. However, to complete your Associate of Science degree with an emphasis in English within a two-year period, you will need to complete at least 15 credits per quarter. You will need to test into WR 121 English Composition and MTH 105 Introduction to Contemporary Mathematics on LBCC's Computerized Placement Test (CPT).

All writing classes numbered above WR 121 require successful completion of WR 121 as a prerequisite.

Student Learning Outcomes

Students who successfully complete the Associate of Science degree with an emphasis in English will:

- Recognize how literature helps in understanding the human condition.
- Interpret literary works through critical reading.
- Demonstrate how literature enhances personal awareness and creativity.
- Write and speak confidently about your own and others' ideas.

TRANSFER

Associate of Science with an emphasis in English

See the front of this section for graduation requirements for the Associate of Science degree. Note: No credits may be used for more than one requirement. OSU English majors must meet proficiency in a foreign language.

General Education Requirements 43

Classes shown below in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of the Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet this requirement.

Program Requirements 32

Sequentially numbered courses need not be taken in sequence, but it is recommended.

Course No.	Course Title	Credits
Fall Term - First Year		
BI 101	*BS: General Biology*	*4*
ENG 204	British Literature: Early	3
MTH 105	*Intro to Contemporary Math*	*4*
WR 121	*English Composition*	*3*
Winter Term		
ENG 201	Shakespeare	4
ENG 205	British Literature: Middle	3
GS 104	*PS: Principles of Physics*	*4*
WR 241	Creative Writing: Fiction (LACV)	3
Spring Term		
ENG 206	British Literature: Modern	3
HUM 103	*CD: Humanities*	*3*
PH 104	*PS: Descriptive Astronomy*	*4*
SOC 204	General Sociology (LACIV)	3
WR 243	*Creative Writing: Script*	*3*
Fall Term - Second Year		
ART 102	*LA: Understanding Art*	*3*
ENG 202	Shakespeare (elective)	4
ENG 253	American Literature: Early	4
HST 203	*DPD: US History: Rise to World Power*	*3*
PSY 201	*SPI: General Psychology*	*4*
Winter Term		
ENG 255	American Literature: Modern	4
HST 101	*WC: History of Western Civilization*	*3*
MUS 108	Music Cultures of the World (LACIII)	3
WR 242	Creative Writing Poetry (LACI)	3
Spring Term		
COMM 218	*Interpersonal Communication*	*3*
ENG 220	Lit of American Minorities (elective)	3
PE 231	*Lifetime Health & Fitness*	*3*
R 101	Intro to Religious Studies (LACII)	3
TA 147	Intro to Theater (elective)	3
	Total Credits Required:	**90**

Exercise and Sport Science

www.linnbenton.edu/health-and-human-performance

The Health and Human Performance Department offers an Associate of Science degree for students planning to transfer to Oregon State University to earn a baccalaureate degree in Exercise and Sport Science. Education tracks include Applied Exercise and Sport Science, Fitness and Nutrition, Physical Education Teacher Education, or Pre-therapy and Allied Health. Due to the multiple paths this program offers, it is in the best interest of the student to see an LBCC advisor immediately, as well as dual enrolling at Oregon State as soon as possible. For students planning on transferring to Western Oregon University, or other four-year institutions, an AAOT with an emphasis in Exercise and Sport Science is a good option to consider.

Either degree program provides students with knowledge about the value of preventive and corrective health practices and the opportunity to participate in physical activities to enhance overall well-being.

Knowledge of preventative and corrective practices is gained through course offerings such as, Introduction to Health and Physical Education, Lifetime Health and Fitness, and Social and Individual Health Determinants. Courses like Exercise and Weight Management, First Aid, Relaxation and Massage, and Stress Management allow for students to apply the knowledge they gain from the coursework into practical skill application. The faculty highly recommend that all students enroll early in PE 131 Introduction to Health and Physical Education, as this course will provide information about career options in health and fitness-related fields, and will give guidance on how best to prepare for these careers.

Physical activity is provided through three distinct learning and participation opportunities: lifetime recreational skills; developmental courses, which stress conditioning of the body and maintenance of a specific level of physical conditioning; and team sport courses, which provide a high level of conditioning and competition. Coursework in this is provided with a variety of physical education activity classes like basketball, dance, bowling, golf, pilates, weight training, or yoga.

Intercollegiate athletics are offered in men's basketball and women's volleyball. If you are interested in intercollegiate athletics, contacting the coach of the respective program is recommended: Men's Basketball - Randy Falk; Women's Volleyball - Jayme Frazier.

Facilities

The department has indoor and outdoor facilities to support exercise, physical education activities, and athletics. The Activity Center contains a fully equipped, double-court gymnasium, as well as a weight training room, a dance and aerobics room, and complete shower facilities. Outdoor facilities include a baseball diamond, tennis courts, four sand volleyball courts, a 400 yard track, and a wellness trail. The department also utilizes non-college facilities for activities such as scuba.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Exercise and Sports Science will:

- Develop individual health and fitness programs.
- Recognize the link between current behavior and future health status.
- Exhibit healthy lifestyle choices.
- Demonstrate the ability to access and explore career and academic opportunities.
- Make appropriate decisions regarding health issues and products.
- Choose healthy individual behaviors that will have a positive impact on society.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

TRANSFER

Associate of Science with an emphasis in Exercise and Sport Science

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

The Exercise and Sport Science major at OSU has multiple tracks that relate to specific career goals. Each track has specific requirements that can be met at the lower division level, either through courses at LBCC or at OSU using the Degree Partnership Program. There is a suggested program of study for each track. The following courses may be taken in addition to (or as substitutes for) program requirements at Oregon State. Students should consult with an advisor before substituting courses.

TRANSFER

Associate of Science with an emphasis in Exercise and Sport Science

See the front of this section for graduation requirements for the Associate of Science degree. See an advisor for alternative changes to this schedule.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47-48

Course No.	Course Title	Credits
Fall Term - First Year		
PE 131	Intro to Health and Physical Ed	3
HE 100	Intro to Public Health	4
WR 121	*English Composition*	*3*
	Literature and Arts	*3*
PE 185	Physical Education Activity Course	1
Winter Term		
MTH 111	*College Algebra or*	
MTH 112	*Trigonometry*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 122	*English Composition: Argumentation*	*3*
PHL 202	*WC: Elementary Ethics*	*3*
SOC 204	*SPI: Introduction to Sociology*	*3*
PE 185	Physical Education Activity Course	1
Spring Term		
COMM 111	*Fundamentals of Speech*[7] *or*	
COMM 112	*Introduction to Persuasion*[7] *or*	
COMM 218	*Interpersonal Communication*	*3*
PE 231	*Lifetime Health & Fitness*	*3*
PE 158	Care/Prevent Athletic Injuries	3
HE 220	Introduction to Epidemiology/Health or	
MTH 243	Introduction to Statistics	3-4
	Approved Elective	3
Fall Term - Second Year		
CH 221	*PS: General Chemistry*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Cultural Diversity	*3*
PSY 201	General Psychology	4
	Biological Science with a lab	*4*
Winter Term		
CH 222	*PS: General Chemistry*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
HE 225	Social & Individual Health Determinants	4
PE 212	Socialcultural Dimensions in PH	3
	Approved Elective	3
Spring Term		
CH 223	General Chemistry	5
	Difference, Power & Discrimination	*3*
	Approved Electives	7
	Total Credits Required:	**90-91**

Additional Approved Program Electives

These can be used to meet specific program requirements at Oregon State. Please see your advisor as soon as possible to select the courses that fit your goals.

Course No.	Course Title	Credits
BI 101	General Biology or	
BI 102	General Biology or	
BI 103	General Biology	4
BI 211	Principles of Biology or	
BI 212	Principles of Biology or	
BI 213	Principles of Biology	4
BI 231	Human Anatomy and Physiology or	
BI 232	Human Anatomy and Physiology or	
BI 233	Human Anatomy and Physiology	5
CH 221	General Chemistry or	
CH 222	General Chemistry or	
CH 223	General Chemistry	5
MTH 112	Trigonometry	5
PE 180	Physical Education Activity Class or	
PE 185	Physical Education Activity Class or	
PE 190	Physical Education Activity Class	1
PE 212	Sociocultural Dimensions of Physical Activity	3
PE 231	Lifetime Health and Fitness	3
PH 201	General Physics	4

Additional Approved Electives

The following courses can count towards the AS degree in EXSS at LBCC. These will transfer as lower division transfer credits (electives) but may not fulfill specific program requirements at OSU.

BI 112	Cell Biology for Health Occupations	4
CH 150	Preparatory Chemistry	3
CH 112	Chemistry for Health Occupations	5
HE 125	Occupational Safety & Health	3
HE 151	Drugs in Society	3
HE 204	Exercise & Weight Managment	3
HE 207	Stress Management	3
HE 220	Intro: Epidemiology/Health Data Analysis	3
HE 252	First Aid	3
HE 253	AIDS & Sexually Transmitted Diseases	3
HE 280	CWE	3
PE 270	Sport Psychology	3

Foreign Language

www.linnbenton.edu/foreign-language

For the 2014-2015 school year, Spanish is the only language available at LBCC for students wishing to pursue a foreign language degree. Transfer credit language classes earn four transfer credits each and emphasize speaking, reading and writing, and helping students to build proficiency. Students wishing to pursue an AS degree in foreign language other than Spanish may study that language through the LBCC/OSU degree partnership program or apply credits toward the degree that have been earned through College Now. Students planning to transfer to Oregon State University are strongly encouraged to consider dual enrolling at OSU and LBCC. The Degree Partnership Program (DPP) is an arrangement between LBCC and Oregon State that allows you to take classes at both institutions (see www.linnbenton.edu/degree-partnership for more information). Make an appointment to meet with an advisor in Foreign Language to learn more about your options with DPP. Make this appointment at least one term in advance of when you plan to take classes as a dually-enrolled student at OSU, and, if you are seeking financial aid, be sure to list both LBCC and OSU when you complete your FAFSA.

TRANSFER

Associate of Science with an emphasis in Foreign Language

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown in *italic* are general education requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of the Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet this requirement.

Program Requirements 47

Course No.	Course Title	Credits
Fall Term - First Year		
	Liberal Arts Core I: Fine Arts	3
PE 231	*Lifetime Health and Fitness*	*3*
SPN 101	First Year Spanish I	4
WR 121	English Composition	3
Winter Term		
	Communication	*3*
HST 158	History of Latin America (LACII)	3
	Physical Sciences	*4*
SPN 102	First Year Spanish II	4
WR 122	*English Composition: Argumentation*	*3*
Spring Term		
	Literature and the Arts	*3*
MTH 105	*Intro to Contemporary Math or*	
MTH 111	*College Algebra*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Social Processes and Institutions	*3*
SPN 103	First Year Spanish III	4
Fall Term - Second Year		
	Biological Sciences	*4*
ENG 209	Non-Western World Literature: The Americas (LACIII)	3
ENG 215	*SPI: Latino/A Literature*	*3*
SPN 201	Second Year Spanish I	4
Winter Term		
	Biological or Physical Sciences	*4*
GEOG 202	*CD: Wrld Reg Geo: Latin Amer/Carib*	*3*
	Liberal Arts Core IV: Social Sciences	3
SPN 202	Second Year Spanish II	4
Spring Term		
	Difference, Power and Discrimination	*3*
	Liberal Arts Core V	3
SPN 203	Second Year Spanish III	4
	Approved Elective(s) (recommend taking class at OSU through DPP)	4
	Total Credits Required:	**90**

For students interested in transferring to an institution other than Oregon State University, it is important that you identify the institution that you plan to attend. An advisor in the foreign language department can help you select the classes at LBCC that will transfer to that institution. You may want to also work with an advisor from the transfer institution as well.

LBCC also offers a wide variety of conversational foreign languages to meet community interests and the needs of local employers. Conversational foreign language classes are offered through community education centers in Albany, Corvallis and Lebanon. They include:beginning conversation classes in Arabic, Chinese, Japanese and Russian; beginning and intermediate classes in American Sign Language; and beginning, intermediate, and advanced conversation classes in French, German, Italian, and Spanish.

History

www.linnbenton.edu/social-science

The Associate of Science in History is for students interested in completing a bachelor's degree at Oregon State University in History. Students interested in this option are strongly encouraged to enroll in the Degree Partnership Program (DPP) as there may be lower division courses required by their chosen discipline that are only offered at Oregon State University. Students interested in the general transfer degree, the AA(OT) should follow the guidelines for this degree in the front section of this catalog. If you know the college/university you will be attending, you should work with an advisor from that school to be sure you are taking appropriate courses at LBCC.

Students who focus on history develop strong reading, writing and critical thinking skills, and the ability to organize seemingly independent information into a unified whole (synthesis). These skills are required in order to research and analyze historical events and to apply past lessons of history to today's problems. They are also general skills valued by employers in a wide variety of fields, so a history degree can be a pathway to a wide variety of occupations. Depending on the area of history studied while in school and whether or not a student pursues post-graduate education, career opportunities for students majoring in History currently include the following: teacher/faculty, archivist, writer/researcher, and museum curator/administrator.

The History Department is the home of the co-curricular Peace Studies Program that offers interested students the opportunity to build awareness of nonviolent approaches to conflict resolution on the interpersonal, intergroup, and international levels. Every two years a

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

group of LBCC students participate in the International Symposium on Peace, Justice and Human Rights, which is held in either Great Britain, Norway, the Netherlands, Germany, Poland, Hungary, Lithuania, Israel or the United States. The symposium brings together students and teachers from a number of countries to experience intercultural communication, to learn about intercultural and international conflict, and to explore strategies for peaceful resolution of conflicts. For further information, contact program advisor Scott McAleer at 541-917-4578.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in History will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.
- Understand and respect cultural differences by: articulating an understanding of the historical basis of cultural ideas, behavior, or issues of inequality, or by articulating how their cultural background influences their reactions to or interactions with others.
- Articulate an awareness of issues related to historical or contemporary inequities in U.S. society and propose methods that would facilitate a more equitable society.

TRANSFER

Associate of Science with an emphasis in History

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown in *italic* are general education requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirement..... 15

See the front of this section for a list of Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements and Electives 32-33

Course No.	Course Title	Credits
Fall Term - First Year		
COMM 111	*Fundamentals of Speech*	*3*
MTH 105	*Intro to Contemporary Math*	*4*
WR 121	*English Composition*	*3*
HST 201	United States History: Colonial and Revolutionary	3
Winter Term		
ART 207	Indigenous Art of the Americas or	
ENG 220	Literature of American Minorities (LACV)	3
BI 102	*BS: General Biology*	*4*
HST 202	United States History: Civil War and Reconstruction	3
PE 231	*Lifetime Health & Fitness*	*3*
WR 122	*English Composition: Argumentation or*	
WR 123	*English Composition: Research*	*3*
Spring Term		
EC 220	*DPD: US Economic Issues: Discrimination*	*3*
GEOG 121	*PS: Physical Geography*	*4*
HST 203	United States History: Rise to World Power	3
PS 201	*SPI: Intro to US Government or*	
SOC 204	*SPI: Intro to Sociology*	*3*
Fall Term - Second Year		
ART 204	*WC: History of Western Art or*	
HUM 101	*WC: Humanities Prehistory & Ancient World*	*3*
BI 101	*BS: General Biology*	*4*
HST 101	Western Civilizations: Ancient	3
R 102	*CD: Western Religions or*	
WS 280	*CD: Global Women*	*3*
Electives		
HST 157	History of Middle East and Africa or	
SPN 101	First Year Spanish I	3-4
Winter Term		
HST 102	Western Civilizations: Medevial & Early Modern	3
HST 158	History of Latin America (elective)	4
ANTH 232	Native North Americas or	
MUS 108	Music Cultures of the World (LACIII)	3
ART 205	*LA: History of Western Art or*	
HUM 102	*LA: Humanities: Middle Ages & Renaissance*	*3*
	Elective or	
SPN 101	First Year Spanish I	4
Spring Term		
ART 102	Understanding Art or	
TA 147	Intro to Theater (LACI)	3
HST 103	History of Western Civilization: Modern World	3
HST 159	History of Asia	3
	Liberal Arts Core II	3
	Liberal Arts Core IV (non-history course)	3
	Total Credits Required:	**90-91**

Horticulture

www.linnbenton.edu/agricultural-sciences

The Horticulture program provides a broad range of instructional services. It provides (1) occupational training for students who intend to receive a technical degree and work in horticulture; (2) supplemental technical training for current horticultural employees; (3) instruction for community members interested in a specific aspect of horticulture; and (4) instruction for students interested in continuing their education in a four-year college program.

The Horticulture curriculum is based on competencies identified and reviewed by industry representatives and agricultural educators. Students study principles of horticulture, crop science and soil science with an emphasis on sustainable production and ecologically sound resource management.

Students develop the skills necessary for entry-and mid-level technical employments and for entering a four-year college program. Opportunities exist for horticulture students in arboriculture, floriculture, greenhouse operation and management, landscape planning and maintenance, retail landscape and garden center sales, nursery operation and management, and turf management. Most classes in the Horticulture program are offered during the day, and part-time enrollment is common. Many students start in the middle of the academic year. Some courses are only offered every other year.

The Associate of Science degree with an emphasis in Horticulture is a lower-division transfer program designed to assist students planning to transfer to Oregon State University. Students completing the degree requirements will be prepared to enroll in upper-division coursework. Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific agriculture, crop and soil science, horticulture, biology, physical science and mathematics courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. =It is important that you identify the four-year school

you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Program Requirements

LBCC's Associate of Science degree in Horticulture is designed to be completed in two years. This assumes, however, that the entering student is prepared to take MTH 111 College Algebra, WR 121 English Composition, and CH 121 College Chemistry (available only through OSU) or CH 221 General Chemistry. If this is not the case, the student needs to allow extra time to complete this degree. CH 221 General Chemistry, which is usually taken in the first term of the AS in Horticulture, requires that the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

Facilities

Instructional facilities, including a greenhouse, laboratories, garden field plots, ornamental gardens, and the campus grounds, are used for skill building and demonstrations.

TRANSFER

Associate of Science with an emphasis in Horticulture

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown in *italic* are general education requirements.

Program Requirements 48

Course No.	Course Title	Credits
AREC 213	Starting an Agricultural or Horticultural Business	4
BI 211	*BS: Principles of Biology*	*4*
BI 212	*BS: Principles of Biology*	*4*
BI 213	Principles of Biology	4
CH 121	*PS: College Chemistry or*	
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
CH 122	College Chemistry (offered only at OSU) or	
CH 222	General Chemistry	5
CH 123	College Chemistry (offered only at OSU) or	
CH 223	General Chemistry	5
COMM 111	*Fundamentals of Speech*	*3*
CSS 205	Soils: Sustainable Ecosystems	4
CSS 215	Soil Nutrients & Plant Fertilization	3
	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
	Literature & the Arts	*3*
EC 201	*SPI: Introduction to Microeconomics* (Three credits apply toward general education requirements; one credit applies toward program.)	*3*(1)
HORT 226	Landscape Plant Materials (offered alternate years)	3
HORT 228	Landscape Plant Materials	3
HORT 260	Organic Farming & Gardening	3
HORT 280	Introduction to Landscape Design	3
HORT 255	Herbaceous Ornamental Plants	3
MTH 111	*College Algebra* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
MTH 112	Trigonometry	5
PE 231	*Lifetime Health & Fitness*	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
	Additional Writing	*3*
	Total Credits Required:	**91**

Human Services

www.linnbenton.edu/education

Students may complete an A.S. in Human Services in preparation for transferring to Oregon State University. The Human Services option is ideal for entry-level work in public or private human services. Positions include youth worker, caseworker, information and referral specialist, family advocate, volunteer coordinator, and others. This option also prepares students to attend graduate school in Human Development and Family Sciences, counseling, marriage and family therapy, social work, or other professions. This curriculum allows maximum flexibility for students to tailor their elective courses to populations or ages of particular interest.

The AS degree is designed to be completed in two years, but this assumes that the entering student has basic skills in writing and math.

Associate of Science with an emphasis in Human Services

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown in *italic* are general education requirements.

Program Requirements 47-48

Course No.	Course Title	Credits
Fall Term- First Year		
HE 100	Introduction to Public Health	4
PE 231	*Lifetime Health & Fitness*	*3*
PSY 201	*SPI: General Psychology*	*4*
WR 121	*English Composition*	*3*
Winter Term		
COMM 218	*Interpersonal Communication*	*3*
HDFS 261	Working with Individuals & Families	3
MTH 105	*Intro to Contemporary Math*	*4*
SOC 204	Introduction to Sociology	3
Spring Term		
BI 102	*BS: General Biology (4) or*	
CH 112	*PS: Chemistry for Health Occupations (5)* (Four credits apply toward general education requirements; one credit applies toward program.)	*(4)*1
HDFS 200	Human Sexuality	3
HE 220	Intro to Epidemiology/Health Data Analysis	3
PSY 202	General Psychology	4

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Fall Term - Second Year

	Cultural Diversity	*3*
HDFS 201	DPD: Contemporary Families in the U.S.	3
	Literature & the Arts	*3*
WR 227	*Technical Writing*	*3*
	Approved Electives	3

Winter Term

HDFS 225	Infant and Child Development	4
NFM 225	Nutrition	4
	Physical Science	*4*
	Western Culture	*3*
	Approved Elective	1

Spring Term

	Biological Science	*4*
ED 253	Learning Across the Lifespan or	
PSY 219	Intro to Abnormal Psychology	3
HDFS 209	Human Services Intership	4
HDFS 229	School Age & Adolescent Development	4
	Approved Electives	3
	Total Credits Required:	**90-91**

Journalism and Mass Communication

www.linnbenton.edu/journalism

The Journalism and Mass Communication program emphasizes writing for print and online media. It prepares students for transfer to a four-year college or university and provides entry-level skills for those who want to change careers.

The journalism program also maintains a co-curricular relationship with The Commuter, LBCC's award-winning student newspaper and online information source. The Commuter offers first- and second-year students valuable training and media experience.

Students who plan to transfer to a four-year college or university can obtain a solid foundation of journalism skills at LBCC, from reporting and photography, to writing, editing and online media. Acquiring these skills will prepare them to excel in a bachelor's degree program.

The Associate of Science Degree with an emphasis in Journalism and Mass Communication is intended for students planning to transfer to Oregon State University. This transfer degree includes 25 lower-division journalism credits, as outlined below. Graduates can transfer to OSU and major in Digital Communication Arts (in the New Media Communications Program), or major in Speech Communication with a New Media Communications minor.

The Associate of Arts (Oregon Transfer), also known as the AAOT, is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. Students are encouraged to contact an advisor at the institution to which they plan to transfer, to coordinate classes that meet that institution's program requirements.

Students who plan to transfer to the University of Oregon should pursue the Associate of Arts (Oregon Transfer) degree and should include journalism within their Arts and Letters requirements (JN 201, JN 216, JN 217 and/or JN 134). Journalism students also are encouraged to include several terms of the Journalism Lab (JN215A) and the Design and Production Lab (JN215B) among their electives to obtain additional writing and editing experience. See the graduation requirements for the Associate of Arts (Oregon Transfer) degree in the front section of this catalog.

Facilities for the Journalism program include The Commuter's modern computer-equipped newsroom overlooking the courtyard, as well as access to other computer and electronic imaging labs on campus. The Commuter is online at www.commuter.linnbenton.edu.

Program Requirements

Students who want to succeed in LBCC's Journalism program are highly encouraged to complete Writing 121 before enrolling in the college's Journalism courses. Another General Education Requirement for the Journalism major is completion of Math 105 or a higher-level math course.

Student Learning Outcomes

Students who successfully complete an Associate of Science with an emphasis in Journalism and Mass Communication will demonstrate:

- Understanding of the role and significance of journalism in a democratic society.
- Ability to recognize news values and apply them in editorial decision-making.
- Ability to research and synthesize facts needed to report on news events and issues.
- Competence in writing news and feature articles, as well as online journalism.
- Ability to apply legal and ethical principles in news judgment.

TRANSFER

Associate of Science Degree with an emphasis in Journalism and Mass Communication

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

See the front of this section for the list of classes meeting the general education requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of Liberal Arts core requirements. OSU does not allow students to take courses in their chosen discipline to meet this requirement.

Program Requirements 32

Course No.	Course Title	Credits

Fall Term - First Year

JN 134	Introduction to Photojournalism	3
MTH 105	*Intro to Contemporary Math*	*4*
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*

Winter Term

JN 201	Media & Society	4
JN 215A	Journalism Lab	1
JN 216	*News Reporting & Writing*	*3*
	Liberal Arts Core V	3
	Physical Science	*4*

Spring Term

	Cultural Diversity	*3*
	Biological or Physical Science	*4*
JN 215A	Journalism Lab	1
JN 215B	Design & Production Lab	2
JN 217	Feature Writing	3
	Liberal Arts Core IV	3

Fall Term - Second Year

	Difference, Power & Discrimination	*3*
JN 215A	Journalism Lab	1
JN 215B	Design & Production Lab	2
	Literature & the Arts	*3*
	Social Processes & Instituitions	*3*
	Approved Elective	3

Winter Term

JN 215B	Design and Production Lab	2
	Liberal Arts Core I	3
	Liberal Arts Core III	3
	Western Culture	*3*
	Approved Elective	3

Spring Term

BI 101	*BS: General Biology*	*4*
COMM 218	*Interpersonal Communication*	*3*
	Liberal Arts Core II	3
JN 280	Cooperative Work Experience	2
WE 202	Cooperative Work Experience Seminar	1
	Approved Elective	3
	Total Credits Required:	**90**

Liberal Studies

The Associate of Science degree in Liberal Studies is for students planning on transferring into the College of Liberal Arts at Oregon State University. It is a good choice for students wishing to design a unique program of study that spans disciplines. It is also a flexible choice for distance education students planning to transfer into the E-campus Liberal Studies program. Students, with their advisor, will develop a plan based on coursework selected from the various disciplines within OSU's College of Liberal Arts, including art, speech communication, history, economics, anthropology, English, foreign languages and literature, new media communications, women studies, sociology, political science, theatre, philosophy, ethnic studies, psychology and music.

Pre-elementary education students planning to complete a Liberal Studies degree should see the Education section of this catalog for the AS degree with an emphasis in Elementary Education – Liberal Studies option.

TRANSFER

Associate of Science Degree in Liberal Studies

General Education Requirements 43

See the front of this section for graduation requirements for the Associate of Science degree.

Liberal Arts Core Requirements 15

See the front of this section. These are courses required for degrees in the college of Liberal Arts at OSU.

Program Requirements 32

In consultation with LBCC and OSU advisors, students will develop an education plan that prepares students to complete the Liberal Studies degree at OSU.

Total Credits Required 90

Mathematics

www.linnbenton.edu/math

The LBCC Mathematics Department offers courses that lead students toward their goals in the college's transfer programs, career and technical programs, and the Department also offers a variety of developmental courses aimed at students preparing for the college-level math courses required in most degree programs (usually either Math 105 or Math 111).

The Mathematics Department offers a two-year Associate of Science degree with an emphasis in mathematics designed for students who plan to transfer to Oregon State University to complete a baccalaureate degree in mathematics. This program provides those students with a solid foundation in mathematics and physics. Students who enter the program with a strong high school mathematics and science background can expect to complete the degree in two years. Students who must take pre-calculus mathematics courses should expect to spend more than two years in the program.

Many students combine mathematics with another discipline in a bachelor's degree program at a four-year school. Students completing the Associate of Science with an emphasis in Mathematics at LBCC need an additional 45 hours of mathematics at Oregon State University, together with university core requirements, to earn the Bachelor of Science degree in mathematics.

There are a variety of employment opportunities for mathematicians in government, industry, and academia. Most mathematicians work in either applied mathematics or in theoretical mathematics. Applied mathematicians spend their time solving problems in science, engineering, computer science, economics, and elsewhere using a variety of mathematical tools. Theoretical mathematicians study and test new mathematical ideas and theories through research.

A popular branch of mathematics, statistics, is a field where professionals work with large data sets to look for patterns that can benefit society or industry. Actuarial science is another field of study in which mathematicians and statisticians study probability and risk assessment for government and industry.

For students who are interested in studying mathematics, a baccalaureate degree is recommended, as well as further study in graduate school in mathematics.

Program Requirements

High school students preparing for entry into the associate degree program are urged to take chemistry, physics and all the mathematics courses available at their schools.

Students should start with WR 121 and MTH 251 when entering this program.

Facilities

The Mathematics Department operates two computer classrooms. The department also participates in the operation of the Learning Centers and Math Labs at the Albany campus and each of the satellite campuses. Together, these facilities offer individualized assistance, tutoring, testing, and resource materials.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Student Learning Outcomes

Students who successfully complete the Associate of Science with an emphasis in Mathematics will:

- Use mathematics to solve problems in related disciplines or real life applications.
- Effectively communicate mathematics language appropriate to the audience.

TRANSFER

Associate of Science with an emphasis in Mathematics

See the front of this section for graduation requirements for an Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
	Biological Science	*4*
COMM 111	*Fundamentals of Speech*	*3*
	Cultural Diversity	*3*
	Difference/Power/Discrimination	*3*
	Literature & the Arts	*3*
MTH 243	Introduction to Statistics or	
MTH 265	Statistics for Scientists & Engineers	4
MTH 231	Elements of Discrete Mathematics	4
MTH 251	*Differential Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 252	Integral Calculus	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 253	Calculus	4
MTH 254	Calculus	4
MTH 255	Vector Calculus	4
MTH 256	Applied Differential Equations	4
PE 231	*Lifetime Health & Fitness*	*3*
PH 211	*General Physics w/Calculus*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Physical/Biological Science	*4*
	Social Processes/Institutions	*3*
	Western Culture	*3*
WR 121	*English Composition*	*3*
	Writing/Composition	*3*
Select 16 elective credits from the following		16

You should work closely with a faculty advisor at both LBCC and OSU when selecting classes from the list below.

BI 101	General Biology (4 credits)
BI 102	General Biology (4 credits)
BI 103	General Biology (4 credits)
BI 211	Principles of Biology (4 credits)
BI 212	Principles of Biology (4 credits)
BI 213	Principles of Biology (4 credits)
CH 221	General Chemistry (5 credits)
CH 222	General Chemistry (5 credits)
CH 223	General Chemistry (5 credits)
CS 161	Introduction to Computer Science I (Java) (4 credits)
CS 162	Introduction to Computer Science II (Java) (4 credits)
PH 104	Descriptive Astronomy (4 credits)
PH 212	General Physics with Calculus (5 credits)
PH 213	General Physics with Calculus (5 credits)

Total Credits Required: 90

Merchandising Management

www.linnbenton.edu/business-management

This program leading to an Associate of Science degree in Merchandising Management is designed for students planning to transfer to Oregon State University to complete a baccalaureate degree in Merchandising Management. Merchandising Management is part of the Department of Design and Human Environment in the College of Business at OSU. The completion of the four-year degree gives students advanced courses to prepare them for management positions in the retailing and merchandising of apparel, textiles and commercial and residential products. retailing and merchandising of apparel, textiles and commercial and residential products. Merchandising Management is a professional program at OSU, which means that students declare as "Pre-Professional Merchandising Management" majors, and must meet criteria to apply and be accepted into the major. One of these criteria is that students complete a set of classes called the Pre-Professional Core. Some of these classes are only offered at OSU, so it is extremely important that students apply to be dual-enrolled at OSU through the Degree Partnership Program (DPP) as soon as they are eligible. The program plan below shows which classes to take through DPP at OSU in your second year.

It is critical that students work with a business transfer curriculum advisor before enrolling in these classes.

Program Requirements

Students expecting to graduate in two years should have a strong interest in the world of business as well as the world of design; they should have sufficient skills in mathematics and writing to enroll in MTH 111 College Algebra and WR 121 English composition.

Student Learning Outcomes

Students who successfully complete the Associate of Science degree with an emphasis in Merchandising Management will:

- Document completion of lower-division baccalaureate core.
- Effectively apply concepts of design.
- Demonstrate business and management concepts in retailing.
- Integrate basic business skills in accounting, computers, and management.
- Communicate effectively using oral and written skills.

TRANSFER

Associate of Science with an emphasis in Merchandising Management

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 48

Course No.	Course Title	Credits
Fall Term - First Year		
BA 101	Introduction to Business	4
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*

Winter Term

BA 215	Survey of Accounting	4
COMM 111	*Fundamentals of Speech*	*3*
PHL 202	*WC: Elementary Ethics*	*3*
	Literature & Arts	*3*
WR 122	*English Composition: Argumentation*	*3*

Spring Term

BI 101	*BS: General Biology*	*4*
EC 201	*SPI: Introduction to Microeconomics* (Three credits apply toward general education requirements; one credit applies toward program.)	*3*(1)
PSY 201	General Psychology	4

Fall Term - Second Year

BA 260	Entrepreneurship & Small Business Management	4
DHE 160	Design Perspectives (OSU course)	3
DHE 277	Fashion Trend Analysis (OSU course)	3
EC 202	Introduction to Macroeconomics	4

Winter Term

BI 102	*BS: General Biology*	*4*
MTH 243	Intro to Statistics	4
MTH 245	Math for Biological/Management, Social Science	4
DHE 161	Design Explorations	4
DHE 270	*DPD: Appearance, Power & Society (OSU course)*	*3*

Spring Term

	Cultural Diversity	*3*
GS 104	*PS: Principles of Physics*	*4*
DHE 162	Design Collaborations	4
	Approved Elective	3
	Total Credits Required:	**91**

Music

www.linnbenton.edu/music

The music program at LBCC offers students academic opportunities in music, and gives them a chance to participate in top-quality performing ensembles. On campus, students can work on individual music skills and begin some of the preliminary music courses for transfer to a four-year college or university, or enter the work of music business, education or musical theater. Individual lessons are available in voice, piano, and guitar. Introduction to Rock Music (MUS 105), Music Appreciation (MUS161), Music Cultures of the World (MUS 108) and Music Fundamentals (MUS 101) support general education degree requirements in the arts.

Students also have the opportunity to perform in several vocal and instrumental ensembles. The LBCC Concert Choir and Chamber Choir are on campus, and students can perform in instrumental groups in cooperation with the Music Department at Oregon State University. Auditions may be required for some performance ensembles. Additionally, co-curricular vocal a cappella ensembles are also available on campus.

The Associate of Science (AS) Degree is designed for students planning to transfer to Oregon State University to pursue a degree in music or liberal arts. Classes that meet music requirements at OSU are listed below.

The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you plan to attend to make sure you are taking the courses that will meet program requirements.

For information on music and related careers, plus the current employment outlook, access the Oregon Career Information System (CIS) located in the Career Center, Takena Hall 101.

Program Requirements

The Music Program requires participation in at least one performance ensemble for at least three terms selected from a choice of Concert Choir or Chamber Choir. Additionally, students may participate in instrumental ensembles in cooperation with the Music Department at Oregon State University. Auditions may be required. Additionally, all students are required to take at least one term each of private voice and private piano instruction. A limited number of tuition grants are available for students participating in a performance ensemble. For more information about tuition grants in music, please contact James Reddan.

The AS degree is designed to be completed in two years, but this assumes that the entering student has tested into WR121 English Composition and MTH 105 Introduction to Contemporary Mathematics class.

Most music programs, including OSU and University of Oregon, require transfer students to complete entrance exams in music theory, keyboard skills, and aural skills. Our offerings in music are designed to prepare you for these exams. Success on these exams will often allow you to test out of some lower-division requirements in the major. Some of the music requirements at Linn-Benton will count as elective credits instead of major requirements upon transfer, but these classes will build the skills you need to succeed in these competitive programs. See an advisor for a list of classes that transfer directly to the school you are interested in.

Student Learning Outcomes

Students who successfully complete the Associate of Science degree with an emphasis in Music will:

- Perform alone or with others, either vocally or instrumentally, a varied repertoire of music;
- Read, notate, analyze and describe music;
- Understand music in relationship to history, culture and the other arts.

TRANSFER

Associate of Science with an emphasis in Music

General Education Requirements 43

See the front of this section for graduation requirements for the Associate of Science degree. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirement..... 15

See the front of this section. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements 32

Course No.	Course Title	Credits
Fall Term - First Year		
MTH 111	*College Algebra* (Four credits apply toward general education requirements; one credit applies toward program.)	*(4)*1
MUS 101	Music Fundamentals	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

MUS 161	Music Appreciation	3
	Performace Ensemble Course	1-2
WR 121	*English Composition*	*3*

Winter Term

COMM 111	*Fundamentals of Speech*	*3*
MUS 108	Music Cultures of the World	3
MUS 114	Aural Skills I	1
PE 231	*Lifetime Health & Fitness*	*3*
	Performance Ensemble Course	1-2
WR 122	*English Composition: Argumentation*	*3*

Spring Term

	Literature & the Arts	*3*
MUS 111	Music Theory I	3
MUS 115	Aural Skills II	1
	Performance Ensemble Course	1-2
	Physical Sciences	*4*

Fall Term - Second Year

	Biological Sciences	*4*
	Cultural Diversity	*3*
	Liberal Arts Core I	3
MP 174B	Individual Lessons: Voice	2
	Performance Ensemble Course	1-2
	Electives	3

Winter Term

	Biological Sciences	*4*
	Liberal Arts Core II	3
	Liberal Arts Core III	3
	Performance Ensemble Course	1-2
	Social Processes & Instituitions	*3*
	Electives	3

Spring Term

	Difference, Power, & Discrimination	*3*
	Liberal Arts Core IV	3
	Liberal Arts Core V	3
	Performance Ensemble Course	1-2
	Western Culture	*3*
	Electives	3

Select from the list of performance classes below. (Note: Students cannot take both levels of a single performance class in the same term.)

MP 101/201	Symphonic Band (1 credit)
MP 102/202	Concert Band (1 credit)
MP 103/203	Marching Band (1 credit)
MP 104/204	Basketball Band (1 credit)
MP 105/205	Large Jazz Band (1 credit)
MP 122/222	Concert Choir (1 credit)
MP 131/231	Chamber Choir (1 credit)
MP 141/241	Symphony Orchestra (1 credit)
MP 151/251	Rehearsal & Performance (1 credit)
MP 171A	Individual Lessons Piano (1 credit)
MP 171B	Individual Lessons Piano (2 credits)
MP 271A	Individual Lessons Piano (1 credit)
MP 271B	Individual Lessons Piano (2 credits)
MP 174A	Individual Lessons Voice (1 credit)
MP 174B	Individual Lessons Voice (2 credits)
MP 274A	Individual Lessons Voice (1 credit)
MP 274B	Individual Lessons Voice (2 credits)

Total Credits Required: 90-96

Other things you should know:

The Music program at OSU includes 100-200 level classes that you can take while at LBCC through the Degree Partnership Program (DPP). Consult with your advisor to see which of these classes you may want to dual enroll in. These additional classes are:

MUS 122, 123 Literature and Materials of Music I (3 credits each)

Students can test out of MUS 122 and MUS 123 at LBCC through LBCC's MUS 111 class and free placement test.

MUS 125, 126 Literature and Materials of Music Lab I, II (1 credit each)

MUS 221, 222, 223 Literature and Materials of Music (3 credits each)

Nutrition and Foodservice Systems

www.linnbenton.edu/culinary-arts

The Nutrition and Foodservice Systems degree is offered in cooperation with Oregon State University and is tailored for the individual seeking a baccalaureate degree in Nutrition and Foodservice Systems with a strong Culinary Arts component. Through a unique articulation agreement students may transition seamlessly to OSU to complete the final two years of a baccalaureate program. A thorough introduction to Culinary Arts, coupled with a strong business core, prepares students for a variety of careers in the hospitality/restaurant industry that focus on serving healthy menu options and using local ingredients.

Students must be 18 years old and have a high school diploma or GED certificate. They should have a strong understanding of business math, good communication skills, and a desire to work directly with customers and staff. In addition, they must be able to work under pressure; demonstrate manual dexterity, physical stamina, concentration, and a good memory; and have a cheerful, friendly, outgoing personality. Besides the regular college costs, students spend about $500 to purchase uniforms, knives, books, shoes and other equipment. Students should wait until after the first day of class to purchase these items.

Students become skilled at working with virtually all types of standard kitchen equipment and tools. In this excellent hands-on learning environment, students learn to care for and maintain a full-service kitchen.

After a strong foundation in culinary skills gained the first year, students will concentrate on business and management skills to prepare for the completion of their bachelor's degree at OSU.

The Associate of Science (AS) Degree is designed for students planning to transfer to Oregon State University. Classes that meet Nutrition and Foodservice Systems degree requirements at OSU are listed below.

Student Learning Outcomes

Students who successfully complete a Nutrition and Foodservice Systems degree will:

- Successfully transfer to and complete a Baccalaureate degree at OSU
- Manage their individual career prospects
- Be able to maintain currency in their profession
- Be able to understand and oversee commercial food production
- Work with team members and successfully interact with internal and external stakeholders
- Demonstrate leadership and supervise staff
- Demonstrate a ''sense of ownership''
- Understand production controls to insure financial success of a food establishment

Associate of Science with an emphasis in Nutrition and Foodservice Systems

This degree is designed for students interested in completing a bachelor's degree at Oregon State University. Students are advised to speak with an OSU program advisor. To earn the AS degree at LBCC, complete the 94 credits listed below:

General Education Requirement..... 43
Classes shown below in *italic* are general education requirements.

Program Requirements 51

Course No.	Course Title	Credits
Fall Term – First Year		
HE 100	Intro to Public Health	4
MTH 111	*College Algebra*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
CH 121	*PS: College Chemistry*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
COMM 111	*Fundamentals of Speech or*	
COMM 218	*Interpersonal Communication*	*3*
	Cultural Diversity	*3*
EC 201	Introduction to Microeconomics	4
Spring Term		
BA 215	Survey of Accounting	4
EC 202	Introduction to Macroeconomics	4
	Literature & the Arts	*3*
	Physical/Biological Science	*4*
Fall Term – Second Year		
CA 101	Culinary Arts Practicum I	7
CA 111	Foodservice Safety and Sanitation	1
CA 112	Station, Tools and Culinary Techniques	3
BI 234	*Microbiology (LBCC) or*	
MB 230	*Introductory Microbiology (OSU)*	*4*
Winter Term		
CA 102	Culinary Arts Practicum II	8
PSY 202	*SPI: General Psychology*	*4*
	Western Culture	*3*
	Writing/Composition	*3*
Spring Term		
CA 103	Culinary Arts Practicum III	8
CA 201	Culinary Arts Career Planning (LBCC) or	
NUTR 104	Orientation (OSU)	1
	Difference, Power & Discrimination	*3*
MTH 243	Introduction to Statistics	4
A math course approved for baccalaureate core AND ST 201 (OSU) or ST 351 (OSU) may be substituted for this class.		
	Total Credits Required:	**94**

Physical Sciences

www.linnbenton.edu/physical-sciences

The Physical Sciences Department offers career and technical and transfer courses in astronomy, chemistry, geology, general sciences and physics. Most courses have laboratory sessions accompanying the lectures. Laboratory sessions are designed to provide students with hands-on experience with science and scientific methods.

The Physical Sciences Department also teaches some non-laboratory courses that fulfill the Science and Society requirement for the Associate of Applied Science degree.

The Associate of Science (AS) Degree is designed for students planning to transfer to Oregon State University. LBCC offers six AS degrees in the physical sciences— each with one of the following emphases: Chemistry, Environmental Sciences, Food and Fermentation Science, General Science, Geology or Physics. These degree programs provide a strong background in mathematics and physical sciences to students planning to transfer to a four-year institution to complete a baccalaureate degree in chemistry, environmental sciences, food and fermentation science, general science, geology or physics. The general science degree is appropriate for students interested in pre-professional programs in the health sciences, such as pre-pharmacy or pre-education.

Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific physical science and mathematics courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Students entering the physical sciences programs with a strong high school mathematics and science background can expect to complete these programs in two years. Students who must take pre-calculus mathematics courses should expect to spend more than two years completing the chemistry, geology, or physics programs.

Program Requirements

LBCC's AS degrees in the physical sciences are designed to be completed in two years. This assumes, however, that the entering student is prepared to take MTH 111 College Algebra, MTH 112 Trigonometry or MTH 251 Differential Calculus (whichever is appropriate for the chosen option), WR 121 English Composition, and CH 221 General Chemistry. If this is not the case, the student needs to allow extra time to complete this degree.

CH 221 General Chemistry, which is usually taken in the first term of each physical science degree program, requires that the student possess a basic knowledge of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact the Student Assessment Center, located in RCH 111 at 541-917-4781.

Student Learning Outcomes

Students who successfully complete the Associate of Science degree with an emphasis in Chemistry, Food and Fermentation, or General Science will:

- Understand and explain chemical and/or biological phenomena using important concepts, methods, and equipment of biology, chemistry, physics and mathematics.
- Confidently and effectively communicate scientific ideas in oral, written, graphical, and pictorial form.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

- Apply scientific principles using the appropriate vocabulary in problem solving, recognizing biological and chemical compounds and their properties, understanding chemical reactions and their scientific consequences.
- Read, interpret, and safely perform laboratory procedures using the appropriate techniques and instrumentation.
- Collect and analyze laboratory data, arrive at reasonable conclusions, and write comprehensive laboratory reports.
- Think critically and creatively about the biological and chemical environment and its complexity, and apply their knowledge to their daily lives.
- Participate as an effective member of a team.

TRANSFER

Associate of Science with an emphasis in Chemistry

See the front of this section for graduation requirements for the Associate of Science degree. The CH 241, 242, 243 sequence will meet the CH 331, 332, 337 or the CH 334, 335, 336, 361 requirement at OSU, but will transfer in as lower division. In addition, students who have passed the entire organic chemistry sequence at LBCC with a grade of "C" or better may receive upper division (300 level) credit at OSU with an acceptable score on the ACS national exam. For further details, see: http://www.chemistry.oregonstate.edu/undergrad/advising/organicchemistrytransfer.htm.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 48

Course No.	Course Title	Credits
Fall Term - First Year		
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
MTH 251	*Differential Calculus* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
CH 222	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
MTH 252	Integral Calculus	5
	Social Processes & Institutions[7]	*3*
WR 227	*Technical Writing*	*3*
Spring Term		
	Biological Science[7]	4
CH 223	General Chemistry	5
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion*[7]	*3*
MTH 253	Calculus	4
Fall Term - Second Year		
CH 241	Organic Chemistry	4
	Literature & the Arts[7]	*3*
MTH 254	Calculus	4
PH 211	General Physics with Calculus	5
Winter Term		
CH 242	Organic Chemistry	4
	Cultural Diversity[7]	*3*
PH 212	General Physics with Calculus	5
	Western Culture[7]	*3*
Spring Term		
CH 243	Organic Chemistry	4
	Difference, Power & Discrimination	*3*
PH 213	General Physics with Calculus	5
	Total Credits Required:	**91**

TRANSFER

Associate of Science with an emphasis in Food and Fermentation Science

See the front of this section for graduation requirements for the Associate of Science Degree. Notes: CH 241 transfers to OSU as CH 331 LD: Organic Chemistry; CH 242 transfers to OSU as CH 337 LD: Organic Chemistry Lab; and CH 243 transfers to OSU as CH 332 LD: Organic Chemistry.

To aid in transferability, if a student begins the Organic Chemistry sequence at LBCC, the student should complete the sequence at LBCC.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
Fall Term - First Year		
BI 211	*BS: Principles of Biology*	*4*
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
COMM 111	*Fundamentals of Speech*	*3*
WR 121	*English Composition*	*3*
Winter Term		
BI 212	*BS: Principles of Biology*	*4*
CH 222	General Chemistry	5
	Social, Processes & Institutions	*3*
	Additional Writing Course	3
Spring Term		
BI 213	Principles of Biology	4
CH 223	General Chemistry	5
MTH 251	*Differential Calculus or*	
MTH 241	*Calculus for Biological/Management/Social Science* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
Fall Term - Second Year		
CH 241	Organic Chemistry	4
MTH 252	Integral Calculus	5
NFM 225	Nutrition (4 credits, LBCC or 3 credits, OSU)	3-4
PE 231	*Lifetime Health & Fitness*	*3*
Winter Term		
CH 242	Organic Chemistry	4
	Cultural Diversity	*3*
PH 201	General Physics	5
	Western Culture	*3*
Spring Term		
CH 243	Organic Chemistry	4
	Difference, Power & Discrimination	*3*
	Literature & the Arts	*3*
PH 213	General Physics with Calculus	5
	Approved Electives	0-2
	Total Credits Required:	**90**

The following course substitutions are recommended for students pursuing the various options associated with the OSU degree in Food Science and Technology:

• Enology and Viticulture Option:

FST 251: Introduction to Wines, Beers and Spirits (OSU) or HORT 251: Temperate Tree Fruit, Berries, Grapes and Nuts (OSU) in place of PH 202 General Physics.

Fermentation Science Option and Enology & Viticulture option may substitute MTH 112 and MTH 241 in place of MTH 251 and 252.

Students will need 3–4 credits of approved electives (see advisor) to meet the 90-credit requirement for the AS degree. It is recommended that students seek admission to the LBCC/OSU Degree Partnership Program and take some or all of these elective credits through the Food Science and Technology Department at OSU.

• Food Science Option:

Approved electives (see advisor) in place of BI 211: Principles of Biology and BI 212: Principles of Biology. It is recommended that students seek admission to the LBCC/OSU Degree Partnership Program and take some or all of these elective credits through the Food Science and Technology Department at OSU.

TRANSFER

Associate of Science with an emphasis in General Science

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47-48

Course No.	Course Title	Credits
Fall Term - First Year		
BI 211	*BS: Principles of Biology*[7]	*4*
CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*[7]	*3*
WR 121	*English Composition*[7]	*3*
Winter Term		
BI 212	Principles of Biology	4
CH 222	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
COMM 111	*Fundamentals of Speech*[7]	*3*
MTH 112	*Trigonometry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
Spring Term		
BI 213	Principles of Biology	4
CH 223	General Chemistry	5
MTH 251	Differential Calculus (5 credits) or	
MTH 241	Calculus for Biological/Management/Social Science (4 credits)	4-5
Fall Term - Second Year		
CH 241	Organic Chemistry or	
G 201	Physical Geology I	4
	Literature & the Arts[7]	*3*
PH 201	General Physics or	
PH 211	General Physics with Calculus	5
WR 227	*Technical Writing*[7]	*3*
Winter Term		
CH 242	Organic Chemistry or	
G 202	Physical Geology II	4
	Difference, Power & Discrimination[7]	*3*
PH 202	General Physics or	
PH 212	General Physics with Calculus	5
	Social Processes & Institutions[7]	*3*
Spring Term		
CH 243	Organic Chemistry or	
G 203	Historical Geology	4
	Cultural Diversity[7]	*3*
PH 203	General Physics or	
PH 213	General Physics with Calculus	5
	Western Culture[7]	*3*
	Total Credits Required:	**90-91**

TRANSFER

Associate of Science with an emphasis in Environmental Sciences

Students who successfully complete the Associate of Science degree with an emphasis in Environmental Sciences will:

- Understand and explain chemical, physical, geological, and biological phenomena using important concepts, methods, and equipment of the biological and physical sciences and mathematics.
- Effectively communicate scientific ideas in oral, written, graphical, and pictorial form.
- Apply scientific principles using the appropriate vocabulary in problem solving.
- Read, interpret, and safely perform laboratory procedures using the appropriate techniques and instrumentation.
- Collect and analyze laboratory data, arrive at reasonable conclusions, and write comprehensive laboratory reports.
- Think critically and creatively about the biological, physical, and chemical environment and its complexity, and apply their knowledge to their daily lives.
- Participate as an effective member of a team.

See the front of this section for graduation requirements for the Associate of Science degree. Students planning on graduate school should take an entire PH sequence.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Fall Term - First Year		
BI 211	*BS: Principles of Biology*	*4*
CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Winter Term

BI 212	*BS: Principles of Biology*	*4*
CH 222	General Chemistry	5
MTH 112	Trigonometry	5

Spring Term

BI 213	Principles of Biology	4
CH 223	General Chemistry	5
MTH 251	Differential Calculus	5

Fall Term - Second Year

MTH 252	Integral Calculus	5
PE 231	*Lifetime Health & Fitness*	*3*
PH 201	General Physics or	
PH 211	General Physics with Calculus	5
WR 121	*English Composition*	*3*

Winter Term

COMM 111	*Fundamentals of Speech*	*3*
CSS 205	Soils: Sustainable Ecosystems or	
G 202	Physical Geology II	4
PH 202	General Physics or	
PH 212	General Physics with Calculus	5
WR 227	*Technical Writing*	*3*
	Approved elective	1

Spring Term

	Cultural Diversity	*3*
	Difference, Power & Discrimination	*3*
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Literature & the Arts	*3*
PHL 202	*WC: Elementary Ethics*	*3*
	Total Credits Required:	**90**

TRANSFER

Associate of Science with an emphasis in Geology

Students who successfully complete the Associate of Science degree with an emphasis in Geology will:

- Utilize geologic concepts and data to evaluate and investigate practical questions of daily importance as well as those that have longer-term consequences.
- Make observations in order to infer the formation of common Earth materials and landforms.
- Recognize signs of important geologic resources such as ores, minerals, and fuels.
- Recognize causes and effects of human impact on the environment such as building on unstable slopes, constructing dams on rivers and jetties on coastlines, and contamination of water resources.
- In a professional manner, participate as a team leader and/or member in a collaborative setting.
- Effectively justify a point of view using various forms of appropriate supporting evidence as it relates to the sciences.
- Apply the scientific method using data to critically analyze, identify, understand and make a conclusion about natural phenomena.
- Obtain and record scientific measurements and observations using safe laboratory techniques and appropriate instruments.
- Prepare and interpret graphs and perform mathematical calculations to evaluate experimental data in order to formulate conclusions.

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits

Fall Term - First Year

CH 221	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 112	*Trigonometry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*[7]	*3*
WR 121	*English Composition*[7]	*3*

Winter Term

CH 222	*PS: General Chemistry*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
COMM 111	*Fundamentals of Speech*[7]	*3*
MTH 251	Differential Calculus	5
WR 227	*Technical Writing*[7]	*3*

Spring Term

	Biological Science[7]	*4*
CH 223	General Chemistry	5
MTH 252	Integral Calculus	5

Fall Term - Second Year

	Cultural Diversity[7]	*3*
	Difference, Power & Discrimination[7]	*3*
G 201	Physical Geology I	4
PH 201	General Physics or	
PH 211	General Physics with Calculus	5

Winter Term

G 202	Physical Geology II	4
	Literature & the Arts[7]	*3*
PH 202	General Physics or	
PH 212	General Physics with Calculus	5
	Social Processes & Institutions[7]	*3*

Spring Term

G 203	Historical Geology	4
MTH 243	Introduction to Statistics	4
PH 203	General Physics or	
PH 213	General Physics with Calculus	5
	Western Culture[7]	*3*
	Additional Elective	1

Students need to take two terms of CH courses, two terms of PH courses, and only one additional CH or PH course to complete a sequence. Students planning on graduate school should plan on completing both CH and PH sequences. Students not taking the full CH and PH sequences need one additional elective credit. See advisor for approved electives.

Total Credits Required: 90

TRANSFER

Associate of Science with an emphasis in Physics

Students who successfully complete the Associate of Science degree with an emphasis in Physics will:

- Confidently and competently communicate scientific ideas in oral and written form using appropriate technical vocabulary.
- Successfully participate as an effective member of a team.
- Think critically and creatively about the physical environment and its complexity, and apply knowledge gained in the program to their daily lives.
- Use a variety of appropriate representations (verbal, pictorial, graphical and mathematical) to understand and explain physics concepts and to solve physics problems.
- Create, read, interpret and safely perform laboratory procedures using the appropriate techniques and equipment designed to collect laboratory data, analyze that data, and draw and support reasonable conclusions from that data.

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits
	Biological Science[7]	*4*
CH 221	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
CH 222	*PS: General Chemistry* (Four credits apply toward general education requirements; one credit applies toward program.)	*4*(1)
CH 223	General Chemistry	5
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion*	*3*
	Cultural Diversity[7]	*3*
	Difference, Power & Discrimination	*3*
	Literature & the Arts	*3*
MTH 251	Differential Calculus (Four credits apply toward general education requirements; one credit applies toward program.)	5
MTH 252	Integral Calculus	5
MTH 253	Calculus	4
MTH 254	Calculus	4
MTH 255	Vector Calculus	4
MTH 256	Applied Differential Equations	4
PE 231	*Lifetime Health & Fitness*	*3*
PH 211	General Physics with Calculus	5
PH 212	General Physics with Calculus	5
PH 213	General Physics with Calculus	5
	Social Processes & Institutions[7]	*3*
	Western Culture[7]	*3*
WR 121	*English Composition*	*3*
WR 227	*Technical Writing*	*3*
Additional elective courses (see program advisor to select courses)		3
	Total Credits Required:	**90**

Political Science

www.linnbenton.edu/social-science

The Associate of Science in Political Science is for students interested in completing a bachelor's degree at Oregon State University in Political Science. Students interested in this major are strongly encouraged to enroll in the Degree Partnership Program (DPP) as there may be lower division courses required by their chosen discipline that are only offered at Oregon State University. Students interested in the general transfer degree, the AA(OT) should follow the guidelines for this degree in the front section of this catalog. If you know the college/university you will be attending, you should work with an advisor from that school to be sure you are taking appropriate courses at LBCC.

Political scientists study the history, development, and the functioning of political systems. Students pursuing a degree in political science will study, for example: how to understand and predict voter behavior; how political systems influence the economy, society, and culture of a place; and how the media and politicians shape public opinion. Because there is a large emphasis placed on learning how to evaluate evidence, form theories, and think and write critically, political science students are well prepared for a variety of occupations. Depending on the area of political science studied while in school and whether or not a student pursues post-graduate education, career opportunities for students majoring in Political Science currently include jobs such as lawyers, legislative staffers, policy analysts, journalists, teachers, business executives and university professors. Many students go on to advance study in fields such as law, diplomacy, public policy and public administration.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in Political Science will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.
- Understand and respect cultural differences by: articulating an understanding of the historical basis of cultural ideas, behavior, or issues of inequality, or by articulating how their cultural background influences their reactions to or interactions with others.
- Articulate an awareness of issues related to historical or contemporary inequities in U.S. society and propose methods that would facilitate a more equitable society.

TRANSFER

Associate of Science with an emphasis in Political Science

See the front of this section for graduation requirements for the Associate of Science degree.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirement..... 15

See the front of this section for a list of Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements and Electives 32-33

Course No.	Course Title	Credits
Fall Term - First Year		
COMM 112	*Introduction to Persuasion*	*3*
MTH 105	*Intro to Contemporary Math*	*4*
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
BI 101	*BS: General Biology*	*4*
HST 101	*SPI: Western Civilizations: Ancient*	*3*
HST 203	*DPD: United States History: Rise to World Power*	*3*
PS 201	Intro to Amer Politics/Government	3
WR 123	*English Composition: Research*	*3*
Spring Term		
G 101	*PS: Intro to Geology*	*4*
HST 102	Western Civ: Medevial & Early Modern (LACIV)	3
HUM 103	*LA: Introduction to Humanities*	*3*
PS 204	Intro to Comparative Politics	3
	Elective	3
Fall Term - Second Year		
ART 102	Understanding Art or	
TA 147	Intro to Theater (LACI)	3
GEOG 121	*PS: Physical Geography*	*4*
HST 103	*WC: History of Western Civ Modern World*	*3*
PS 205	International Relations	3
	Elective or	
SPN 101	First Year Spanish I	4
Winter Term		
GEOG 202	World Geography	3
	Liberal Arts Core II	3
PS 206	Introduction to Political Thought	3
	Elective or	
SOC 204	General Sociology or	
SPN 102	First Year Spanish II	3-4
Spring Term		
EC 201	Introduction to Microeconomics	4
GEOG 203	*CD: World Geography*	*3*
	Liberal Arts Core V	3
PS 211	Peach & Conflict	3
	Electives	3
	Total Credits Required:	**90-91**

Psychology

www.linnbenton.edu/social-science

The Associate of Science in Psychology is for students interested in completing a bachelor's degree at Oregon State University in Psychology. Students interested in this major are strongly encouraged to enroll in the Degree Partnership Program (DPP) as there may be lower division courses required by their chosen discipline that are only offered at Oregon State University. Students interested in the general transfer degree, the AA(OT) should follow the guidelines for this degree in the front section of this catalog. If you know the college/university you will be attending, you should work with an advisor from that school to be sure you are taking appropriate courses at LBCC.

Psychology is the scientific discipline devoted to understanding the human mind -- how it functions, what determines emotions and behavior, and how individuals learn, get motivated or de-motivated, and function in groups. Many psychologists work with individuals in therapeutic settings, but there are other branches of psychology that apply the tools and knowledge of the field to business and industrial settings. These psychologists help businesses best select and train employees, help employees overcome mental health problems, and plan workspaces and work processes. Depending on whether or not a student pursues post-graduate education, career opportunities for students majoring in Psychology currently include jobs in areas such as social services, school and private counseling, clinical work, basic and applied research, private corporations, etc.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in Psychology will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.
- Understand and respect cultural differences by: articulating an understanding of the historical basis of cultural ideas, behavior, or issues of inequality, or by articulating how their cultural background influences their reactions to or interactions with others.
- Articulate an awareness of issues related to historical or contemporary inequities in U.S. society and propose methods that would facilitate a more equitable society.

TRANSFER

Associate of Science with an emphasis in Psychology

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements and Electives 32

Course No.	Course Title	Credits
Fall Term - First Year		
MTH 111	*College Algebra*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	*Lifetime Health & Fitness*	*3*
PSY 201	General Psychology	4
WR 121	*English Composition*	*3*
Winter Term		
BI 102	*BS: General Biology*	*4*
COMM 111	*Fundamentals of Speech*	*3*
PSY 202	General Psychology	4
WR 227	*Technical Writing*	*3*

Spring Term

BI 103	*BS: General Biology*	*4*
ENG 207	*LA: Non-Western Lit: Asia or*	
ENG 208	*LA: Non-Western World Lit: Africa or*	
ENG 209	*LA: The Americas or*	
ENG 215	*LA: Latino/A Literature or*	
ENG 220	*LA: Literature of American Minorities or*	
ENG 257	*LA: African American Literature*	*3*
HST 157	*CD: History of Middle East & Africa or*	
HST 158	*CD: History of Latin Amercia or*	
HST 159	*CD: History of Asia or*	
WS 280	*CD: Global Women*	*3*
PSY 215	Developmental Psychology or	
PSY 216	Social Psychology	3
SOC 204	*SPI: Introduction to Sociology*	*3*

Fall Term - Second Year

ANTH 232	Native North Americans (LACIII)	3
HST 101	*WC: History of Western Civilization or*	
HUM 101	*WC: Introduction to Humanities or*	
PHL 201	*WC: Introduction to Philosophy*	*3*
	Electives or Foreign Languarge	6
	(recommend SPN 101 First Year Spanish I)	

Winter Term

GS 104	*PS: Physical Science: Principles of Physics or*	
GS 106	*PS: Physical Science: Principles of Earth Science*	*4*
PS 204	Intro to Comparative Politics (LACV)	3
PSY 219	Abnormal Psychology	3
MUS 161	Music Appreciation or	
TA 147	Introduction to Theater (LACI)	3
	Electives or Foreign Languarge	4
	(recommend SPN 101 First Year Spanish I)	

Spring Term

HDFS 201	*DPD: Contemporary Families in the U.S. or*	
SOC 206	*DPD: Social Problems & Issues*	*3*
MTH 243	Introduction to Statistics	4
R 101	Introduction to Religious Studies (LACII)	3
	Electives or Foreign Languarge	6
	Total Credits Required	**90**

Public Health

www.linnbenton.edu/health-and-human-performance

The Health and Human Performance Department offers two Associate of Science (AS) degrees for students planning to transfer to Oregon State University to earn a baccalaureate degree in Public Health with options in Health Promotion and Behavior, or Health Management and Policy. The Health Promotion and Behavior degree is for students planning on working in the field of public health in a non-clinical setting, such as planning and evaluating programs related to healthy behavior across the lifespan, and promoting programs that improve health in the general population. Students choosing the Health Management Policy AS degree are preparing for careers in managing health care organizations or agencies. Students planning to transfer to another institution should consider the Associate of Arts Oregon Transfer degree. A sample advising guide for this degree for health students can be found in the Exercise and Sport Science section of this catalog. Each university has different requirements and you should plan your LBCC classes with the requirements of the school you plan to attend.

Facilities

The department has indoor and outdoor facilities to support exercise and physical activities that act as a supplement for health behaviors. The Activity Center contains a fully equipped, double-court gymnasium, as well as a weight training room, a dance and aerobics room, and complete shower facilities. Outdoor facilities include a baseball diamond, tennis courts, four sand volleyball courts, a 400 meter track, and a wellness trail.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Health Promotion and Behavior will:

- Recognize the link between current behavior and future health status.
- Exhibit healthy lifestyle choices.
- Demonstrate an ability to access and explore career and academic opportunities.
- Make appropriate decisions regarding health issues and products.
- Research current and future health care organizations and policies.

TRANSFER

Associate of Science with an emphasis in Health Promotion and Behavior

See the front of this section for graduation requirements for the Associate of Science degree.

The following courses may be taken in addition to (or as substitutes for) program requirements at Oregon State. Students should consult with an advisor before substituting courses.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No.	Course Title	Credits

Fall Term - First Year

BI 101	*BS: General Biology*	*4*
HE 100	Introduction to Public Health	4
PE 231	*Lifetime Health and Fitness*	*3*
WR 121	*English Composition*	*3*

Winter Term

BI 102	*BS: General Biology*	*4*
HE 210	Introduction to Health Services	3
HE 225	Social & Individual Health Determinants	4
PE 185	Physical Education Activity Course	1
WR 122	*English Composition: Argumentation*	*3*

Spring Term

COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion or*	
COMM 218	*Interpersonal Communication*	*3*
HE 220	Intro to Epidemiology & Health Data Analysis	3
SOC 204	General Sociology	3
	Approved Elective	6

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Fall Term - Second Year

MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
NFM 225	Nutrition	4
PSY 201	*SPI: General Psychology*	*4*
	Approved Elective	3

Winter Term

CH 112	*PS: Chem for Health Occupations*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
EC 220	*DPD: Contemporary U.S. Economic Issues or*	
SOC 206	*DPD: Social Problems & Issues*	*3*
	Literature and Arts	*3*
PE 185	Physical Education Activity Course	1
PSY 202	General Psychology	4

Spring Term

	Cultural Diversity	*3*
PE 185	*Physical Education Activity Course*	*1*
	Western Culture	*3*
	Approved electives	

Take the following electives or choose classes in the Public Health major at OSU through the Degree Partnership Program to equal 90 credits.

The following courses can count towards the AS degrees in Health Promotion and Education or Health Management and Policy at LBCC. These will transfer as lower division transfer credits but do not fulfill program requirements at OSU.

CH 150	Preparatory Chemistry (3 credits)
CH 112	Chemistry for Health Occupations (5 credits)
HE 125	Occupational Safety & Health (3 credits)
HE 151	Drugs in Society (3 credits)
HE 204	Exercise & Weight Management (3 credits)
HE 207	Stress Management (3 credits)
HE 252	First Aid (3 credits)
HE 253	AIDS & Sexually Transmitted Diseases (3 credits)
NFM 225	Nutrition (4 credits)
PE 131	Introduction to Health & Physical Education (3 credits)
PE 180	Physical Education Activity Classes or
PE 185	Physical Education Activity Classes or
PE 190	Physical Education Activity Classes (1 credit each)
PE 212	Sociocultural Dimensions of Physical Activity (3 credits)

Total Credits Required: 90

TRANSFER

Associate of Science with an emphasis in Health Management and Policy

See the front of this section for graduation requirements for the Associate of Science degree.

The following courses may be taken in addition to (or as substitutes for) program requirements at Oregon State. Students should consult with an advisor before substituting courses.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

Program Requirements 47

Course No. Course Title Credits

Fall Term - First Year

BI 101	*BS: General Biology*	*4*
CS 120	Digital Literacy	3
HE 100	Introduction to Public Health	4
WR 121	*English Composition*	*3*

Winter Term

BI 234	*BS: Microbiology*	*4*
HE 210	Introduction to Health Services	3
MTH 111	*College Algebra*	*4*(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 122	*English Composition: Argumentation*	*3*

Spring Term

CH 112	*PS: Chemistry for Health Occupations*	*(4)*1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion or*	
COMM 218	*Interpersonal Communication*	*3*
HE 220	Intro to Epidemiology & Health Data Analysis	3
PE 231	*Lifetime Health and Fitness*	*3*
SOC 204	Introduction to Sociology	3

Fall Term - Second Year

BA 215	Survey of Accounting	4
EC 201	*SPI: Introduction to Microeconomics*	*3*(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Literature and Arts	*3*
MTH 245	Math for Biological/Management/Social Sciences	4

Winter Term

EC 202	Introduction to Macroeconomics	4
HE 225	Social & Individual Health Determinants	4
	Western culture	*3*
	Approved Elective	3

Spring Term

	Cultural Diversity	*3*
	Difference, Power, and Discrimination	*3*
	Approved electives	9

The following courses can count towards the AS degree in EXSS at LBCC. These will transfer as lower division transfer credits (electives) but may not fulfill specific program requirements at OSU.

CH 150	Preparatory Chemistry (3 credits)
CH 112	Chemistry for Health Occupations (5 credits)
HE 125	Occupational Safety & Health (3 credits)
HE 151	Drugs in Society (3 credits)
HE 204	Exercise & Weight Management (3 credits)
HE 207	Stress Management (3 credits)
HE 252	First Aid (3 credits)
HE 253	AIDS & Sexually Transmitted Diseases (3 credits)
HE 280	CWE (3 or more credits)
HE 280	CWE (3 credits or more)
NFM 225	Nutrition (4 credits)
PE 131	Introduction to Health & Physical Education (3 credits)
PE 180	Physical Education Activity Classes or
PE 185	Physical Education Activity Classes or
PE 190	Physical Education Activity Classes (1 credit each)
PE 212	Sociocultural Dimensions of Physical Activity (3 credits)

Total Credits Required: 90

Sociology

www.linnbenton.edu/social-science

The Associate of Science in Sociology is for students interested in completing a bachelor's degree at Oregon State University in Sociology. Students interested in this major are strongly encouraged to enroll in the Degree Partnership Program (DPP) as there may be lower division courses required by their chosen discipline that are only offered at Oregon State University. Students interested in the general transfer degree, the AA(OT) should follow the guidelines for this degree in the front section of this catalog. If you know the college/university you will be attending, you should work with an advisor from that school to be sure you are taking appropriate courses at LBCC.

Sociologists explore how both individuals and collectivities construct, maintain, and alter social organization in various ways. Sociologists also ask about the sources and consequences of change in social arrangements and institutions, and about the satisfactions and difficulties of planning, accomplishing, and adapting to such change. Students with training in Sociology can pursue careers in policy research, teaching, educational and non-profit administration, social work, government, and a variety of other careers that involve a deep understanding of both societal problems and individual behavior.

The Sociology department at Oregon State University offers several paths for sociology majors, and so we offer two possible tracks as part of our Associate of Science degree. Students seeking general training in sociology should pursue the General Sociology Track. Students interested in a career in Criminal Justice (see the section in the catalog on Criminal Justice for more information) can pursue a bachelor's degree in that field at Oregon State University by taking the Crime and Justice Track towards their Associate of Science.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree in Sociology will:

- Articulate the interplay between social or natural forces and individuals.
- Apply analytical skills to social or natural phenomena to explain, evaluate, or predict human behavior.
- Understand and respect cultural differences by: articulating an understanding of the historical basis of cultural ideas, behavior, or issues of inequality, or by articulating how their cultural background influences their reactions to or interactions with others.
- Articulate an awareness of issues related to historical or contemporary inequities in U.S. society and propose methods that would facilitate a more equitable society.

TRANSFER

Associate of Science with an emphasis in Sociology

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements.

OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Liberal Arts Core Requirement..... 15

See the front of this section for a list of Liberal Arts Core Requirements. OSU does not allow students to take courses in their chosen discipline to meet these requirements.

Program Requirements and Electives..... 32

Course No.	Course Title	Credits
Fall Term - First Year		
COMM 112	*Introduction to Persuasion or*	
COMM 218	*Interpersonal Communication*	*3*
MTH 105	*Introduction to Contemporary Math*	*4*
PE 231	*Lifetime Health & Fitness*	*3*
WR 121	*English Composition*	*3*
Winter Term		
ANTH 103	*SPI: Intro to Cultural Anthropology*	*3*
HST 101	*WC: History of Western Civilization or*	
HST 102	*WC: History of Western Civilization or*	
HST 103	*WC: History of Western Civilization*	*3*
SOC 204	Introduction to Sociology	3
WR 123	*English Composition: Research or*	
WR 227	*Technical Writing*	*3*
Spring Term		
HST 157	*CD: History of Middle East & Africa or*	
HST 158	*CD: History of Latin Amercia or*	
HST 159	*CD: History of Asia or*	
WS 280	*CD: Global Women*	*3*
	Physical Science	*4*
SOC 205	Institutions and Social Change	3
	Electives	6
Fall Term - Second Year		
	Biological & Physcial Sciences	*4*
PSY 201	General Psychology (LACIV)	4
SOC 206	Social Problems and Issues	3
	Electives	6
Winter Term		
ART 102	Understanding Art or	
TA 147	Intro to Theater	3
	Biological Sciences	*4*
SOC 222	Marriage Relationships	3
	Electives	6
Spring Term		
ART 207	Indigenous Art of the Americas or	
MUS 108	Music Cultures of the World (LACIII)	3
	Difference, Power, & Discrimination	*3*
	Liberal Arts Core II	3
PSY 216	Social Psychology (LACV)	3
	Electives	4
	Total Credits Required:	**90**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Theater

www.linnbenton.edu/theater-program

The theater arts degree is a practical liberal arts degree. The broad range of subjects studied enable the theater student to qualify for a wide variety of fields. Theater majors are found in the professional areas of live theatre, film, television, corporate and media training, radio, public relations, advertising, business law, teaching, and higher education. The diverse nature of theater explores expressions of human interactions and conflict.

The Theater program at Linn-Benton Community College is dedicated and focused on using the Arts to serve the communities in Linn and Benton counties. Through Touring Children's Theater and the Annual Children's Play, LBCC Theater provides opportunities to engage young audiences in the Arts and allows LBCC students a hands-on, dynamic learning experience. LBCC Theater's emphasis on Community Engaged and Devised Theater provides the student an opportunity to explore and experience one's community more fully, create partnerships within the community, and then produce a collaborative creation that both values the citizenry of the district and empowers the community to connect through story-telling and the Arts.

This study develops intellectual awareness about the human condition. It helps develop skills for working as a theater artist and as an individual who understands team work. Liberal studies majors will benefit from a departmental philosophy that good theater training is also excellent teacher training. Many courses in the department have no prerequisites, and they will help liberal studies students to prepare for careers in teaching.

In addition to acting and backstage opportunities, theater students are encouraged to work with faculty as assistant directors, designers, stage managers, and in theater administration. Theater faculty encourage highly motivated and qualified students to develop their own creative efforts. New student play scripts and innovative approaches to theater are strongly encouraged. Theater arts students choose to concentrate in one of three areas once they have completed a common core of courses: acting, design/ technical, and children's theater.

The theater department offers two transfer degrees for students wishing to study theater. The AS degree is designed to facilitate a seamless transfer to the theater option within the Speech Communications major at Oregon State University. The AAOT degree is for students wishing to transfer to another four-year institution, such as Southern Oregon University or Western Oregon University. Students pursuing the AAOT should speak with Dan Stone as soon as possible to best tailor their course choices to the school that they plan to transfer to, as requirements differ at each program.

Both the AS and the AAOT degrees are designed to be completed in two years, but this assumes that the entering student has basic skills in writing and math.

Student Learning Outcomes

Students who successfully complete an Associate of Science degree with an emphasis in Theater will:

- Students who successfully complete an Associate of Science degree with an emphasis in Theater will:
- Demonstrate basic performance and production skills.
- Develop an understanding of dramatic literature.
- Develop an understanding of theater in a cultural context.
- Develop an ability to engage the broader community in the Arts and communicate the importance and impact of the Arts within one's community
- Be prepared to competently audition and interview for a variety of Theater-related positions.

TRANSFER

Associate of Science with an emphasis in Theater

See the front of this section for graduation requirements for the Associate of Science degree.

General Education Requirements 43

Classes shown below in *italic* are general education requirements. You may take Theater classes to fulfill general education requirements at OSU. See the front of this section for classes that satisfy these degree requirements.

Liberal Arts Core Requirements 15

See the front of this section for a list of Liberal Arts Core Requirements. Classes are shown below that satisfy these requirements. Students may take Theater classes to fulfill these requirements.

Program Requirements 33

Course No.	Course Title	Credits
Fall Term - First Year		
	Biological Science	*4*
TA 147	Introduction to Theater	3
TA 250	Workshop: Theater Arts	3
TA 145	Improvisation	3
TA 295	Touring Children's Theater	3
TA 180	Rehearsal Practicum or	
TA 282	Performance Practicum	1
WR 121	English Composition	3
Winter Term		
MTH 105	*Intro to Contemporary Math or higher*	*4*
TA 121	Oral Interpretation of Literature	3
TA 247	Make Up	3
TA 248	Fundamentals of Acting I (LACI)	3
TA 180	Rehearsal Practicum or	
TA 282	Performance Practicum	1
Spring Term		
COMM111	*Fundamental of Speech*	*3*
ENG 201	Shakespeare or	
ENG 202	Shakespeare (LACII)	4
PE 231	*Lifetime Health & Fitness*	*3*
TA 244	Stagecraft (LACV)	3
TA 180	Rehearsal Practicum or	
TA 282	Performance Practicum	1
Fall Term - Second Year		
	Biological/Physical Sciences	*4*
	Liberal Arts Core (III or IV)	3
MUS108	*Music Cultures of the World*	*3*
	Social Processes & Institutions	*3*
TA 180	Rehearsal Practicum or	
TA 282	Performance Practicum	1
Winter Term		
	Difference, Power & Discrimination	*3*
	Liberal Arts Core (III or IV)	3
	Physical Science	*4*
TA 254	Directing I	3
TA 180	Rehearsal Practicum or	
TA 282	Performance Practicum	1

Spring Term

ART 204	History of Western Art or	
ART 205	History of Western Art or	
ART 206	History of Western Art	3
TA 140	Playreading	3
TA 253	Community Engaged Theater	3
	Western Culture	*3*
WR 243	*Creative Writing: Script Writing*	*3*
	Total Credits Required:	**91**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Associate of Applied Science Degree Requirements

The Associate of Applied Science (AAS) degree is a state approved associate degree that is intended to prepare graduates for direct entry into the workforce. The AAS degree may also help to prepare students for career advancements, occupational licensures, or further study at a four-year college or university.

General Requirements:

1. Complete the related instruction requirements and the required major curriculum as outlined.
2. Complete a minimum of 90 credits (some programs require more).
3. Complete a minimum of 24 credits at LBCC.
4. Maintain a minimum accumulative grade point average of 2.00 or better.

Listed below are the related instruction requirements for the AAS degree. Where options exist, see a department advisor for assistance.

RELATED INSTRUCTION REQUIREMENTS

COMMUNICATION (3 CREDITS)

Some programs may have a specific communication requirement not listed below. Refer to program curriculum for details or

Select one course from the following:

COMM 100 Introduction to Speech Communication (3 credits)
COMM 111 Fundamentals of Speech (3 credits)
COMM 112 Introduction to Persuasion (3 credits)
COMM 218 Interpersonal Communications (3 credits)
WR 115 Introduction to College Writing (3 credits)
WR 121 English Composition (3 credits)

COMPUTATION (3 CREDITS)

Some programs may have a specific computation requirement. Refer to program curriculum for details or place into MTH 065 Elementary Algebra (4 credits) or a higher level math course.

HUMAN RELATIONS (3 CREDITS)

When choosing a course in Human Relations, students should check specific requirements of the program.

If a program does not offer a specific requirement, refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement for the Associate of Applied Science degree.

Accounting Technology

www.linnbenton.edu/business-management

An associate degree or certificate in accounting technology can prepare you for a wide variety of jobs in the accounting field. These positions manage the financial records of companies or clients, documenting and recording financial information for use in reports, research, financial statements and payrolls. In smaller offices, accountants handle all finances. They record accounting transactions and reconciliations, prepare bank deposits, and prepare financial statements and other reports for managers and supervisors. In larger offices and accounting departments, the jobs are more specialized. Entry-level positions enter the details of transactions, find the totals for accounts, compute interest charges, and monitor loans, as well as maintain responsibility for accounts payable and receivable. More experienced accountants may be responsible for payroll, cost accounting, and the entire accounting cycle. Most accountants use computerized accounting software. Experienced workers may enter transactions on the computer and review computer generated reports. Accountants must ensure that their actions comply with generally accepted accounting principles, federal and state laws, and company policies and procedures. They need knowledge in accounting, economics, tax and law; general office procedures; mathematics; written and oral communication; computer hardware and software; and customer service skills.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Accounting will:

- Accurately compile, generate and interpret accounting information as required by the organization.
- Successfully utilize computer technology to create documents and report information.
- Analyze, interpret, and communicate accounting information with stakeholders at a level appropriate to the stakeholder's understanding.
- Work with team members and successfully interact with internal and external stakeholders. Assume a leadership role.

Program Requirements

The following programs are available to students who are interested in accounting but do not desire a four-year degree: a one-year certificate in Accounting Clerk and a two-year Associate of Applied Science degree in Accounting Technology with two tracks — a Business Track and a Healthcare Track. Both prepare students for entry-level positions in bookkeeping and accounting. Graduates of the two-year program should be able to enter at a higher level and advance further.

Students entering these programs should have a high interest in business operations, demonstrate attention to detail, familiarity with computer software, and working in a team environment. Students can incorporate an interest in both the healthcare and accounting professions by choosing the Healthcare Track in the Accounting Technology degree. They also should have sufficient math and writing skills to enroll in MTH 065 Elementary Algebra and WR 121 English Composition.

CAREER AND TECHNICAL

Associate of Applied Science in Accounting Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 82

Course No.	Course Title	Credits
Fall Term - First Year		
BA 101	Introduction to Business	4
BA 111	Practical Accounting I	4
MTH 065	*Elementary Algebra*	*4*
WR 121	English Composition	3
Winter Term		
BA 112	Practical Accounting II	4
BA 285	*Business Relations in a Global Economy*	*4*
CIS 125	Introduction to Software Applications	3
CIS 125D	Introduction to Databases	1
MTH 095	Intermediate Algebra	4
Spring Term		
BA 113	Practical Accounting III	4
BA 177	Payroll Accounting	2
BA 226	Business Law	3
BA 228	Computerized Accounting	3
COMM 100	*Introduction to Speech Communication*	*3*
Business Track Second Year:		
Fall Term - Second Year		
BA 120	Professional Accounting I[1]	3
BA 206	Principles of Management	3
BA 219	Governmental Accounting[1]	3
EC 115	Outline of Economics	4
	Elective	3
Winter Term		
BA 121	Professional Accounting II[1]	3
BA 216	Cost Accounting[1]	3
BA 224	*Human Resource Management*	*3*
BA 256	Income Tax Accounting1	3
BA 280A	CWE Accounting Technology	3
Spring Term		
BA 122	Professional Accounting III[1]	3
BA 218	Personal Finance Planning	3
BA 222	Financial Management[1]	3
CIS 135S	Advanced Spreadsheets	3
PE 231	Lifetime Health & Fitness	3
	Total Credits Required:	**92**
Health Track Second Year:		
Fall Term - Second Year		
BA 120	Professional Accounting I[1]	3
BA 206	Principles of Management	3
BA 218	Personal Finance Planning	3
EC 115	Outline of Economics	4
MO 5.630	Medical Terminology & Body Systems I	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Winter Term

BA 121	Professional Accounting II[1]	3
BA 216	Cost Accounting[1]	3
OA 2.544	Medical Insurance Procedures	4
OA 2.672	Basic Coding	3

Spring Term

BA 122	Professional Accounting III[1]	3
BA 280A	CWE	3
BA 222	Financial Management[1]	3
CIS 135S	Advanced Spreadsheets	3
PE 231	Lifetime Health & Fitness	3
	Total Credits Required:	**93**

CAREER AND TECHNICAL

One-Year Certificate in Accounting Clerk

Students who successfully complete the one-year Certificate in Accounting Clerk will:

- Successfully function at an entry-level position in the following areas: Accounts Payable, Accounts Receivable, General Ledger, or Payroll.
- Utilize basic accounting software as well as spreadsheets, database and word processing.
- Analyze, interpret and communicate with peers and management regarding accounting information.
- Successfully work with a team and interact with team members.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Course No.	Course Title	Credits

Fall Term

BA 101	Introduction to Business	4
BA 111	Practical Accounting I	4
MTH 065	*Elementary Algebra*	*4*
WR 121	*English Composition*	*3*

Winter Term

BA 112	Practical Accounting II	4
BA 224	*Human Resource Management*	*3*
CIS 125	Introduction to Software Applications	3
CIS 125D	Introduction to Databases	1
MTH 095	Intermediate Algebra	4

Spring Term

BA 113	Practical Accounting III	4
BA 177	Payroll Accounting	2
BA 226	Business Law	3
BA 228	Computerized Accounting	3
COMM 100	Introduction to Speech Communication	3
	Total Credits Required:	**45**

Administrative Medical Assistant

The Administrative Medical Assistant program prepares students for front office work in physicians' offices, clinics or hospitals, or other medical facilities. Medical administrative assistants provide support services using good communication and computer skills along with their knowledge of medical terms and procedures. Duties may include scheduling and receiving patients; transcribing or editing medical reports; obtaining patient's data; maintaining medical records; handling telephone calls, correspondence, reports and manuscripts; and eventually assuming responsibility for office management, insurance matters, office accounts, fees and collections. They can assist physicians with reports, speeches and journal articles.

A person wanting to become an administrative medical assistant should have the ability to get along well with people and the desire to work in a medical atmosphere. A successful administrative medical assistant must be reliable, enjoy detail work, be able to multitask, and work well under stress; the assistant will be dealing with many different people each day--many of whom are ill.

During the second year, a student's practicum experience will consist of 180 hours as a medical administrative assistant in a medical office, clinic or hospital. Students are trained to work independently with minimal supervision. This opportunity provides a bridge between classroom and career.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Administrative Medical Assistant will:

- Function effectively as a healthcare team member and/or leader.
- Interact effectively in oral and written communications.
- Use computers and other technology proficiently for administrative tasks.
- Demonstrate positive interpersonal interactions and diplomacy.
- Multi-task efficiently.
- Model professional and ethical behaviors, especially confidentiality and compassion.
- Participate in ongoing professional development.
- Solve problems using a variety of appropriate tools.
- Identify process improvement skills.
- Have a working knowledge of medical terminology, body systems, electronic health records, billing, and coding.

Program Requirements

The Administrative Medical Assistant program is designed to be completed in two years of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT) or has taken the necessary coursework to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret the test scores and get help in planning their program.

All courses must be completed with a "C" or better. Courses may be repeated one time to accomplish this requirement. Students who have completed all of the first year courses with a minimum "C" grade or better by the end of spring term will be admitted to second year program courses.

Students may also need to complete required immunizations, a urine drug screen, and a criminal background check in order to participate in the work experience (practicum) portion of the program.

CAREER AND TECHNICAL

Associate of Applied Science in Administrative Medical Assistant

See the beginning of this section for graduation requirements for Associate of Applied Science degree.

Related Instruction Requirements..... 11

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 82

Course No.	Course Title	Credits

Fall Term - First Year

CIS 125	Intro to Software Application	3
CS 120	Digital Literacy	3
MO 5.630	Medical Terminology & Body Systems I	3
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3

Winter Term

MO 5.414	Drug Names & Classifications	3
MO 5.631	Medical Terminology & Body Systems II	3
MO 5.665	Documentation & Screening in the Medical Office	2
OA 2.505	Voice Recognition	2
OA 2.544	Medical Insurance Procedures	4
OA 2.656M	Medical Information Processing	3

Spring Term

MO 5.632	Medical Terminology & Body Systems III	3
OA 109	Job Success Skills[1]	1
OA 2.515M	Business Math Medical	2
OA 2.551M	*Communications in Business: Medical*	*3*
OA 2.524	Healthcare Documentation	3
OA 2.672	Basic Coding	3

Fall Term - Second Year

MO 5.625	Basic Clinical Office Procedures[1]	5
OA 202	Word Processing for Business: MS Word	3
OA 205	Desktop Publishing[1]	3
OA 2.670	*Medical Office Procedures*	*4*

Winter Term

CIS 125D	Introduction to Databases	1
HE 252	First Aid	3
MTH 065	*Elementary Algebra*	*4*
OA 280	CWE for Office Professionals	3
OA 2.671	Medical Law & Ethics	3

Spring Term

BA 111	Practical Accounting I	4
OA 216	Trends in Technology	3
OA 203	Advanced Word Processing	4
OA 241	Records Management	3
OA 280	CWE for Office Professionals	3
	Total Credits Required:	**93**

Administrative Office Professional

Market driven, industry validated—the Administrative Office Professional (AOP) statewide-approved degree program reflects the evolving responsibilities of secretaries, administrative assistants, and other support personnel. Office professionals are increasingly self-directed and technically proficient. The AOP program emphasizes project management; internet/intranet communications and research; document retrieval; customer service and public relations; the ability to take initiative, think logically, demonstrate problem-solving techniques; and successfully interact with a variety of personalities. The International Association of Administrative Professionals (IAAP) has identified a new Administrative Professional who is capable of handling complex tasks and managing groups of individuals.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Administrative Office Professional will

- Function effectively as a team member and/or leader, including virtual partners.
- Interact effectively in oral and written communications.
- Use project management skills.
- Schedule and maintain calendars for self and others.
- Plan meetings, including negotiating hotel contracts, scheduling catering, preparing for cyber-and video-conferencing.
- Plan travel and supporting activities for others.
- Perform desktop publishing using both paper and electronic methods.
- Multi-task efficiently.
- Model professional and ethical behaviors.
- Participate in ongoing professional development.
- Solve problems using a variety of appropriate tools.

Program Requirements

This statewide program includes students working 240 hours in a variety of offices. Upon completion, the students are eligible to sit for the Certified Administrative Professional or Certified Professional Secretary examinations sponsored by the International Association of Administrative Professionals. When they pass the written exam, they will become credentialed as Certified Administrative Professionals or Certified Professional Secretaries after working full time for one year.

The Administrative Office Professional program is designed to be completed in two years of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT), or has taken the necessary coursework, to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret the test scores and get help in planning their program.

CAREER AND TECHNICAL

Associate of Applied Science in Administrative Office Professional

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 11

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 80

Course No.	Course Title	Credits

Fall Term - First Year

CS 120	Digital Literacy	3
CIS 125	Intro to Software Applications	3
OA 104	Business Math	2
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3

Winter Term

CIS 125D	Introduction to Databases	1
OA 2.505	Voice Recognition	2
OA 202	Word Processing for Business: MS Word	3
OA 205	Desktop Publishing[1]	3
OA 215	Communications in Business	4
OA 225	Applied Document Processing	3

Spring Term

CIS 135S	Advanced Spreadsheets	3
OA 109	Job Success Skills: Office[1]	1
OA 116	*Administrative Procedures[1]*	*4*
OA 203	Advanced Word Processing	4
OA 241	Records Management[1]	3

Fall Term - Second Year

BA 101	Introduction to Business	4
BA 111	Practical Accounting I or	
BA 211	Principles of Accounting: Financial . . .	4
MTH 065	*Elementary Algebra*	*4*
OA 251	Management for the Office Professional	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Winter Term

BA 226	Business Law	3
OA 270	CWE Seminar: Prep for IAAP Certification	1
OA 271	Advanced Business Projects[1]	4
OA 280	CWE for Office Professionals	4
WR 121	*English Composition*	*3*

Spring Term

BA 228	Computerized Accounting	3
BA 224	Human Resource Management	3
COMM 111	Fundamentals of Speech or	
COMM 218	Interpersonal Communication	3
OA 216	Trends in Technology	3
OA 280	CWE for Office Professionals	4
	Total Credits Required:	**91**

Animal Technology

www.linnbenton.edu/animal-science

LBCC is the only community college in the Willamette Valley with an Animal Technology program. The program uses the community as a natural instructional laboratory and provides students with knowledge and skills useful for working in production livestock occupations and in entering into livestock-related fields. Some coursework may transfer to a four-year institution.

Farm and ranch workers need to have a basic understanding of livestock feeding and nutrition, reproduction, health care and disease prevention, animal identification methods, farm accounting, and be able to make prudent decisions based on current economics. Besides a basic understanding of the aforementioned subjects, they may also need the practical skills to operate machinery and repair fencing, corrals, barn structures, and watering systems.

Owners of large farms may hire farm managers to oversee most farm activities or focus on a single activity, such as calving. These managers supervise and direct other workers and many make critical production decisions. They may set farm production goals and identify appropriate marketing strategies to maximize profitability. They consider weather predictions, animal disease potential in their area, commodity pricing, and federal farm programs. They must decide when to plant, what to grow, and what type of equipment and supplies to purchase. To start new ventures, farmers and farm managers negotiate and secure bank loans. They must keep good financial records and understand federal and state regulations.

LBCC's Animal Technology courses are designed to provide practical learning experiences through hands-on laboratory sessions. Persons already employed in specific agricultural fields can upgrade or add to their skillset. Students in the program also have an opportunity to participate in competitive collegiate livestock judging.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Animal Technology will:

- Effectively apply multiple-specie Animal Husbandry skills and concepts within the livestock industry.
- Use skills acquired to gain employment in animal agriculture.
- Effectively research nutrition, management, marketing, health and reproduction issues.
- Interact with professionals unique to the industry using appropriate vocabulary.
- Apply appropriate computational and accounting skills and utilize technology for successful money management and other record-keeping requirements.

Program Requirements

The Animal Technology program is designed to be completed in two years. This assumes, however, that the entering student has been placed at or above the following levels on the Computerized Placement Test: WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra. It is advisable to take the test as early as possible. If developmental coursework is required, it may take the student longer than two years to complete the program.

In preparation for the Animal Technology program, high school students should study mathematics, life sciences and physical sciences. Program completion requires a minimum of four credits of math and eight credits of biology, plus other Related Instruction courses, such as English Composition, and courses related to speech/oral communication, first aid, and human relations.

Students can take Related Instruction courses at night, but the technical classes are only offered during the day. Part-time enrollment is common; students may start in the middle of the school year or enroll for any portion of the program.

Facilities

Classes are conducted in modern, well-equipped classrooms and laboratories. Emphasis is placed on hands-on experience, and many classes utilize the local livestock producers for in-the-field laboratory exercises. Computers, microscopes and other modern lab equipment are available for student use. The college supplies equipment and tools for use during lab sessions.

CAREER AND TECHNICAL

Associate of Applied Science in Animal Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 10

Computation

MTH 065	Elementary Algebra	4

Communication

WR 121	English Composition	3

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 80

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
ANS 121	Introduction to Animal Science	4
ANS 207	Careers in Animal Agriculture	1
ANS 210	Feeds & Feed Processing	4
ANS 211	Applied Animal Nutrition	3
ANS 231	Livestock Evaluation	3
ANS 278	Genetic Improvement of Livestock	3
AREC 211	Management in Agriculture	4
AREC 221	Marketing in Agriculture	3
AT 156	Livestock Diseases & Parasites	3
BI 101	General Biology	4
BI 102	General Biology	4
COMM 100	Introduction to Speech Communication or	
COMM 111	Fundamentals of Speech or	
COMM 112	Introduction to Persuasion or	
COMM 218	Interpersonal Communication	3
CSS 205	Soils: Sustainable Ecosystems	4
CSS 210	Forage Crops	3

CSS 215	Soil Nutrients & Plant Fertilization	3
HE 252	First Aid	3
Select three courses from the options below		12
ANS 215	Beef/Dairy Industries (4 credits)	
ANS 216A	Applied Sheep Production (4 credits)	
ANS 216B	Applied Swine Production (4 credits)	
ANS 220	Introductory Horse Science (4 credits)	
ANS 227	Artificial Insemination (4 credits)	
Electives or approved CWE		*13*
	Total Credits Required:	**90**

Animal Technology: Horse Management

www.linnbenton.edu/animal-science

The Animal Technology Department offers a two-year Associate of Applied Science degree in Horse Management. This degree provides students with the knowledge and skills useful in entering occupations in the horse industry. Some of the coursework may transfer to a four-year institution. The program uses the local horse community as a natural instructional laboratory, and the courses provide extensive, practical, hands-on experience. The program maintains and operates a small training and breeding facility at which a limited number of student horses may be boarded. The college's seven-acre horse facility is located 1.5 miles from campus.

Job opportunities are varied, depending on the specific interest of the student. Typical jobs open to students completing the Horse Management degree program include stable helper, exercise rider, apprentice trainer, show groom, foaling attendant, breeding assistant and general farm hand. Many students are already working on family horse ranches or at agricultural jobs when they enter the program.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Animal Technology: Horse Management will:

- Successfully start a young horse and understand basic training concepts necessary to continue training through an advanced level.
- Manage a breeding herd and apply scientific concepts to a breeding program.
- Apply business, health and management concepts necessary to maintain a successful equine facility.
- Research a management or health problem.
- Communicate effectively using appropriate equine industry vocabulary in order to be successful in the job market.

Program Requirements

Students entering the Animal Technology: Horse Management program should have a firm background in life and physical sciences and should be prepared to take courses in mathematics and biology.

A mandatory riding evaluation is given at the start of the program to enable proper placement in courses.

The program is designed to be completed in two years. This assumes, however, that the entering student has placed at or above the following levels on the Computerized Placement Test: WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra. It is advisable to take the test as early as possible. Students entering the program with math and writing skills below the minimum requirement may require longer than two years to complete the degree. Program completion requires a minimum of 4 credits of math and 8 credits of biology, plus Related Instruction courses such as English composition, speech and social sciences.

Facilities

Classes are conducted in modern well-equipped classrooms and laboratories. Emphasis is placed on hands-on experience, and many classes utilize the local producers for laboratory exercises. In addition, there are computers, microscopes, and other modern lab equipment available for student use.

The training classes are conducted in a modern barn with indoor arena, 28 box stalls and washing and grooming facilities. Students bringing horses to school may board them at the LBCC barn.

CAREER AND TECHNICAL

Associate of Applied Science in Animal Technology: Horse Management

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 10

Computation

MTH 065	Elementary Algebra	4

Communication

WR 121	English Composition	3

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 80

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
AG 280B	CWE Animal Technology	2
ANS 121	Introduction to Animal Science	4
ANS 210	Feeds & Feed Processing	4
ANS 211	Applied Animal Nutrition	3
ANS 220	Introductory Horse Science	4
ANS 221	Equine Conformation and Performance	2
ANS 222	Young Horse Training	2
ANS 223	Equine Marketing	2
ANS 278	Genetic Improvement of Livestock	3
AT 143	Introduction to Horse Management	2
AT 154	Equine Business Management	3
AT 155	Equine Diseases & Parasites	3
AT 163	Schooling the Horse I	3
AT 164	Schooling the Horse II	3
AT 277A	Horse Breeding Management	2
AT 277B	Horse Breeding Management Lab	2
BI 101	General Biology	4
BI 102	General Biology	4
COMM 100	Introduction to Speech Communication or	
COMM 111	Fundamentals of Speech or	
COMM 112	Introduction to Persuasion or	
COMM 218	Interpersonal Communication	3
CSS 210	Forage Crops	3
HE 252	First Aid	3
Select additional elective courses or approved CWE		*16*
	Total Credits Required:	**90**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Apprenticeship

www.linnbenton.edu/apprenticeship

The Apprenticeship program provides courses in accordance with the Apprenticeship and Training Laws for the State of Oregon. These courses present technical instruction for the trades and are intended to complement on-the-job skills for both men and women. Each apprenticeable trade has a Joint Apprenticeship Training Committee (JATC) or a Trades Apprenticeship Training Committee (TATC) which outlines the procedures to become a journey person. This outline usually consists of two to five years of supervised on-the-job experience in various aspects of the trade in conjunction with LBCC coursework. The JATC/TATC committees outline the type of supportive courses needed to prepare students to become qualified journey persons in addition to working with related training courses.

Students wanting to move into management, supervision, or small business management can transfer to Oregon Institute of Technology (OIT) with related-training credits toward a Bachelor of Science (BS) in Operations Management after earning the Apprenticeship AAS degree.

If you are interested in becoming registered in an Oregon State Apprenticeship program please contact the Oregon State Bureau of Labor and Industries Apprenticeship Training Division at 971-673-0765 or www.boli.state.or.us for program and entrance requirements.

Student Learning Outcomes

Students who successfully complete the Associate of Applied Science or the Certificate in Electrician Apprenticeship Technologies will:

- Complete 6,000–8,000 hours of State of Oregon approved OJT attaining a journey card.
- Apply theory of electrical wiring.
- Repair and install electrical wire devices according to licensure regulations to meet NEC and OSC for Limited Energy Technician – License A and Manufacturing Plant Electrician.

Program Requirements

Students pursuing a designated and sponsored Oregon State Bureau of Labor and Industries occupation must meet entrance requirements for their chosen career.

The degree and certificates available in these trades are designed for journeymen who have completed an Oregon registered apprenticeship program with transcripted related training. The degree and/or certificates are available for journeymen who have completed a 2, 3 or 4-year apprenticeship program. Up to 22 credits as credit for prior certification may be granted for a journey card from the State of Oregon.

Facilities

The program is conducted in modern, well-equipped classrooms and laboratories. The Apprenticeship Technology labs contain equipment including electrical components and meters and programmable logic controller stations for electricians and instrument technicians to practice hands-on exercises. The Industrial Mechanics lab facilities include equipment to attain welding training, machinery alignment, and material sciences.

CAREER AND TECHNICAL

Associate of Applied Science Electrician Apprenticeship Technologies

A journey card and state-issued Certificate of Completion of the Electrician Apprenticeship training is required. The journey card or approved CWE credit may replace up to 22 credits of the program requirements.

Related Instruction Requirements..... 9-10

Computation (3 credits)

This requirement is satisfied by completing the following courses:

APR 101	Introduction to Electricity & Circuit Components.....	6
APR 102	Alternating Current Components & Uses	6
APR 103	Electric Generators, Motors, & Controls.....	6
or		
MTH 065	Elementary Algebra.....	4

Communication

WR 115	Introduction to College Writing	3

Human Relations

This requirement is satisfied by completing the following course:

WD 4.165	Customer Service for Welders or Cultural Literacy course.....	3

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 81

Credit for Prior Certification..... 22

The following courses may be used toward the degree requirements:

Course No.	Course Title	Credits
APR 101	Introduction to Electricity & Circuit Components.....	6
APR 102	Alternating Current Components & Uses	6
APR 103	Electric Generators, Motors, & Controls.....	6
APR 121	Introduction to the Limited Energy Trade	4
APR 122	Fundamentals of Electricity & Electronics.....	4
APR 123	Electrical Test Equipment.....	4
APR 201	Electric Motors	6
APR 202	Electric Motor Controls	6
APR 204	Basic Welding for Electricians	2
APR 208	National Electrical Code I.....	6
APR 210	National Electrical Code II	6
APR 212	National Electrical Code III.....	6
APR 214	Programmable Logic Controllers.....	3
APR 215	Advanced PLC Troubleshooting.....	3
APR 216	Industrial Pneumatics Systems	3
APR 217	Process Control and Instrumentation	3
APR 221	Specialized Systems.....	4
APR 222	Process Control & Instrumentation	4
APR 223	Communication Systems & Networks.....	4
APR 224	Protective Signaling.....	4
APR 225	Systems Integration	4
APR 261	National Electrical Code: Expanded Exam Prep	3
	Total Credits Required:	**90-91**

CAREER AND TECHNICAL

One-Year Certificate in Electrician Apprenticeship Technologies

A journey card and state-issued Certificate of Completion of the Electrician Apprenticeship (Limited Maintenance Electrician and Limited Energy Technician A or B) training is required. The journey card may replace up to 22 credits of the program requirements.

Related Instruction Requirements..... 9-10

Computation (3 credits)

This requirement is satisfied by completing the following courses:

APR 101	Introduction to Electricity & Circuit Components.....	6
APR 102	Alternating Current Components & Uses	6
APR 103	Electric Generators, Motors, & Controls.....	6
or		
MTH 065	Elementary Algebra.....	4

Communication

WR 115	Introduction to College Writing	3

Human Relations

This requirement is satisfied by completing the following courses:

WD 4.165	Customer Service for Welders or	
	Cultural Literacy course.....	3

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 36
Credit for Prior Certification..... 22

The following courses may be used toward the degree requirements:

Course No.	Course Title	Credits
APR 101	Introduction to Electricity & Circuit Components.....	6
APR 102	Alternating Current Components & Uses	6
APR 103	Electric Generators, Motors, & Controls.....	6
APR 121	Intro to the Limited Energy Trade.....	4
APR 122	Fundamentals of Electricity & Electronics.....	4
APR 123	Electrical Test Equipment.....	4
APR 201	Electric Motors	6
APR 202	Electric Motor Controls.....	6
APR 204	Basic Welding for Electricians.....	2
APR 208	National Electrical Code I.....	6
APR 210	National Electrical Code II	6
APR 212	National Electrical Code III.....	6
APR 214	Programmable Logic Controllers.....	3
APR 215	Advanced PLC Troubleshooting.....	3
APR 216	Industrial Pneumatics Systems.....	3
APR 217	Process Control and Instrumentation.....	3
APR 221	Specialized Systems.....	4
APR 222	Process Control & Instrumentation	4
APR 223	Communication Systems & Networks.....	4
APR 224	Protective Signaling.....	4
APR 225	Systems Integration	4
APR 261	National Electrical Code: Expanded Exam Prep	3
	Total Credits Required:	**45-46**

CAREER AND TECHNICAL

Certificate in Limited Electrician Apprenticeship Technologies

Students who successfully complete the Certificate in Limited Electrician Apprenticeship will:

- Complete 4,000 hours of State of Oregon approved OJT.
- Repair and install electrical wire devices according to limited licensure and regulations to meet NEC and OSC code for Limited Energy Technician – License B and Limited Maintenance Electrician.

A journey card and state-issued Certificate of Completion of the Limited Electrician Apprenticeship training is required. The following courses may be used toward the certificate requirements:

Program Requirements 24
Credit for Prior Certification..... 22

Course No.	Course Title	Credits
APR 101	Introduction to Electricity & Circuit Components.....	6
APR 102	Alternating Current Components & Uses	6
APR 103	Electric Generators, Motors, & Controls.....	6
APR 121	Intro to the Limited Energy Trade.....	4
APR 122	Fundamentals of Electricity & Electronics.....	4
APR 123	Electrical Test Equipment.....	4
APR 201	Electric Motors	6
APR 202	Electric Motor Controls.....	6
APR 204	Basic Welding for Electricians.....	2
APR 208	National Electrical Code I.....	6
APR 210	National Electrical Code II	6
APR 212	National Electrical Code III.....	6
APR 214	Programmable Logic Controllers.....	3
APR 221	Specialized Systems.....	4
APR 222	Process Control & Instrumentation	4
APR 223	Communication Systems & Networks.....	4
APR 224	Protective Signaling.....	4
APR 225	Systems Integration	4
APR 261	National Electrical Code: Expanded Exam Prep	3
	Total Credits Required:	**24**

CAREER AND TECHNICAL

Associate of Applied Science in Industrial Mechanics and Maintenance Technology Apprenticeship

Students who successfully complete the Associate of Applied Science or the Certificate in Industrial Mechanics and Maintenance will:

- Complete a minimum of 8,000 hours of State of Oregon approved OJT.
- Repair, install, and maintain a variety of industrial equipment using trade specific tools and techniques in compliance with state regulations for millwright, pipefitter, welder and instrumentation technician.

A journey card and state-issued Certificate of Completion of the Industrial Mechanics and Maintenance Apprenticeship training (millwright, pipefitter, welder, and instrumentation technician) is required. The journey card may replace up to 22 credits of the program requirements.

Related Instruction Requirements..... 10-11

Computation (3 credits)

This requirement is satisfied by completing the following courses:

APR 257	Math for Apprenticeship.....	5
or		
MTH 060	Introduction to Algebra	4

Communication

WR 115	Introduction to College Writing	3

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements		**81**
Credit for prior certification		22
Course No.	Course Title	Credits
APR 161	Manufacturing Processes I	2
APR 255	Introduction to Metallurgy	3
APR 256	Electricity for Maintenance	3
APR 258	Machinery Alignment	3
Select 48 credits from the following electives:		48
APR 214	Programmable Logic Controllers	3
APR 215	Advanced PLC Troubleshooting	3
APR 216	Industrial Pneumatics Systems	3
APR 217	Process Control and Instrumentation	3
APR 252	Industrial Hydraulics I	4
APR 253	Industrial Hydraulics II	4
APR 254	Industrial Lube Fundamentals	3
APR 259	Vibration Analysis and Equipment Reliability	3
APR 260	Pumps & Pumping	3
APR 262	Pumps and Valves	2
APR 264	Manufacturing Processes II	2
APR 265	Manufacturing Processes III	2
WD 4.151	Welding I	2
WD 4.152	Welding II	2
WD4.157	Machinery Operations Essentials	3
WD 4.160	Prep for Certification	2
WD 4.245	Layout Procedures for Metals	3
WD 4.255	Fabrication of Structural Systems	4
WD 4.256	Basic Pipe Welding Skills	4
WD 4.257	Fabrication & Repair	4
WD 4.258	Print Reading: Welders	3
WD 4.280	Aluminum Welding	2
	Total Credits Required:	**91-92**

CAREER AND TECHNICAL

One-Year Certificate in Industrial Mechanics and Maintenance Technology Apprenticeship

A journey card and state-issued Certificate of Completion of the Millwright, Pipefitter, Welder, Instrumentation Technician training is required. The journey card may replace up to 22 credits of the program requirements.

Related Instruction Requirements		**10-11**
Computation (3 credits)		
This requirement is satisfied by completing the following courses:		
APR 257	Math for Apprenticeship	5
or		
MTH 060	Introduction to Algebra	4
Communication		
WR 115	Introduction to College Writing	3

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements		**36**
Credit for Prior Certification		22

The following courses may be used toward the degree requirements:

Course No.	Course Title	Credits
APR 214	Programmable Logic Controllers	3
APR 215	Advanced PLC Troubleshooting	3
APR 216	Industrial Pneumatics Systems	3
APR 217	Process Control and Instrumentation	3
APR 252	Industrial Hydraulics I	4
APR 253	Industrial Hydraulics II	4
APR 254	Industrial Lube Fundamentals	3
APR 259	Vibration Analysis and Equipment Reliability	3
APR 260	Pumps & Pumping	3
APR 262	Pumps and Valves	2
APR 264	Manufacturing Processes II	2
APR 265	Manufacturing Processes III	2
WD 4.151	Welding I	2
WD 4.152	Welding II	2
WD4.157	Machinery Operations Essentials	3
WD 4.160	Prep for Certification	2
WD 4.245	Layout Procedures for Metals	3
WD 4.255	Fabrication of Structural Systems	4
WD 4.256	Basic Pipe Welding Skills	4
WD 4.257	Fabrication & Repair	4
WD 4.258	Print Reading: Welders	3
WD 4.280	Aluminum Welding	2
	Total Credits Required:	**46-47**

Automotive Technology

www.linnbenton.edu/automotive-technology

Learn to service, diagnose, and repair modern vehicles using the latest diagnostic and undercar equipment. In cooperation with Snap-on Corporation, training combines operational theory with hands-on activities for engine repair, automatic transmissions, manual transmission and drive train, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, and engine performance. Get ready to pass ASE certification tests and begin a career as an automotive service technician. Programs include a NATEF Certified One-Year Certificate in Automotive Maintenance and Light Repair and a Two-Year NATEF Certified Associate of Applied Science (AAS) in Automotive Technology.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Automotive Technology will:

- Practice safety precautions, to protect yourself, vehicles and the environment.
- Communicate clearly, with team members and customers.
- Conduct yourself on the job with a high degree of professionalism.
- Use service literature and tools efficiently.
- Practice a systematic diagnostic and repair strategy to maintain modern automobiles and light trucks

Program Requirements

Many automotive courses require placement into RD 090 College Success and Reading Strategies and placement into WR 095 College Writing Fundamentals, and placement into MTH 060 Introduction to Algebra. A meeting with a program advisor is required prior to registration for first year Automotive Technology classes.

Additional costs are:

- $1,000.00 per term in the first 3 terms for Snap-on Tools.
- $100 - $200 per term for textbooks.
- $150 for 2 required Uniform work shirts and related safety apparel.
- $10 lab fee per credit for each Automotive course.

Facilities

The Automotive Technology program is located at the world class Advanced Transportation Technology Center on 2000 West Oak St. in Lebanon OR.

Some highlights of the facility include:

- 38,000 ft^2 of professional learning and repair space
- Furnished Snap-on Tools for student use
- Over 20 State-of-the-art Snap-on Diagnostic Tools including bi-directional scan tools, 4 channel scopes, flash reprogrammers, 5 gas analyzers, and many more
- Mustang AC/EC Hybrid Dynamometer
- On Site commercial Propane and CNG refueling
- Additional advanced Propulsion courses offered for EV's, Hybrids, Propane and CNG vehicles.

CAREER AND TECHNICAL

Associate of Applied Science in Automotive Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree. Classes offered during multiple terms may be taken as circumstances dictate.

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Computation (3 credits)

See the beginning of this section for a list of approved courses.

Communication

This requirement is satisfied by completing the following course:

IN 4.164	*Technical Writing for CTE*	*3*

(Taken first year - winter term below)

Human Relations

This requirement is satisfied by completing the following course:

AU 3.643	*Customer Service for Automotive Technicians*	*3*

(Taken first year - spring term below)

Program Requirements 84

Course No.	Course Title	Credits
Fall Term - First Year		
AU 3.316	Drive Train Service	10
AU 3.318	Maintenance & Repair Practice	3
	Computation	*3*
Winter Term		
AU 3.318	Maintenance & Repair Practice	3
AU 3.319	Suspension, Steering & Braking Systems	10
IN 4.164	*Technical Writing for CTE*	*3*
Spring Term		
AU 3.318	Maintenance & Repair Practice	3
AU 3.317	Electrical Systems & Engine Performance	10
AU 3.643	*Customer Service for Automotive Technicians*	*3*
Fall Term - Second Year		
AU 3.298	Advanced Engine Performance[1]	6
AU 3.300	Automatic Transmissions & Transaxles[1]	6
WE 1.280W	CWE Auto Technology	4
Winter Term		
AU 3.296	Advanced Steering/Suspension/Braking Systems	6
AU 3.299	Engine Repair[1]	5
WE 1.280W	CWE Auto Technology	4
Spring Term		
AU 3.303	Automotive Heating & Air Conditioning[1]	5
AU 3.295	Manual Drive Train & Axles	5
WE 1.280W	CWE Auto Technology	4
	Total Credits Required:	**93**

Child and Family Studies

www.linnbenton.edu/education

The Child and Family Studies Program offers a 12-credit Certificate in Working with Families, a 12- or 13-credit Child Care Directors Certificate, a 16-credit Certificate in Childhood Care and Education, and a one-year certificate and a two-year Associate of Applied Science degree (AAS) in Child and Family Studies to prepare students for employment in the field of early childhood education.

The program emphasizes concepts in growth and development, curriculum design, positive guidance , and provides opportunities to apply knowledge and skills with children birth to five years of age in the Head Start Periwinkle Child Development Center (PCDC), the program's on-campus lab school. You must have current inoculations and complete the Central Registry background check before working directly with children.

If you are interested in related areas of study, see the following sections of this catalog: child care — see Child Care Provider Training; elementary school teaching — see Education; OSU's Human Development and Family Sciences programs — see the AS degree in Education; parent education — see Parenting Education.

Some financial assistance is available for Child and Family Studies majors. See your advisor for more information.

Student Learning Outcomes

A student who successfully completes an Associate of Applied Science in Child and Family Studies will:

- Work as an effective team member and lead teacher.
- Assess and utilize various types of communication strategies to meet the unique needs of families.
- Link families with appropriate community resources.
- Recognize and honor diversity in interactions with children and families.
- Select from a wide variety of guidance strategies to meet individual needs of children.
- Adapt learning environments and activities to meet the needs of individual children.
- Plan, implement and evaluate developmentally appropriate activities and learning environments.
- Develop and practice record-keeping, observation and assessment skills.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Fall Linked Classes

If your Computerized Placement Test (CPT) writing score is 95 or below, you should take the linked classes in your first term. The linked classes integrate the subjects and assignments of two courses, HDFS 225 Child Development, and CG 100 College Success Strategies. You will learn important skills that will benefit you as a student in future courses. Get more details from your advisor.

Associate of Applied Science Degree in Child and Family Studies

The Associate of Applied Science degree (AAS) is designed for students who plan to enter the workforce upon completing the degree. Graduates with two-year degrees may become teachers of young children in child care centers, family child care homes, Head Start programs or parent cooperatives. They plan and implement developmentally appropriate learning experiences to foster young children's physical, social-emotional, cognitive and language development. They may design indoor and outdoor environments, keep records, and confer with parents.

See an advisor if you are interested in a Bachelor's degree in this field. LBCC has articulation agreements with Southern Oregon University (SOU) and Oregon State University (OSU). Students may pursue an AAOT with emphasis in Child & Family Studies at SOU or complete the Child & Family Studies AAS degree requirements plus 30 specialized general education courses and transfer to SOU. The AS in Human Development & Family Sciences, Child Development option transfers to OSU with specified general education and program courses.

The AAS degree in Child and Family Studies is designed to be completed in two years, but this assumes that the entering student has basic skills in writing and college-level math. If you did not did not place into WR 121 and MTH 065 on the writing and mathematics portions of the Computerized Placement Test (CPT), you may be required to take pre-college courses that extend completion of your degree beyond two years. Research has shown that students who get started on this work during their first few quarters of college are more likely to finish their degrees than those who postpone it. Linn-Benton offers a summer term that will allow you to gain these skills and stay on track to complete.

CAREER AND TECHNICAL

Associate of Applied Science in Child and Family Studies

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 10

Computation (3 credits)

MTH 065 Elementary Algebra..... 4
(Taken first year - spring term below.)

Communication

WR 121 English Composition 3
(Taken first year - fall term below.)

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 80

Course No.	Course Title	Credits
Fall Term - First Year		
HDFS 225	Infant and Child Development.....	4
HDFS 248	Learning Experiences for Children.....	3
WR 121	*English Composition*.....	*3*
	Electives (See advisor for approved electives.)	4
Winter Term		
COMM 218	Interpersonal Communication.....	3
ED 7.731	Positive Guidance for Young Children	3
ED 152	Creative Activities/Dramatic Play	3
HDFS 261	Working with Individuals & Families	3
	Electives (See advisor for approved electives.)	4
Spring Term		
ED 179	Literature, Science & Math	3
ED7.710	Principles of Observation.....	3
HDFS 233	Professional Foundations in Early Childhood.....	3
MTH 065	*Elementary Algebra*	*4*
	Electives (See advisor for approved electives.)	2
Fall Term - Second Year		
ED 101	Observation & Guidance.....	3
ED 282	Working with Children with Special Needs	3
	Electives (See advisor for approved electives.)	8
Winter Term		
ED 102	Education Practicum.....	3
HDFS 201	Contemporary Families in the U.S.	3
	Human Relations	*3*
	Electives (See advisor for approved electives.)	6
Spring Term		
ED 103	Extended Education Practicum.....	3
ED 7.725	Job Search Skills.....	3
	Electives (See advisor for approved electives)	10
	Total Credits Required:	**90**

One-Year Certificate in Child and Family Studies

Completion of the one-year Certificate in Child and Family Studies provides students with education and training to become assistant teachers of young children in child care centers or Head Start programs. Graduates may also become registered family child care providers. Assistant teachers implement daily educational programs planned by the teacher, maintain the classroom, keep written records, report and record accidents, and communicate with the director and other staff.

The one-year Certificate in Child and Family Studies requires 46 credits. This assumes that the entering student has basic skills in writing and math. If you did not place into WR 090 and MTH 020 on the writing and mathematics and writing portions of the Computerized Placement Test (CPT), you may be required to take additional pre-college courses that extend completion of your degree beyond one year. Research has shown that students who get started on this work during their first few quarters of college are more likely to finish their degrees than those who postpone it. LBCC offers a summer term that will allow you to gain these skills and stay on track to complete.

Students who earn the certificate will have completed 46 credit hours of the 90-credit Associate of Applied Science degree in Child and Family Studies. Graduates may apply some of their certificate program credit hours toward a transfer degree.

A student who successfully completes a one-year Certificate in Child and Family Studies will:

- Work as an effective team member.
- Communicate effectively to establish positive and productive relationships with coworkers and families.
- Recognize a wide range of individual differences among parents and children.
- Develop positive relationships with children that support growth and development.
- Utilize positive guidance techniques.
- Plan, implement and evaluate developmentally appropriate activities.

CAREER AND TECHNICAL

One-Year Certificate in Child and Family Studies

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 35-36

Course No.	Course Title	Credits
Fall Term		
ED 101	*Observation & Guidance*	*3*
ED 282	Working with Children with Special Needs	3
HDFS 225	Infant and Child Development	4
HDFS 248	Learning Experiences for Children	3
WR 090	The Write Course (4 credits) or	
WR 095	College Writing Fundamentals (or higher)	3-4
Winter Term		
ED 102	Education Practicum	3
ED7.731	Positive Guidance for Young Children	3
HDFS 261	Working with Individuals & Families	3
MTH 020	*Basic Mathematics (or higher)*	*4*
	Electives (See advisor for approved electives.)	1-2
Spring Term		
COMM 218	*Interpersonal Communication*	*3*
ED 103	Extended Education Practicum	3
ED 179	Literature, Science & Math	3
ED 7.725	Job Search Skills	3
HDFS 233	Professional Foundations in Early Childhood	3
	Total Credits Required:	**45-46**

CAREER AND TECHNICAL

Certificate in Childhood Care and Education

Students just entering the field of early childhood or those child care providers who have not taken credit classes can earn a certificate by completing 16 credit hours of the 46-credit, one-year Certificate in Child and Family Studies. See required courses below.

Course No.	Course Title	Credits
ED 7.731	Positive Guidance for Young Children	3
ED 7.710	Principles of Observation	3
ED 152	Creative Activities/Dramatic Play or	
ED 179	Literature, Science & Math or	
HDFS 225	Infant and Child Development	4
HDFS 248	Learning Experiences for Children	3
	Elective (see advisor for approved list)	3
	Total Credits Required:	**16**

CAREER AND TECHNICAL

Career Pathway Certificate Working with Families

Students just entering the field of early childhood or those who would like to focus on credit classes related to working with families of young children can earn a certificate by completing 12 credit hours of the 90-credit AAS degree in Child and Family Studies. See required courses below.

Course No.	Course Title	Credits
Take the following courses..... 12		
ED 219	Civil Rights & Multicultural Issues in Education (3 credits)	
HDFS 201	Contemporary Families in the U.S. (3 credits)	
HDFS 261	Working with Individuals & Families (3 credits)	
SOC 222	Marriage Relationships (3 credits)	
	Total Credits Required:	**12**

CAREER AND TECHNICAL

Career Pathway Certificate Child Care Director

Students who would like to focus on credit classes related to being a child care center director or site director can earn a certificate by completing 12 or 13 credit hours of the 90-credit AAS degree in Child and Family Studies. See required courses below.

Course No.	Course Title	Credits
ED 219	Civil Rights & Multicultural Issues in Education	3
HDFS 233	Professional Foundations in Early Childhood	3
Choose one of the following courses		3
HDFS 201	Contemporary Families in the U.S. (3 credits)	
HDFS 261	Working with Individuals & Families (3 credits)	
Choose one of the following courses		3
HDFS 225	Infant and Child Development (4 credits)	
HDFS 248	Learning Experiences for Young Children (3 credits)	
ED 7.710	Principles of Observation (3 credits)	
ED 7.731	Positive Guidance for Young Children (3 credits)	
ED 282	Working with Children with Special Needs (3 credits)	
	Total Credits Required:	**12-13**

Civil Engineering Technology

www.linnbenton.edu/civil-engineering

Students in the Civil Engineering Technology certificate program are trained to work as surveyors, drafters, and designers in civil engineering and surveying offices. Civil engineering technicians help engineers plan and build roadways, utilities and structures. Engineering technicians work with the design, surveying, construction and inspection of engineering projects. Technicians' duties are more hands-on and limited in scope than those of engineers.

Engineering technicians need knowledge in the following areas: mathematics, including algebra, geometry and trigonometry; computer usage; structural analysis; surveying; construction specifications and techniques; drafting and reading plans; engineering design methods; and use of the English language.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Graduates of this certificate program can expect to work as entry-level engineering technicians. However, students are encouraged to complete a two-year associate's degree to improve their employability. The Civil Engineering Technology Certificate program is designed to be taken concurrently with the Associate of Applied Science degree in Drafting and Engineering Graphics Technology at LBCC to enable students to complete an associate degree in a related field. Adequately prepared students can complete both degrees concurrently in two years.

Student Learning Outcomes

Students who successfully complete a certificate in Civil Engineering Technology will:

- Use AutoCAD®, Windows®, civil drafting software and GIS software.
- Visualize and interpret real world situations and translate them into drawings and designs.
- Use surveying equipment to perform basic land and construction surveys.
- Speak and write effectively.
- Think critically to solve engineering problems.
- Work effectively on a team to complete an engineering project.

Program Requirements

Students entering the program in the fall or spring term with current AutoCAD® experience, familiarity with right angle trigonometry, who have college level reading skills, and who are prepared to take MTH112 and WR121 can expect to complete the program In one year. Students who are deficient in these areas an can expect to take more time to complete the certificate.

The program emphasizes the use of mathematics and computers in engineering work. The curriculum starts with background courses in math, drafting, and CAD and works up to project surveys and public works designs. Students in the program should have a strong aptitude for math and computers, and should expect to do physically active work outdoors. One of the program courses (ENGR 242) is currently offered only at night. Some students attend part time.

Facilities

Classes are held in well-equipped classrooms and laboratories. Computers are used extensively with current versions of AutoCAD®, Civil 3D® and ARCGIS®. Modern survey instruments also are used, including automatic levels, total stations and GPS equipment.

CAREER AND TECHNICAL

Certificate in Civil Engineering Technology

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 43

Course No.	Course Title	Credits
CE 6.488	Advanced Surveying & Land Development	4
CEM 263	*Plane Surveying*	*3*
EG 4.409	Drafting I	2
EG 4.411	CAD I	4
EG 4.421	CAD II	4
EG 4.446	Strength of Materials	3
EG 4.455	Structural Drafting	2
EG 4.456	Civil Drafting Lab	1
EG 4.465	Civil Drafting II	3
ENGR 242	Introduction to GIS	3
HE 112	Emergency First Aid	1
MTH 097	*Practical Geometry*	*4*
MTH 111	College Algebra	5
MTH 112	Trigonometry	5
WR 121	*English Composition*	*3*
WW 6.167	Public Works Infrastructure I	2
WW 6.235	Applied Hydraulics	3
9.607E	Excel -- Intro to Spreadsheets	1
	Total Credits Required:	**53**

Coding Reimbursement Specialist

www.linnbenton.edu/coding

As our ever-changing health care system goes through the pains of transformation, the most important element in physician outpatient practices is reimbursement maximization and compliance with HIPAA, meaningful use, and the Patient Protection and Affordable Care Act. Maximizing reimbursement is the only way to survive as reimbursement levels fall while traditional expenses rise and new ones are levied. The overall objective of this program is to produce graduates who are immediately prepared to help health care providers meet this challenge. Students will be prepared to meet or exceed the competencies required by the AAPC (American Academy of Professional Coders), which qualify them to sit for the national coding exam and obtain their CPC (certified professional coder) credential

This certificate is a post-secondary certificate that could lead directly to a Medical Office Specialist or Transcriptionist, Medical Assistant, or Administrative Medical Assistant 2 year degrees as well as professional credentialing opportunities.

This certificate will enable students to become Certified Medical Coders which are in great demand in our Region.

Student Learning Outcomes

Students who successfully complete a certificate in Coding and Reimbursement Specialist at LBCC will:

- Demonstrate competency in procedural coding from both the CPT and HCPCS II code sets.
- Demonstrate competency in diagnostic coding from both the ICD9 and ICD10 code sets.
- Demonstrate competency in Evaluation and Management Coding from both the 1995 and 1997 CMS standards.
- Demonstrate competency in coding and reimbursement compliance, including HIPAA.

Program Requirements

The Coding and Reimbursement Specialist reads and interprets the medical records of patients in all types of health care facilities to obtain detailed information regarding their diseases, injuries, surgical operations and other procedures. This specialist then assigns codes using specific code sets. A person wanting to become a Coding and Reimbursement Specialist should have an interest in working with medical information and be comfortable working at a job that involves significant computer work and is detail driven.

The Coding and Reimbursement Specialist program is designed to be completed in one year. Students must place at or above the following levels on the Placement Test: WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra.

CAREER AND TECHNICAL

One-Year Certificate in Coding Reimbursement Specialist

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 36

Course No.	Course Title	Credits
Fall Term		
CIS 125	Intro to Software Applications	3
CMA 101	Medical Terminology & Body Systems I	4
CMA 110	*Medical Office Communications*	*3*
CRS 110	Medical Insurance & Reimbursement Systems	4
Winter Term		
CMA 102	Medical Terminology & Body Systems II	4
CMA 111	Medical Documentation & Screening	3
CMA 112	Basic Law & Ethical Issues in Healthcare	3
CMA 130	Pharmacology I	3
CRS 111	Basic Coding I	3
Spring Term		
CMA 103	Medical Terminology & Body Systems III	4
CMA 200	Medical Office Management	4
CRS 112	Hospital Environment Coding	3
CRS 210	Advanced Coding & Exam Prep	4
	Total Credits Required:	**45**

Computer Information Systems – Health Informatics

www.linnbenton.edu/computer-systems

Health Informatics is the application of Computer (IT) Information Technology in the healthcare industry, focusing on the design, implementation and maintenance of the necessary IT infrastructure in order to produce patient and enterprise wide data for utilization in the delivery of quality and efficient healthcare. The focus of the program is to create, maintain and manage large, complex, electronic information systems that can securely gather, store, transfer and make accessible Electronic Health Records (EHRs) and Electronic Medical Records (EMRs).

Graduates of the Associate of Applied Science degree in Health Informatics are prepared to work with networked IT and database systems and programming tools; understand medical terminology; and understand health information systems. They will be prepared for entry-level positions in the IT or technical department of a hospital, clinic or other healthcare setting. Job titles can include: IT Help Desk, health information technician, and database assistant.

The program includes Health Information Management (HIM) distance learning courses that are accessed via the internet and provided by Portland Community College (PCC). These courses occur during the first and second year of study and do not require attendance on the campus of PCC. The second year also includes valuable cooperative work experience in the information technology field, arranged with one of a number of local public or private health-related organizations.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Health Informatics will:

- Provide technical support for hardware, support, and networks in a healthcare environment.
- Solve healthcare and business-related information technology issues.
- Understand the principles of health information management.
- Communicate and work effectively in a healthcare information technology environment.
- Apply a basic system infrastructure design in a healthcare environment.
- Analyze and program to solve computation problems using various program languages.
- Solve problems as part of a group or team.

Program Requirements

Students considering a major in health informatics should be aware that this is a challenging program that requires a full-time commitment. The sequence of courses begins in fall term and continues for two years. Although there is a small amount of flexibility in the time some courses can be taken, students who intend to complete the program in two years should plan to begin in fall term and pursue it full time. Students should also be sure to meet with a program advisor regularly to ensure that coursework is on track.

Facilities

The students in this program spend a considerable amount of their time working on computers. Campus labs are well-equipped with modern hardware and software. Students have access to networked IBM-compatible personal computers for completing assignments.

CAREER AND TECHNICAL

Associate of Applied Science in Health Informatics

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 12

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 82

Course No.	Course Title	Credits
Fall Term		
CIS 125	Introduction to Software Applications	3
CIS 151	Intro to Networks	4
CS 160	Orientation to Computer Science	4
WR 121	*English Composition*	*3*
Winter Term		
HIM 182	Health Care Delivery Systems (PCC)	3
PE 231	Lifetime Health & Fitness	3
MTH 111	*College Algebra*	*5*
MP 109	Basic Medical Terminology (PCC)	2
WR 227	Technical Writing	3

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Spring Term

BA 211	Principles of Accounting	4
CS 140U	Fundamentals of UNIX/Linux1	4
CS 161	Introduction to Computer Science1 (Java)	4
HIM 110	Health Informatics Technology (PCC)	4

Fall Term - Second Year

CIS 125D	Intro to Databases (5 weeks)	1
CS 140M	Operating Systems I: Microsoft	4
CS 162	Introduction to Computer Science II (Java)	4
HIM 283	Health Information Systems (PCC)	4
HIM 285	Health Care Financial & Compliance (PCC)	3

Winter Term

CS 240A	Microsoft Windows® Server Administration I	4
CS 244	Systems Analysis & Project Management1	4
CS 275	Database Systems: SQL & Oracle	4
CS 284	Intro to Computer Security & Information Assurance	4

Spring Term

CS 225	*IT Career Skills*	*4*
CS 240B	Microsoft Windows® Server Administration II	4
CS 276	Database Systems: PL/SQL	4
CS 280	CWE Computer Systems	3
WE 202	CWE Seminar	1
	(WE 202 and CS 280 must be taken together)	
	Total Credits Required:	**94**

Construction and Forestry Equipment Technology

www.linnbenton.edu/construction-and-forestry-tech

The Construction and Forestry Technology Program is a two-year program leading to an Associate of Applied Science degree. The program develops the technical competency and professional attributes of students to prepare graduates for high-paying and rewarding jobs as John Deere construction and forestry equipment technicians.

The program begins fall quarter of each year. The total program is designed to be completed in six quarters. Each specialized subject is studied in the classroom and laboratory on campus. Cooperative Work Experience is also included in the curriculum. Students are selected to participate in the Construction and Forestry Equipment Technology program through an interview process with a sponsor John Deere Construction and Forestry Equipment Dealership. Selected students will receive assistance with tuition and tools from the sponsor dealership.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Construction and Forestry Equipment Technology will:

- Understand superior customer service at a John Deere dealership.
- Use Service Advisor and Electronic Parts Catalog.
- Select, maintain and store appropriate tools.
- Inspect, maintain, remove, rebuild and replace John Deere engines, electrical, power train and hydraulic systems.
- Follow safe practices.

Program Requirements

Students must meet or exceed the following placement scores to enter the Construction and Forestry Equipment Technology Program

1. WR095
2. MTH060
3. RD 090

Facilities

The program is conducted in modern, well-equipped classrooms and laboratory/shops. The 25,000-square-foot Heavy Equipment Mechanics/ Diesel facility houses a dynamometer and heavy-duty engine rebuilding lab. Students also have a large area where they can work on construction and forestry equipment and components.

CAREER AND TECHNICAL

Associate of Applied Science in Construction and Forestry Equipment Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree

Related Instruction Requirements:..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements: 80

Course No.	Course Title	Credits
Fall Term – First Year		
CT 3.123	Fundamental Shop Skills	3
CT 3.297	Electrical & Electronic Systems	10
MA 3.396B	Manufacturing Processes I	2
WD 4.151	Welding I	2
Winter Term		
CT 3.134	Basic Hydraulics	3
CT 3.146	Pneumatic Brakes & Controls	5
MTH 060	*Introduction to Algebra*	*4*
WD 4.152	Welding II	2
Spring Term		
CT 3.132	Advanced Mobile Hydraulics	5
CT 3.296	Steering, Suspension, & Brakes	5
IN4.164	*Technical Writing for Technicians*	*3*
Summer Term		
WE 1.280DCWE		6
Fall Term – Second Year		
CT 3.122	*Customer Svc for Heavy Equipment Technicians*	*3*
CT 3.295	Power Train Systems	10
	Elective	2
Winter Term		
CT 3.129	Heavy Equipment/Diesel Engines	7
PE 231	Lifetime Health and Fitness	3
	Elective	2
Spring Term		
CT 3.130	Heavy Equipment/Diesel Tune-Up	10
CT 3.303	Mobile AC & Comfort Systems I	3

Approved electives

MA 3.397B	Manufacturing Processes II (2 credits)
MA 3.398B	Manufacturing Processes III (2 credits)
WD 4.154	Welding Seminar (1-10 credits)
WE 1.2800	CWE (6 credits)

Other electives may be approved by Heavy Equipment/Diesel Department faculty advisor.

Total Credits Required: 90

Criminal Justice

www.linnbenton.edu/criminal-justice

Oregon law enforcement agencies are facing a growing need to replace large numbers of retiring officers. In addition, the prison industry and areas of law enforcement such as crime analysis are predicted to expand in the 21st century. Law enforcement agencies commonly seek candidates who have a minimum of a two-year degree, and many give preference to candidates with four-year degrees. Students interested in a two-year degree should pursue the Associate of Applied Science (AAS) degree. Students interested in transferring and completing a four-year degree should consider the Associate of Arts, Oregon Transfer (AAOT) degree. We also offer a track within our Associate of Science (AS) degree in Sociology for students interested in transferring into the Crime and Justice option of the Sociology program at Oregon State University. Please see the catalog section for Sociology for more information, and talk to your advisor.

In addition, agencies look for candidates who can demonstrate they have the qualities necessary for success in the law enforcement field—candidates who:

- Can think critically, solve problems and construct quick, practical solutions.
- Have excellent interpersonal, written and verbal communication skills.
- Are nonjudgmental about the diverse populations of people.
- Can pass stringent physical ability tests, background checks, and psychological assessments.

The Criminal Justice program can help prepare you to meet the requirements for employment in the highly competitive field of law enforcement and corrections. The program is designed to help you gain critical thinking and communication skills that will make you a competitive candidate for an exciting and rewarding career in law enforcement. You will have opportunities to form ties with local police agencies and gain experience with ethnic and cultural diversity through work at a local community service agency.

Both the AAS and the AAOT degrees described below are designed to be completed in two years, but this assumes that the entering student has tested into WR 121 English Composition and either MTH 065 Elementary Algebra for the AAS degree or MTH 105 Introduction to Contemporary Mathematics for the AAOT degree.

Student Learning Outcomes

Students who successfully complete the Associate of Applied Science or Associate of Arts degree in Criminal Justice will:

- Communicate effectively, both verbally and in writing.
- Understand and properly apply criminal statutes.
- Recognize criminal conduct.
- Apply key U.S. Supreme Court cases to real-life situations.
- Present as a viable candidate for law enforcement/corrections work.
- Develop strategies for coping with the stressors associated with police/corrections work.
- Understand the role and procedures of the criminal court system.

Associate of Applied Science in Criminal Justice

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements:..... 10

Computation

MTH 065 Elementary Algebra..... 4
(Taken first year -fall term below.)

Communication

WR 121 English Composition 3
(Taken first year - fall term below.)

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements: 81

Course No.	Course Title	Credits
Fall Term - First Year		
MTH 065	*Elementary Algebra*	*4*
RD 090	College Success & Reading or higher.....	5
WR 121	*English Composition*.....	*3*
Winter Term		
WR 122	English Composition: Argumentation	3
CJ 100	Survey of Criminal Justice Systems	3
CJ 101	Introduction to Criminology.....	3
CJ 132	Introduction to Parole & Probation.....	3
CJ 201	Juvenile Delinquency.....	3
Spring Term		
CJ 210	Introduction to Criminal Investigation	3
HS 205	Youth Addiction.....	3
PE 231	Lifetime Health and Fitness.....	3
PSY 201	General Psychology.....	4
Fall Term - Second Year		
CJ 110	Introduction to Law Enforcement.....	3
CJ 226	Constitutional Law.....	3
CJ 230	Introduction to Juvenile Corrections.....	3
	Human Relations	*3*
SOC 206	Social Problems and Issues	3
Winter Term		
CJ 130	Introduction to Corrections	3
CJ 202	Violence & Aggression	3
CJ 211	Ethical Issues in Law Enforcement.....	3
CJ 220	Introduction to Substantive Law..	3
CJ 222	Procedural Law.....	3
Spring Term		
CJ 112	Police Field Operations.....	3
CJ 120	Introduction to Judicial Process...	3
CJ 232	Introduction to Corrections, Counseling & Casework.	3
CJ 250A	CJ Capstone Course: Job Search & Interviewing	1
CJ 250B	Capstone-Regulations and Communication	1
	You are encouraged to select courses in sociology, psychology, writing, speech, computer science, and CWE to meet your elective requirements. A limited number of courses outside these areas will be accepted as electives.	
Electives.	.....	9
	Total Credits Required:	**90**

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

CAREER AND TECHNICAL

One-Year Certificate in Juvenile Corrections

Students who successfully complete the one-year Certificate in Juvenile Corrections will:

- Understand the differences between the adult and the juvenile criminal justice systems.
- Understand the social, legal, and rehabilitative strategies employed in the treatment of juvenile offenders.

Related Instruction Requirements..... 11

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 34

Course No.	Course Title	Credits
Fall Term		
CJ 101	Introduction to Criminology	3
HS 205	Youth Addiction	3
MTH 065	*Elementary Algebra*	*4*
PSY 201	*General Psychology*	*4*
WR 121	*English Composition*	*3*
Winter Term		
CJ 201	Juvenile Delinquency	3
CJ 211	Ethical Issues in Law Enforcement	3
CJ 232	Introduction to Corrections, Counseling & Casework	3
PSY 215	Introduction to Developmental Psychology	3
WR 122	English Composition: Argumentation	3
Spring Term		
CJ 230	Introduction to Juvenile Corrections	3
CJ 250A	Job Search and Interviewing	1
CJ 280A	Cooperative Work Experience	3
PSY 219	Introduction to Abnormal Psychology	3
SOC 206	General Sociology	3
	Total Credits Required:	**45**

Crop Production

The Crop Production program provides a broad range of instructional services. It provides (1) occupational training for students who intend to receive a technical degree and work in agricultural production; (2) supplemental technical training for current agricultural industry employees; (3) instruction for community members interested in specific aspects of agriculture; and (4) instruction for students interested in continuing their education in a four-year college program.

The Crop Production curriculum is based on competencies identified and reviewed by industry representatives and agricultural educators. Students study principles of agronomy, crop science and soil science with an emphasis on sustainable production and ecologically sound management of agricultural resources. Additionally, the program allows students to focus their field of study into one of four topical focus areas based on student interest and career goals. Available focus areas include: (1) Agricultural Business, (2) Bioenergy, (3) Shop Skills and Diesel Equipment, or (4) an Interdisciplinary Focus selected with the help of a faculty advisor. Independent Pathways Certificates in focus areas may also be available. Students interested in pursuing Pathways Certificates should speak with an advisor to determine availability.

Students develop the skills necessary for entry- and mid-level technical employments and for entering a four-year college program. Typical career fields for graduates of the Crop Production program include agricultural production; plant protection; natural resource conservation; chemical supplies and services; grain, fertilizer, feed, and seed supplies and services; and inspection services.

The Crop Production curricula lead to an Associate of Applied Science degree (AAS) or a one-year certificate. Most classes in the Crop Production program are offered during the day, and part-time enrollment is common. Full-time students can complete the AAS degree in two years if they meet prerequisite basic skill requirements as determined through the Computerized Placement Test. Many students start in the middle of the academic year.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Crop Production will:l:

- Effectively analyze crop production problems.
- Effectively adapt a cropping system to changing production, market, environmental, social, and regulatory issues.
- Successfully compete in the job market for a position in the agricultural industry.

Program Requirements

Students are expected to have basic mathematical, reading, and writing skills. To graduate with an AAS degree, students need to complete a four-credit algebra course (MTH 065 Elementary Algebra) in addition to the other Related Instruction requirements.

Facilities

Instructional facilities, including crop production fields, a greenhouse, industrial/mechanical and science laboratories, ornamental gardens, and the campus grounds, are used for skill building and demonstrations.

CAREER AND TECHNICAL

Associate of Applied Science in Crop Production

See the beginning of this section for graduation requirements for the Associate of Applied Science degree. Students who pass a computer proficiency test may substitute another approved course for AG 111 Computers in Agriculture.

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Computation

MTH 065 Elementary Algebra ..... 3(1)
(Three credits apply toward Related Instruction requirements; one credit applies toward program.)

Communication

WR 121 English Composition 3

Human Relations

Three credits from AG 280 CWE Agriculture course below.
(spring term - second year)

Program Requirements 81

Course No.	Course Title	Credits
Fall Term - First Year		
AG 111	Computers in Agriculture	3
	Biological or Physical Science Elective	4
CSS 200	Crops in Our Environment	3
CSS 205	Soils: Sustainable Ecosystems	4
Winter Term		
CSS 215	Soil Nutrients & Plant Fertilization	3
HE 112	Emergency First Aid	1
HT 8.102	Career Exploration: Horticulture	1

Spring Term

AG 8.140	BioEnergy Feedstock Production	3
BI 103	General Biology: The Dynamic Plant	4
CSS 210	Forage Crops	3
	Technical Elective	3

Fall Term - Second Year

AREC 213	Starting an Agricult./Horticultural Business	4
COMM 100	Intro to Speech Communication or	
COMM 111	Fundamentals of Speech	3
CSS 240	Pest Management	4
HORT 230	Sustainable Agriculture and Food Systems	3
	Technical Elective	4

Winter Term

AG 250	Irrigation System Design	3
AG 8.130	Pesticide Safety	3
SPN 101	First Year Spanish I	4
	Biological or Physical Science Elective	4
	Technical Elective	3

Spring Term

AG 280A	CWE Agriculture	6
GS 154	Energy and Sustainability	3
HORT 260	Organic Farming & Gardening	3
WE 202	CWE Seminar	1
	Technical Elective	3

Approved technical electives:

Agricultural Business Focus

AREC 211 Management in Agriculture (Fall/Winter) (4 credits)
AREC 221 Marketing in Agriculture (Fall/Winter) (3 credits)
BA 101 Introduction to Business (4 credits)
BA 215 Survey of Accounting (Fall/Spring) (4 credits)

Biofuel Focus

AG 8.141 Principles of BioEnergy (Fall only) (4 credits)
GS 154 Energy and Sustainability (Spring only) (3 credits)
MT3. 815 Skills Lab (Biofuel focus, arrange with instructor) (1-6 credits)

Shop Skills and Diesel Equipment Focus

HV 3.123 Fundamental Shop Skills (Fall/Winter) ..... (3 credits)
WD 4.151 Welding I (2 credits)
WD 4.152 Welding II (2 credits)

Interdisciplinary Study Focus

Focus courses as approved by the program advisor.

Total Credits Required: 90

CAREER AND TECHNICAL

Certificate in Crop Production

Students who successfully complete a one-year Certificate in Crop Production will:

- Effectively analyze crop production problems.
- Effectively manage agricultural crops or production supplies.
- Successfully compete in the job market for a position in the agricultural industry.

Students passing a computer proficiency test may substitute another elective for AG 111 Computers in Agriculture. Students are required to take six credits of computation and communication courses at appropriate level based on Computerized Placement Test scores.

Course No.	Course Title	Credits

Fall Term

AG 111	Computers in Agriculture	3
CSS 200	Crops in Our Environment	3
CSS 205	Soils: Sustainable Ecosystems	4
CSS 240	Pest Management	4

Winter Term

AG 250	Irrigation System Design	3
AG 8.130	Pesticide Safety	3
	Computation	3
CSS 215	Soil Nutrients & Plant Fertilization	3
HE 112	Emergency First Aid	1
HT 8.102	Career Exploration: Horticulture	1

Spring Term

AG 8.140	BioEnergy Feedstock Production	3
BI 103	General Biology: The Dynamic Plant	4
CSS 210	Forage Crops	3
HORT 260	Organic Farming & Gardening	3
	Communication	3

Total Credits Required: 44

Culinary Arts

www.linnbenton.edu/culinary-arts

Culinary Arts is an extensive hands-on, theory-based program that prepares the student for a career as a professional chef. Students gain skill in virtually all aspects of food preparation, including pantry, bakery, garde manger, grill, sandwich making, ala carte, quantity food, production, soups, sauces and meat preparation.

Culinary Arts is a complete, comprehensive two-year program based on classical French and European cuisine. Students become skilled at working with virtually all types of standard kitchen equipment and tools. The kitchen provides service for the cafeteria, catering functions, a café and a working sit-down restaurant. By working in this excellent learning environment, students learn to care for and maintain a full-service kitchen.

All aspects of culinary arts are covered, including meats, fish and poultry. Handling and tasting these products is an integral part of many courses. Any student who has any medical, religious, moral or other reasons that may prevent this should make an appointment with the Culinary Arts faculty advisor prior to registering.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Culinary Arts will:

- Reflect a work ethic equal to the high standards of the culinary profession.
- Manage their individual career prospects.
- Use technical and creative skills to accomplish culinary tasks.
- Understand and utilize necessary basic and advanced culinary theory.
- Communicate effectively in business and personal situations using oral and written skills as appropriate.

Program Requirements

Students must be 18 years of age and have a high school diploma or a Related Instruction Development (GED) certificate. They must also possess good basic math and reading skills; be able to work under pressure; demonstrate dexterity, physical stamina, concentration and good memory; and be able to work cooperatively with others. Students must have a valid Oregon Liquor Control Commission (OLCC) servers permit (contact department for exceptions).

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

In addition to regular college costs, students spend about $950 for course fees and to purchase uniforms, knives, shoes, books and other equipment. Students should wait until after the first day of class to purchase these items.

CAREER AND TECHNICAL

Associate of Applied Science in Culinary Arts

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement

Computation

This requirement is satisfied by completing the following course:

CA 8.302	Applied Math for Culinary Arts	3

Communication

COMM 218	Interpersonal Communication	3

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 73

Course No.	Course Title	Credits
Fall Term - First Year		
CA 101	Culinary Arts Practicum I	7
CA 111	Food Service Safety & Sanitation	1
CA 112	Station, Tools & Culinary Techniques	3
CA 8.354	Banquet & Buffet Lab E (optional course)	1
Winter Term		
CA 102	Culinary Arts Practicum II	8
CA 8.350	Banquet & Buffet Lab A	1
CA 8.302	*Applied Math for Culinary Arts*	*3*
Spring Term		
CA 103	Culinary Arts Practicum III	8
CA 8.351	Banquet & Buffet Lab B	2
CA 8.373	Costing	1
COMM 218	*Interpersonal Communication*	*3*
Fall Term - Second Year		
CA 8.321	Advanced Cooking Management I	7
CA 8.354	Banquet & Buffet Lab E	1
CA 8.368	Creating the Menu	2
CA 8.409	Meats	3
Winter Term		
CA 8.322	Advanced Cooking Management II	7
CA 8.341	Soups & Sauces	3
CA 8.352	Banquet & Buffet Lab C	1
CA 8.355	Banquets & Buffet Planning	2
CA 8.414	Garde Manger	2
Spring Term		
CA 8.301	Culinary Arts Career Planning	1
CA 8.309	Purchasing for Chefs	2
CA 8.323	Advanced Cooking Management III	7
CA 8.353	Banquet & Buffet Lab D	2
	Human Relations	*3*
	Approved electives	*10*
BA 101	Introduction to Business (4 credits)	
PE 231	Lifetime Health and Fitness (3 credits)	
CA 8.344	Food and Beer Pairing (3 credits)	
CA 8.380	Plated Desserts (3 credits)	
CA 8.381	Fruit Desserts and Laminated Doughs (3 credits)	
CA 8.382	Chocolate, Confections and Frozen Desserts (3 credits)	
CA 8.383	The Breads of France (3 credits)	
CA 8.384	Advanced Cakes and Pastries (3 credits)	
CA 8.385	Advanced Breads (3 credits)	
CA 8.421	World Cuisine (2 credits)	
CA 8.386	Preserving and Canning the Harvest (2 credits)	
	Total Credits Required:	**90**

Dental Assistant

www.linnbenton.edu/dental-assistant

The Dental Assistant program offers technical training to persons who want to work in dental offices or clinics. The program prepares its graduates for employment in dentistry by emphasizing current concepts in clinical dental assisting, developing proper work ethics, particularly in regard to accuracy, safety, conduct on the job, and recognizing the value of continuing education.

The Dental Assistant program has special admission requirements and enrollment limits. One class of limited size is accepted fall term. (See Special Admissions Programs in the "How to Get Started – Admissions" section of the catalog.) Students unable to meet the required competency level may be advised of other alternatives. All dental assisting classes and supportive classes are presented in a specific sequence. Students must complete these with a "C" or better to remain in the program.

The program was designed to allow students to take the Infection Control Examination administered by DANB at the end of the fall term, when the Infection Control class requirements have been completed successfully.

Prior to beginning the Dental Assistant program, students must provide proof of initiation of the hepatitis B vaccination series, MMR vaccination, and a negative tuberculin test.

The program is accredited by the American Dental Association's Commission on Dental Accreditation and by the United States Department of Education. Graduating students are eligible to take the Dental Assisting National Board Examination, and the Radiation Health and Safety, and General Chairside Examination. Successful graduates receive a Dental Assisting Certificate and are eligible to apply for the Oregon Expanded Function and Radiological Proficiency Certificates.

Student Learning Outcomes

Students who successfully complete a one-year Certificate in Dental Assistant will:

- Apply for and maintain appropriate credentials/licenses to practice dental assisting.
- Exhibit professionalism and a dedicated work ethic by employing ethical and legal standards in dentistry.
- Strive toward lifelong learning to maintain competency in the profession and as a valued team member.
- Function on the job in a manner that ensures continued employment.
- Perform work in an organized, sequenced, manner as a multi-task, motivated self-starter.
- Practice caring behaviors; be "a people person" by providing a safe, caring environment.
- Practice asepsis and sterilization consistent with OSHA and CDC regulations.

- Work with a variety of people and personality styles, maintain an open mind, be flexible and tolerate a variety of points of view.
- Use critical thinking strategies to identify and participate in problem solving by using verbal, nonverbal and written communication skills with patients and team members.
- Provide oral health education and nutrition counseling.

Facilities

Clinical and expanded function experience is gained utilizing individual stations with anatomical mannequins. Three fully equipped radiology rooms, dark room processing and digital radiography equipment are available for the student to acquire competence in exposing and developing radiographs. Practical experience is gained during the summer term when the student is placed in general practice and specialty offices in Linn and Benton counties.

CAREER AND TECHNICAL

One-Year Certificate in Dental Assistant

Course No.	Course Title	Credits
Fall Term		
DA 5.461	Dental Radiology I	3
DA 5.484	Dental Materials I	3
DA 5.494	Introduction to Dentistry	3
DA 5.500	Dental Anatomy & Histology	2
DA 5.501	Dental Infection Control & Sterilization	2
DA 5.502	Basic Science for Dentistry	2
Winter Term		
DA 5.462	Dental Radiology II	3
DA 5.485	Dental Materials II	3
DA 5.488	Expanded Duties I	3
DA 5.495	Clinical Practice	4
Spring Term		
DA 5.453	Dental Pathology/Pharmacology	2
DA 5.463	Dental Radiology III	3
DA 5.489	Expanded Duties II	2
DA 5.491	Dental Office Records & Emergencies	2
DA 5.496	Dental Specialties	2
DA 5.497	Dental Health Education & Nutrition.	2
DA 5.550	Human Relations in Dentistry	2
Summer Term		
DA 5.510	Office Practicum	8
DA 5.515	Office Practicum Seminar	2
	Total Credits Required:	**53**

Dental Hygiene

Pre-Professional Dental Hygiene Preparation

Linn-Benton Community College offers pre-professional preparation for transfer to dental hygiene programs. Interested students should consult with an advisor for current requirements or check the Oregon Dental Hygienists' Association Web site at www.odha.org. All hygiene programs in Oregon are listed, along with contact information and requirements for entry. Dental hygiene programs in the state of Oregon are: Lane Community College in Eugene, Mt. Hood Community College in Gresham, ODS College of Dental Science in La Grande, Oregon Institute of Technology (OIT) in Klamath Falls, Pacific University in Forest Grove, Portland Community College in Portland, and Apollo School of Dental Hygiene in Portland.

Course No.	Course Title	Credits
BI 231	Human Anatomy & Physiology	5
BI 232	Human Anatomy & Physiology	5
BI 233	Human Anatomy & Physiology	5
BI 234	Microbiology	4
CH 121	College Chemistry	5
CH 122	College Chemistry (offered at OSU)	5
CH 123	College Chemistry (offered at OSU)	5
MTH 065	Elementary Algebra	4
NFM 225	Nutrition	4
PSY 201	General Psychology	4
SOC 204	General Sociology or	
SOC 205	General Sociology	3
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
	Introductory Computer Science Course (see advisor)	

Diagnostic Imaging

www.linnbenton.edu/diagnostic-imaging

Diagnostic Imaging is a 22-month intensive program. Students receive an Associate of Applied Science (AAS) Degree. The Diagnostic Imaging program prepares students through a progressive, outcomes-based educational format.

The purpose of this program is to prepare students to practice as proficient, multi-skilled professionals in culturally diverse health care settings. The LBCC program is designed to train students to demonstrate outcomes established by the American Society of Radiologic Technologists (ASRT), and to successfully complete the American Registry of Radiologic Technologists (ARRT) certification examination.

Students move through this training as a cohort. Classes are tailored specifically to these students, who attend class for approximately 40 hours per week. It does not follow the traditional college terms.

This is a cost recovery program. Students must deposit a portion of the cost of the program prior to beginning classes. The cost of this program is subject to change.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science Degree in Diagnostic Imaging will:

- Demonstrate competency in ARRT designated Radiological Procedures.
- Operate equipment, store, handle and/or process any imaging information to industry standards.
- Provide patient care and comfort with empathy and cultural competence.
- Abide by the ethics and the professional conduct of medical professionals, the ASRT Code of Ethics, and the ARRT Standard of Ethics.
- Position patients accurately and provide quality images.
- Protect patients, self, and others by applying the principles of radiation physics.
- Demonstrate effective communication with patients, family members, and colleagues using verbal, written, and information technology tools/devices.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Program Requirements

All Associate of Applied Science Related Instruction requirements are prerequisites to the program. Students are required to have a current American Heart Association (AHA) Health Care Provider CPR card, updated vaccinations, and complete a criminal background check and drug screen. Eligible applicants are admitted based on points awarded on the point's worksheet in the Admission Bulletin.

CAREER AND TECHNICAL

Associate of Applied Science in Diagnostic Imaging

See the beginning of this section for graduation requirements for Associate of Applied Science degree.

Pre-Admission Requirements

WR 121	English Composition	3

Related Instruction Requirements..... 11

These courses must be completed with a grade of C or higher prior to the admission of the Diagnostic Imaging program.

Computation

MTH 111	College Algebra	5

(Must be completed within the last five years)

Communication (3 credits)

See the beginning of this section for a list of approved courses except WR 115 Intro to College Writing and WR 121 English Composition.

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements 86

Course No.	Course Title	Credits
Summer Term - First Year		
DI 100	Comprehensive Patient Care	3
DI 110	Radiographic Proc. & Positioning–Chest/Abdomen	3
DI 120	Exposure I: Production	3
DI 140	Radiation Protection	3
Fall Term		
DI 111	Radiographic Proc. & Positioning-Extremities/Spine.	6
DI 121	Exposure II	3
DI 141	Radiation Biology	3
Winter Term		
DI 112	Radiographic Proc. & Positioning–Skull & Review	4
DI 113	Radiographic Proc. & Positioning–Fluoroscopy	4
DI 122	Exposure III: Digital Imaging	2
DI 130	Pharmacology for Imaging	2
Spring Term - Second Year		
DI 210	Clinical Externship I	11
DI 220	Radiographic Pathology	3
Summer Term		
DI 211	Clinical Externship II	11
DI 230	Basic Principles of Computed Tomography	1
Fall Term		
DI 200	Radiographic Comprehensive Review I	1
DI 212	Clinical Externship III	11
Winter Term		
DI 201	Radiographic Comprehensive Review II	1
DI 213	Clinical Externship IV	11
	Total Credits	**97**

Drafting and Engineering Graphics Technology

www.linnbenton.edu/engineering-graphics

The two-year Drafting and Engineering Graphics Technology program is a technical curriculum designed to assist students in acquiring basic attitudes, skills and knowledge necessary to successfully enter drafting occupations. The first year of study provides a sound general background, while the second year provides more specific coverage of major occupational areas, such as civil, mechanical, schematics, architectural and technical illustration.

Skilled CAD operators find careers in engineering, architecture, construction, manufacturing, 3-D graphics and many other exciting fields. This career often is an entry point into design, engineering, management and other related areas with salary increases commensurate with skills.

Drafters make detailed drawings of objects that will be manufactured or built. Many drafters specialize in one area. For example, architectural drafters draw features of buildings and other structures. Aeronautical drafters prepare drawings of aircraft and missiles. Civil drafters prepare drawings and maps of highways, pipelines and water systems. Electrical drafters draw wiring and layout diagrams. These are used by workers who install and repair electrical equipment and wiring in buildings. Electronic drafters draw wiring diagrams, circuit board assembly diagrams and layout drawings. Workers who assemble, install and repair electronic equipment use these. Mechanical drafters make detailed drawings of machinery, factories, aircraft, automobiles, other consumer and mechanical devices.

Drafters need knowledge in the following areas: making and using plans, blueprints, drawings, and models; how to build machines, buildings, and other things; how to use computers, machines, and tools to do work more usefully; mathematics, including algebra, geometry, and statistics; computer hardware and software; physics; and use of the English language

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Drafting and Engineering Graphics will:

- Proficiently use AutoCAD, Solids Modeling with SolidWorks and Inventor, Windows and be adaptable to other software.
- Understand mechanical, civil and architectural drawing processes and their applications.
- Create ANSI standard orthographic drawings using 2-D and 3-D modeling tools.
- Understand all facets in creating a drawing, how drawings relate, supporting documentation to drawings and processes.
- Visualize and interpret realistic project situations and translate them into drawings.
- Apply critical thinking both in self-directed and team environments
- Effectively communicate both verbally and in writing.
- Exhibit a strong work ethic, able to self manage skills and time, receptive to assessment and possess job search skills.

Program Requirements

Drafting and Engineering Graphics coursework is rigorous and sequential. Careful scheduling and dedicated effort are required to complete the program in two years. To do so, entering students should have a ninth-grade reading level and be prepared to register for math classes as needed. Students are required to complete MTH 111 College Algebra and several engineering courses that require math skills.

Most class sequences begin in the fall. Working students should consider completing the program in three years or more. Students may

attend on a part-time basis with little difficulty. Students may take Related Instruction courses at night, but most technical courses are offered only during the day. Individuals seeking to learn AutoCAD® for personal use or to update AutoCAD® skills may enroll in evening classes. Students are required to purchase basic drafting equipment at an approximate cost of $40.

CAREER AND TECHNICAL

Associate of Applied Science in Drafting and Engineering Graphics Technology

See the beginning of this section for graduation requirements for Associate of Applied Science degree.

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements: 81

Course No.	Course Title	Credits
Fall Term - First Year		
CS 120	Digital Literacy	3
EG 4.409	Drafting I	2
EG 4.411	CAD I	4
WD 4.265	Print Reading & Welding Exploration	3
Winter Term		
EG 4.421	CAD II	4
EG 4.423	Architectural Design I	4
EG 4.455	Structural Drafting	2
GS 104	Principles of Physics	4
WW 6.156	Industrial Electricity	4
Spring Term		
EG 4.431	CAD III	4
EG 4.446	Strength of Materials	3
EG 4.456	Civil Drafting Lab	1
EG 4.457	Workplace Survey	1
MTH 111	*College Algebra*	*5*
Fall Term - Second Year		
COMM 100	*Introduction to Speech Communication or*	
COMM 111	*Fundamentals of Speech or*	
COMM 112	*Introduction to Persuasion or*	
COMM 218	*Interpersonal Communication*	*3*
EG 4.443	Schematics	3
EG 4.445	Plane Surveying	3
EG 4.451	Solids I	4
MT 3.802	*Customer Service for Technicians*	*3*
Winter Term		
EG 4.452	Solids II	4
EG 4.453	Customizing CAD Systems	3
EG 4.465	Civil Drafting II	3
IN 4.164	Techinical Writing for Technicians	3
	Technical elective	3
Spring Term		
EG 4.454	Applied Solids Design	3
EG 4.463	Architectural Design II	4
HE 261	CPR	1
MT 3.803	Industrial Safety	2
WE 1.280R	CWE Drafting Technician	3
	Technical elective	3

Technical electives:

Any course with the prefix of MT (except MT 3.802 & MT 3.803)
Any course with the prefix of BA or with the prefix of CS (except CS 120)
Any course with the prefix of ENGR
(except ENGR 111, ENGR245, ENGR 248)
Any course with the prefix of MA (except MA 3.247, MA 3.248, MA 3.431)
Any course with the prefix of WD (except WD 4.258, WD 4.265)

Total Credits Required: 92

Graphic Arts (Applied Arts)

www.linnbenton.edu/graphic-arts

The Graphic Arts Department is dedicated to training students for entry-level positions within the visual communications industry. The curriculum provides learning experiences utilizing the latest industry-standard imaging software applications. Projects provide opportunities for students to work with clients and to accept responsibility for deadlines and quality control. Employment opportunities are found in a wide range of settings: print shops, service bureaus, advertising agencies, graphic design or in-house design groups and/or as an independent designer.

The Digital Imaging/Prepress Technology Certificate is a one-year program. It is the first step for students interested in careers in the printing, publishing, graphic and web design fields. Graphic technology is emphasized. Foundation courses in design composition, color, digital photography and typography are included.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Graphic Arts will:

- Develop and apply technical competencies necessary for employment in the Graphic Arts industry.
- Demonstrate analytical problem solving in the planning and production of design / marketing projects.
- Demonstrate appropriate behavior in giving and/or receiving constructive criticism, including making necessary changes.

Facilities

The graphics facilities include one graphic design and one digital imaging computer laboratory. Equipment similar to what is found in the offices of printers, designers, illustrators and publishers throughout the country are available.

The facilities also include graphic design and fine art studios as well as display galleries for presenting student work and the work of other designers and artists. Facilities are handicapped accessible.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

CAREER AND TECHNICAL

Associate of Applied Science in Graphic Design

See the beginning of this section for graduation requirements for Associate of Applied Science degree.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements: 81

Course No.	Course Title	Credits
Fall Term - First Year		
AA 156	Foundations in Digital Page Layout	3
ART 120	Foundations in Digital Image Processes	4
ART 204	*History of Western Art*	*3*
MTH060	*Introduction to Algebra*	*4*
WR 121	*English Composition*	*3*
Winter Term		
AA 160	Digital Page Layout II	3
AA 178	Composition and Color for Designers	4
ART 121	Computers in Visual Arts	4
ART 131	Drawing I	4
Spring Term		
AA 193	Digital Image Processes III	4
AA 224	Typographical Design I	4
ART 234	Figure Drawing	4
ART 263	Digital Photography	4
Fall Term - Second Year		
AA221	Graphic Design I	4
AA226	Typographical design II	4
ART122	Foundation Motion Media 4-D	3
CIS195	Web Development I	4
Winter Term		
AA 237	Illustration I	4
AA222	Graphic Design II	4
AA161	Web Design Basics	3
ART205	History of Western Art	3
Spring Term		
AA223	Graphic Design III	4
AA228	Portfolio & Professional Practices	4
ART206	History of Western Art	3
AA162	Web Design II	3
	Total Credits Required:	**91**

CAREER AND TECHNICAL

One-Year Certificate in Digital Imaging and Prepress Technology

Students who successfully complete a One-Year Certificate in Digital Imaging/Prepress Technology will:

- Develop and apply technical competencies necessary for employment in the prepress and printing industry.
- Demonstrate analytical problem solving in the planning and production of files and/or mechanicals for print/reproduction.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 38

Course No.	Course Title	Credits
Fall Term		
AA 156	Foundations in Digital Page Layout	3
ART 120	Foundations in Digital Image Processes	4
ART 204	*History of Western Art*	*3*
MTH060	*Introduction to Algebra*	*4*
WR 121	*English Composition*	*3*
Winter Term		
AA 160	Digital Page Layout II	3
AA 178	Composition and Color for Designers	4
ART 121	Computers in Visual Arts	4
ART 131	Drawing I	4
Spring Term		
AA 193	Digital Image Processes III	4
AA 224	Typographical Design I	4
ART 234	Figure Drawing	4
ART 263	Digital Photography	4
	Total Credits Required:	**48**

Healthcare Office Specialist

www.linnbenton.edu/business-technology

The Healthcare Office Specialist is a one-year program preparing people for entry-level positions in medical offices or hospitals working as receptionists, medical records technicians, health information technicians, documentation specialists (transcriptionists) admitting registrars, and other office administrative support positions. The required coursework lays the foundation for a two-year program for students who want to continue their education to become an administrative medical assistant.

A person wanting to become a healthcare office specialist should have the ability to get along well with people and be comfortable working in a medical atmosphere. A successful healthcare office specialist must have excellent written and interpersonal communication skills, be computer literate, highly organized, and detail-oriented.

Student Learning Outcomes

Students who successfully complete a one-year Certificate in Healthcare Office Specialist will:

- Function effectively as a healthcare team member and/or leader.
- Interact effectively in oral and written communications.
- Use computers and other technology proficiently for administrative tasks.
- Demonstrate positive interpersonal interactions and diplomacy.
- Manage multi-tasks efficiently.
- Model professional and ethical behaviors, especially confidentiality and compassion.
- Participate in ongoing professional development.
- Solve problems using a variety of appropriate tools.
- Identify process improvement skills.
- Have a working knowledge of medical terminology, body systems, electronic health records, insurance, billing, and coding

Program Requirements

This program is designed to be completed in one year of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT), or has taken the necessary coursework, to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret the test scores and get help in planning their program. The required courses can all be applied toward the two-year Associate of Applied Science Administrative Medical Assistant degree.

CAREER AND TECHNICAL

One-Year Certificate in Healthcare Office Specialist

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 39

Course No.	Course Title	Credits
Fall Term		
CIS 125	Intro to Software Applications	3
CS 120	Digital Literacy	3
MO 5.630	Medical Terminology & Body Systems I	3
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3
Winter Term		
MO 5.414	Drug Names & Classifications	3
MO 5.665	Documentation & Screening in the Medical Office	2
OA 2.544	Medical Insurance Procedures	4
OA 2.656M	Medical Information Processing	3
OA 2.671	Medical Law & Ethics	3
Spring Term		
OA 109	Job Success Skills: Medical[1]	1
OA 2.505	Voice Recognition	2
OA 2.515M	*Business Math: Medical*	*2*
OA 2.524	Healthcare Documentation	3
OA 2.551M	*Communications in Business: Medical*	*3*
OA 2.670	*Medical Office Procedures*	*4*
OA 2.672	Basic Coding	3

Total Credits Required: 48

Heavy Equipment/Diesel Technology

www.linnbenton.edu/heavy-equipment/diesel

The curriculum of the Heavy Equipment/Diesel Technology program is designed to give the student a balance of theory and practical experience gained by diagnosing, servicing, repairing and rebuilding components and live equipment. Diesel technicians repair and maintain the diesel engines that power trains; ships; generators; and the equipment used in highway construction, logging and farming. Technicians also maintain and repair power train, electrical and hydraulic systems used in construction equipment, farm equipment and trucks.

To become a diesel technician, you should have a mechanical aptitude and an affinity for shop work, mathematics and science. Being able to read with understanding is essential because technicians spend a considerable amount of time reading service manuals.

Upon completing the Associate of Applied Science degree or two-year certificate, the student may gain employment in service departments of distributors and dealers that sell diesel-powered trucks, farming, logging and construction equipment. Bus lines, railways, and marine industries also employ diesel technicians. LBCC's Heavy Equipment/Diesel Technology program supports student participation in Skills USA-VICA. Students raise funds to pay the cost of travel, lodging and entry fees in the annual state skills contest.

In addition to the usual books and supplies, students should expect to spend about $3,000 for a personal entry level set of diesel mechanic hand tools. The official required tool set for Heavy Equipment/Diesel Tech students is the SnapOn 9200AGSO tool kit, KRA 2007FPBO 7 drawer roll cabinet (red) and the EEDM525D meter. Students should also budget approximately $100 for uniform and safety apparel to wear in all lab classes.

The Heavy Equipment/Diesel Technology curricula lead to an Associate of Applied Science degree or a two-year certificate.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree or earn a two-year certificate in heavy equipment/diesel:

- Follow safe shop practices.
- Inspect, diagnose, conduct failure analysis and perform preventive maintenance inspections during repairs.
- Use service resources effectively.
- Apply fundamental skills and concepts to unfamiliar situations.
- Provide superior customer service, and practice productive interpersonal relations.
- Demonstrate proper use and care of shop and personal tools.
- Communicate effectively in writing and verbally.

Program Requirements

Students must meet or exceed the following placement scores to enter the Heavy Equipment/Diesel Technology Program

1. WR095
2. MTH060
3. RD 090

Facilities

The program is conducted in modern, well-equipped classrooms and laboratory/shops. The 25,000-square-foot Heavy Equipment Mechanics/Diesel facility houses a dynamometer and heavy-duty engine rebuilding lab. Students also have a large area where they can work on trucks, construction equipment and farm equipment.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

CAREER AND TECHNICAL

Associate of Applied Science in Heavy Equipment/Diesel Technology

See the beginning of this section for graduation requirements for Associate of Applied Science degree.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 80

Course No.	Course Title	Credits
Fall Term - First Year		
HV 3.123	Fundamental Shop Skills	3
HV 3.297	Electrical & Electronic Systems	10
MA 3.396B	Manufacturing Processes I	2
WD 4.151	Welding I	2
Winter Term		
HV 3.134	Basic Hydraulics1	3
HV 3.146	Pneumatic Brakes & Controls[1]	5
MTH 060	*Introduction to Algebra*	*4*
WD 4.152	Welding II	2
Spring Term		
HV 3.132	Advanced Mobile Hydraulics[1]	5
HV 3.296	Steering, Suspension & Brakes	5
IN 4.164	*Technical Writing for Technicians*	*3*
Summer Term		
WE 1.2800	Cooperative Work Experience	6
Fall Term - Second Year		
HV 3.295	Power Train Systems	10
HV 3.122	*Customer Service for Heavy Equipment Technicians*	*3*
	Elective	2
Winter Term		
HV 3.129	Heavy Equipment/Diesel Engines[1]	7
PE 231	Lifetime Health and Fitness	3
	Elective	2
Spring Term		
HV 3.130	Heavy Equipment/Diesel Tune-Up[1]	10
HV 3.303	Mobile Air Conditioning & Comfort Systems[1]	3

Approved electives

MA 3.397B	Manufacturing Processes II (2 credits)
MA 3.398B	Manufacturing Processes III (2 credits)
WD 4.154	Welding Seminar (1-10 credits)
WE 1.2800	CWE (6 credits)

Other electives may be approved by Heavy Equipment/Diesel Department faculty advisor.

Total Credits Required: 90

Horticulture

www.linnbenton.edu/agricultural-sciences

The Horticulture program provides a broad range of instructional services. It provides (1) occupational training for students who intend to receive a technical degree and work in horticulture; (2) supplemental technical training for current horticultural employees; (3) instruction for community members interested in a specific aspect of horticulture; and (4) instruction for students interested in continuing their education in a four-year college program.

The Horticulture curriculum is based on competencies identified and reviewed by industry representatives and agricultural educators. Students study principles of horticulture, crop science and soil science with an emphasis on sustainable production and ecologically sound resource management.

Students develop the skills necessary for entry-and mid-level technical employments and for entering a four-year college program. Opportunities exist for horticulture students in arboriculture, floriculture, greenhouse operation and management, landscape planning and maintenance, retail landscape and garden center sales, nursery operation and management, and turf management.

The Horticulture curricula lead to an Associate of Science (AS), Associate of Applied Science degree (AAS) or a one-year certificate. Most classes in the Horticulture program are offered during the day, and part-time enrollment is common. Many students start in the middle of the academic year. Some courses are only offered every other year.

The Associate of Science degree with an emphasis in Horticulture is a lower-division transfer program designed to assist students planning to transfer to Oregon State University. Students completing the degree requirements will be prepared to enroll in upper-division coursework. Students seeking to transfer to an institution other than OSU may be best served by pursuing an AA(OT) while taking specific agriculture, crop and soil science, horticulture, biology, physical science and mathematics courses that will transfer to the student's selected college or university. The AA(OT) is a general transfer degree and does not include program requirements. =It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you hope to attend to make sure you are taking the courses that will meet program requirements.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Horticulture will:

- Propagate, grow, and maintain plants in landscapes and horticultural production systems.
- Develop creative solutions to production, environmental, and social issues in the horticultural industry.
- Successfully transfer to a four-year college horticultural program.
- Successfully compete in the job market for a position in the horticultural industry.

Program Requirements

Full-time students can complete the Associate of Applied Science (AAS) degree in two years if they meet the prerequisite basic skill requirements as determined through the Computerized Placement Test. Students are expected to have basic mathematical, reading, and writing skills. To graduate with an AAS degree, students need to complete a four-credit algebra course (MTH 065 Elementary Algebra) in addition to fulfilling other Related Instruction requirements.

LBCC's Associate of Science degree in Horticulture is designed to be completed in two years. This assumes, however, that the entering student is prepared to take MTH 111 College Algebra, WR 121 English Composition, and CH 121 College Chemistry (available only through OSU) or CH 221 General Chemistry. If this is not the case, the student needs to allow extra time to complete this degree. CH 221 General Chemistry, which is usually taken in the first term of the AS in Horticulture, requires that the student possess a basic knowledge

of chemistry prior to enrolling in the course. In order to fulfill this requirement a student must either:

- Pass a Chemistry Entrance Exam, or
- Take a college-level chemistry course (CH 112, CH 121, or CH 150).

To schedule an entrance exam or for further information contact: Linda Taylor at taylorl@linnbenton.edu or 541-917-4741.

Facilities

Instructional facilities, including a greenhouse, laboratories, garden field plots, ornamental gardens, and the campus grounds, are used for skill building and demonstrations.

CAREER AND TECHNICAL

Associate of Applied Science in Horticulture

See the beginning of this section for graduation requirements for the Associate of Applied Science degree. Students who pass a computer proficiency test may substitute another elective for AG 111 Computers in Agriculture. MTH 065 Elementary Algebra is required.

Related Instruction Requirements..... 9

Computation

MTH 065 Elementary Algebra..... 3(1)
(Three credits apply toward Related Instruction requirements; one credit applies toward program.)

Communication

WR 121 English Composition 3

Human Relations

This requirement is satisfied by completing the following course:
HT 8.137 Plant Propagation..... 3(1)
(Three credits apply toward Related Instruction requirements; one credit applies toward program.)

Program Requirements 81

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
AG 250	Irrigation System Design	3
AG 280C	CWE Horticulture	3
AG 8.130	Pesticide Safety	3
AREC 213	Starting an Agricult./Horticultural Business	4
BI 103	General Biology: The Dynamic Plant	4
	Biological or Physical Science Elective	3
COMM 100	Introduction to Speech Communication or	
COMM 111	Fundamentals of Speech	3
CSS 205	Soils: Sustainable Ecosystems	4
CSS 215	Soil Nutrients & Plant Fertilization	3
CSS 240	Pest Management	4
HE 112	Emergency First Aid	1
HORT 211	Horticulture Practicum	3
HORT 228	Landscape Plant Materials	3
HORT 230	Sustainable Agriculture and Food Systems	3
HORT 247	Arboriculture: Principles and Practices	4
HORT 251	Temperate Tree Fruits, Berries, Grapes and Nuts	3
HORT 260	Organic Farming & Gardening	3
HT 8.102	Career Exploration Horticulture	1
HT 8.115	Greenhouse Management	3
SPN 101	First-Year Spanish I	4

Select 14 credits from the following: 14

HORT 226 Landscape Plant Materials
(offered alternate years - Fall term) (3 credits)
HORT 255 Herbaceous Ornamental Plants
(offered alternate years - Spring term) (3 credits)
HORT 280 Introduction to Landscape Design (3 credits)
HT 8.135 Turf Management
(offered alternate years - Winter term) (3 credits)
HT 8.139 Arboriculture practicum
(offered alternate years - Spring term) (2 credits)
HT 8.140 Landscape Maintenance
(offered alternate years - Winter term) (3 credits)

Total Credits Required: 90

CAREER AND TECHNICAL

Certificate in Horticulture

Students who successfully complete a one-year Certificate in Horticulture will:

- Propagate, grow, and maintain plants in landscapes and horticultural production systems.
- Effectively adapt horticultural production systems to changing production, environmental, and social issues.
- Successfully compete in the job market for a position in the horticultural industry.

Students who pass a computer proficiency test may substitute another elective for AG 111 Computers in Agriculture.

Course No.	Course Title	Credits
AG 111	Computers in Agriculture	3
AG 8.130	Pesticide Safety	3
BI 103	General Biology: The Dynamic Plant	4
CSS 205	Soils: Sustainable Ecosystems	4
CSS 240	Pest Management	4
HORT 228	Landscape Plant Materials	3
HORT 260	Organic Farming & Gardening	3
HT 8.102	Career Exploration Horticulture	1
HT 8.137	Plant Propagation	4

Select 9 credits from the following: 9

AG 250 Irrigation System Design (3 credits)
AREC 213 Starting an Agricultural or Horticultural Business (4 credits)
CSS 215 Soil Nutrients & Plant Fertilization (3 credits)
HORT 226 Landscape Plant Materials
(offered alternate years Fall term) (3 credits)
HORT 230 Sustainable Agriculture and Food Systems (3 credits)
HORT 247 Arboriculture: Principles and Practices
(offered alternate years - Spring term) (4 credits)
HORT 251 Temperate Tree Fruit, Berries, Grapes and Nuts
(offered alternate years- Fall term) (3 credits)
HORT 255 Herbaceous Ornamental Plants
(offered alternate years - Spring term) (3 credits)
HORT 280 Introduction to Landscape Design (3 credits)
HT 8.115 Greenhouse Management (3 credits)
HT 8.135 Turf Management
(offered alternate years- Winter term) (3 credits)
HT 8.139 Arboriculture practicum .....
(offered alternate years - pring term) (2 credits)
HT 8.140 Landscape Maintenance
(offered alternate years - Winter term) (3 credits)

Other required courses:

Math and Writing courses at appropriate level
(based upon placement test scores) 6

Total Credits Required: 44

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Library Instructional Assistant

www.linnbenton.edu/education

The Education/Child and Family Studies Department offers both an 18 credit and a 36 credit certificate in Library Instructional Assistant for students who would like to work in school libraries as library assistants.

CAREER AND TECHNICAL

Certificate in Basic Library Instructional Assistant

The Basic Library Instructional Assistant Certificate is 18 credits and prepares students to work in school libraries as library assistants. Library assistants in schools need knowledge in library processes, collections, reference materials and children's literature. These 18 credits are the first half of the 36-credit certificate.

**Select 18 credits from the following courses:..... **		**18**
LIB 140	Introduction to School Libraries (3 credits)	
LIB 141	Circulation of Library Materials (3 credits)	
LIB 142	Reference Materials & Services (3 credits)	
LIB 143	Collection Development (3 credits)	
LIB 144	Organization of Library Materials (3 credits)	
LIB 145	Online Information Literacy for Librarians (3 credits)	
LIB 146	Children's Literature & Reading Promotion (3 credits)	
LIB 147	Multicultural Literature K-12 (3 credits)	
LIB 148	Library Skill Curriculum (3 credits)	
LIB 149	Global Literature K-12 (3 credits)	
LIB 151	Reading Promotion/Reader's Advisory (3 credits)	
LIB 152	Design & Production of Library Resources (3 credits)	
	Total Credits Required:	**18**

CAREER AND TECHNICAL

Certificate in Library Instructional Assistant

The Library Instructional Assistant Certificate is 36 credits and prepares students to work in school libraries as library assistants. This certificate provides an in-depth study of library processes, collections, reference materials, children's literature and focuses on reading promotion.

Take all of the following courses:

Course No.	Course Title	Credits
LIB 140	Introduction to School Libraries	3
LIB 141	Circulation of Library Materials	3
LIB 142	Reference Materials & Services	3
LIB 143	Collection Development	3
LIB 144	Organization of Library Materials	3
LIB 145	Online Information Literacy for Librarians	3
LIB 146	Children's Literature & Reading Promotion	3
LIB 147	Multicultural Literature K-12	3
LIB 148	Library Skill Curriculum	3
LIB 149	Global Literature K-12	3
LIB 151	Reading Promotion/Readers Advisory	3
LIB 152	Design & Production of Library Resources	3
	Total Credits Required:	**36**

Legal Administrative Assistant

Legal administrative assistants may work for attorneys in private or public practice, the judicial system, the government, or large corporations that have legal departments. They must be familiar with legal procedures and the judicial process. Although their work varies depending upon the type of employer, most legal administrative assistants prepare and process legal documents such as appeals and motions, fill out forms for clients, and either take dictation or transcribe letters and memos dictated by the attorney. They create electronic legal documents, letters, and other case materials and use computers to create other legal documents. In larger offices, legal administrative assistants may supervise staff and enhance attorneys' effectiveness by assisting in monitoring case progress; alerting attorneys of issues requiring his/her attention; maintaining contact with providers, adjusters, and opposing counsel; contributing information to the team case review; completing special projects; and providing administrative support.

Coursework emphasizes legal terminology; preparing legal documents; and developing good word processing, English and communication skills. As a part of the program, students work for 240 hours in a legal-related office. The Legal Administrative Assistant program represents exciting and challenging opportunities for legal support staff. Students training in this field can easily enter other administrative support areas as well.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Legal Administrative Assistant will:

- Function effectively as a team member and/or leader.
- Interact effectively in oral and written communications.
- Use computers and other technology proficiently for administrative tasks.
- Demonstrate positive interpersonal interactions and diplomacy.
- Multi-task efficiently.
- Model professional and ethical behaviors, especially confidentiality, honesty and integrity.
- Participate in ongoing professional development and training.
- Solve problems using a variety of appropriate tools.
- Perform duties based on a legal knowledge base.
- Demonstrate effective, independent work skills and behavior.

Program Requirements

The Legal Administrative Assistant program is designed to be completed in two years of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT), or has taken the necessary coursework, to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret test scores and get help in planning their program.

CAREER AND TECHNICAL

Associate of Applied Science in Legal Administrative Assistant

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 11

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 79

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 125	Intro to Software Applications	3
CS 120	Digital Literacy	3
OA 104	Business Math	2
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3

Winter Term

BA 226	Business Law	3
CIS 125D	Introduction to Databases	1
OA 202	Word Processing for Business: MS Word	3
OA 205	Desktop Publishing[1]	3
OA 225	Applied Document Processing	3
OA 2.675	Legal Practices, Procedures & Terminology I[1]	3

Spring Term

OA 109	Job Success Skills: Legal[1]	1
OA 116	*Administrative Procedures [1]*	*4*
OA 203	Advanced Word Processing	4
OA 241	Records Management	3
OA 2.676	Legal Practices, Procedures & Terminology II[1]	3

Fall Term - Second Year

BA 111	Practical Accounting I	4
CJ 222	Procedural Law	3
MTH 065	*Elementary Algebra*	*4*
OA 251	Management for the Office Professional[1]	3

Winter Term

CJ 220	Introduction to Substantive Law	3
OA 204L	Legal Administrative Project Management[1]	4
OA 215	Communications in Business	4
OA 280	CWE for Office Professionals	4

Spring Term

BA 228	Computerized Accounting	3
CJ 120	Introduction to the Judicial Process	3
OA 280	CWE for Office Professionals	4
OA 270	Prep for IAAP Certifying Exam	1
OA 2.505	Voice Recognition	2
WR 121	*English Composition*	*3*
	Total Credits Required:	**90**

Machine Tool Technology

www.linnbenton.edu/machine-tool

The Machine Tool Technology curriculum is designed to develop skills in a wide variety of machining processes. Instruction includes training on manual lathes, milling machines, band saws, surface grinders, drill presses and other equipment. Computer Numerical Control training centers on utilization of modern CNC machines and Computer Aided Manufacturing (CAM) software. Students attain the skills required for a career in the machinist's trade with a combination of classroom learning and hands-on training. Safety and skills for successful employment are emphasized throughout the curriculum. The Machine Tool Technology Program offers an Associate of Applied Science Degree, a One-Year Certificate and a CNC Machinist Certificate.

Student Learning Outcomes

Students who successfully complete the Associate of Applied Science Degree in Machine Tool Technology will be able to demonstrate the following skills:

- Set up and safely operate the manual machine tools including the milling machine, lathe, drill press, band saw, surface grinder and other machine shop equipment.
- Advanced manufacturing competencies.
- Set up and operate the CNC Vertical Machining Center and the CNC Turning Center.
- Read, write and edit machine code (G&M code).
- Interpret technical drawings and understand Geometric Dimensioning and Tolerancing procedures.
- Understand Computer Aid Drafting, Computer Aided Manufacturing and Computer Numeric Control (CAD/CAM/CNC) technologies.
- Proficiency using Mastercam and Solidworks software.
- Apply good inspection practices and know how to use inspection tools and equipment.
- Pass all the Related Instruction requirements for an AAS degree.

Facilities

The Machine Tool Technology facilities include a manual machine shop, a CNC area, a computer lab and classrooms. Facilities, lab equipment and machines are designed to allow comprehensive instruction in the tools of the machinist's trade. The Machine Tool Technology Department is committed to providing training on current, state-of-the-art manufacturing software.

CAREER AND TECHNICAL

Associate of Applied Science in Machine Tool Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree. All class sequences may be taken as circumstances dictate.

Related Instruction Requirements:..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements: 80

Course No.	Course Title	Credit

Fall Term – First Year

MA 3.396	Manufacturing Processes I	6
MA 3.405	Inspection I[1]	2
MA 3.420	CNC: Mill	4
MA 3.431	Basic Print Reading: Metals	2

Winter Term

MA 3.397	Manufacturing Processes II	6
MA 3.406	Inspection II[1]	2
MA 3.421	CNC Lathe	4
MTH 060	*Introduction to Algebra*	*4*

Spring Term

COMM 100	*Introduction to Speech Communication*	*3*
MA 3.398	Manufacturing Processes III	6
MA 3.416	CNC: Special Projects[1]	4
MT 3.802	*Customer Service for Technicians*	*3*

Fall Term – Second Year

MA 3.407	Math for NC Machinists[1]	1
MA 3.412	CAM I[1]	3
MA 3.432	Introduction to Mastercam	3
MA 3.438	Manufacturing Processes IV	3
MA 3.451	Advanced CNC Technology I	3
	Elective	3

Winter Term

HE 110	First Aid & CPR	1
MA 3.427	Solid Works I[1]	3
MA 3.433	Mastercam II: Surfaces[1]	3
MA 3.439	Manufacturing Processes V	3
MA 3.452	Advanced CNC Technology II	3

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Spring Term

MA 3.428	Solid Works II[1]	3
MA 3.434	Mastercam III: Solids[1]	3
MA 3.437	Materials Science	2
MA 3.453	Advanced CNC Technology III	3
WD 4.270	Introduction to Welding for Machinists	1
WR 227	Technical Report Writing	3
	Total Program Credits:	**90**

Others as approved by the program advisor.

CAREER AND TECHNICAL

One-Year Certificate in Machine Tool Technology

Students who complete a one-year Certificate in Machine Tool Technology will have the following skills:

- Set up and operate all of the machine tools (including CNC equipment) at an intermediate level.
  Read, write and edit CNC machine code.
- Understand technical drawings.
- Know how to use Mastercam Computer Aided Manufacturing (CAM) software as it pertains to the CNC Turning Center.
- Have good inspection skills.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 36

Course No. Course Title Credits

Fall Term – First Year

MA 3.396	Manufacturing Processes I	6
MA 3.405	Inspection I[1]	2
MA 3.420	CNC: Mill	4
MA 3.431	Basic Print Reading: Metals	2

Winter Term

MA 3.397	Manufacturing Processes II	6
MA 3.406	Inspection II[1]	2
MA 3.421	CNC Lathe	4
MTH 060	*Introduction to Algebra*	*4*

Spring Term

COMM 100	*Introduction to Speech Communication*	*3*
MA 3.398	Manufacturing Processes III	6
MA 3.416	CNC: Special Projects[1]	4
MT 3.802	*Customer Service for Technicians*	*3*
	Total Credits Required:	**46**

CAREER AND TECHNICAL

Certificate in CNC Machinist

Students earning a CNC Machinist Certificate will have mastered the following competencies:

- CNC Vertical Machining Center.
- CNC Turning Center.
- Mastercam and Solidworks software.
- Mathematics as it relates to machine shop problem solving.

Course No. Course Title Credits

Fall Term

MA 3.407	Math for NC Machinists[1]	1
MA 3.420	CNC: Mill[1]	4
MA 3.432	Introduction to Mastercam[1]	3

Winter Term

MA 3.421	CNC: Lathe[1]	4
MA 3.427	Solid Works I[1]	3
MA 3.433	Mastercam II: Surfaces[1]	3

Spring Term

MA 3.416	CNC: Special Projects[1]	4
MA 3.428	Solid Works II[1]	3
MA 3.434	Mastercam III: Solids[1]	3
	Total Credits Required:	**28**

Mechatronics/Industrial Automation Technology

www.linnbenton.edu/mechatronics-technician

Mechatronics is the electrical, electronic, and computer control of mechanical systems for a wide variety of industrial and commercial processes. A Mechatronics technician is a cross between a millwright in mechanical skills, an industrial electrician in troubleshooting expertise, and a computer programmer in programming and operating automated equipment including industrial robots and commercial heating and cooling systems. An important focus of this training is practical energy efficiency and sustainability.

Mechatronics/Industrial Automation Technology technicians troubleshoot, maintain, and repair mechanical equipment that is controlled by electrical, electronic and computer systems used in a wide variety of applications. Such technicians are in high demand in many industries: food processing, forest products, manufacturing, health care and educational facilities, petroleum, renewable energy, mining, agriculture, aerospace, defense, and telecommunications.

Successful mechatronics technicians require well-developed reading skills and the ability to think analytically about interrelated systems. Successful technicians are self-starters, willing to learn on-the-job, and have the ability to work alone and in teams. Employers commonly screen for drug use prior to hiring. Prospective students should contact the program advisor for more details and about this rigorous training.

Student Learning Outcomes

Students who successfully complete the Associate of Applied Science in Mechatronics /Industrial Automation Technology will:

- Troubleshoot, maintain and repair mechanical and electrical systems.
- Analyze schematics.
- Locate and analyze technical data.
- Assist in design and rebuilding projects.
- Manage career education and workplace learning.
- Communicate effectively in writing and verbally with fellow workers and customers.
- Apply mathematics and scientific principles to troubleshooting, maintenance, and repair situations.
- Promote energy efficiency and industrial sustainability.
- Cultivate a positive professional workplace personality.
- Practice a high level of craftsmanship.

CAREER AND TECHNICAL

Associate of Applied Science in Mechatronics /Industrial Automation Technology

Related Instruction Requirements..... 9

Computation

One credit from three of the courses designated with an asterisk below.

Communication

This requirement is satisfied by completing the following course:

IN 4.164	Technical Writing for CTE	3

Human Relations

This requirement is satisfied by completing the following course:

MT3.802	Customer Service for Technicians	3

Program Requirements 81

The technical elective courses to be arranged with program advisor.

Course No.	Course Title	Credits
Fall Term - First Year		
MT 3.801	Mechatronics Orientation	1
MT 3.803	Industrial Safety	2
MT 3.812	Mechanical Systems*	4
MT 3.817	Drive Systems	2
MT 3.821	Electrical Systems Troubleshooting	4
Winter Term		
EG 4.416	Intermediate CAD	4
MT 3.819	Bearings & Lubrication Systems	2
MT 3.822	Troubleshooting Motors & Controls	4
MT 3.830	Industrial Pneumatics Systems	3
Spring Term		
IN 4.165	Lifetime Health & Fitness for Technicians	3
MT 3.805	Predictive & Preventive Maintenance	3
MT 3.824	Programmable Logic Controllers	3
MT 3.833	Principles of Technology*	5
MT 3.836	Industrial Hydraulics Systems	3
Fall Term - Second Year		
MT 3.823	Industrial Sensors & Actuators	3
MT 3.826	Advanced PLC Troubleshooting	3
MT 3.834	Principles of Technology II*	5
MT 3.897	Capstone Project I	3
	Technical elective	2
Winter Term		
MT 3.827	Automated Material Handling	3
MT 3.846	Pumps & Valves	2
MT 3.898	Capstone Project II	3
	Technical elective	4
Spring Term		
GS 154	Energy & Sustainability	3
MT 3.825	Process Control & Instrumentation	3
MT 3.899	Capstone Project & Assessment	3
	Technical elective	4
	Total Credits Required:	**90**

Approved technical electives, select a minimum of 10 credits. Other technical courses can be used to fulfill this requirement but they must be approved by the program advisors.

• Machining Focus

MA 3.396B	Manufacturing Processes I (2 credits)
MA 3.397B	Manufacturing Processes II (2 credits)
MA 3.420	CNC: Mill (4 credits)
MA 3.427	SolidWorks I (3 credits)

• Welding Focus

WD 4.151	Welding I (2 credits)
WD 4.152	Welding II (2 credits)
WD 4.258	Basic Print Reading: Welders (2 credits)
WD 4.260	Basic Wire Feed Welding (2 credits)

• Industrial Refrigeration Focus

MT 3.847	HVAC System Controls (2 credits)
MT 3.848	EPA Technician Certification (2 credits)
MT 3.849	Heating Systems (2 credits)
MT 3.852	Refrigeration Brazing (1 credit)
MT 3.854	Refrigeration Servicing (2 credits)
MT 3.855	Refrigeration Troubleshooting (2 credits)

CAREER AND TECHNICAL

Career Pathway Certificate in Mechatronics: Industrial Refrigeration

Course No.	Course Title	Credits
MT 3.821	Electrical Systems Troubleshooting	4
MT 3.847	HVAC System Controls	2
MT 3.848	EPA Technician Certification	2
MT 3.849	Heating Systems	2
MT 3.854	Refrigeration Servicing	2
MT 3.855	Refrigeration Troubleshooting	2
	Total Credits Required:	**14**

CAREER AND TECHNICAL

Career Pathway Certificate in Mechatronics: Maintenance

Course No.	Course Title	Credits
GS154	Energy & Sustainability	3
MT3.803	Industrial Safety	2
MT3.805	Predictive & Preventive Maintenance	3
MT3.812	Mechanical Systems	4
MT3.817	Drive Systems	2
MT3.819	Bearings & Lubrications Systems	2
MT3.821	Electrical Systems Troubleshooting	4
MT3.822	Troubleshooting Motors & Controls	4
MT3.824	Programmable Logic Controllers	3
MT3.836	Industrial Hydraulics Systems	3
MT3.846	Pumps & Valves	2
	Total Credits Required	**32**

CAREER AND TECHNICAL

One-Year Certificate in Industrial & Building Mechanic/Green Technician

This certificate prepares men and women to work in a wide variety of occupations that require an understanding of energy efficiency, sustainability, green technologies and maintenance and troubleshooting skills. These occupations include: facilities operation and maintenance, RHVAC, industrial maintenance and operations.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Student Learning Outcomes

Students who successfully complete the Industrial & Building Mechanic/Green Technician Certificate will:

- Be prepared for many green occupations across a variety of diverse industries.
- Have a fundamental understanding of energy efficiency, sustainability, green technologies, and maintenance and troubleshooting procedures.
- Apply reading, workplace math skills, and customer service skills on-the-job.

Related Instruction Requirements..... 10

Computation

MTH 060 Introduction to Algebra 4

Communication

This requirement is satisfied by completing the following course:
IN 4.164 Technical Writing for Technicians 3

Human Relations

This requirement is satisfied by completing the following course:
MT 3.802 Customer Service for Technicians 3

Program Requirements 36

Course No.	Course Title	Credits
GS 154	Energy and Sustainability	3
MT 3.803	Industrial Safety	2
MT 3.805	Predictive & Preventive Maintenance	3
MT 3.817	Drive Systems	2
MT 3.819	Bearings & Lubrication Systems	2
MT 3.821	Electrical Systems Troubleshooting	4
MT 3.822	Troubleshooting Motors and Controls	4
MT 3.824	Programmable Logic Controllers	3
MT 3.836	Industrial Hydraulics Systems	3
MT 3.846	Pumps & Valves	2
MT 3.848	EPA Technician Certification	2
MT 3.849	Heating Systems	2
MT 3.854	Refrigeration Servicing	2
MT 3.855	Refrigeration Troubleshooting	2
	Total Credits Required:	**46**

Medical Assistant

The Medical Assistant program is a two-year program that will incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. The program trains students in office administrative and medical skills and to work well with people. Medical assistants perform a variety of basic medical duties primarily in the outpatient setting. These duties may include taking patient histories; recording patients' vital signs; collecting and preparing laboratory specimens; preparing patients for exams, X-rays and procedures; taking patient EKG's; phlebotomy, wound dressing and other duties. Medical assistants may also have clerical duties, which may include completing insurance forms, scheduling appointments, billing, and bookkeeping.

Medical Assistant students must demonstrate the ability to:

- lift/carry/push/pull and move heavy objects, patients, supplies and equipment (at least 50 lbs.);
- demonstrate manual dexterity and eye-hand coordination;
- stand and walk for prolonged periods;
- reach, stoop, bend, kneel, crouch, stretch and squat;
- distinguish letters and symbols and, with corrected normal vision and hearing, be able to distinguish changes in a patient's vital signs
- not have color blindness.

LBCC's Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). CAAHEP may be reached at the Commission on Accreditation of Allied Health Education Programs, 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208 312-553-9355 or at www.caahep.org.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree with an emphasis in Medical Assistant will:

- Function effectively as a healthcare team member and/or leader.
- Interact effectively in oral and written communications.
- Use computers and other technology proficiently for administrative and clinical tasks.
- Use appropriate medical equipment proficiently to perform clinical tasks.
- Demonstrate positive interpersonal interactions and diplomacy.
- Manage multiple tasks efficiently.
- Model professional and ethical behaviors, including confidentiality.
- Participate in ongoing professional development and training.
- Think critically by anticipating, initiating, and participating in problem-solving processes.
- Function within legal scope of practice.
- Lead and participate in the discussion of patient education.
- Prioritize and organize tasks.
- Demonstrate proficiency in administrative and clinical content areas.

Program Requirements

The Medical Assistant program has special admission requirements and enrollment limits. One class of limited size is accepted fall term. (See Special Admissions Programs in the "How to Get Started – Admissions" section of the catalog.) The Medical Assistant program is designed to be completed in six terms of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT), or has taken the necessary coursework, to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret the test scores and get help in planning their program.

Students must complete required immunizations and a criminal background check in order to be eligible for admission. Students with a felony record will not be able to complete the program. A urine drug screen and a physical will need to be completed. Students must read the Student Handbook found on the advisor's webpage. Students will also be required to participate in 270 hours of an unpaid practicum experience that may require driving to towns in our area.

Students who graduate from LBCC's Medical Assistant program with an Associate of Applied Science degree are eligible to sit for the national certification exam given the American Association of Medical Assistants. Successful completion of this exam grants the graduate the certification of CMA (AAMA).

CAREER AND TECHNICAL

Associate of Applied Science in Medical Assistant

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 10

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 84

Course No.	Course Title	Credits
Fall Term - First Year		
BI 101	General Biology	4
CIS 125	Introduction to Software Applications	3
CMA 101	Medical Terminology & Body Systems I	4
CMA 110	Medical Office Communications	3
WR 121	English Composition	3
Winter Term		
CMA 102	Medical Terminology & Body Systems II	4
CMA 112	Basic Law & Ethical Issues in Healthcare	3
CMA 130	Pharmacology I	3
CRS 110	Medical Insurance & Reimbursement Systems	4
Spring Term		
CMA 103	Medical Terminology & Body Systems III	4
CMA 111	Medical Documentation & Screening	3
COMM 218	*Interpersonal Communication*	*3*
HE 112	First Aid	1
HE 261A	CPR Professional Rescuer	1
MTH 065	*Elementary Algebra*	*4*
Fall Term - Second Year		
AH 5.440	Interprofessional Education I	1
CMA 200	Medical Office Management	4
CMA 201	Basic Clinical Office Procedures	5
CMA 203	Physicians Office Laboratory	4
CMA 211	Math for Medical Assistants	1
Winter Term		
AH 5.440	Interprofessional Education I	1
CMA 202	Advanced Clinical Office Procedures	5
CMA 204	Basic EKG Techniques	1
CMA 205	Phlebotomy for Medical Assistants	2
CMA 212	*Human Relations in Healthcare*	*3*
CMA 250	Administrative Practicum	3
CMA 251	Preparation for CMA Exam/Seminar Admin	2
Spring Term		
AH 5.440	Interprofessional Education I	1
CMA 230	Pharmacology II	3
CMA 260	Clinical Practicum	6
CMA 261	Preparation for CMA Exam/Seminar Clinical	2
CRS 111	Basic Coding I	3
	Total Credits Required:	**94**

Network and Systems Administration

www.linnbenton.edu/computer-systems

The Network and Systems Administration program develops graduates who are able to enter the job market successfully as network technicians, junior network administrators, and junior system administrators. The program provides foundational skills, which provide a firm basis for lifelong, on-the-job learning and professional growth.

The first year of the program includes a sequence of four courses, which prepares students who wish to take the examination for Cisco Certified Network Associate® (CCNA) certification. The first year also includes courses in software applications, programming, and Web development.

The second year of the program includes a sequence of advanced courses in the administration of client/server network operating systems, script programming, and a course in network and system security. The second year also includes valuable cooperative work experience in the information technology field, arranged with one of a number of local public or private organizations.

The Certificate in Basic Networking is designed to help students develop skills to administer and manage computer networks and assume the role of a network technician. The courses examine and illustrate network terminology, protocols, standards, local and wide area networks (LANS/WANS), OSI model, cabling, network topology, troubleshooting, and network addressing. Skill classes are taught in a laboratory setting, online simulation, lecture, and online curriculum. This certificate program must be started in fall term, and it assumes that the entering student already has some working knowledge and familiarity with computer systems and software. Individual courses may assist the student in preparing for related industry information technology exams (CCNA, CompTIA, MCSE). Students should contact an advisor to discuss this certificate program and the necessary basic skill set prior to enrolling in courses. All the required courses can be applied toward the Network and Systems Administration two-year of Applied Science degree.

The Certificate in Systems Administration is a 27-credit certificate and may take two years to complete. It prepares students for entry into the Information Technology field as administrators of Network Operating Systems. These systems typically incorporate a large number of client enterprise-wide resources and connectivity through a computer network. This certificate program teaches foundational skills that provide a basis for lifelong on-the-job learning and professional growth. The required courses for this certificate can all be applied toward the Network and Systems Administration two-year Associate of Applied Science degree.

To begin this certificate the assumption is made that the entering student already has some working knowledge and familiarity with computer systems and software. The following (or equivalent as determined by a Computer Systems Department advisor) courses need to be completed prior to or during the first term: CS 120 Digital Literacy, and MTH 060 Introduction to Algebra, both with a minimum "C" grade. The certificate program includes five laboratory courses in which students practice hands-on administration of several Network Operating Systems. Also included in the certificate program are courses in Networking Essentials, Orientation to Computer Science, and Security and Information Assurance.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Network and Systems Administration will:

- Analyze and program to solve computation problems using various program languages.
- Design and utilize a database system using SQL.
- Communicate and work effectively in a technical computer environment.
- Solve business-related computer problems.
- Obtain practical experience working in a business computer field.
- Be prepared to take and pass the CCNA exam.
- Solve problems with a group or team.
- Demonstrate professional skills while dealing with people with technical problems and write directions they can follow.
- Understand the principles of management.
- Provide technical support for hardware, software, and networks.
- Apply a basic system design in a business environment.

Program Requirements

Students considering a major in Network and Systems Administration should be aware that this is a challenging program which requires a full-time commitment. The sequence of courses begins in fall term and continues for two years. Although there is a small amount of flexibility in the time some courses can be taken, students who intend to complete the program in two years should plan to begin in fall term and pursue it full time. Students should also be sure to meet with a program advisor regularly to ensure that coursework is on track.

Important Note: It is a prerequisite for each student in Web/Database Technology to possess a basic knowledge of information technology hardware and software before enrolling in any CIS or CS courses. In order to fulfill this requirement a student must either:

- Pass a Computer Literacy Placement Exam, or
- Enroll in CS 120 – Digital Literacy (3 credits).

To schedule a placement exam or for further information contact: Linda Dompier at dompiel@linnbenton.edu or 541-917-4636.

Facilities

The students in this program spend a considerable amount of their time working on computers. Campus labs are well-equipped with modern hardware and software. Students have access to networked IBM-compatible personal computers for completing assignments.

CAREER AND TECHNICAL

Associate of Applied Science in Network and Systems Administration

Related Instruction Requirements..... 11

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 84

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 151	Introduction to Networks	4
CS 120	Digital Literacy (challenge exam available)	3
CS 160	Orientation to Computer Science	4
MTH 095	*Intermediate Algebra (or higher)*	*4*
Winter Term		
CIS 125	Introduction to Software Applications	3
CIS 152	Routing and Switching Essentials[1]	4
CIS 195	Web Development I	4
CS 161	Introduction to Computer Science I (Java)	4
Spring Term		
CIS 153	Scaling Networks[1]	4
CS 133J	Javascript I	4
CS 140U	Fundamentals of UNIX/Linux[1]	4
WR 121	*English Composition*	*3*
Fall Term - Second Year		
CIS 154	WAN Design Connecting Networks	4
CS 140M	Operating Systems I: Microsoft	4
CS 225	*IT Career Skills*	*4*
CS 227H	Systems Support: Hardware	3
CS 279	Network Management	4
Winter Term		
CS 240A	Microsoft Windows® Server Administration I	4
CS 244	Systems Analysis & Project Management[1]	4
CS 275	Database Systems: SQL & Oracle	4
CS 284	Intro to Computer Security & Information Assurance[1]	4
Spring Term		
CS 240B	Microsoft Windows® Server Administration II	4
CS 280	CWE Computer Systems	3
CS 285	Network Defensive Security	4
WE 202	CWE Seminar	1
WR 227	Technical Writing	3
	Total Credits Required:	**95**

CAREER AND TECHNICAL

Certificate in Basic Networking

Course No.	Course Title	Credits
Fall Term		
CIS 151	Introduction to Networks	4
Winter Term		
CIS 152	Routing and Switching Essentials	4
Spring Term		
CIS 153	Scaling Networks	4
Summer Term		
CIS 154	Connecting Networks	4
(Taken summer term or fall term)		
	Total Credits Required:	**16**

CAREER AND TECHNICAL

Certificate in Systems Administration

This certificate takes more than one year to complete as there are prerequisites for several courses. Please see an advisor in the Computer Systems Department for more information.

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 151	Introduction to Networks[1]	4
Winter Term		
CS 160	Orientation to Computer Science	4
Spring Term		
CS 140U	Fundamentals of UNIX/Linux	4
Fall Year - Second Year		
CS 279	Network Management[1]	4

Winter Term

CS 240A	Microsoft Windows® Server Administration I[1]	4
CS 284	Intro to Computer Security & Information Assurance	4

Spring

CS 240B	Microsoft Windows® Server Administration II[1]	4
	Total Credits Required:	**28**

Nursing

www.linnbenton.edu/nursing

The Associate Degree Nursing program has met all requirements to be approved by the Oregon State Board of Nursing. Additionally, the nursing program has met Accreditation Commission for Education in Nursing requirements for candidacy in preparation for national accreditation.

Open to both men and women, this two-year program is designed to train highly skilled generalist nurses. The Nursing program accepts one class per year beginning fall term. Qualified applicants who have met the minimum admission standards are selected through a point system. The Associate Degree Nursing curriculum leads to an Associate of Applied Science degree. Graduates are eligible to take the National Council Licensing Examination for Registered Nurse licensing (NCLEX-RN). The coursework completed for the ADN may be transferable to Linfield College, OHSU, and other RN to BSN or RN to MS programs.

Students who apply to the Nursing program should have a strong academic background preparing them for the educational challenges of first- and second-year coursework. Students are evaluated in all aspects of the program, including clinical practice, and are expected to be an active participant in their education on a daily basis. Required clinical rotations occur in hospitals, skilled care facilities, community-based care settings, and other areas where health care is delivered in Linn and Benton counties. Clinical opportunities occur during day, evening, night, weekend and holiday shifts. Educational and learning opportunities are primarily located in, but are not limited to, Linn and Benton counties.

The Oregon State Board of Nursing reviews applicants for RN licensure upon completion of LBCC's Nursing program and is responsible for ensuring that approved applicants meet certain criteria regarding issues of substance abuse, criminal histories and felony convictions. Specific questions regarding these issues should be directed to the Oregon State Board of Nursing, 17938 SW Upper Boones Ferry Rd, Portland, OR 97224, 971-673-0685.

Student Learning Outcomes

The student nurse: (Adapted from the 2013 NCLEX test plan)

- Provides and directs nursing care that enhances the care delivery setting to protect the patient and healthcare personnel
- Protects patients and healthcare personnel from health and environmental hazards
- Provides and directs the nursing care of the patient that incorporates knowledge of expected growth and development principles; prevention and/or early detection of health problems; and strategies to achieve optimal health
- Provides and directs nursing care that promotes and supports the emotional, mental, and social well-being of the patient experiencing stressful events, as well as patients with acute or chronic mental illness.
- Provides comfort and assistance in the performance of activities of daily living
- Provides care related to the administration of medications and parenteral therapies
- Reduces the likelihood that patients will develop complications or health problems related to existing conditions, treatments, or procedures
- Manages and provides care for patients with acute, chronic or lie-threatening physical health conditions

Program Requirements

All nursing courses must be completed at LBCC unless transfer credit is granted. Related courses may be taken prior to or concurrent with enrollment in the Nursing program. The student must achieve a minimum "C" grade in each required course, and courses must be taken in the specified sequence. Students who are unable to meet the required competency level for the program may be advised of other alternatives to meet their goals.

Special Requirements

For current requirements for entry into the Nursing program, contact Admissions at 917-4811 or look on the Web at www.linnbenton.edu/admissions and click on Forms, then Nursing Application.

Petition Process

A student may file a petition to waive minimum admission requirements or a petition for exceptions to the nursing point system.

A committee meets periodically to consider these petitions.

CAREER AND TECHNICAL

Associate of Applied Science in Nursing

Pre-Admission Requirements

All program applicants must be certified nurse assistants in the state of Oregon.

BI 231	Human Anatomy & Physiology	5
	Related Instruction Requirements	**10**

Computation

MTH 095	Intermediate Algebra	4
	(Must be completed prior to admission to the program)	

Communication

WR 121	English Composition	3
	(Must be completed prior to admission to the program)	

Human Relations

PSY 215	Introduction to Developmental Psychology	3
	(Taken winter term - second year below)	
	Program Requirements	**79**

Course No.	Course Title	Credits

Fall Term - First Year

AH 111	Medical Terminology I for Healthcare Providers	2
BI 232	Human Anatomy & Physiology	5
NUR 101	Fundamentals of Nursing Practice	9
NUR 268A	Drug Therapy & Nursing Implications	1

Winter Term

BI 233	Human Anatomy & Physiology	5
NUR 102	Introductory Medical-Surgical Care	9
NUR 268B	Drug Therapy & Nursing Implications	1

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Spring Term

BI234	Microbiology	4
NUR 103	Care Throughout the Lifespan	9
NUR 268C	Drug Therapy & Nursing Implications	1

Fall Term - Second Year

NFM 225	Nutrition	4
NUR 201	Advanced Medical-Surgical Care	9
WR 123	English Composition: Research	3

Winter Term

NUR 202	Critical Transitions in Care	9
PSY 215	Introduction to Developmental Psychology	3

Spring Term

NUR 203	Nursing Practicum Experience	6
NUR 222	Professional Practice Issues	2
	Total Credits Required:	**94**

Occupational Therapy Assistant

www.linnbenton.edu/ota

This is a two-year associate degree program designed to prepare the student to function as an entry-level occupational therapy assistant (OTA). OTAs work under the supervision of occupational therapists to help clients develop, maintain, and/or regain health and function through the use of purposeful activity. They address physical, mental, and social components of activity as they work with clients to improve the underlying cause of impairment and/or to adapt activities for client success. Traditional students attend classes on the LBCC campus while distance education students attend classes in real time via the Internet allowing participation from remote sites. Laboratory and clinical components are delivered locally and at partner sites. Graduates will be eligible and prepared to sit for the national certification examination.

Student Learning Outcomes

Students who successfully complete the Associate of Applied Science in Occupational Therapy Assistant will be prepared to:

- Pass the national certification examination.
- Secure employment as an entry-level occupational therapy assistant.
- Use a client-centered, holistic, occupation-based approach to assessment and intervention.
- Establish therapeutic relationships with clients.
- Employ entry-level activity analysis, critical thinking and clinical reasoning.
- Demonstrate entry-level technical skill and clinical competency.
- Follow current standards of practice and use evidence-based research.
- Display professional attitudes and behaviors. This involves following the profession's code of ethics and adhering to all laws and regulations governing the practice of occupational therapy.
- Communicate appropriately and effectively with clients, healthcare team members and the public. This includes both verbal and written communication.

Program Requirements

The following pre-requisite courses must be completed with a grade of C or better: RD 115 (Advanced College Reading & Learning Strategies; not required for those who have an associate degree or higher), WR 121 (English Composition), MTH 065 (Elementary Algebra), BI 102 (General Biology) or BI 112 (Cell Biology for Health Occupations) or BI 212 (Principals of Biology), PSY 201 (General Psychology) or PSY 202 (General Psychology), CS 120 (Digital Literacy), and AH 111 Medical Terminology I for Healthcare Providers. Students accepted into the program also will need to complete and pass the criminal background check and drug screen, and show proof of current immunizations and First Aid/CPR certification.

CAREER AND TECHNICAL

Associate of Applied Science in Occupational Therapy Assistant

Students must complete Level II fieldwork within 18 months of completion of the didactic portion of the program. Students must fulfill all graduation requirements within 36 months of admission into the program.

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 11

These courses are pre-admission requirements.

Computation

MTH 065	Elementary Algebra	4

(Must be completed prior to admission to the program)

Communication

WR 121	English Composition	3

(Must be completed prior to admission to the program)

Human Relations

PSY 201/202	General Psychology	4

(Must be completed prior to admission to the program)

Course No.	Course Title	Credits

Program Requirements 81-82

Course No.	Course Title	Credits

Fall Term - First Year

BI 121	Essentials of Human Anatomy & Physiology I.	4
COMM 218	Interpersonal Communication	3
OTA 117	Professionalism	1
OTA 119	Preparing for Success in the OTA Program	1
OTA 120	Occupational Therapy Foundations	4
WR 227	Technical Writing	3

Winter Term

BI 122	Essentials of Human Anatomy & Physiology II	4
OTA 118	Documentation	1
OTA 125	Therapeutic Use of Self	1
OTA 140	Activity Analysis	4
PSY 215	Introduction to Developmental Psychology	3

Spring Term

OTA 122	Mental Health Theory & Practice	4
OTA 124	Physical Health Theory & Practice	3
OTA 124A	Physical Health Lab	2
PSY 219	Introduction to Abnormal Psychology	3

Fall Term - Second Year

OTA 160	Level I Fieldwork	1
OTA 161	Fieldwork Seminar	1
OTA 222	Pediatric Theory & Practice	4
OTA 224	Geriatric Theory & Practice	4

Winter Term

OTA 240	Administration & Management	2
OTA 260	Level II Fieldwork A	10

Spring Term

OTA 230	Innovative Theory & Practice	2
OTA 270	Level II Fieldwork B	10

During or prior to the 4th term of the program, students take one of the following courses.

HE 225	Social & Individual Health Determinants	4
PE 231	Lifetime Health & Fitness	3

During or prior to the 4th term of the program, students take one of the following courses.

SOC 204	Intro to Sociology	3
SOC 205	Institutions & Social Change	3
SOC 206	Social Problems & Issues	3
ANTH 103	Introduction to Cultural Anthropology	3
ANTH 210	Comparative Cultures	3

Total Credits Required: 92-93

Office Specialist

Job opportunities are excellent for well-trained office specialists. Opportunities for advancement are available with experience and proven aptitude. Generally, the work is in pleasant surroundings with regular daytime hours. The Office Specialist program provides students the opportunity to acquire skills for entry-level positions such as general office assistant, receptionist, and administrative support specialist.

LBCC offers two certificates for office specialists: a one-year Office Specialist Certificate and a short-term Office Technology Skills Certificate. The short-term program focuses on updating technology skills for entry-level office support jobs, and the one-year program provides the opportunity to acquire technology and communication skills needed to gain employment in a more advanced position.

Office specialists perform a variety of duties that vary with the employer and with the individual's level of training and experience. Duties may include filing, typing, operating various office machines, writing letters, answering telephones, and scheduling appointments. More experienced office specialists might keep financial records, prepare budgets, and supervise other employees.

Individuals who want to become office specialists should have the ability to get along well with many different people. Successful office support staff must be reliable and must enjoy detail work. In addition to general office skills, they must develop a good working knowledge of computer hardware and software; mathematics; proper maintenance of business records; customer service; communication skills; and grammar, spelling and proper use of the English language.

Student Learning Outcomes

Students who successfully complete the One-year Certificate in Office Specialist will:

- Function effectively as a team member.
- Interact effectively in oral and written communications.
- Use computers and other technology proficiently for support staff tasks.
- Demonstrate positive interpersonal interactions and diplomacy.
- Manage multi-tasks efficiently.
- Model professional and ethical behaviors.
- Participate in ongoing professional development.
- Solve problems using a variety of appropriate tools.
- Demonstrate proficiency in content areas.

Program Requirements

The Office Specialist program is designed to be completed in one year of full-time attendance. This assumes that the student has placed at or above the necessary levels on the Computerized Placement Test (CPT), or has taken the necessary coursework, to place into the required program courses. It is advisable to take the placement test as early as possible to identify courses needed prior to enrolling in this program. Students should work with an advisor to interpret the test scores and get help in planning their program. The required courses can all be applied toward the two-year Associate of Applied Science Administrative Office Professional degree.

The Office Technology Skills Certificate is a short-term certificate that focuses on specific skills for entry-level office support jobs. It is ideal for students who need to update their office skills for employment as an office support person in today's high technology environment or for the person wanting to update technology skills for personal use. The classes may be taken all together to earn a certificate in one term, or one may pick and choose classes for his/her specific needs. The required courses can all be applied towards the one-year Office Specialist Certificate and the two-year Associate of Applied Science Administrative Office Professional degree. This certificate is designed to be completed in one to two terms.

CAREER AND TECHNICAL

One-Year Certificate in Office Specialist

Related Instruction Requirements..... 13

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 32

Course No.	Course Title	Credits
Fall Term		
CIS 125	Intro to Software Applications	3
CS 120	Digital Literacy	3
OA 104	*Business Math*	*2*
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3
Winter Term		
CIS 125D	Introduction to Databases	1
OA 202	Word Processing for Business: MS Word	3
OA 205	Desktop Publishing[1]	3
OA 215	*Communications in Business*	*4*
OA 225	Applied Document Processing	3
Spring Term		
CIS 135S	Advanced Spreadsheets	3
OA 109	Job Success Skills: Office[1]	1
OA 116	*Administrative Procedures*[1]	*4*
OA 203	Advanced Word Processing	4
OA 241	Records Management[1]	3
OA 2.505	Voice Recognition	2

Total Credits Required: 45

CAREER AND TECHNICAL

Certificate in Office Technology Skills

Course No.	Course Title	Credits
CIS 125	Intro to Software Applications	3
CIS 125D	Intro to Databases	1
CS 120	Digital Literacy	3
OA 104	Business Math	2
OA 110	Editing Skills for Information Processing	3
OA 125	Formatting & Skillbuilding	3

Total Credits Required: 15

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Profitable Small Farms

Profitable Small Farms combines hands-on learning and classroom teaching to develop the skills to start a small farm. The program has a dual focus on the technical skills to produce food sustainably with minimal negative environmental impacts and the entrepreneurial skills to develop and manage a community-based agricultural business. The program starts in the fall and continues through the summer for students to experience a full year of small farm management. The program is suitable for students starting their college education and students who already possess a higher education degree.

The Profitable Small Farms program is designed to provide students with the know-how to first develop and then successfully sustain a small farm. Students take a variety of courses in technical subjects and spent significant time on the farm and on field trips. Higher level courses build on those earlier in the program. Project-based entrepreneurial courses prepare students for the real world and provide strategies and documents for the students' immediate use upon graduating from the program.

Throughout the program students practice growing food crops and manage small animals on the LBCC student organic farm. Farm-direct marketing is experienced by managing the college CSA (community supported agriculture) program, and selling to the campus restaurants and to students and staff at the college farmers' market. The program maintains strong ties with the local farming community, food businesses, and university extension service, which helps students in internship and job placement.

Student Learning Outcomes

Students who successfully complete a one-year certificate in Profitable Small Farms will:

- Be prepared to start a small farm by choosing appropriate farm management approaches including crop and livestock selection and product marketing, suitable to the local physical and economic environment.
- Be able to develop creative solutions to production, marketing, financial, and labor issues in order to sustain a small farm.
- Understand the functioning of community food systems and be prepared to work for an organization that works on food system topics.

Program Requirements

Students must have a high school diploma or a General Education Development (GED) certificate. They must also possess good basic math and reading skills, demonstrate some physical stamina and be able to work cooperatively with others. Permission from the program chair is required to start the program in any term other than fall.

Facilities

Instructional facilities, including greenhouses, laboratories, an organic farm, ornamental gardens, and the campus grounds, are used for skill building and demonstrations.

CAREER AND TECHNICAL

Certificate in Profitable Small Farms

See the beginning of this section for graduation requirements for the Associate of Applied Science degree. Classes offered during multiple terms may be taken as circumstances dictate.

Related Instruction Requirements..... 9

Classes shown below in *italic* satisy the Related Instruction requirements. Appropriate computation and communication courses are selected based on placement test scores and may be taken during any term of the program. Previous college-level courses may be applied.

Computation (3 credits)

See the beginning of this section for a list of approved courses.

Communication (3 credits)

See the beginning of this section for a list of approved courses.

Human Relations

This requirement is satisfied by completing the following course:

AG 230C	Sustainable Small Farm Management	3

Program Requirements .....

Course No.	Course Title	Credits
Fall Term		
AG 230A	Sustainable Small Farm Management	2
AREC 213	Starting a New Ag/Hort Business	4
HORT 230	Sustainable Ag and Food System	3
	Elective	3
Winter Term		
AG 230B	Sustainable Small Farm Management	2
ANS 212	Small Scale Sustainable Livestock Production	3
AREC 214	Farm Direct Marketing	4
	Elective	3
Spring Term		
AG 230C	*Sustainable Small Farm Management*	*3*
HORT 260	Organic Farming and Gardening	3
HT 8.115	Greenhouse Management	3
	Elective	3
Summer Term		
	Computation	*3*
	Communication	*3*
HORT 261	Advanced Practice in Local Food Production	2
HORT 261A	Advanced Practice in Local Food Production Lab	4

Approved Electives

CSS 205	Soils: Sustainable Ecosystems (4 Credits)
CSS 240	Pest Management (4 Credits)
HORT 251	Temperate Tree Fruits, Berries, Grapes and Nuts (3 Credits)
HT 8.137	Plant Propagation (4 Credits)
CSS 215	Soil Nutrients and Plant Fertilization (3 Credits)
HT 8.102	Careers Exploration Horticulture (1 Credit)
AG 250	Irrigation System Design (3 Credits)
HORT 211	Horticulture Practicum (3 Credits)

Total Credits Required: 48

Retail Management

www.linnbenton.edu/business-management

The Retail Management Certificate is a less-than-one-year certificate that has received statewide approval by the Oregon State Board of Education. The program aims to equip students and retail employees with the management skills necessary for career success within the retail industry. According to the Oregon Employment Department, the growth rate between the years 2006-2016 for First Line Supervisors/Managers of Retail Sales Force is estimated at 10 percent. To accommodate the needs of working individuals, the program includes a number of classes offered in evening, weekend or online formats.

Student Learning Outcomes

Students who successfully complete the certificate in Retail Management will:

- Use communication skills with individuals and groups in retail settings.
- Apply math and computer skills requisite with industry expectations.
- Evaluate and select marketing and retailing strategies.
- Apply basic accounting theory and practice to a service or retail setting.
- Explain the impact, roles, skills, responsibilities, and accountability of supervisors/managers in managing, leading, and controlling human resources within an organization.

Program Requirements

Students are expected to have a high school diploma or an equivalent GED. Students also should have a high interest in business operation, selling services and/or products to consumers, and managing and motivating people in organizations.

CAREER AND TECHNICAL

Certificate in Retail Management

Course No.	Course Title	Credits
Fall Term		
BA 101	Introduction to Business	4
BA 285	Business Relations/Global	4
COMM 100	Introduction to Speech	3
MTH 060	Introduction to Algebra	4
Winter Term		
BA 206	Principles of Management	3
BA 224	Human Resource Management	3
CIS 125	Introduction to Software Applications	3
WR 214	Business Communication	3
Spring Term		
BA 215	Survey of Accounting	4
BA 223	Principles of Marketing	4
BA 249	Retail Management	3
CIS 125D	Introduction to Databases	1
COMM 218	Interpersonal Communication	3
	Total Credits Required:	**42**

Skills Training

LBCC offers an Occupational Skills Training certificate that provides the opportunity for students to receive instruction in a specific occupational area. The program is individualized and allow flexibility in program implementation. Individualized training plans are developed in consultation with the student, LBCC faculty, LBCC program advisor, work-site trainer and agency representative, if appropriate. The program utilizes community employers to train students for new careers when appropriate.

Program Requirements

The Occupational Skills Training Certificate requires a minimum of 45 credits. In addition to classroom instruction, students in this program are required to participate in supervised and structured work-based training. While participating in the structured work-based training, students will maintain weekly activity logs, quarterly evaluations and quarterly curriculum reviews.

Before beginning the Occupational Skills Training Certificate, students must receive written approval from a faculty advisor.

Student Learning Outcomes:

Students who successfully complete Occupational Skills Training will:

- Utilize appropriate workplace skills, concepts and theory.
- Understand and follow industry regulations and safe practices.
- Communicate effectively, both orally and in writing, with supervisor and co-workers and the public.
- Be an effective worker utilizing an understanding of workplace culture and professional ethics.

CAREER AND TECHNICAL

Certificate in Occupational Skills Training

A minimum of 45 credits is required for this certificate. Contact your advisor for course selection assistance.

Course No.	Course Title	Credits
COMM 100	Introduction to Speech Communication	3
MTH 060	Introduction to Algebra	4
OST 280	Occupational Skills Training	20-26
WR 115	Introduction to College Writing	3
	Occupational Specific Courses	9-15
	Total Credits Required:	**45**

Social Media Technology

The Social Media certificate is a 12 credit certificate program and is designed to provide social media students with a foundation and skill set that successfully allows them to implement effective and engaging social media. Students will gain hands-on experience in a range of social media platforms and tools as well as learn how organizations are leveraging social media for communications and outreach. Additionally, students will be able to discuss policies to manage a public social media account and the distribution of information.

Student Learning Outcomes

- Create, maintain and manage existing Social Media accounts.
- Discover emerging Social Media technologies.
- Recognize and describe social networks and their properties, participants, history, and development.
- Understand how personal account settings (anonymous accounts, false identities, and multiple identities) affect the community formation.
- Understand the importance of monitoring and responding to the social media community.
- Formulate and implement a social media marketing plan.
- Explain and understand how different organizations within the same market utilize social networks to share or market information and ideas
- Describe how social networks can influence political movements or decisions.
- Understand and effectively utilize copyrights related to social media.
- Explain the characteristics of digital content including the life of information, the restrictions of the communication medium, and ownership of the information.

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

- Understand, discuss, and acknowledge limitations of account and sharing policies in various social networking platforms including ethical violations.
- Recognize liability related participation in social media.

Program Requirements

Applicants must be in good academic and financial standing at LB iLearn Campus in order to be admitted to this program as well as meet college ready criteria.

CAREER AND TECHNICAL

Certificate in Social Media Technology

Course No.	Course Title	Credits
SMT 110	Social Media Technology	4
SMT 111	Social Media Communication and Human Relationships	2
SMT 112	Social Media Marketing and Communication	4
SMT 113	Social Media Privacy, Ethics and Legal Issues	2
	Total Credits Required:	**12**

Water, Environment and Technology

The Environmental Technology Department provides training for operators, utility workers, environmental technicians, laboratory technicians, and other workers that make up the field of Public Works. Cities, counties and other public entities have needs for clean drinking water, well maintained streets and parks, wastewater treatment facilities, maintenance of pipes, pumps, and storage facilities. Many private facilities and industries have similar needs for maintenance of infrastructure, water supply and waste management. This program provides education to meet the employment needs of workers in both the public and private systems.

The Environmental Technology Department offers a two-year Associate of Applied Science Degree in Water, Environment and Technology. Four completion levels in Environmental Technology and Public Works fulfill the requirements for the two-year degree.

- Public Works
- Wastewater Technology
- Drinking Water
- Advanced Water Technology

Working in the field of Environmental Technology requires skills in chemistry, microbiology and laboratory practices. Students will also have knowledge of city government, infrastructure including pipe, pumps and storage tanks, and equipment maintenance.

Environmental Technology Employment Opportunities:

Public Works Utility Worker: supports all aspects of the operation and maintenance of public works systems including streets, piping, pumps, water supply, wastewater treatment.

Watershed Management: oversees the watershed that is the water source for the community.

Water Treatment Operator: responsibility for the operation and maintenance of the water treatment and supply system.

Water Distribution System Operator: responsibility of the operation and maintenance of the water distribution system made up of piping, pumps, storage facilities.

Stormwater Control and Management: responsibility for monitoring and controlling surface runoff from storms and managing the treatment of this stormflow.

Industrial Pre-Treatment: work with local industry to monitor and control industrial discharges to the community treatment systems.

Wastewater Treatment Operator: responsibility for the operation and maintenance of the city's wastewater treatment system.

Wastewater Collection System Operator: responsibility of the operation and maintenance of the wastewater collection system made up of piping, pumps, and other equipment.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science in Water, Environment and Technology will:

- Understand the organization and procedures in the operation of a typical city or town.
- Understand the components and interaction of public works operations.
- Follow safe work practices.
- Apply chemical, microbiological, and mechanical knowledge and skills to maintain proper water and wastewater plant operations.
- Apply math and hydraulics skills to general public works activities, water and wastewater plant operation, collections systems and water distribution system operations.
- Understand state and federal regulations covering public works, water and wastewater plant operations.
- Interact effectively in oral and written communication.
- Use computers in public works, water and wastewater plant operations.
- Demonstrate work ethic and model professional interaction with the public.

Program Requirements

Entering students must be prepared to enroll in MTH 060 Introduction to Algebra and WR 115 Introduction to College Writing by fall term of their first year.

Workplace Requirements

In the field of Public Works, the workplace and security concerns often require drug testing, background checks, and a current drivers license as a prerequisite to full time employment. As a part of the two-year degree credit in Cooperative Work Experience (CWE) is required. CWE activities take place at a non-LBCC instructional location. A student may be required to comply with the non-LBCC site's policies concerning drug testing, background checks, etc.. Students should meet with program advisors for clarification of these and workplace related concerns.

Facilities

Classes are held in modern, well-equipped classrooms and laboratories. The Water, Environment and Technology program offers completely equipped laboratories for chemistry, microbiology, mechanical and electrical maintenance applications. Computer applications are a part of many classroom activities and laboratory applications.

CAREER AND TECHNICAL

Associate of Applied Science in Water, Environment and Technology

See the beginning of this section for graduation requirements for the Associate of Applied Science degree.

Related Instruction Requirements..... 9
Classes shown below in *italic* satisfy the Related Instruction requirement.

Computation (3 credits)
This requirement is satisfied by completing the following courses:

MT 3.812	Mechanical Systems	4
MT 3.833	Principles of Technology	5
WW 6.235	Applied Hydraulics	3

Communication

This requirement is satisfied by completing the following course:

IN 4.164	Technical Writing for Technicians	3

Human Relations (3 credits)

Refer to the courses listed at the beginning of the AAOT Degree section that have the Cultural Literacy symbol ◆. These courses also meet the Human Relations requirement.

Program Requirements: 81

Course No.	Course Title	Credits
Fall Term - First Year		
MT 3.812	*Mechanical Systems*	*4*
WW 6.151	WE&T Lab Skills I	3
WW 6.153	WE&T Industrial Safety	3
WW6.170	Introduction to Public Works	2
WW 6.190	Introduction to Environmental Technology	4
Winter Term		
IN 4.164	*Technical Writing for Technicians*	*3*
WW 6.152	WE&T Lab Skills II	3
WW 6.164	Water Sources and Watershed Management	3
WW 6.167	Public Works Infrastructure I	2
WW 6.172	Industrial Pre-Treatment & Stormwater Control	3
Spring Term		
MT 3.833	*Principles of Technology*	*5*
WW 6.165	Public Works Infrastructure II	2
WW 6.191	Water Treatment Processes	3
WW 6.192	Primary and Secondary Treatment	3
WW 6.193	Water Laboratory Practices	4
Fall Term – Second Year		
WW 6.176	CDL Ground School	2
WW 6.194	Wastewater Laboratory Practices	4
WW 6.196	Water Disinfection and Water Quality Control	3
WW 6.197	Solids Processing and Reuse	3
WW 6.235	*Applied Hydraulics*	*3*
Winter Term		
AG 8.130	Pesticide Safety	3
MT 3.846	Pumps and Valves	2
WW 6.156	Industrial Electricity	4
WW 6.166	Process Control for Water Treatment Systems	3
WW 6.169	Effluent Disinfection, Disposal and Reuse	3
Spring Term		
WW 6.154	Process Control for Wastewater Treatment Systems	3
WW 6.168	Cooperative Work Experience	3
WW 6.198	Introduction to PLCs and Industrial Control Systems.	4
	Human Relations	*3*
	Total Credits	**90**

Career Pathway Certificate in Public Works

AG 8.130	Pesticide Safety	3
	Human Relations	3
IN 4.164	Technical Writing for Technicians	3
MT 3.812	Mechanical Systems	4
WW 6.153	WE&T Industrial Safety	3
WW 6.167	Public Works Infrastructure I	2
WW 6.170	Introduction to Public Works	2
WW 6.176	CDL Ground School	2
WW 6.190	Introduction to Environmental Technology	4
	Total Pathway Credits	**26**

Career Pathway Certificate in Wastewater Technology

WW 6.151	WE&T Lab Skills I	3
WW 6.165	Public Works Infrastructure II	2
WW 6.169	Effluent Disinfection, Disposal and Reuse	3
WW 6.172	Industrial Pre-treatment and Stormwater Control	3
WW 6.192	Primary and Secondary Treatment	3
WW 6.194	Wastewater Laboratory Practices	4
WW 6.197	Solids Processing and Reuse	3
	Total Pathway Credits	**21**

Career Pathway Certificate in Drinking Water

MT 3.846	Pumps and Valves	2
WW 6.152	WE&T Lab Skills II	3
WW 6.164	Water Sources and Watershed Management	3
WW 6.191	Water Treatment Processes	3
WW 6.193	Water Laboratory Practices	4
WW 6.196	Water Disinfection and Water Quality Control	3
WW 6.235	Applied Hydraulics	3
	Total Pathway Credits	**21**

Career Pathway Certificate in Advanced Water Technology

MT 3.833	Principles of Technology	5
WW 6.154	Process Control for Wastewater Treatment Systems	3
WW 6.156	Industrial Electricity	4
WW 6.166	Process Control for Water Treatment Systems	3
WW 6.168	Cooperative Work Experience	3
WW 6.198	Introduction to PLCs and Industrial Control Systems.	4
	Total Pathway Credits	**22**

Web/Database Technology

www.linnbenton.edu/computer-systems

Web/Database Technology classes prepare students for entry-level positions in Web development and database administration as well as technical support, network support, software support, assistance and troubleshooting for end users. Common job titles include Web Developer I, Database Administrator I, Web Application Developer, End-User Computer Support Specialist, Help Desk Assistant and Computer Lab Assistant.

Web developers are responsible for helping create and maintain Web-based applications and company Web sites. This includes creating Web pages, implementing both client and server-side software applications and interfacing with data storage facilities. Web developers must be familiar with a variety of programming languages and technologies, including both open source and closed source environments.

Database administrators are responsible for helping design and implement database applications, as well as creating queries and producing reports from multiple databases. They are also responsible for ensuring data integrity and security. Database administrators need to be fluent in SQL and database design theory.

Computer support specialists determine a company's computer needs and locate computers or software that meets those needs. They install software following manufacturers' guidelines. At larger companies,

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

specialists may develop training materials and teach staff how to use new software, as well as supervise other computer support staff.

Computer Support Specialists test or monitor systems to locate problems. This may mean reinstalling software or replacing hardware that is not working. Some computer support specialists help customers who purchased products from computer hardware or software vendors. Support specialists must be aware of developments in the field and must keep abreast of rapidly occurring changes. The second year of this program includes valuable cooperative work experience in the field, arranged with one of a number of local public or private organizations.

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Web/Database Technology will:

- Create browser- and platform-agnostic, standards compliant, accessible Web pages using HTML, CSS, JavaScript and other technologies.
- Create Web applications using various web programming "stacks."
- Create and manipulate relational databases using ANSI standard and Oracle proprietary programming languages.

Program Requirements

Students expecting to graduate in the program should have good people skills, as well as a strong interest in working with computers.

Important Note: It is a prerequisite for each student in Web/Database Technology to possess a basic knowledge of information technology hardware and software before enrolling in any CIS or CS courses. In order to fulfill this requirement a student must either:

- Pass a Computer Literacy Placement Exam, or
- Enroll in CS 120 – Digital Literacy (3 credits).

To schedule a placement exam or for further information contact: Linda Dompier at dompiel@linnbenton.edu or 541-917-4636.

Facilities

Computer facilities are provided by the Forum Computer Lab and the Science, Engineering & Technology Division. The lab is well-equipped with modern hardware and software. Students have access to networked personal computers for completing assignments.

CAREER AND TECHNICAL

Associate of Applied Science in Web/Database Technology

See the beginning of this section for graduation requirements for the Associate of Science degree.

Related Instruction Requirements..... 11
Classes shown below in *italic* satisy the Related Instruction requirement.

Program Requirements 81

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 151	Networking Essentials	4
CS 120	Digital Literacy	3
CS 160	Orientation to Computer Science	4
MTH 095	*Intermediate Algebra (or higher)*	*4*
Winter Term		
CIS 125	Introduction to Software Apps	3
CIS 195	Web Development I	4
CS 152	Routing & Switching Essentials	4
CS 161	Introduction to Computer Science I (Java)	4
Spring Term		
CIS 197	Content Management Systems	4
CS 133J	Javascript I	4
CS 140U	Fundamentals of UNIX/Linux	4
WR 121	*English Composition*	*3*
Fall Term - Second Year		
CIS 196	Web Development II	4
CS 140M	Operating Systems: Microsoft	4
CS 233J	Javascript II	4
WR 227	Technical Report Writing	3
Winter Term		
CIS 296	Web Development using Open Source Software	4
CS 244	Systems Analysis & Project Management	4
CS 275	Database Systems: SQL & Oracle	4
CS 284	Intro to Computer Security & Information Assurance	4
Spring Term		
CIS 295	Web Development Using the Microsoft Stack	4
CS 225	*IT Career Skills*	*4*
CS 276	Database Systems: PL/SQL	4
CS 280	CWE Computer Systems	3
WE 202	CWE Seminar	1
	Total Credits Required:	**92**

Welding and Fabrication Technology

www.linnbenton.edu/welding-technlogy

Welding and fabrication is a rewarding career for men and women who enjoy challenges and like to work with their hands. Welding is used in constructing ships, automobiles, bridges, buildings, aircraft equipment and many other products. In the welding process, heat is used to fuse metal pieces together. Soldering and brazing are similar processes that are used on electronic and other small equipment.

Personal qualities desirable in a welder/fabricator include mechanical ability, preciseness and creativity. A welder/fabricator must be in good physical condition and be able to stand, stoop, kneel and bend. Good eyesight, especially depth perception, is necessary. The ability to work as a team is a valuable asset, but a welder/fabricator must also have the initiative to work independently.

People already employed in welding or a related field may upgrade their skills by enrolling in the classes offered through the Welding and Fabrication Technology Department. Welding I, Welding II, and Preparation for Certification classes offer students exposure to welding processes and practices. Advanced coursework to prepare for certification in pipe or plate welding is available with instructor permission. Testing is done by an independent agency.

It is recommended that students enter the program in September, because many of the required classes run sequentially starting fall term. Admission may be possible at other times, depending on space availability and/or the student's previous experience. See a Welding faculty advisor for details

The Welding and Fabrication Technology program supports student participation in Skills USA and the student membership program with the American Welding Society (AWS).

Student Learning Outcomes

Students who successfully complete an Associate of Applied Science degree in Welding and Fabrication Technology will:

- Follow safe practices.
- Demonstrate work ethic.
- Use welding processes and equipment.
- Interpret blueprints.

- Apply appropriate metallurgical principles.

Pipefitter Welder:

- Calculate and lay out pipe.
- Read, synthesize and apply industry codes.
- Demonstrate pipe welding skills.

Industrial Mechanic (Millwright):

- Solve and repair industrial equipment.

Fabricator/Welder:

- Select correct materials and procedures to build projects.

Program Requirements

The Welding and Fabrication Department offers several options to prepare people for entry-level positions in welding repair, welder fabricator, industrial mechanics and pipefitter/welder; all of them provide training in welding procedures, print reading, fabrication and layout. Students wanting to enter the program should have basic math and high school-level reading skills. Interested students should consider the Associate of Applied Science degree or the two-year certificate.

Facilities

The welding shop is a large, modern facility with up-to-date equipment. It has 29 oxyacetylene stations, 29 manual stick electrode stations, 44 MIG and 22 TIG stations. Other equipment includes plasma arc, Computer/Numerical Controlled flame and plasma cutting, template cutting, shearing, bending, rolling, drilling and rigging equipment. Classrooms are conveniently located next to the shop and audiovisual materials are available.

CAREER AND TECHNICAL

Associate of Applied Science Degree in Welding and Fabrication Technology

Related Instruction Requirements..... 10

Classes shown below in *italic* satisy the Related Instruction requirement.

Program Requirements 86

Course No.	Course Title	Credits
Fall Term - First Year		
WD 4.166	Teamwork Skills for Welders	1
WD 4.240	Basic Arc Welding (SMAW)[1]	6
WD 4.242	Fabrication & Repair Practices I[1]	4
WD 4.258	Basic Print Reading: Welders[1]	3
WD 4.269	*Math & Measurement for Welders*	*4*
Winter Term		
IN 1.197	Introduction to Industrial Computers	1
WD 4.166	Teamwork Skills for Welders	1
WD 4.168	Communication, Career Planning, and Interview Skills for Welders[1]	3
WD 4.241	Intermediate Arc Welding	6
WD 4.243	Fabrication & Repair Practices II[1]	4
WD 4.247	Interpreting Metal Fabrication Drawings[1]	3
Spring Term		
WD 4.164	*Technical Writing for Welders*	*3*
WD 4.166	Teamwork Skills for Welders	1
WD 4.245	Layout Procedures for Metals[1]	3
WD 4.246	Advanced Arc Welding (SMAW & FCAW)[1]	6
WD 4.250	Fabrication & Repair Practices III[1]	4
Fall Term - Second Year		
HE 112	Emergency First Aid	1
MA 3.396B	Manufacturing Processes I	2
WD 4.156	Machinery Operations & Maintenance	3
WD 4.255	Fabrication of Structural Systems	4
WD 4.266	Pipe Welding Practices I	4
WD 4.291	A.W.S. Structural Code for Welders	1
Winter Term		
WD 4.244	Intro to Lean Manufacturing	1
WD 4.253	Basic Electricity and Fluid Power for Welders	3
WD 4.257	Fab & Repair: Applied Problem Solving[1]	4
WD 4.259	Advanced Fab Techniques	3
WD 4.267	Pipe Welding Practices II	4
Spring Term		
WD 4.154	CWE or Welding Seminar	1
WD 4.165	*Customer Service for Welders*	*3*
WD 4.263	Fabrication & Pipe Welding Capstone	2
WD 4.264	Metallurgy for Welders	2
WD 4.268	Pipe Welding Practices III	4
	Total Credits Required:	**95**

CAREER AND TECHNICAL

One-Year Certificate in Welding and Fabrication Technology

Related Instruction Requirements..... 9

Classes shown below in *italic* satisfy the Related Instruction requirement.

Program Requirements 44

Course No.	Course Title	Credits
Fall Term		
WD 4.166	*Teamwork Skills for Welders*	*1*
WD 4.240	Basic Arc Welding (SMAW)[1]	6
WD 4.242	Fabrication & Repair Practices I[1]	4
WD 4.258	Basic Print Reading: Welders[1]	3
WD 4.269	*Math & Measurement for Welders*	*4*
Winter Term		
IN 1.197	Introduction to Industrial Computers	1
WD 4.166	*Teamwork Skills for Welders*	*1*
WD 4.168	Communication, Career Planning, and Interview Skills for Welders[1]	3
WD 4.241	Intermediate Arc Welding	6
WD 4.243	Fabrication & Repair Practices II[1]	4
WD 4.247	Interpreting Metal Fabrication Drawings[1]	3
Spring Term		
WD 4.164	*Technical Writing for Welders*	*3*
WD 4.166	*Teamwork Skills for Welders*	*1*
WD 4.245	Layout Procedures for Metals[1]	3
WD 4.246	Advanced Arc Welding (SMAW & FCAW)[1]	6
WD 4.250	Fabrication & Repair Practices III[1]	4
	Total Credits Required:	**53**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Workforce Training

www.linnbenton.edu/workforce-education

Accelerated Short-Term Training Programs

Accelerated Short-Term Training programs are state-approved certificate programs that are offered to fill current openings in the local job market. The format for these programs is intense and condensed. A group of students completes all the didactic courses in a certificate program together, attending class for approximately 30 to 40 hours each week. The programs include workplace skill training as well as job search skills. These are fast paced curriculums which require much study time outside of class. Students are encouraged to be focused on their studies and avoid employment during the course.

These programs are cost recovery. The college makes every effort to keep the price for these cost recovery programs close to the tuition based programs, based on a cost per hour of instruction model. The cost of these programs varies. The advertised price for each program or course includes tuition, fees, books, and supplies. Students' costs above and beyond course fees may include: Criminal background checks, drug screening, immunization, medical screening, licensing costs and CPR certification.

For more information about Accelerated Short-Term Training programs, contact the Business, Healthcare and Workforce Division Office at LBCC, 541-917-4923.

Pharmacy Technician[9]

This less-than-one-year certificate program prepares students for gainful employment as pharmacy technicians in any number of pharmacy settings. The program also prepares students for the National Pharmacy Technician Certification Test to become Certified Pharmacy Technicians.

To accomplish these goals, the program combines classroom instruction with lab work and clinical experience. The curriculum is based on the broad learning objectives established by the American Society of Health Systems Pharmacists, the national accrediting body for pharmacy technology programs. Nineteen pharmacies in the Linn and Benton county area helped develop the program, and local pharmacists teach the classes.

In order to meet the basic curriculum requirements of the Pharmacy Technician Educators Council, courses such as Pharmacy Law and Ethics, Pharmacy Mathematics, and Pharmacy Practicum are incorporated. In these courses, students develop communication and interpersonal relations skills, as well as teamwork, responsibility and initiative.

A group of up to 24 students completes the training together and attends class for approximately 35 hours a week. A 210-hour cooperative work experience is part of the training and takes place at area hospitals, clinics and retail stores. Student is responsible for transportation to and from CWE sites.

Student Learning Outcomes

Students who successfully complete a certificate in Pharmacy Technician will be able to:

- Alert the pharmacist to potential problems in the filling of prescriptions such as duplications of therapy, possible adverse reactions or drug interactions and contraindications.
- Interpret prescription information, enter it into the computer, generate a prescription label, and dispense medication appropriately and correctly, under the supervision of a pharmacist.
- Communicate effectively with patients and other healthcare professionals, both on the telephone and in person.
- Students will be able to perform inventory control tasks, including placing, receiving and shelving orders.

Admission Requirements

Applications are accepted on a first-come, first-served basis with preference given to residents of Linn-Benton Community College's tax district and students with previous college experience.

Students are required to:

- Attend a program information session,
- Have current immunizations
- Have an Oregon Board of Pharmacy initial Pharmacy Technician license
- Complete WR 095 College Writing Fundamentals and MTH 060 Introduction to Algebra with a "C" grade or better (or equivalent score on College Placement Test). The math class or math CPT must have been completed in the last five years.
- Submit a completed LBCC admission application form.

Students accepted into the program must pass a criminal background check and drug screening. On-line applications dates are posted in the Pharmacy Technician Bulletin. All applicants are given a time / date stamp on their applications and all supplemental documentation required for admission must be submitted in a sealed envelope within two business days of completing the on-line application. Applicants must be in good academic and financial standing at LBCC in order to be admitted to this program. Students receiving federal financial aid will be required to pass all classes with a "C" or better to maintain their financial aid status. The cost of this program varies.

Program Requirements

Course No.	Course Title	Credits
BA 2.108	Customer Service	2
PH 5.901	Pharmacy Technician	3
PH 5.905	Pharmacy Laws & Ethics	2
PH 5.910	Pharmacy Math	4
PH 5.915	Pharmacology & Drug Classification for Pharmacy Technicians	5
PH 5.920	Pharmacy Operations: Retail & Institutional	2
WE 1.2803	Cooperative Work Experience	7
	Total Credits:	**25**

Phlebotomy[9]

This less-than-one-year certificate program prepares students for employment as a phlebotomist. It will also prepare students for certification examinations of the American Society of Clinical Pathologists and the National Accrediting Agency for Clinical Laboratory Sciences. To accomplish these goals, the program combines classroom instruction with lab work and clinical experience. Skill areas covered are: vacuum collections, capillary skin punctures, butterfly needles, blood cultures and specimen collection on adults, children and infants.

A group of up to 24 students completes the training as a cohort. Classes are tailored specifically to these students, who attend class for approximately 35 hours a week. The first 12 weeks of training are in the classroom. The last four weeks are in a clinic, hospital or physician's office. Student is responsible for transportation to and from clinical sites.

Student Learning Outcomes

Students who successfully complete a certificate in Phlebotomy will:

- Perform a venipuncture with proper technique using a vacutainer.
- Perform a venipuncture with proper technique using syringe.
- Perform a finger stick with proper technique.
- Perform a heel stick with proper technique.
- Communicate effectively with patient, healthcare staff, and other medical providers.

Admission Requirements

Applications are accepted on a first-come, first-served basis with preference given to residents of Linn Benton Community College's tax district and students with previous college experience. Students are required to:

- Attend a program information session
- Pass a criminal background check
- Pass a drug test
- Complete WR 095 College Writing Fundamentals and MTH 020 Basic Mathematics with a "C" or better (or equivalent score on College Placement Test) Math class or Math CPT must have been completed within the last five years
- Have current immunizations
- Complete an LBCC admissions application form.
- Applicants must be in good academic and financial standing at LBCC in order to be admitted to this program.

Students will be required to pass all classes with a "C" or better to maintain their status in the program and financial aid eligibility.

On-line applications dates are posted in the Phlebotomy Technician Bulletin. All applicants are given a time / date stamp on their applications and all supplemental documentation required for admission must be submitted in a sealed envelope within two business days of completing the on-line application. The cost of this program varies.

Program Requirements

Course No.	Course Title	Credits
CS 120	Digital Literacy	3
OA 109	Job Success Skills	1
OA 2.671	Medical Law & Ethics	3
PH 5.310	Phlebotomy	8
PH 5.311	Medical Terminology for Phlebotomy	2
PH 5.320	Anatomy & Physiology for Phlebotomists	2
PH 5.330	Communication and Customer Service for Phlebotomists	2
WE 1.280N	CWE Phlebotomy	5
	Total Credits:	**26**

Polysomnographic Technology[9]

This three-term, 44-credit program prepares students for employment as polysomnographic technologists. The program will be offered through a combination of online lecture, hands-on practice, and patient contact in a clinical practicum. Courses will include Basic and Advanced Polysomnography, Fundamentals of Sleep Monitoring Equipment, Therapeutic Modalities, Clinical Sleep Disorders, Polysomnography Scoring and Analysis, Exam Prep, Clinical Practicum and Job Success Skills.

A group of up to 24 students will move through this program as a cohort. The majority of the coursework will be offered online with lab classes meeting on selected Saturdays at LBCC's Albany campus. During the second- and third-term, students will engage in a minimum of 270 hours of clinical experience in a sleep lab. Student is responsible for transportation to and from clinical sites.

LBCC's program is accredited, so students are eligible to sit for the national RPSGT exam upon completion of the program.

Student Learning Outcomes

- Students can properly prepare Polysomnographic equipment and supplies for use in the sleep lab.
- Students can properly place and secure Polysomnographic sensors and electrodes to sleep lab patients.
- Students can properly input sleep study and technical information into clinic computer.
- Students can properly perform all-channel equipment calibrations.

Admission Requirements

Applications are accepted on a first-come, first-served basis with preference given to Oregon residents and students with previous college experience. Students are required to:

- Attend a program information session
- Pass a criminal background check
- Pass a drug test
- Complete WR 090 or equivalent writing course from an accredited institution with a "C" or better
- Complete MTH 060 Introduction to Algebra or completion of an equivalent math course from an accredited institution with a "C" or better (or equivalent score on the College Placement Test). Math class or math CPT must have been completed in the last five years
- RD 115 Advanced College Reading and Learning Strategies or equivalent reading course from an accredited institution with a "C" or better
- BI 103 General Biology: Human Body or equivalent biology course from an accredited institution with a "C" or better
- Medical Terminology I (MO5.630) or equivalent course from an accredited institution with a "C" or better, (M05.630 Medical Terminology can be waived by passing the LBCC challenge exam)
- Have a current CPR card (either from the American Heart Association or Red Cross only; must be CPR for Emergency Responders, Healthcare Providers or Professional Rescuers)
- Complete an LBCC admissions application form.

Applicants must be in good academic and financial standing at LBCC in order to be admitted to this program. Students will be required to pass all classes with a "C" or better to maintain their status in the program, maintain financial aid eligibility, and graduate.

On-line applications dates are posted in the Polysomnography Technician Bulletin. All applicants are given a time / date stamp on their applications and all supplemental documentation required for admission must be submitted in a sealed envelope within two business days of completing the on-line application. The cost of this program varies.

Course No.	Course Title	Credit
Summer Term		
PSG 102	Basic Polysomnography	5
PSG 103	Therapeutic Modalities I	5
PSG 211	Fundamentals of Sleep Monitoring Equipment	5
Fall Term		
OA 109	Job Success Skills	1
PSG 205	Advanced Polysomnography	5
PSG 215	Polysomnography Scoring & Analysis	5
PSG 297A	Polysomnography Practicum	4
Spring Term		
PSG 204	Clinical Sleep Disorders	4
PSG 207	Therapeutic Modalities II	2
PSG 208	Prep for RPSGT Exam	2
PSG 221	Current Topics in Sleep Medicine	1
PSG 297B	Polysomnography Practicum	5
	Total Credits	**44**

1–Courses offered that term only.

2–Other classes may substitute. See advisor.

6–These courses must have been completed within the last five years.

7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.

8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.

9–A cost-recovery program. See "Workforce Training" section for details.

Veterinary Assistant[9]

This less-than-one-year certificate program provides prospective veterinary assistants/technicians with education and experience in commonly used medical and surgical techniques, as well as an understanding of common disease states of animals. The program also provides an introduction to animal hospital management, business procedures and job preparation skills. Students will be able to step into an entry-level position with the confidence and competence necessary to be a productive addition to the staff.

Each week the program focuses on one or more related topics and laboratory time devoted to reinforcing those topics. Guest speakers such as board-certified specialists and industry representatives, cover specific areas. The curriculum focuses primarily on small animal species, but information regarding large animal species is incorporated wherever possible.

The cooperative work experience will take place in an area veterinary clinic or hospital. A group of up to 24 students complete the training together and attends class for approximately 35 hours a week. Four weeks are spent working and observing in a local veterinary clinic or hospital. Student is responsible for transportation to and from CWE sites.

Student Learning Outcomes

Students who successfully complete a certificate in Veterinary Assistant will be able to:

- Communicate effectively with clients.
- Discuss such topics as wellness protocols, pre-anesthetic testing recommendations, vaccinations, parasite control as well as home dental care for pets.
- Perform cephalic venipuncture, subcutaneous and intramuscular injections.
- Perform accurate calculation of dosages.
- Recognize and understand common disorders such as parvo virus, feline rhinotracheitis virus, hypothyroidism, hyperthyroidism and diabetes.

Admission Requirements

Applications are accepted on a first-come, first-served basis with preference given to residents of LBCC's tax district and students with previous college experience. Students are required to:

- Pass a criminal background check
- Submit a copy of a High School diploma or GED or equivalent
- Submit a Veterinary Clinic Observation checklist
- Attend a program information session
- Complete WR 115 Introduction to College Writing, and MTH 060 Introduction to Algebra with a "C" grade or better (or equivalent score on the College Placement Test). Math class or Math CPT must have been completed in the last five years
- Complete an LBCC admissions application form

Applicants must be in good academic and financial standing at LBCC in order to be admitted to this program. Students receiving financial aid will be required to pass all classes with a "C" or better to maintain financial aid eligibility.

The on-line application dates are posted in the Veterinary Assistant Bulletin. All applicants are given a time / date stamp on their applications and all supplemental documentation required for admission must be submitted in a sealed envelope within two business days of completing the on-line application. The cost of this program varies.

Program Requirements

Course No.	Course Title	Credits
BA 2.108A	Customer Service	1
VT 8.601	Foundation Sciences	3
VT 8.605	Veterinary Medicine	7
VT 8.610	Veterinary Clinic Practices	1
VT 8.615	Clinical Sciences	2
VT 8.620	Surgery & Anesthesia	2
VT 8.625	Veterinary Radiology	2
VT 8.626	Veterinary Office Software	3
VT 8.630	Pharmacology	2
VT 8.635	Alternative Medicine for Veterinary Technology	1
VT 8.640	Law & Ethics for Veterinary Technology	1
WE 1.2805	Cooperative Work Experience	5
	Total Credits:	**30**

Associate of Arts Oregon Transfer Degree Requirements

The AAOT degree is an agreement between the Oregon University System and Oregon's community colleges to provide transfer of community college coursework to a state four-year institution (Oregon State University, University of Oregon, Eastern Oregon State University, Portland State University, Southern Oregon State University, Western Oregon University and Oregon Institute of Technology) as well as other community colleges. Completing this degree can lead to junior standing upon transfer but does not guarantee automatic admission by the college or university. The AAOT is recognized by the colleges and universities as meeting institutional lower-division general education requirements but not necessarily school, department or major requirements with regard to courses or GPA. LBCC students are encouraged to consult with an advisor at the school they plan to attend.

GENERAL EDUCATION: FOUNDATIONAL REQUIREMENTS LEARNING OUTCOMES

Listed below are the general education requirements for the AAOT degree. All courses must be passed with a grade of "C" or better. Students must have a minimum cumulative GPA of 2.0 at the time the AAOT is awarded.

WRITING

As a result of completing the General Education Writing sequence, a student should be able to:

- Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
- Locate, evaluate, and ethically utilize information to communicate effectively.
- Demonstrate appropriate reasoning in response to complex issues.

As a result of taking the General Education Writing courses infused with Information Literacy, a student who successfully completes should be able to:

- Formulate a problem statement.
- Determine the nature and extent of the information needed to address the problem.
- Access relevant information effectively and efficiently.
- Evaluate information and its source critically.
- Understand many of the economic, legal, and social issues surrounding the use of information.

SPEECH/ORAL COMMUNICATION

As a result of successfully completing the Communication General Education requirements, a student should be able to:

- Engage in ethical communication processes that allow people to accomplish goals.
- Respond to the needs of diverse audiences and contexts; and build and manage personal and community relationships.

MATHEMATICS

As a result of taking General Education Mathematics courses, a student should be able to:

- Use appropriate mathematics to solve problems.
- Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

HEALTH, WELLNESS AND FITNESS

As a result of completing the General Education Health, Wellness and Fitness course, a student should be able to:

- Recognize key determinants of health and wellness.
- Be able to design a comprehensive wellness program for physical fitness, nutrition, and/or stress management using a selected process of behavior change.
- Demonstrate the ability to evaluate or assess key indicators of health such as blood pressure, body composition, blood lipids, blood glucose, cardiorespiratory fitness, muscular strength and muscular endurance, and flexibility.
- Demonstrate appropriate reasoning in response to complex issues.

GENERAL EDUCATION: DISCIPLINE STUDIES LEARNING OUTCOMES

ARTS AND LETTERS

"Arts & Letters" refers to works of art, whether written, crafted, designed, or performed and documents of historical or cultural significance. As a result of taking General Education Arts & Letters courses, a student should be able to:

- Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.
- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

SOCIAL SCIENCES

As a result of taking General Education Social Science courses, a student should be able to:

- Apply analytical skills to social phenomena in order to understand human behavior.
- Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SCIENCE, MATH, COMPUTER SCIENCE

As a result of taking General Education Science or Computer Science courses, a student should be able to:

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner.
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CULTURAL LITERACY

As a result of taking a designated Cultural Literacy course, learners would be able to:

- Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

FOREIGN LANGUAGE REQUIREMENT

Students transferring to any Oregon public four-year institution must complete two terms (8 credits), or demonstrate equivalent proficiency in a foreign language prior to transferring. In addition, students who plan to earn a Bachelor of Arts degree must complete a total of six terms (24 credits), or demonstrate equivalent proficiency, in a foreign language prior to graduating with their Bachelors degree. Students interested in studying Spanish may complete these requirements at LBCC.

GENERAL EDUCATION: FOUNDATIONAL REQUIREMENTS

WRITING (3 COURSES)

WR 121 English Composition (3 credits)
WR 122 English Composition: Argumentation (3 credits)
and
WR 123 English Composition: Research (3 credits)
or
WR 227 Technical Writing (3 credits)

SPEECH/ ORAL COMMUNICATION (1 COURSE)

COMM 111 Fundamentals of Speech (3 credits)
COMM 112 Intro to Persuasion (3 credits)
COMM 218 Interpersonal Communication (3 credits)

MATHEMATICS (1 COURSE)

MTH 105 Intro to Contemporary Math (4 credits) or higher math course.

HEALTH, WELLNESS AND FITNESS (3 CREDITS)

HE 225 Social & Individual Health Determinants (4 credits)
PE 180 Activity Classes (1 credit)
PE 185 Activity Classes (1 credit)
PE 190 Activity Classes (1 credit)
PE 231 Lifetime Health & Fitness (3 credits)

GENERAL EDUCATION: DISCIPLINE STUDIES

ARTS AND LETTERS

Three (3) courses chosen from two or more disciplines.

ART 102◆ Understanding Art (3 credits)
ART 204◆ History of Western Art (3 credits)
ART 205◆ History of Western Art (3 credits)
ART 206◆ History of Western Art (3 credits)
ART 207◆ Indigenous Art of the Americas (3 credits)
ART 263 Digital Photography (3 credits)
ENG 104 Literature: Fiction (3 credits)
ENG 106 Literature: Poetry (3 credits)
ENG 107 Western World Literature: Classical (4 credits)
ENG 109 Western World Literature: Modern (4 credits)
ENG 110 Film Studies (3 credits)
ENG 201 Shakespeare (4 credits)
ENG 202 Shakespeare (4 credits)
ENG 204 British Literature: Early (3 credits)
ENG 205 British Literature: Middle (3 credits)
ENG 206 British Literature: Modern (3 credits)
ENG 207◆ Non-Western World Literature: Asia (3 credits)
ENG 208◆ Non-Western World Literature: Africa (3 credits)
ENG 209◆ Non-Western World Literature: The Americas (3 credits)
ENG 215◆ Latino/A Literature (3 credits)
ENG 220◆ Literature of American Minorities (3 credits)
ENG 221 Children's Literature (3 credits)
ENG 253 American Literature: Early (4 credits)
ENG 255 American Literature: Modern (4 credits)
ENG 257◆ African-American Literature (3 credits)
ENG 261 Science Fiction (3 credits)
HUM 101◆ Intro to Humanities: Prehistory (3 credits)
HUM 102◆ Intro to Humanities: Renaissance (3 credits)
HUM 103◆ Intro to Humanities: Modernism (3 credits)
JN 134 Introduction to Photojournalism (3 credits)
JN 201 Media & Society (4 credits)
JN 216 News Reporting & Writing (3 credits)
JN 217 Feature Writing (3 credits)
MUS 101 Music Fundamentals (3 credits)
MUS 105◆ Introduction to Rock Music (3 credits)
MUS 108◆ Music Cultures of the World (3 credits)
MUS 111 Music Theory I (3 credits)
MUS 161◆ Music Appreciation (3 credits)
SPN 201◆ Second-Year Spanish I (4 credits)
SPN 202◆ Second-Year Spanish II (4 credits)
SPN 203◆ Second-Year Spanish III (4 credits)
SPN 214 Spanish for Heritage Speakers (4 credits)
SPN 215 Spanish for Heritage Speakers (4 credits)
SPN 216 Spanish for Heritage Speakers (4 credits)
TA 121◆ Oral Interpretation of Literature (3 credits)
TA 145 Improvisation (3 credits)
TA 147 Introduction to Theater (3 credits)
TA 240 Creative Drama for the Classroom (3 credits)
WR 240 Creative Writing: Nonfiction Workshop (3 credits)
WR 241 Creative Writing: Short Fiction Workshop (3 credits)
WR 242 Creative Writing: Poetry Workshop (3 credits)

SOCIAL SCIENCES

Four (4) courses chosen from two or more disciplines.

ANTH 103◆ Introduction to Cultural Anthropology (3 credits)
ANTH 210◆ Comparative Cultures (3 credits)
ANTH 230◆ Time Travelers (3 credits)
ANTH 232◆ Native North Americans (3 credits)
CJ 100 Survey of the Criminal Justice System (3 credits)
CJ 101 Introduction to Criminology (3 credits)
CJ 110 Introduction to Law Enforcement (3 credits)
CJ 120 Introduction to Judicial Process (3 credits)
CJ 130 Introduction to Corrections (3 credits)
CJ 201 Juvenile Delinquency (3 credits)
CJ 202 Violence & Aggression (3 credits)
CJ 220 Introduction to Substantive Law (3 credits)
CJ 226 Constitutional Law (3 credits)
EC 115 Outline of Economics (4 credits)
EC 201 Introduction to Microeconomics (4 credits)
EC 202 Introduction to Macroeconomics (4 credits)
EC 215 Economic Development in the U.S. (4 credits)
EC 220◆ Contemporary U.S. Economic Issues: Discrimination (3 credits)
ED 216 Purpose, Structure & Function of Education in a Democracy (3 credits)
ED 253 Learning Across the Lifespan (3 credits)
GEOG 202◆ World Geography: Latin America & the Caribbean (3 credits)
GEOG 203◆ World Geography: Asia (3 credits)
GEOG 204◆ World Geography: Africa & the Middle East (3 credits)
HDFS 200 Human Sexuality (3 credits)
HDFS 201◆ Contemporary Families in the U.S. (3 credits)
HDFS 222 Partner & Family Relationships (3 credits)
HDFS 225 Infant & Child Development (4 credits)
HDFS 229 School Age & Adolescent Development (4 credits)
HST 101◆ History of Western Civilization (3 credits)
HST 102 History of Western Civilization (3 credits)
HST 103 History of Western Civilization (3 credits)
HST 157◆ History of Middle East & Africa (3 credits)
HST 158◆ History of Latin America (3 credits)
HST 159◆ History of Asia (3 credits)
HST 201◆ U.S. History: Colonial & Revolutionary (3 credits)
HST 202◆ U.S. History: Civil War & Reconstruction (3 credits)
HST 203◆ U.S. History: Rise to World Power (3 credits)
PHL 201◆ Introduction to Philosophy (3 credits)
PHL 202◆ Elementary Ethics (3 credits)
PS 201 Introduction to American Politics & Government (3 credits)
PS 204 Introduction to Comparative Politics (3 credits)
PS 205◆ Introduction to International Relations (3 credits)
PS 211 Peace & Conflict (3 credits)
PSY 101 Psychology & Human Relations (3 credits)
PSY 201 General Psychology (4 credits)
PSY 202 General Psychology (4 credits)

PSY 215◆ Introduction to Developmental Psychology (3 credits)
PSY 216 Social Psychology (3 credits)
PSY 219 Introduction to Abnormal Psychology (3 credits)
PSY 231 Human Sexuality (3 credits)
R 101◆ Introduction to Religious Studies (3 credits)
R 102◆ Religions of Western World (3 credits)
R 103◆ Religions of Eastern World (3 credits)
SOC 204◆ Introduction to Sociology (3 credits)
SOC 205◆ Institutions and Social Change (3 credits)
SOC 206◆ Social Problems and Issues (3 credits)
SOC 222◆ Marriage Relationships (3 credits)
WS 280◆ Global Women (3 credits)

SCIENCE/MATH/COMPUTER SCIENCE

Four (4) courses from at least two disciplines including at least three (3) laboratory courses in biological and/or physical science. (Laboratory classes are indicated below with an asterisk (*).

ANS 121 Introduction to Animal Science* (4 credits)
BI 101 General Biology* (4 credits)
BI 102 General Biology* (4 credits)
BI 103 General Biology* (4 credits)
BI 200 Principles of Ecology: Field Biology* (4 credits)
BI 211 Principles of Biology* (4 credits)
BI 212 Principles of Biology* (4 credits)
BI 213 Principles of Biology* (4 credits)
BI 231 Human Anatomy & Physiology* (5 credits)
BI 232 Human Anatomy & Physiology* (5 credits)
BI 233 Human Anatomy & Physiology* (5 credits)
BI 234 Microbiology* (4 credits)
CH 112 Chemistry for Health Occupations (5 credits)
CH 121 College Chemistry (5 credits)
CH 221 General Chemistry* (5 credits)
CH 222 General Chemistry* (5 credits)
CH 223 General Chemistry* (5 credits)
CH 241 Organic Chemistry* (4 credits)
CH 242 Organic Chemistry* (4 credits)
CH 243 Organic Chemistry* (4 credits)
CS 161 Introduction to Computer Science I (4 credits)
CS 162 Introduction to Computer Science II (4 credits)
CS 260 Data Structures (4 credits)
FW 251 Principles of Wildlife Conservation (3 credits)
G 101 Introduction to Geology* (4 credits)
G 102 Introduction to Geology* (4 credits)
G 103 Introduction to Geology* (4 credits)
G 201 Physical Geology I* (4 credits)
G 202 Physical Geology II* (4 credits)
G 203 Historical Geology* (4 credits)
GS 104 Physical Science: Principles of Physics* (4 credits)
GS 105 Physical Science: Principles of Chemistry* (4 credits)
GS 106 Physical Science: Principles of Earth Science* (4 credits)
GS 108 Oceanography* (4 credits)
MTH 105 Introduction to Contemporary Math (4 credits)
MTH 111 College Algebra (5 credits)
MTH 112 Trigonometry (5 credits)
MTH 211 Fundamentals of Elementary Mathematics I (4 credits)
MTH 212 Fundamentals of Elementary Mathematics II (4 credits)
MTH 213 Fundamentals of Elementary Mathematics III (4 credits)
MTH 231 Elements of Discrete Math (4 credits)
MTH 232 Elements of Discrete Math (4 credits)
MTH 241 Calculus for Biological/Management/Social Sciences (4 credits)
MTH 243 Introduction to Statistics (4 credits)
MTH 245 Math for Biological/Management/Social Sciences (4 credits)
MTH 251 Differential Calculus (5 credits)
MTH 252 Integral Calculus (5 credits)
MTH 253 Calculus (4 credits)
MTH 254 Calculus (4 credits)
MTH 255 Vector Calculus (4 credits)
MTH 256 Applied Differential Equations (4 credits)
MTH 265 Statistics for Scientists & Engineers (4 credits)
PH 104 Descriptive Astronomy* (4 credits)
PH 201 General Physics* (5 credits)
PH 202 General Physics* (5 credits)
PH 203 General Physics* (5 credits)
PH 211 General Physics with Calculus* (5 credits)
PH 212 General Physics with Calculus* (5 credits)
PH 213 General Physics with Calculus* (5 credits)

CULTURAL LITERACY

Students must select one course from any of the discipline studies that is designated as meeting the statewide criteria for cultural literacy indicated by a ◆symbol.

ELECTIVES

Any college-level course that would bring total credits to 90 quarter hours including up to 12 credits of Career and Technical Education courses (part of an LBCC Career Technical Program).

Art

www.linnbenton.edu/art

The art curriculum is designed to enrich student learning in visual art and develop skills for expressing ideas through art. Historical and cultural perspectives regarding visual expression are explored in all art courses. Lecture courses in Art History and Understanding Art embrace the realm of human experience presented through art. The AAOT is a general transfer degree. To make the best use of your time at LBCC, you should identify the university you hope to attend and study that school's art program requirements. You should plan your LBCC course work around the requirements of the university you plan to attend. The art department provides the opportunity for students to develop and refine their skills by offering studio classes in drawing, painting, ceramics, digital photography, compositional design, color design and three-dimensional design. Classes are open to all students. Some second-year classes have prerequisites. Studio classes may be repeated for credit if more experience is desired.

Ceramics courses are offered at the Benton Center where students may take two terms of ceramic studio courses, ART 154, and ART 254. For students interested in further study of ceramics, CWE and Special Projects courses are recommended. There are galleries for the exhibit of both student and professional art work.

Student Learning Outcomes

Students who successfully complete coursework in Art will:

- Discuss the form and content of specific works of art representing art and artists across time and cultures
- Demonstrate visual literacy in the use of the elements and principles of design
- Demonstrate competence in studio practices
- Apply the creative process in planning, designing and solving visual problems

Program Requirements

The AA(OT) degree is designed to be completed in two years, but this assumes that the entering student has tested at or above the following levels on the Computerized Placement Test (CPT): WR121 English Composition and MTH 105 Introduction to Contemporary Mathematics or MTH 111 College Algebra.

OREGON TRANSFER

Art Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

Students planning to transfer to a four-year institution other than Oregon State University are encouraged to complete the AA(OT) degree. The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors: one at LBCC and a second at the institution you hope to attend, to make sure you are taking the classes that will meet program requirements.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 123 or WR 227	English Composition: Research or Technical Writing	3
	Writing Credits Required	**9**
COMM 111 or COMM 112 or COMM 218	Fundamentals of Speech or Introduction to Persuasion or Interpersonal Communication	3
	Oral Communication Credits Required	**3**
MTH 105 (or higher math course number)	Introduction to Contemporary Mathematics	4
	College Level Math Credits Required	**4**
HE 225	Social & Individual Health Determinants or 3 credits with a PE prefix	4
	Health/Wellness/Fitness Credits Required	**3**
	Total Foundational Requirements	**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆ symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.
Take the following art history courses:
ART 204 History of Western Art (3 credits)
ART 205 History of Western Art (3 credits)
ART 206 History of Western Art (3 credits)

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Electives

(29 credits of Art are required out of the following 43 credits, and should be chosen with the program requirements of the institution you hope to attend in mind.)

ART 102 Understanding Art (3 credits)
ART 115 Basic Design I: Composition (4 credits)
ART 117 Basic Design: 3-Dimensional (4 credits)
ART 131 Drawing I (4 credits)
ART 132 Drawing II (4 credits) (or Year One)
ART 154 Ceramics I (4 credits)
ART 281 Painting (4 credits)
ART 234 Figure Drawing (4 credits)
ART 254 Ceramics II (4 credits)
ART 263 Digital Photography (4 credits)

Total Credits 90

Business Administration

www.linnbenton.edu/business-management

The program leading to an Associate of Arts degree with an emphasis in business Administration prepares students for transfer into any of the major programs in business administration offered by any public four-year university in Oregon, where students may complete requirements for the baccalaureate degree with two additional years of work. Students planning to transfer to any other four-year institution should contact the transfer curriculum advisor before enrolling in any courses.

Student Learning Outcomes

Students who successfully complete an Associate of Arts degree in Business Administration will:

- Demonstrate the ability to utilize business computer applications and specifically, spreadsheet software for quantitative business analysis.
- Demonstrate math skills at the college level.
- Demonstrate effective oral and written communication skills and the ability to effectively work in teams.
- Understand the roles of marketing, management, finance, accounting, MIS, economics, law and ethics in the business environment.
- Be familiar with the multi-cultural and global environment.
- Utilize pre-business courses in upper-division classes.

Program Requirements

Students expecting to graduate in two years should have a strong interest in the world of business; they should have sufficient skills in mathematics and writing to enroll in MTH 111 College Algebra and WR 121 English Composition.

OREGON TRANSFER

Business Administration Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The AAOT is designed as a general course of study that will transfer to a four-year institution. This is a suggested course of study for the Business Administration transfer student.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 123	English Composition: Research or	
WR 227	Technical Writing	3
Writing Credits Required		**9**
COMM 111	Fundamentals of Speech	3
Oral Communication Credits Required		**3**
MTH 111	College Algebra	(4)1
	(Four credits apply toward foundational requirements; one credit applies toward electives.)	
College Level Math Credits Required		**4**
PE 231	Lifetime Health and Fitness	3
Health/Wellness/Fitness Credits Required		**3**
	Total Foundational Requirements	**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.
Take the following economics courses:

EC 201	Introduction to Microeconomics (4 credits)
EC 202	Introduction to Macroeconomics (4 credits)

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Take the following math courses:

MTH 241	Calculus for Biological/Management/ Social Sciences (4 credits)
MTH 245	Math for Biological/Management/Social Sciences(4 credits)

Electives

The following courses are suggested electives for the Business Administration transfer student.

BA 101	Introduction to Business (4 credits)
BA 211	Principles of Accounting: Financial (4 credits)
BA 213	Principles of Accounting: Managerial (4 credits)
BA 226	Business Law (3 credits)
BA 260	Entrepreneurship & Small Business Management (4 credits)
BA 275	Business Quantitative Methods (4 credits)
CIS 125	Introduction to Software Applications (3 credits)
	Total Credits Required: 90

Criminal Justice

www.linnbenton.edu/criminal-justice

Oregon law enforcement agencies are facing a growing need to replace large numbers of retiring officers. In addition, the prison industry and areas of law enforcement such as crime analysis are predicted to expand in the 21st century. Law enforcement agencies commonly seek candidates who have a minimum of a two-year degree, and many give preference to candidates with four-year degrees. Students interested in a two-year degree should pursue the Associate of Applied Science (AAS) degree. Students interested in transferring and completing a four-year degree should consider the Associate of Arts, Oregon Transfer (AAOT) degree. We also offer a track within our Associate of Science (AS) degree in Sociology for students interested in transferring into the Crime and Justice option of the Sociology program at Oregon State University. Please see the catalog section for Sociology for more information, and talk to your advisor.

In addition, agencies look for candidates who can demonstrate they have the qualities necessary for success in the law enforcement field—candidates who:

- Can think critically, solve problems and construct quick, practical solutions.
- Have excellent interpersonal, written and verbal communication skills.
- Are nonjudgmental about the diverse populations of people.
- Can pass stringent physical ability tests, background checks, and psychological assessments.

The Criminal Justice program can help prepare you to meet the requirements for employment in the highly competitive field of law enforcement and corrections. The program is designed to help you gain critical thinking and communication skills that will make you a competitive candidate for an exciting and rewarding career in law enforcement. You will have opportunities to form ties with local police agencies and gain experience with ethnic and cultural diversity through work at a local community service agency.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Both the AAS and the AAOT degrees described below are designed to be completed in two years, but this assumes that the entering student has tested into WR 121 English Composition and either MTH 065 Elementary Algebra for the AAS degree or MTH 105 Introduction to Contemporary Mathematics for the AAOT degree.

Student Learning Outcomes

Students who successfully complete the Associate of Arts degree in Criminal Justice will:

- Communicate effectively, both verbally and in writing.
- Understand and properly apply criminal statutes.
- Recognize criminal conduct.
- Apply key U.S. Supreme Court cases to real-life situations.
- Present as a viable candidate for law enforcement/corrections work.
- Develop strategies for coping with the stressors associated with police/corrections work.
- Understand the role and procedures of the criminal court system.

OREGON TRANSFER

Criminal Justice Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The AAOT is designed as a general course of study that will transfer to a four-year institution. These courses are designed to assist the criminal justice major in acquiring the skills necessary to be successful in the field of corrections, law enforcement and juvenile corrections. Many courses meet the requirements of this degree, but some choices are better for criminal justice students than others. You will want to choose the classes that are required by the four-year Institution you plan to attend. The courses listed below are recommended for students planning to transfer to Southern Oregon or OIT. Other students should see an advisor for recommendations. Please contact you advisor for assistance when scheduling your classes.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 227	Technical Writing	3
Writing Credits Required		**9**
COMM 111	Fundamentals of Speech or	
COMM 112	Introduction to Persuasion or	
COMM 218	Interpersonal Communication	3
Oral Communication Credits Required		**3**
MTH 105	Introduction to Contemporary Mathematics	4
(or higher math course number)		
College Level Math Credits Required		**4**
PE 231	Lifetime Health and Fitness	3
Health/Wellness/Fitness Credits Required		**3**
Total Foundational Requirements		**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.
Choose from the following criminal justice courses:

CJ 100	Survey of Criminal Justice Systems (3 credits)
CJ 101	Introduction to Criminology (3 credits)
CJ 110	Introduction to Law Enforcement (3 credits)
CJ 130	Introduction to Corrections (3 credits)
CJ 226	Constitutional Law (3 credits)

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Electives

The following courses are suggested electives for the Criminal Justice transfer student.

CJ 112	Police Field Operations (3 credits)
CJ 202	Violence & Aggression (3 credits)
CJ 210	Introduction to Criminal Investigation (3 credits)
CJ 211	Ethical Issues in Law Enforcement (3 credits)
CJ 220	Introduction to Substantive Law (3 credits)
CJ 222	Procedural Law (3 credits)
CJ 230	Introduction to Juvenile Corrections (3 credits)
CJ 250A	CJ Capstone Course–Job Search & Interviewing (1 credit)
CJ 250B	Capstone–Regulations and Communication (1 credit)
HS 205	Youth Addiction (3 credits)
PE 185	Activity Course (1 credit)
PE 185	Activity Course (1 credit)

Total Credits Required: 90

Economics

www.linnbenton.edu/business-management

The program leading to an Associate of Arts degree with an emphasis in Economics prepares students for transfer into any of the major programs in Economics offered by any public four-year university in Oregon. Students may complete requirements for the baccalaureate degree with two additional years of work. Students planning to transfer to any other four-year institution should contact the Economics transfer curriculum advisor before enrolling in any courses.

Student Learning Outcomes

Students who successfully complete an Associate of Arts degree with an emphasis in Economics will:

- Effectively use industry standard computer skills to accomplish tasks and enhance decision-making.
- Communicate effectively using oral, written and technology skills as appropriate.
- Work with team members and successfully interact with internal and external stakeholders.
- Assume a leadership role.
- Understand and utilize as necessary, economic theory as it applies in the areas of business and government.
- Apply learning to successfully complete a baccalaureate degree at a four-year university.
- Understand the multi-cultural, global environment of contemporary economics.
- Manage their own career prospects including internships and work experience.

Program Requirements

Students expecting to graduate in two years should have a strong interest in the economy. They should have sufficient skills in mathematics and writing to enroll in MTH 111 College Algebra and WR 121 English Composition.

OREGON TRANSFER

Economics Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The AAOT is designed as a general course of study that will transfer to a four-year institution. This is a suggested course of study for the Economics transfer student. See the front of this section of the catalog for graduation requirements for the Associate of Arts degree.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 123	English Composition: Research or	
WR 227	Technical Writing	3
Writing Credits Required		**9**
COMM 111	Fundamentals of Speech	3
Oral Communication Credits Required		**3**
MTH 111	College Algebra (Four credits apply toward foundational requirements; one credit applies toward electives.)	(4)1
College Level Math Credits Required		**4**
PE 231	Lifetime Health and Fitness	3
Health/Wellness/Fitness Credits Required		**3**
	Total Foundational Requirements	**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.
Take the following economics courses:
EC 201 Introduction to Microeconomics (4 credits)
EC 215 Economic Development in the U.S (4 credits)
EC 220 Contemporary U.S. Economic Issues: Discrimination (3 credits)

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.
Take the following math courses:
MTH 241 Calculus for Biological/Management/Social Sciences (4 credits)
MTH 245 Math for Biological/Management/Social Sciences (4 credits)

Electives

The following courses are suggested electives for the Economics transfer student.
EC 202 Introduction to Macroeconomics (4 credits)
BA 275 Business Quantitative Methods (4 credits)
CIS 125 Introduction to Software Applications (3 credits)
CIS 135S Advanced Spreadsheets (3 credits)

Plus enough additional electives to reach the minimum of 90 credits for the AAOT.

Total Credits Required: 90

Education

www.linnbenton.edu/go/education

The Education/Child and Family Studies Department offers programs for students who want to become preschool, elementary, middle, and secondary school teachers and instructional assistants. If you would like to become an instructional assistant, turn to the Instructional Assistant section of the catalog. If you want to become a preschool teacher, turn to the Child and Family Studies section.

The first step for students who wish to become a K–12 teacher is to see an Education advisor. Students who want to become K–12 teachers can take their first two years of coursework at LBCC, then transfer to a four-year university and work toward their teaching credential. Each College of Education at a University determines the unique path it requires its teaching candidates to take. The Education advisors at LBCC have the most current program information from local universities.

Determine your preferred grade level and/or subject area of teaching as soon as possible. Select the university that you would like to attend following your education at LBCC. These decisions will help you take the courses at LBCC that will most benefit you.

Programs that lead to teacher certification are available at many public and private higher education institutions in Oregon. If you plan to teach grades K–8, select the elementary education emphasis; to teach grades 6–12, you will need to complete a degree in a subject discipline.

Students planning to attend OSU will pursue the Associate of Science degree. Students who wish to attend WOU as an education major will complete an AAOT with specific WOU requirements. Students who wish to transfer to other universities will also complete the AAOT degree.

Student Learning Outcomes

Students who successfully complete an Associate of Arts degree with an emphasis in Education will:

- Select a transfer institution that best meets their goal of becoming a K–12 teacher.
- Select meaningful coursework for transferring to that Institution.
- Be prepared to apply to a College of Education within the transfer institution of their choice.

Program Requirements

Both the AS and the AAOT degrees are designed to be completed in two years, but this assumes that the entering student has prerequisite basic skills. If you did not achieve the minimum scores on the mathematics and writing portions of the Computerized Placement Test (CPT), you

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

may be required to take pre-college courses that may extend completion of your degree beyond two years. Reading courses also may be advisable. The course requirements listed below do not include pre-college courses.

Most teacher preparation programs expect students to have experience working in public schools. ED 101A Observation and Guidance and ED 102A Education Practicum provide this. These classes also give you the opportunity to make final decisions about a teaching career, along with learning basic classroom skills. Public school placements must be arranged one term in advance. Check with your advisor to be ready to enroll in a practicum.

OREGON TRANSFER

Elementary Education Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

For information about this degree, see an Education faculty advisor.

OREGON TRANSFER

Elementary/Middle Education Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

For information about this degree, see an Education faculty advisor.

Exercise and Sport Science

www.linnbenton.edu/health-and-human-performance

For students planning on transferring to Western Oregon University, or other four-year institutions, an AAOT with an emphasis in Exercise and Sport Science is a good option to consider. This degree program provides students with knowledge about the value of preventive and corrective health practices and the opportunity to participate in physical activities to enhance overall well-being.

Knowledge of preventative and corrective practices is gained through course offerings such as Diet and Nutrition for Active Lifestyles, Introduction to Health and Physical Education, Lifetime Health and Fitness, Psychosocial Dimensions of Health, and Social and Individual Health Determinants. Courses like Exercise and Weight Management, First Aid, Relaxation and Massage, and Stress Management allow for students to apply the knowledge they gain from the coursework into practical skill application. The faculty highly recommend that all students enroll early in PE 131 Introduction to Health and Physical Education, as this course will provide information about career options in health and fitness-related fields, and will give guidance on how best to prepare for these careers.

Physical activity is provided through three distinct learning and participation opportunities: lifetime recreational skills; developmental courses, which stress conditioning of the body and maintenance of a specific level of physical conditioning; and team sport courses, which provide a high level of conditioning and competition. Coursework in this is provided with a variety of physical education activity classes like basketball, dance, bowling, golf, pilates, tennis, weight training, or yoga.

Intercollegiate athletics are offered in men's basketball and women's volleyball. If you are interested in intercollegiate athletics, contacting the coach of the respective program is recommended: Men's Basketball - Randy Falk; Women's Volleyball - Jayme Frazier.

Student Learning Outcomes

Students who successfully complete an AAOT degree with an emphasis in Exercise and Sports Science will:

- Develop individual health and fitness programs.
- Recognize the link between current behavior and future health status.
- Exhibit healthy lifestyle choices.
- Demonstrate the ability to access and explore career and academic opportunities.
- Make appropriate decisions regarding health issues and products.
- Choose healthy individual behaviors that will have a positive impact on society.

Facilities

The department has indoor and outdoor facilities to support exercise, physical education activities, and athletics. The Activity Center contains a fully equipped, double-court gymnasium, as well as a weight training room, a dance and aerobics room, and complete shower facilities. Outdoor facilities include a baseball diamond, tennis courts, four sand volleyball courts, a 400 yard track, and a wellness trail. The department also utilizes non-college facilities for activities such as scuba.

OREGON TRANSFER

Exercise and Sport Science and Health Promotion Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The Associate of Arts (Oregon Transfer) degree is designed to allow you to complete the first two years of your studies at LBCC and transfer to a four-year college as a junior. Many courses meet the requirements of this degree, but some choices are better for Exercise and Sport Science students than others. Select your electives carefully to ensure that you take the prerequisites to upper-division courses, and meet with your advisor regularly. LBCC works closely with Western Oregon University and you may be interested in transferring to that institution. Classes that meet requirements for Western are listed below. See your advisor if you wish to select classes within the AAOT for transfer to a different institution.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 123	English Composition: Research or	
WR 227	Technical Writing	3
Writing Credits Required		**9**
COMM 111	Fundamentals of Speech or	
COMM 218	Interpersonal Communication	3
Oral Communication Credits Required		**3**
MTH 112	Trigonometry (Four credits apply toward foundational requirements; one credit applies toward electives.)	5
College Level Math Credits Required		**4**
PE 231	Lifetime Health and Fitness (or 3 credits with a PE prefix)	3
Health/Wellness/Fitness Credits Required		**3**
Total Foundational Requirements		**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.
Choose from the following art history and music courses:
ART 204 History of Western Art (3 credits)
ART 205 History of Western Art (3 credits)
ART 206 History of Western Art (3 credits)
MUS 101 Music Fundamentals (3 credits)
MUS 105 Introduction to Rock Music (3 credits)
MUS 161 Music Appreciation (3 credits)

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.

Choose one of the following courses to meet the cultural literacy requirement:
ANTH 230 Time Travelers (3 credits)
HST 201 U.S. History: Colonial & Revolutionary (3 credits)
HST 202 U.S. History: Civil War & Reconstruction (3 credits)
HST 203 U.S. History: Rise to World Power (3 credits)
R 101 Introduction to Religious Studies (3 credits)
R 103 Religious of Eastern World (3 credits)
SOC 206 Social Problems and Issues (3 credits)

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Electives recommended for WOU

BI 231, 232, 233 Anatomy and Physiology (15 credits)
CS 120 Digital Literacy (3 credits)
HE 252 First Aid (3 credits)
PE 131 Introduction to Health & Physical Education (3 credits)
PE 180-199 PE Activity Classes (1 or 2 credits)

Electives

The following courses are recommended classes in EXSS. These classes will transfer as lower division transfer credits but do not fulfill program requirements at WOU. The degrees relating to exercise and sport science, health, and teacher education are highly competitive at WOU and thus your advisor may recommend some elective classes to help prepare you to be a successful applicant to these majors.

HE 100 Intro to Public Health (4 credits)
HE 151 Drugs in Society (3 credits)
HE 204 Exercise & Weight Management (3 credits)
HE 205 Diet & Nutrition for Active Lifestyles (3 credits)
HE 207 Stress Management (3 credits)
HE 210 Introduction to Health Services (3 credits)
HE 220 Intro to Epidemiology & Health Data Analysis (3 credits)
HE 225 Social & Individual Health Determinants (4 credits)
HE 253 AIDS & Sexually Transmitted Diseases (3 credits)
HE 256 Foundations of Public Health (3 credits)
NFM 225 Nutrition (3 credits)
PE 212 Sociocultural Dimensions of Physical Activity (3 credits)
PE 232 Backpacking: Map & Compass Skills (3 credits)
PE 270 Sport Psychology (3 credits)
PE 280 CWE (3+ credits)

Total Credits Required: 90

Foreign Language

www.linnbenton.edu/foreign-language

Spanish is the only language available at LBCC for students wishing to pursue a foreign language degree at a four-year transfer school. Transfer credit language classes earn four transfer credits each and emphasize speaking, reading and writing, and helping students to build proficiency. Because we offer a limited number of courses in foreign language, students planning to transfer to Oregon State University should see the Associate of Science with empahsis in Foreign Language.

For students interested in transferring to an institution other than Oregon State University, it is important that you identify the institution that you plan to attend. An advisor in the foreign language department can help you select the classes at LBCC that will transfer to that institution. You may want to also work with an advisor from the transfer institution as well.

For students interested in the language, culture, and history of Latin American countries, the faculty in the foreign language department recommends the following courses, most of which can be taken as part of the General Education component of an Associate of Science (AS) or Associate of Arts (Oregon Transfer) degree:

ENG 215 Latino/a Literature (3 credits)
ENG 209 Non-Western World Literature: The Americas (3 credits)
GEOG 202 World Geography: Latin American and Caribbean (3 credits)
HST 158 History of Latin America (3 credits)

LBCC also offers a wide variety of conversational foreign languages to meet community interests and the needs of local employers. Conversational foreign language classes are offered through community education centers in Albany, Corvallis and Lebanon. They include:beginning conversation classes in Arabic, Chinese, Japanese and Russian; beginning and intermediate classes in American Sign Language; and beginning, intermediate, and advanced conversation classes in French, German, Italian, and Spanish.

Music

www.linnbenton.edu/music

The music program at LBCC offers students academic opportunities in music, and gives them a chance to participate in top-quality performing ensembles. On campus, students can work on individual music skills and begin some of the preliminary music courses for transfer to a four-year college or university, or enter the work of music business, education or musical theater. Individual lessons are available in voice, piano, and guitar. Introduction to Rock Music (MUS 105), Music Appreciation (MUS161), Music Cultures of the World (MUS 108) and Music Fundamentals (MUS 101) support general education degree requirements in the arts.

Students also have the opportunity to perform in several vocal and instrumental ensembles. The LBCC Concert Choir and Chamber Choir are on campus, and students can perform in instrumental groups in cooperation with the Music Department at Oregon State University. Auditions may be required for some performance ensembles. Additionally, co-curricular vocal a cappella ensembles are also available on campus.

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

The AA(OT) is a general transfer degree and does not include program requirements. It is important that you identify the four-year school you plan to attend. You should review the requirements of the program you plan to study at that institution and take those classes at LBCC. You may want to work with two advisors; one at LBCC and a second at the institution you plan to attend to make sure you are taking the courses that will meet program requirements.

For information on music and related careers, plus the current employment outlook, access the Oregon Career Information System (CIS) located in the Career Center, Takena Hall 101.

Student Learning Outcomes

Students who successfully complete the AAOT degree with an emphasis in Music will:

- Perform alone or with others, either vocally or instrumentally, a varied repertoire of music;
- Read, notate, analyze and describe music;
- Understand music in relationship to history, culture and the other arts.

Program Requirements

The Music Program requires participation in at least one performance ensemble for at least three terms selected from a choice of Concert Choir and Chamber Choir. Additionally, students may participate in instrumental ensembles in cooperation with the Music Department at Oregon State University. Auditions may be required. Additionally, all students are required to take at least one term each of private voice and private piano instruction. A limited number of tuition grants are available for students participating in a performance ensemble. For more information about tuition grants in music, please contact James Reddan.

The AAOT degree is designed to be completed in two years, but this assumes that the entering student has tested into WR121 English Composition and MTH 105 Introduction to Contemporary Mathematics or MTH 111 College Algebra class.

Most music programs, including OSU and University of Oregon, require transfer students to complete entrance exams in music theory, keyboard skills, and aural skills. Our offerings in music are designed to prepare you for these exams. Success on these exams will often allow you to test out of some lower-division requirements in the major. Some of the music requirements at Linn-Benton will count as elective credits instead of major requirements upon transfer, but these classes will build the skills you need to succeed in these competitive programs. See an advisor for a list of classes that transfer directly to the school you are interested in.

OREGON TRANSFER

Music Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The Associate of Arts (Oregon Transfer) degree is designed to allow you to complete the first two years of your studies at LBCC and transfer to a four-year college as a junior. Many courses meet the requirements of this degree, but some choices are better for music students than others. Select your electives carefully with your advisor to ensure that you take the prerequisites to upper-division courses. A sample AAOT two-year plan of study is outlined below. Check with your advisor each term to be sure you are on track for the degree, and to transfer seamlessly to the school of your choice.

Course No.	Course Title	Credits
Term 1		
MUS 161	Music Appreciation	3
MUS 108	Music Cultures of the World	3
	Performing Ensemble	1-2
One of the following:		
	Social Science	3
SPN 101	First Year Spanish I	4
WR 121	English Composition	3
Term 2		
BI 101	General Biology	4
COMM 111	Fundamentals of Speech	3
MUS 101	Music Fundamentals	3
	Performing Ensemble	1-2
SPN102	First Year Spanish II	4
Term 3		
MTH 111	College Algebra (or higher)	5
MP 174A	Individual Lessons Voice (1 credit) or	
MP 174B	Individual Lessons Voice (2 credits) or	
MP 274A	Individual Lessons Voice (1 credit) or	
MP 274B	Individual Lessons Voice (2 credits)	1-2
MUS 111	Music Theory I	3
	Performance Ensemble	1-2
PHL 201	Introduction to Philosophy	3
Term 4		
BI 102	General Biology	4
PE 231	Lifetime Health and Fitness	3
	Performance Ensemble	1-2
PHL 202	Elementary Ethics	3
WR 122	English Composition: Argumentation	3
Term 5		
	Arts & Letters	3
BI 103	General Biology	4
MP 171A	Individual Lessons Piano (1 credit) or	
MP 171B	Individual Lessons Piano (2 credits) or	
MP 271A	Individual Lessons Piano (1 credit) or	
MP 271B	Individual Lessons Piano (2 credits)	1-2
	Performance Ensemble	1-2
R 101	Introduction to Religious Studies	3
Term 6		
MUS 108	Music Cultures of the World	3
	Performance Ensemble	1-2
R 102	Religions of Western World	3
	Science	3-4
WR 123	English Composition: Research	3

Select from the list of performance classes below. (Note: Students cannot take both levels of a single performance class in the same term.)

MP 101/201	Symphonic Band (1 credit)
MP 102/202	Concert Band (1 credit)
MP 103/203	Marching Band (1 credit)
MP 104/204	Basketball Band (1 credit)
MP 105/205	Large Jazz Band (1 credit)
MP 106/206	Pep Band (1 credit)
MP 122/222	Concert Choir (1 credit)
MP 131/231	Chamber Choir (1 credit)
MP 141/241	Symphony Orchestra (1 credit)
MP 151/251	Rehearsal & Performance (1 credit)

Total Credits Required: 91

Theater

www.linnbenton.edu/theater-program

The theater arts degree is a practical liberal arts degree. The broad range of subjects studied enable the theater student to qualify for a wide variety of fields. Theater majors are found in the professional areas of live theatre, film, television, corporate and media training, radio, public relations, advertising, business law, teaching, and higher education.

The diverse nature of theater explores expressions of human interactions and conflict.

This study develops intellectual awareness about the human condition. It helps develop skills for working as a theater artist and as an individual who understands team work. Liberal studies majors will benefit from a departmental philosophy that good theater training is also excellent teacher training. Many courses in the department have no prerequisites, and they will help liberal studies students to prepare for careers in teaching.

In addition to acting and backstage opportunities, theater students are encouraged to work with faculty as assistant directors, designers, stage managers, and in theater administration. Theater faculty encourage highly motivated and qualified students to develop their own creative efforts. New student play scripts and innovative approaches to theater are strongly encouraged. Theater arts students choose to concentrate in one of three areas once they have completed a common core of courses: acting, design/ technical, and children's theater.

The AAOT degree is for students wishing to transfer to another four-year institution, such as Southern Oregon University or Western Oregon University. Students pursuing the AAOT should speak with Dan Stone as soon as possible to best tailor their course choices to the school that they plan to transfer to, as requirements differ at each program.

The AAOT degree is designed to be completed in two years, but this assumes that the entering student has basic skills in writing and math.

Student Learning Outcomes

Students who successfully complete an AAOT degree with an emphasis in Theater will:

- Demonstrate basic performance and production skills.
- Develop an understanding of dramatic literature.
- Develop an understanding of theater in a cultural context.
- Develop an understanding of the relationship between theater and the other arts.

OREGON TRANSFER

Theater Transfer Guide for Students Pursuing an Associate of Arts Oregon Transfer Degree

The Associate of Arts (Oregon Transfer) degree is designed to allow you to complete the first two years of your studies at LBCC and transfer to a four-year college as a junior. Many courses meet the requirements of this degree, but some choices are better for theater students than others. Select your electives carefully to ensure that you take the pre-requisites to upper-division courses. A sample AAOT two-year plan of study is outlined below. Check with your advisor each term to be sure you are on track for the degree, and to transfer seamlessly to the school of your choice.

Foundational Requirements

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
WR 123	English Composition: Research or	
WR 227	Technical Writing	3
Writing Credits Required		**9**
COMM 111	Fundamentals of Speech or	
COMM 112	Introduction to Persuasion or	
COMM 218	Interpersonal Communication	3
Oral Communication Credits Required		**3**
MTH 105	Introduction to Contemporary Mathematics	4
(or higher math course number)		
College Level Math Credits Required		**4**
HE 225	Social & Individual Health Determinants	4
	or 3 credits with a PE prefix	
Health/Wellness/Fitness Credits Required		**3**
	Total Foundational Requirements	**19**

Discipline Studies

(See pages 109 & 111 for course listings. One of the courses must be a cultural literacy course, designated with a ◆symbol.)

Arts & Letters

At least three (3) courses chosen from at least two (2) prefixes.
Take the following theater courses:
TA 145 Improvisation (3 credits)
TA 240 Creative Drama for the Classroom (3 credits)

Choose one of the following courses to meet the cultural literacy requirement:
ART 204 History of Western Art (3 credits)
ART 205 History of Western Art (3 credits)
MUS 108 Music Cultures of the World (3 credits)
SPN 201 Second-Year Spanish I (4 credits)

Social Sciences

At least four (4) courses chosen from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses chosen from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Electives

The following courses are suggested electives for the Theater transfer student.
TA 140 Playreading (3 credits)
TA 147 Introduction to Theater (3 credits)
TA 180 Rehearsal Practicum (3 credits)
TA 247 Make Up (3 credits)
TA 248 Fundamentals of Acting I (3 credits)
TA 282 Production Practicum (3-6 credits)

Plus enough additional electives to reach the minimum of 90 credits for the AAOT.

Total Credits Required: 90

1–Courses offered that term only.
2–Other classes may substitute. See advisor.
6–These courses must have been completed within the last five years.
7–Course may be taken any term to accommodate a student's particular interests and scheduling considerations. See the requirements for the Associate of Science degree for approved courses.
8–No more than two courses with the same alpha prefix may be used by a student to meet the general education requirement. See an advisor.
9–A cost-recovery program. See "Workforce Training" section for details.

Associate of General Studies Degree Requirements

For students who are not pursuing specific transfer or Career and Technical Education (CTE) programs, the Associate of General Studies (AGS) degree provides an alternative to pursue a broad general education background and accomplish personal educational goals. It is important for a student to work closely with an advisor in designing a course plan for this degree. Because of the flexibility of this degree, it may not fulfill requirements for transfer to a four-year institution.

General Requirements:

1. Complete the 14 credits of general education requirements, 55 credits of general electives, and 21 credits of focused electives.
2. Complete a minimum of 90 credits.
3. Complete a minimum of 24 credits at LBCC.
4. Maintain a minimum accumulative grade point average of 2.00 or better.

GENERAL EDUCATION REQUIREMENTS

WRITING/COMPOSITION (3 CREDITS)

Take the following course:

WR 121 English Composition (3 credits)

(You must pass WR 115 with a "C" or better or attain an appropriate score on the Placement Test to enroll in WR 121.)

COMMUNICATION (3 CREDITS)

Select one course.

COMM 100 Introduction to Speech Communication (3 credits)
COMM 111 Fundamentals of Speech (3 credits)
COMM 112 Introduction to Persuasion (3 credits)
COMM 218 Interpersonal Communication (3 credits)

MATHEMATICS (4 CREDITS)

Place into MTH 065 Elementary Algebra (4 credits) or a higher level math course.

HEALTH & PHYSICAL EDUCATION (4 CREDITS)

Select 4 credits. Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per quarter will count toward general education requirements.

HE 112 Emergency First Aid (1 credit)
HE 125 Occupational Safety & Health (3 credits)
HE 225 Social & Individual Health Determinants (4 credits)
HE 252 First Aid (3 credits)
HE 261 CPR (1 credit)
PE 185 Activity Courses (various courses for 1-2 credits)
PE 231 Lifetime Health & Fitness (3 credits)

GENERAL ELECTIVES

Select 55 general elective courses. General electives may include any combination of lower division transfer and/or career and technical education courses. All general electives must be collegiate-level courses.

FOCUSED ELECTIVES

Choose Option 1 or Option 2. All focused electives must be collegiate-level courses.

Option 1 – focused exploration of Humanities/Arts, Social Science, and Math/Science.

Select 21 credits from the following categories, with a minimum of 3 credits from each group. To determine if a class may be applied toward fulfilling these requirements for the Associate of General Studies degree, look for the proper symbol in the "Course Descriptions" section of this catalog.

The Humanities/Arts group:
Art, creative writing, foreign languages (200-level courses only), literature, music, philosophy, religion, theater

The Social Science group:
History, psychology, sociology, political science, anthropology, economics

The Math/Science group:
Mathematics, animal science, biology, physical science, physics

Option 2 – focused exploration in a career and technical area.

Select 21 credits of career and technical courses. Work with a career and technical program advisor to select appropriate courses that are from an approved career and technical program.

Oregon Transfer Module

Any student awarded an Oregon Transfer Module will have met the requirements for the Transfer Module at any Oregon community college or institution in the Oregon University System. Upon transfer, the receiving institution may specify additional coursework that is required for a major or for degree requirements or to make up the difference between the Transfer Module and the institution's total General Education requirements.

All courses must be completed with a grade of "C" or higher. Students must have a minimum cumulative GPA of 2.0 at the time the module is awarded.

GENERAL EDUCATION: FOUNDATIONAL REQUIREMENTS

WRITING

Take two courses from the following:

WR 121 English Composition (3 credits)
(You must have passed WR 115 with a grade of "C" or better or attained an appropriate score on the Placement Test to enroll in WR 121.)
WR 122 English Composition: Argumentation & Style (3 credits)
WR 123 English Composition: Research (3 credits)
WR 227 Technical Writing (3 credits)

COMMUNICATION

Select one course from the following:

COMM 111 Fundamentals of Speech (3 credits)
COMM 112 Introduction to Persuasion (3 credits)
COMM 218 Interpersonal Communication (3 credits)

MATHEMATICS

Take the following math course or a higher level math course. The general education math may not be used to meet the Math/Science/Computer Science requirement.

MTH 105 Introduction to Contemporary Mathematics (4 credits)

GENERAL EDUCATION: DISCIPLINES STUDIES

ARTS & LETTERS

Select a minimum of three courses.

ART 102◆ Understanding Art (3 credits)
ART 204◆ History of Western Art (3 credits)
ART 205◆ History of Western Art (3 credits)
ART 206◆ History of Western Art (3 credits)
ART 207◆ Indigenous Art of the Americas (3 credits)
ART 263◆ Digital Photography (3 credits)
ENG 104 Literature: Fiction (3 credits)
ENG 106 Literature: Poetry (3 credits)
ENG 107 Western World Literature: Classical (4 credits)
ENG 109 Western World Literature: Modern (4 credits)
ENG 110 Film Studies (3 credits)
ENG 201 Shakespeare (4 credits)
ENG 202 Shakespeare (4 credits)
ENG 204 British Literature: Early (3 credits)
ENG 205 British Literature: Middle (3 credits)
ENG 206 British Literature: Modern (3 credits)
ENG 207◆ Non-Western World Literature: Asia (3 credits)
ENG 208◆ Non-Western World Literature: Africa (3 credits)
ENG 209◆ Non-Western World Literature: The Americas (3 credits)
ENG 215◆ Latino/a Literature (3 credits)
ENG 220◆ Literature of American Minorities (3 credits)
ENG 221 Children's Literature (3 credits)
ENG 253 American Literature: Early (4 credits)
ENG 255 American Literature: Modern (4 credits)
ENG 257◆ African-American Literature (3 credits)
ENG 261 Science Fiction (3 credits)
HUM 101◆ Intro to Humanities: Prehistory (3 credits)
HUM 102◆ Intro to Humanities: Renaissance (3 credits)
HUM 103◆ Intro to Humanities: Modernism (3 credits)
JN 134 Introduction to Photojournalism (3 credits)
JN 201 Media & Society (4 credits)
JN 216 News Reporting & Writing (3 credits)
JN 217 Feature Writing (3 credits)
MUS 101 Music Fundamentals (3 credits)
MUS 105◆ Introduction to Rock Music (3 credits)
MUS 108◆ Music Cultures of the World (3 credits)
MUS 111 Music Theory I (3 credits)
MUS 161◆ Music Appreciation (3 credits)
SPN 201◆ Second-Year Spanish I (4 credits)
SPN 202◆ Second-Year Spanish II (4 credits)
SPN 203◆ Second-Year Spanish III (4 credits)
SPN 214 Spanish for Heritage Speakers (4 credits)
SPN 215 Spanish for Heritage Speakers (4 credits)
SPN 216 Spanish for Heritage Speakers (4 credits)
TA 121 ◆ Oral Interpretation of Literature (3 credits)
TA 145 Improvisation (3 credits)
TA 147 Introduction to Theater (3 credits)
TA 240 Creative Drama for the Classroom (3 credits)
WR 240 Creative Writing: Nonfiction Workshop (3 credits)
WR 241 Creative Writing: Short Fiction Workshop (3 credits)
WR 242 Creative Writing: Poetry Workshop (3 credits)

SOCIAL SCIENCES

Select a minimum of three courses.

ANTH 103◆ Introduction to Cultural Anthropology (3 credits)
ANTH 210◆ Comparative Cultures (3 credits)
ANTH 230◆ Time Travelers (3 credits)
ANTH 232◆ Native North Americans (3 credits)
CJ 100 Survey of the Criminal Justice System (3 credits)
CJ 101 Introduction to Criminology (3 credits)
CJ 110 Introduction to Law Enforcement (3 credits)
CJ 120 Introduction to Judicial Process (3 credits)
CJ 130 Introduction to Corrections (3 credits)
CJ 201 Juvenile Delinquency (3 credits)
CJ 202 Violence & Aggression (3 credits)
CJ 220 Introduction to Substantive Law (3 credits)
CJ 226 Constitutional Law (3 credits)
EC 115 Outline of Economics (4 credits)
EC 201 Introduction to Microeconomics (4 credits)
EC 202 Introduction to Macroeconomics (4 credits)
EC 215 Economic Development in the U.S. (4 credits)
EC 220◆ Contemporary U.S. Economic Issues: Discrimination (3 credits)
ED 216 Purpose, Struc & Function of Ed in a Democracy (3 credits)
ED 253 Learning Across the Lifespan (3 credits)
GEOG 202◆ World Geography: Latin America & the Caribbean (3 credits)
GEOG 203◆ World Geography: Asia (3 credits)
GEOG 204◆ World Geography: Africa & the Middle East (3 credits)
HDFS 200 Human Sexuality (3 credits)
HDFS 201◆ Contemporary Families in the U.S. (3 credits)
HDFS 222 Partner & Family Relationships (3 credits)
HDFS 225 Child Development (3 credits)
HDFS 229 School Age & Adolescent Development (3 credits)
HST 101◆ History of Western Civilization (3 credits)
HST 102 History of Western Civilization (3 credits)
HST 103 History of Western Civilization (3 credits)
HST 157◆ History of Middle East & Africa (3 credits)
HST 158◆ History of Latin America (3 credits)

HST 159◆ History of Asia (3 credits)
HST 201◆ U.S. History: Colonial & Revolutionary (3 credits)
HST 202◆ U.S. History: Civil War & Reconstruction (3 credits)
HST 203◆ U.S. History: Rise to World Power (3 credits)
PHL 201◆ Introduction to Philosophy (3 credits)
PHL 202◆ Elementary Ethics (3 credits)
PS 201 Introduction to American Politics & Government (3 credits)
PS 204 Introduction to Comparative Politics (3 credits)
PS 205◆ Introduction to International Relations (3 credits)
PS 211 Peace & Conflict (3 credits)
PSY 101 Psychology & Human Relations (3 credits)
PSY 201 General Psychology (4 credits)
PSY 202 General Psychology (4 credits)
PSY 215 Introduction to Developmental Psychology (3 credits)
PSY 216 Social Psychology (3 credits)
PSY 219 Introduction to Abnormal Psychology (3 credits)
PSY 231 Human Sexuality (3 credits)
R 101◆ Introduction to Religious Studies (3 credits)
R 102◆ Religions of Western World (3 credits)
R 103◆ Religions of Eastern World (3 credits)
SOC 204◆ Introduction to Sociology (3 credits)
SOC 205◆ Institutions and Social Change (3 credits)
SOC 206◆ Social Problems and Issues (3 credits)
SOC 222◆ Marriage Relationships (3 credits)
WS 280◆ Global Women (3 credits)

SCIENCE/MATH/COMPUTER SCIENCE

Select three courses, including at least one biological or physical science with a lab. Laboratory classes are indicated below with an asterisk (*).

ANS 121 Introduction to Animal Science* (4 credits)
BI 101 General Biology* (4 credits)
BI 102 General Biology* (4 credits)
BI 103 General Biology* (4 credits)
BI 200 Principles of Ecology: Field Biology* (4 credits)
BI 211 Principles of Biology* (4 credits)
BI 212 Principles of Biology* (4 credits)
BI 213 Principles of Biology* (4 credits)
BI 231 Human Anatomy & Physiology* (5 credits)
BI 232 Human Anatomy & Physiology* (5 credits)
BI 233 Human Anatomy & Physiology* (5 credits)
BI 234 Microbiology* (4 credits)
CH 112 Chemistry for Health Occupations (5 credits)
CH 121 College Chemistry (5 credits)
CH 221 General Chemistry* (5 credits)
CH 222 General Chemistry* (5 credits)
CH 223 General Chemistry* (5 credits)
CH 241 Organic Chemistry* (4 credits)
CH 242 Organic Chemistry* (4 credits)
CH 243 Organic Chemistry* (4 credits)
CS 161 Introduction to Computer Science I (4 credits)
CS 162 Introduction to Computer Science II (4 credits)
CS 260 Data Structures (4 credits)
FW 251 Principles of Wildlife Conservation (3 credits)
G 101 Introduction to Geology* (4 credits)
G 102 Introduction to Geology* (4 credits)
G 103 Introduction to Geology* (4 credits)
G 201 Physical Geology I* (4 credits)
G 202 Physical Geology II* (4 credits)
G 203 Historical Geology* (4 credits)
GS 104 Physical Science: Principles of Physics* (4 credits)
GS 105 Physical Science: Principles of Chemistry* (4 credits)
GS 106 Physical Science: Principles of Earth Science* (4 credits)
GS 108 Oceanography* (4 credits)
MTH 105 Introduction to Contemporary Math (4 credits)
MTH 111 College Algebra (5 credits)
MTH 112 Trigonometry (5 credits)
MTH 211 Fundamentals of Elementary Mathematics I (4 credits)
MTH 212 Fundamentals of Elementary Mathematics II (4 credits)
MTH 213 Fundamentals of Elementary Mathematics III (4 credits)
MTH 231 Elements of Discrete Math (4 credits)
MTH 232 Elements of Discrete Math (4 credits)
MTH 241 Calculus for Bio/Management/Social Sciences (4 credits)
MTH 243 Introduction to Statistics (4 credits)
MTH 245 Math for Biological/Management/Social Sciences (4 credits)
MTH 251 Differential Calculus (5 credits)
MTH 252 Integral Calculus (5 credits)
MTH 253 Calculus (4 credits)
MTH 254 Calculus (4 credits)
MTH 255 Vector Calculus (4 credits)
MTH 256 Applied Differential Equations (4 credits)
MTH 265 Statistics for Scientists & Engineers (4 credits)
PH 104 Descriptive Astronomy* (4 credits)
PH 201 General Physics* (5 credits)
PH 202 General Physics* (5 credits)
PH 203 General Physics* (5 credits)
PH 211 General Physics with Calculus* (5 credits)
PH 212 General Physics with Calculus* (5 credits)
PH 213 General Physics with Calculus* (5 credits)

Additional courses for a total of 45 credits.

COURSE INFORMATION

- Career and Technical courses have alphabetical prefixes and generally are numbered 2.000 through 8.999. Some Career and Technical courses have 100 and 200 numbers.
- Courses with 100 and 200 numbers are usually transferable to four-year institutions. However, there are limits on Career and Technical courses. Please see your advisor.
- Courses numbered 0.100 to 0.999 do not apply toward LBCC degree and certificate programs.
- Many departments offer professional/industry related courses not listed in this catalog. Please contact the appropriate department for a list and schedule of these courses, workshops and seminars.

Courses marked with the symbols below may be applied toward fulfilling the general education requirements for the Associate of General Studies degree. For lists of classes that fulfill general education requirements for other degrees offered at LBCC, see the "Graduation Requirements" section of this catalog.

- ➢ Humanities/Art
- ● Math/Science
- ■ Social Sciences

AA: APPLIED ARTS

AA 156 FOUNDATION DIGITAL PAGE LAYOUT
(3 credits)
Continued exploration of InDesign as a page layout program. Preparation and preflighting of digital mechanical files will be created to industry standards, as well as font management, and the use of Adobe Acrobat™ for producing PDF's. Students will get an extensive introduction to Indesign interactive documents for computer web and portable devises. Environmental factors effecting ethical printing practices, job opportunities and the workplace will be discussed during this course. Corequisite: ART 120 Foundations in Digital Imaging Processes

AA 160 DIGITAL PAGE LAYOUT II
(3 credits)
Continued exploration of InDesign as a page layout program. Preparation and preflighting of digital mechanical files will be created to industry standards, as well as font management, and the use of Adobe Acrobat™ for producing PDF's. Students will get an extensive introduction to Indesign interactive documents for computer web and portable devises. Environmental factors effecting ethical printing practices, job opportunities and the workplace will be discussed during this course. Prerequisite: AA 156 Foundations in Digital Page Layout with a "C" or better. Corequisite: ART 121 Computers in Visual Arts

AA 161 WEB DESIGN BASICS
(3 credits)
Introduction to web page design using industry standard software for the development of HTML based web sites. Explore site definition, page layout, graphic creation and optimization and implementation of web sites. Prerequisite: CIS 195 Web Development I with a "C" or better. Corequisite: AA 222 Graphic Design II

AA 162 WEB DESIGN II
(3 credits)
Expansion of web page design using industry standard software for the development of HTML based web sites. Explore site definition, page layout, graphic creation, understanding additional web languages and more advanced implementation of web sites. Coursework will include completion of online portfolio. Prerequisite: AA 161 Web Design Basics with a "C" or better. Corequisite: AA 228 Portfolio Preparation

AA 178 COLOR & COMPOSITION FOR DESIGNERS
(4 credits)
Identifies the common foundation to all areas of design, with attention to how the elements and principles of design work together to create visual communication. Students will use art media and graphic design computer programs to solve design problems. References to specific design solutions from graphic design history will be shown to supplement studies. Exploration of basic color theory and systems for organizing color harmonies will be augmented with discussions concerning issues graphic designers face when working and printing color. Students will develop a critical awareness of the effects of color and design in the world around them. Corequisite: ART 121 Computer in Visual Arts

AA 193 DIGITAL IMAGE PROCESSES III
(4 credits)
Culmination of the image manipulation sequence. Integrating the entire Adobe Design Creative Suite™ for creating color correct, printable images. Introduction of web optimization for images. Students will gain an in-depth understanding of vector illustration software and will learn to smoothly transition between applications depending upon current client needs. Introduces the basic concepts of 3-D illustration using modeling. Discusses career opportunities. Coursework will include preparation of a portfolio. Prerequisite: ART 121 Computers in Visual Arts with a "C" or better.

AA 198 INDEPENDENT STUDIES
(1-3 credits)
Individual instruction in advanced problems relevant to the student's interests and needs. Required: instructor's approval.

AA 221 GRAPHIC DESIGN I
(4 credits) - offered Fall only
Introduction to graphic design. Examines visual communication through the application of the elements and principles of art. Studies static vs. dynamic, visual centering, design systems, metamorphosis and continuums. Instills critical analysis and good design judgment. Prerequisite: AA 193 Digital Image Processes III with a "C" or better.

AA 222 GRAPHIC DESIGN II
(4 credits) - offered Winter only
Studies corporate mark design; the development of symbols, logos, design programs and identity systems. Examines the design's adaptability, application, practicality and integrity. Environmental issues are discussed. Teamwork and interaction are stressed. Instills critical analysis, process and good design judgment. Course will include small group work teams and will include interactions with real world clients. Prerequisite: AA 221 Graphic Design I with a grade of "C" or better. Corequisite: AA 161 Web Design Basics

AA 223 GRAPHIC DESIGN III
(4 credits) - offered Spring only
Studies corporate mark design; the development of symbols, logos, design programs and identity systems. Examines the design's adaptability, application, practicality and integrity. Environmental issues are discussed. Teamwork and interaction are stressed. Instills critical analysis, process and good design judgment. Course will include small group work teams and will include interactions with real world clients. Course will include job opportunities and at least one visit to a design studio. Prerequisite: AA 222 Graphic Design II with a grade of "C" or better. Corequisite: AA 162 Web Design II

AA 224 TYPOGRAPHICAL DESIGN I
(4 credits) - offered Winter & Spring only
Introduction to letterforms. Develops a fundamental awareness of type and typographic design. Studies the evolution, art and vocabulary of typography; hand-built letterforms; and designing with type. Emphasizes typography as a working tool. Prerequisite: ART 121 Computers in Visual Arts with a grade of "C" or better. Corequisite: AA 193 Digital Image Processes III

AA 226 TYPOGRAPHIC DESIGN II
(4 credits) - offered Fall only
Continues the study, use and design of letterforms. Emphasizes creating original type variations and form manipulation. Prerequisites: AA 224 Typographical Design I; AA 193 Digital Image Processes III with a grade of "C" or better

AA 228 PORTFOLIO & PROFESSIONAL PRACTICES
(4 credits) - offered Spring only
Emphasizes reevaluation of previously produced projects: organization and production of the business card, business stationery, resume, envelop, self-promotional and comprehensive portfolio. Covers current job opportunities; methods in merchandising job talents: action before, during and after the interview; and business practices and ethics. Students present their professional portfolios to the public at Portfolio Presentations and in a more personal setting at the reception that follows. Worksite safety and ergonomics will be covered during this course. Prerequisites: AA 222 Graphic Design II with a grade of "C" or better

AA 237 ILLUSTRATION I
(4 credits) - offered Fall only
Explores and develops skills in the use of various tools, materials and techniques. Increases student awareness of illustrative possibilities and processes. Pen and ink, graphite and ink wash are included. Prerequisites: ART 121 Computers in Visual Arts with a grade of "C" or better

AA 280 CWE GRAPHICS
(2-14 credits)
Gives students practical experience in supervised employment related to graphics. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: AA 160 Digital Page Layout II with a grade of "C" or better. Required: CWE Faculty Coordinator's approval.

AG: AGRICULTURE

AG 111 COMPUTERS IN AGRICULTURE
(3 credits) - offered Fall & Spring only
Agricultural examples and problems are utilized as a basis for the material in this course. Provides hands-on experience in the areas of word processing, spreadsheets, PowerPoint and Web site development.

AG 230A SUSTAINABLE SMALL FARM MGMT
(2 credits) offered Fall only
This course teaches the major skills necessary to manage a small farm. Students study in the classroom and practice on the LBCC farm how to grow local small farm crops, maintain fields, repair and constuct farm buildings, and operate hand and power equipment. Developing soft skills to successfully market LBCC farm products using a farm stand and a community supported agriculture program is also covered.

AG 230B SUSTAINABLE SMALL FARM MGMT
(2 credits) offered Winter only
This course teaches the major skills necessary to manage a small farm. Students study in the classroom and practice on the LBCC farm how to grow local small farm crops, maintain fields, repair and constuct farm buildings, and operate hand and power equipment. Developing soft skills to successfully market LBCC farm products using a farm stand and a community supported agriculture program is also covered.

AG 230C SUSTAINABLE SMALL FARM MGMT
(3 credits) offered Spring only
This course teaches the major skills necessary to manage a small farm. Students study in the classroom and practice on the LBCC farm how to grow local small farm crops, maintain fields, repair and constuct farm buildings, and operate hand and power equipment. Developing soft skills to successfully market LBCC farm products using a farm stand and a community supported agriculture program is also covered.

AG 250 IRRIGATION SYSTEM DESIGN
(3 credits) - offered Fall & Winter only
Designing drip, low pressure, and sprinkler irrigation systems with an emphasis in horticultural and field crop applications from pump to output nozzle.

AG 280A CWE AGRICULTURE
(2-14 credits)
Designed to give students practical experience in supervised employment related to agriculture. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

AG 280B CWE ANIMAL TECH
(2-14 credits)
Designed to give students practical experience in supervised employment related to animal technology. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

AG 280C CWE HORTICULTURE
(2-14 credits)
Designed to give students practical experience in supervised employment related to horticulture. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

AG 8.130 PESTICIDE SAFETY
(3 credits) - offered Winter only
Covers background information in use of herbicides, insecticides, fungicides and other pesticides. Types of materials, safety in handling, storage and method of application are emphasized. Attention also is given to keeping current with changes in pesticide recordkeeping procedures.

AG 8.140 BIOENERGY FEEDSTOCK PRODUCTION
(3 credits) - offered Winter only
Students in this course are introduced to the feedstocks that are used in the production of biofuels, including temperate and tropical climate crops and grasses, wood resides, and animal wastes. The principles of sustainable agriculture and its implications to ecologically sound and socially responsible biofuel feedstock production are discussed. Also covered are options for on-farm biofuel manufacturing.

AG 8.141 PRINCIPLES OF BIOENERGY
(4 credits) - offered Fall only
Provides an overview of the biofuel industry, the major types of biofuels, and the implications of an emerging biofuel energy sector. The social, economical, and environmental sustainability of biofuel production are discussed throughout the course. Students will learn the various methods of manufacturing biofuels in the laboratory, on the farm and on a commercial scale. Fundamental concepts in biofuel engineering and biofuel chemistry are covered. Field trips include farm-scale and industrial biofuels operations in Oregon.

AH: ALLIED HEALTH

AH 111 MEDICAL TERMINOLOGY I FOR HEALTHCARE PROVIDERS
(2 credits)
Prepares students to use basic medical language in written and oral form to understand the basics of physician's diagnosis and treatment and to communicate with health care professionals. Abbreviations, pronunciation and spelling are emphasized.

AH 5.440 INTERPROFESSIONAL EDUCATION I
(1 credit)
The Interprofessional Education Course (IPE) introduces students to the basic concepts and practices needed to collaborate effectively. The content of these courses will complement the non-technical competencies that already occur in each program's curriculum. In the IPE courses, students will learn about the roles and responsibilities of various healthcare professions. They will also learn and practice the skills that enhance collaborative practice and interprofessional communication. Required: Admission to the Nursing program.

ANS: ANIMAL SCIENCE

ANS 121 ANIMAL SCIENCE
(4 credits) - offered Fall & Spring only
Examines body systems of the food and fiber species and the interaction of these systems. Introduces the student to various phases of the livestock industry, including terminology, production practices, marketing and selection techniques. Students are expected to build communication skills through weekly lab reports and class presentations. Lab sessions are designed for hands-on experience with livestock. Emphasis is placed on the nutritional, reproductive and physical needs of the animals.

ANS 207 CAREERS IN ANIMAL AGRICULTURE
(1 credit) - offered Winter only
Explores career opportunities in animal science. Includes guest lecturers from various fields of animal agriculture as well as an emphasis on resume writing and job interviewing.

ANS 210 FEEDS AND FEED PROCESSING
(4 credits) - offered Fall only
Covers basic animal nutrition, including digestive systems and nutrients. Studies methods of determining feed values, types of feed, feed characteristics, nutritional requirements and composition, methods of feeding and feed processing.

ANS 211 APPLIED ANIMAL NUTRITION
(3 credits) - offered Winter only
Introduces formulating and analyzing rations for livestock, balancing nutritional needs and choice of ingredients in relation to cost and suitability. Includes economics of livestock feeding and performance indicators. Prerequisite: ANS 210 Feeds & Feed Processing

ANS 212 SMALL SCALE SUSTAINABLE LIVESTOCK PRODUCTION
(3 credits)
Small scale livestock production is increasing in Oregon and the US. Poultry production in urban and suburban settings is especially popular. Local and state agencies across the US are revising regulations and codes to accommodate the small scale, part time and hobby farmers. Restaurants, food businesses, and consumers are increasingly looking for sustainably raised, local animal products. These trends are resulting in new business opportunities and the need for training of individuals in small scale animal husbandry.

ANS 215 BEEF/DAIRY INDUSTRIES
(4 credits) - offered Fall only
Covers fundamentals of modern beef production and management, including cattle breeds, mating systems and reproduction, nutrition, marketing, production testing, diseases and parasites, and other management practices. Particular emphasis is on developing beef husbandry skills.

ANS 216A APPLIED SHEEP PRODUCTION
(4 credits) - offered Winter only
Covers fundamentals of modern sheep production, including sheep breeds, industry segments, nutrition, reproduction, diseases and parasites, wool evaluation, marketing and modern management practices. Note: Course offered alternate years only. Offered Winter 2014.

ANS 216B APPLIED SWINE PRODUCTION
(4 credits) - offered Winter only
Covers fundamentals of modern swine production, including swine breeds, marketing, reproduction, nutrition, production testing, diseases and parasites, production problems, and environmental concerns. Note: Course offered alternate years only. Offered Winter 2013.

ANS 220 INTRODUCTORY HORSE SCIENCE
(4 credits) - offered Fall only
Basic course in commercial horse production and management. Covers breeds, breeding systems, physiology, nutrition, reproduction and diseases. Also develops basic skills in handling, foot care, feeding, selection and health management.

ANS 221 EQUINE CONFORMATION AND PERFORMANCE
(2 credits) - offered Spring only
Teaches students practical skills in four specific areas of horse science: anatomy, foot and leg care, fitting and showing, and horse conformation judging and assessing conformation for performance. Recognizing common unsoundnesses and blemishes also is covered.

ANS 222 YOUNG HORSE TRAINING
(2 credits) - offered Fall only
Provides hands-on training. The student is assigned a young horse to train for the term. The training consists of halter breaking, leading, sacking, longeing, trailer loading and handling the feet. Saddling, bitting, ground driving and early stages of riding are taught, as well as grooming, safety and use of equipment.

ANS 223 EQUINE MARKETING
(2 credits) - offered Winter only
Introduces the practical concepts of equine marketing. Emphasizes assessing the market, targeting potential buyers, and preparing and presenting the product. Business law, as it relates to equine marketing, is discussed. Through practicing interviewing skills and writing a resume, students learn to "market themselves."

ANS 227 ARTIFICIAL INSEMINATION
(4 credits) - offered Spring only
Includes instruction on reproductive organs, hormones, heat diagnosis, semen collection, insemination techniques, semen evaluation, pregnancy testing, freezing and dilution methods. Hands-on experience is stressed. Note: Recommended for second-year students.

ANS 231 LIVESTOCK EVALUATION
(3 credits) - offered Spring only
Introduces criteria and principles in the physical evaluation of beef, sheep and swine. Emphasizes correctness of body type, relation of type to production, market standards, soundness and body parts. Extensive time is spent on applying techniques in evaluating live animals.

ANS 278 GENETIC IMPROVEMENT: LIVESTOCK
(3 credits) - offered Winter only
Introduces basic, practical concepts of improving livestock through a variety of genetic programs, including genetic possibilities, utilizing heritability for production gains, inbreeding coefficient, mating systems, genetic predictors and improvement programs. Recommended: MTH 065 Elementary Algebra.

ANTH: ANTHROPOLOGY

ANTH 103 INTRO TO CULTURAL ANTHROPOLOGY
■ *(3 credits)*
Surveys the field of cultural anthropology and its focus - studying human behavior and culture. Introduces a methodology for studying human sociocultural adaptations. Includes the topics of major cross-cultural studies with a focus on language, economics, marriage, kinship, gender, political organization, stratification, and spiritual belief systems. Examines traditional and contemporary practices, the processes of culture change, and the application of cultural anthropology to practical society problems.

ANTH 210 COMPARATIVE CULTURES
■ *(3 credits)*
Examines the ethnographic process anthropologists use to study other cultures, the process of comparing two or more cultures in an ethnologic context, and the development of cultures over time to be what they are today. Introduces a methodology for engaging in culturally relative dialogue is introduced and then emphasized in all learning activities. Recommended: College-level reading and writing skills.

ANTH 230 TIME TRAVELERS
■ *(3 credits)*
Introduction to how the past is studied by archaeologists. The history of archaeology, archaeological theories, and archaeological methods will be discussed and explored in multiple contexts., emphasizing visual and hands-on learning. Recommended: College-level reading and writing skills.

ANTH 232 NATIVE NORTH AMERICANS
■ *(3 credits)*
Focuses on Native American cultures and their ancestors in prehistoric, historic, and contemporary contexts. Anthropological evidence, including archaeology and ethnography, and indigenous evidence, including customs and oral histories and traditions, are used to create holistic perspectives about both early Native American cultures and cultures today. Later changes resulting from contact, westernization, and assimilation are investigated. Recommended: College-level reading and writing skills.

APR: APPRENTICESHIP

APR 101 INTRO ELECTRICITY/CIRCUIT COMP
(6 credits) - offered Fall only
Introductory electricity course, emphasizing electron theory, electrical terminology, magnetism, and electro-magnetism. Ohm's Law will be introduced and applied to series, parallel, and series-parallel circuits. A study of AC circuits and the associated reactive components (capacitors and inductors) will necessitate an introduction to trigonometry and vector analysis.

APR 102 AC COMPONENTS AND USES
(6 credits) - offered Winter only
Introduces students to the practical application of resistors, capacitors, inductors and transformers to AC electrical circuits. AC resonant circuits, including RL, RC, and RLC will be studied in both series and parallel configurations. The components involved with the distribution of AC power as well as lighting, heating and wiring applications will be covered. Students will learn troubleshooting skills and proper use of test equipment as they apply to AC circuits.

APR 103 ELEC GENERATOR/MOTORS/CONTROL
(6 credits) - offered Spring only
Introduces students to AC and DC generators and alternators. The study of the theory, design and construction of both single-phase and three-phase generators and alternators is included. Students are also introduced to semiconductor control devices and PLC programming.

APR 121 INTRO TO LIMITED ENERGY TRADE
(4 credits)
This is the first term of coursework designed for apprentices studying to become Limited Energy Technicians. Topics covered this term include an introduction to the limited energy trade, job site and tool safety, low-voltage cabling, craft-related mathematics, and conduit bending. Industry codes, standards and agencies will also be discussed.

APR 122 FUND OF ELECTRICITY & ELECTRON
(4 credits) - offered Winter only
This class is designed for apprentices working/studying to become Limited Energy Technicians, but is open to anyone desiring an introduction to Electricity and Electronics. Topics for this term include: Basic DC and AC Circuit analysis, Semiconductors, ICs and Digital Logic, Switching Devices, and Blueprint Reading. Using a DMM to safely test voltage, current and resistance will be emphasized. The National Electrical Code (NEC) as it relates to effective and safe implementation of low-voltage circuits will be introduced. Prerequisite: APR 121 Introduction to the Limited Energy Trade with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 123 ELECTRICAL TEST EQUIPMENT
(4 credits) - offered Spring only
This class is designed for apprentices working/studying to become Limited Energy Technicians. Topics for this term include: Electrical Test Equipment, Power Quality, and Proper Grounding and Cable Termination. Effective and safe use of various trade-related test equipment as well as the National Electrical Code (NEC) requirements for safe grounding and cable termination will be emphasized. Prerequisite: APR 122 Fundamentals of Electricity and Electronics with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 161 MANUFACTURING PROCESSES I
(2 credits)
This course provides training and learning experiences in basic machining operations. Students will be using the lathe, milling machine and other machine tools to complete a project. The finished projects are used to participate in a contest; judging is based on performance, craftsmanship and technology utilization. Students are required to demonstrate some design responsibilities. Skills for successful employment are emphasized.

APR 201 ELECTRIC MOTORS
(6 credits) - offered Fall only
Introduces students to various aspects of electric motors including types and applications, factors governing proper selection, effective protection and troubleshooting. Additional topics include hand bending of conduit, correct strapping and proper wire selection. Emphasis is on effective troubleshooting, including human relations and customer service during maintenance, troubleshooting and repair. Recommended: MTH 060 College Algebra

APR 202 ELECTRIC MOTOR CONTROLS
(6 credits) - offered Winter only
Provides an introduction to the design of control circuits and the electrical components that comprise these circuits. Students will design, troubleshoot and demonstrate a motor control training circuit in the context of a team environment. Prerequisite: APR 201 Electric Motors with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 204 BASIC WELDING FOR ELECTRICIANS
(2 credits)
An introductory course stressing safety and equipment familiarization with lab exercises in basic oxygen fuel welding and cutting. A basic introduction and use of different electric arc welding processes. Includes technical information in the related subjects.

APR 208 NATIONAL ELECTRICAL CODE I
(6 credits) - offered Fall only
Designed for students preparing to take examinations based on The National Electrical Code (NEC). The NEC is the safety manual for electrical installation for the nation. The course will study sections of the NEC relating to "wiring and protection" and "wiring methods and materials." Strategies for finding and applying information found in these sections to real life situations are emphasized.

APR 210 NATIONAL ELECTRICAL CODE II
(6 credits) - offered Winter only
Designed for students preparing to take examinations based on the National Electrical Code (NEC). The NEC is the safety manual for electrical installation for the nation. The course includes a comprehensive study of the sections of the NEC relating to "Equipment for General Use" and "Special Occupancies." Strategies for finding and applying information found in these sections to real life situations are emphasized.

APR 212 NATIONAL ELECTRICAL CODE III
(6 credits) - offered Spring only
Designed for students preparing to take examinations based on the National Electrical Code (NEC). The NEC is the safety manual for electrical installation for the nation. The course includes a comprehensive study of the chapters of the NEC relating to "Special Equipment", Special Conditions, "Communication Systems" and "Tables." Strategies for finding and applying information found in these sections to real life situations is emphasized.

APR 214 PROGRAMMABLE LOGIC CONTROLLERS
(3 credits)
Programmable logic controls are industrial computers used to control electrical and mechanical systems. This course is a hands-on introduction to Programmable Logic Controllers (PLCs) with emphasis given to effective selection, installation, and troubleshooting of PLC systems. PLC ladder logic programming will be introduced. Field troubleshooting of input and output devices will be covered.

APR 215 ADVANCED PLC TROUBLESHOOTING
(3 credits)
Designed to develop advanced skills in programming PLCs. Students will learn to convert common industrial control circuits to PLC ladder logic as well as create programs from narrative descriptions. Special emphasis is placed on interfacing the PLC with a selection of electro-pneumatic control devices. Also covered are interpreting PLC data sheets and systemic approach to testing and troubleshooting of PLC programs. Prerequisites: APR 214 Programmable Logic Control or MT3.824 Programmable Logic Controllers with a "C" or better

APR 216 INDUSTRIAL PNEUMATIC SYSTEMS
(3 credits)
Learn to analyze fundamental pneumatic schematics, how to troubleshoot common pneumatic problems, how to maintain and repair pneumatic systems used in a variety of production applications, and how to promote energy efficiency in pneumatic systems. Understanding pneumatic circuits is critical to working with all types of industrial control systems.

APR 217 PROCESS CONTROL & INSTRUMENTATION
(3 credits)
Provides an introduction to process control and instrumentation. Students will develop a working production line that includes sensors, pneumatics, PLCs and motor controls. Energy efficiency and maintenance, troubleshooting, and repair of control systems is emphasized.

APR 221 SPECIALIZED SYSTEMS
(4 credits) - offered Fall only
Designed for the apprentice working/studying to become a licensed Limited Energy Technician. The wide range of topics covered in this class include: Specialty Transformers, Medical Systems, Sound and Signal Systems, and an introduction to both HVAC and Boiler systems. The National Electrical Code (NEC) requirements regarding the safe installation of each of these systems will be emphasized. Prerequisite: APR 122 Fundamentals of Electricity and Electronics with a grade of "C" or better; Recommended: MTH 060 College Algebra

APR 222 PROCESS CONT & INSTRUMENTATION
(4 credits) - offered Fall only
Designed for the apprentice working/studying to become a licensed Limited Energy Technician. The topics covered in this course include: Instrumentation, Process Control and Distributed Control Systems. Emphasis will be placed on NEC/safety requirements as they relate to each of these systems. NEC practice exams will be administered during the last three weeks of the term. Prerequisite: APR 221 Specialized Systems with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 223 COMM SYSTEMS & NETWORKS
(4 credits) - offered Fall only
Designed for the apprentice working/studying to become a licensed Limited Energy Technician. The topics covered in this course include: Cable Selection, Busses and Networks, Wireless Communication and an introduction to Site Survey and Job Planning. Application specific cable selection for safety, efficacy and code (NEC) requirements will be emphasized. Prerequisite: APR 222 Process Control and Instrumentation with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 224 PROTECTIVE SIGNALING
(4 credits) - offered Fall only
Designed for the electrical apprentice working/studying to become a Class-A Limited Energy Technician. The topics covered in this course include: Fire Alarm Systems, Intrusion Detection Systems, Access Control and Nurse Call. The National Electrical Code (NEC) will be emphasized as it relates to the safe installation of each of these low voltage systems. Prerequisite: APR 223 Communication Systems and Networks with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 225 SYSTEMS INTEGRATION
(4 credits) - offered Fall only
Designed for the electrical apprentice working/studying to become a Class-A Limited Energy Technician. The topics covered in this course include: audio, closed circuit television (CCTV), Broadband Systems and Systems Integration. The National Electrical Code (NEC) will be emphasized as it relates to the safe installation of each of these low-voltage systems. NEC practice exams will be administered during the last two weeks of the term. Prerequisite: APR 224 Protective Signaling with a grade of "C" or better; Recommended: MTH 060 Introduction to Algebra

APR 252 INDUSTRIAL HYDRAULICS I
(4 credits) - offered Fall only
Provides a study of the basics of hydraulics used in the industrial manufacturing setting. Emphasis is on the components, circuit construction and the mathematical calculations used to compute pressure and force as it pertains to hydraulic equipment. Safety is stressed in each lesson. Prerequisite: MTH 060 Introduction to Algebra with a grade of "C" or better; Required: APR 257 Math for Apprenticeship or equivalent.

APR 253 INDUSTRIAL HYDRAULICS II
(4 credits) - offered Winter only
A continuation of the material introduced in Industrial Hydraulics I and covers the mechanics and design of hydraulic power systems. This course incorporates hands-on exercises with hydraulic trainers which cover the principals of pressure and force. Prerequisite: APR 252 Industrial Hydraulics I with a grade of "C" or better.

APR 254 INDUSTRIAL LUBE FUNDAMENTALS
(3 credits) - offered Winter only
Introduces the apprentice to lubrication and bearings. Proper selection and application of lubricants will be discussed including lubrication programs typically implemented in the industrial environment. Apprentices will learn to identify and properly inspect a variety of types of bearing and seals. Preventive/predictive maintenance will be given special emphasis.

APR 255 INTRODUCTION TO METALLURGY
(3 credits) - offered Spring only
Introduces the properties of various metals and their response to heating and cooling in the manufacturing setting. The metallurgy of welding is stressed with hands-on application to metal theory.

APR 256 ELECTRICITY FOR MAINTENANCE
(4 credits) - offered Fall & Winter only
This course provides the student with a hands-on survey of electricity/electronics. Topics include DC and AC electricity, Ohm's Law, series and parallel circuits, electrical sources, semiconductor electronics and motors. The student will have an opportunity to construct various electrical circuits and test the electrical parameters associated with them, thereby confirming theoretical predictions and gaining knowledge in the proper use of electrical test equipment. Recommended: MTH 060 Introduction to Algebra or equivalent.

APR 257 MATH FOR APPRENTICESHIP
(5 credits) - offered Winter only
This course covers the mathematics needed for the industrial apprenticeship programs by emphasizing applications and problem-solving through studying basic operations with integers, exponents, algebraic expressions, linear equations, dimensional analysis, scientific notation, ratio and proportion, realistic percent problems, and an introduction to practical geometry and trigonometry. Prerequisite: MTH 020 Basic Mathematics with a grade of "C" or better

APR 258 MACHINERY ALIGNMENT
(3 credits) - offered Spring only
Designed to give the student both theory and working knowledge for alignment of rotating equipment by using various methods and procedures. This course is applicable to all types of equipment alignment, from small pumps to large turbines.

APR 259 VIBRATION ANALYSIS AND EQUIPMENT RELIABILITY
(3 credits)
Vibration analysis of rotating machinery allows a trained technician to determine how well a piece of equipment is running during operation by the use of spectrum analysis. It is a non-invasive inspection technique to accurately determine if bearing or gear defects exist from the sound vibrations produced by machinery. The class will discuss the effects of motion and movement pertaining to reliable equipment operation by exploring how defects start in bearings and develop to the point of needing replacement. Ways to reduce the effects of wear are a part of reliability. Prerequisite: APR 257 Math for Apprenticeship or MTH 060 Introduction to Algebra with a grade of "C" or better

APR 260 PUMPS & PUMPING
(3 credits) - offered Fall only
Covers the components, operations and maintenance of centrifugal pumps. Nomenclature of pumps, pump hydraulics and the procedures used in the performance of routine maintenance activities are illustrated. Pump operating conditions and troubleshooting are also covered.

APR 261 NATL ELECTRICAL CODE: EXPANDED EXAM PREP
(3 credits)
Designed for students who have met their electrical code class requirement but have not passed the state electrical code safety exam. The course continues the comprehensive study of the National Electrical Code (NEC). The NEC is the safety manual for electrical installation for the nation.

APR 262 PUMPS & VALVES
(2 credits)
Learn to troubleshoot, maintain and repair industrial pumps and valves. Pump and valve selection is stressed as is print reading and correct installation. Emphasizes internet practical skills that lead to the efficient operation of valve and pumping systems.

APR 264 MANUFACTURING PROCESSES II
(2 credits)
This lecture/lab course provides machine tool technology training and learning opportunities at an intermediate level. Instruction will be given in the safe and efficient operation of machine tools. Theory and practical considerations will be covered. Environmental awareness information is included in this course.

APR 265 MANUFACTURING PROCESSES III
(2 credits)
This lecture/lab course focuses on advanced machine tool operation. Determining machine tool selection, setup and planning for multi-tool projects will be covered. Shop math, including Trigonometry and Elementary Algebra will be used to make calculations. Students will complete a series of machining projects. This course includes instruction on basic Computer Numerical Control (CNC) machining and turning.

AREC: AGRICULTURE BUSINESS MGMT

AREC 211 MANAGEMENT IN AGRICULTURE
(4 credits) - offered Fall & Winter only
Covers agriculture as a business; the decision-making process; tools of decision making; acquiring, organizing and managing land, labor and capital resources; and reasons for success and failure. Students learn teamwork, cooperation and leadership skills through classroom simulation, group activities and assignments.

AREC 213 STARTING AG/HORT BUSINESS
(4 credits) - offered Fall only
An introduction to starting a business in agriculture or horticulture. Skills, models, decision making tools, and strategic alternatives analysis will be discussed and practiced using a number of different computer software programs. Students become familiar with business planning including business structure selection, market assessment, risk analysis and mitigation, financial and tax planning, and Federal programs and incentives. Resources for the entrepreneur are discussed. Agricultural and horticultural case studies and examples are emphasized. Recommended for second year student in the AAS and AS programs or prior Internet research and technical writing experience.

AREC 221 MARKETING IN AGRICULTURE
(3 credits) - offered Fall & Winter only
Covers all aspects of sales and marketing of agricultural products, including fruits and vegetables, cereal grains, milk and dairy products, commercial and purebred livestock. The commodities futures market and other specialized outlets also are included.

ART: ART

ART 102 UNDERSTANDING ART
➢ *(3 credits)*
Surveys the basic elements of visual form. Traditional and contemporary visual arts from around the world are examined in ways designed to provide a framework for meaningful responses to form and content.

ART 115 BASIC DESIGN I: COMPOSITION
➢ *(4 credits)*
Introduction to theory and studio practice in using the principles and elements of design to articulate visual ideas. Focus will be on concepts relating to 2-D design structure. Students will be exposed to art historical references as they relate to concepts as well as being encouraged to write and think critically about art and design. Emphasis will be on instilling sound foundational information in the traditional aspects of design as well as encouraging thoughtful exploration of contemporary design potential.

ART 116 BASIC DESIGN II: COLOR
(4 credits)
Explore basic color theory and systems for organizing color harmonies. Students are exposed to art historical references and simple physics/optics as they relate to color, and encouraged to think and write critically about color as a form of expression. Students also will develop a critical awareness of color in studio practice, learn historical and cultural context of color usage, and discuss color as a means of visual communication. ART 115 recommended, but not required.

ART 117 BASIC DESIGN: 3-DIMENSIONAL
➢ *(4 credits) - offered Spring only*
A beginning course in the principles of 3-dimensional design. Emphasis will be on design problem-solving in a variety of media. Studio work explores basic elements of space, planes, mass, texture. Fundamental course for students interested in fashion design, ceramics, sculpture, architecture and othermore advanced media-oriented courses. Recommended: College level reading and writing skills and ART 115 Basic Design I: Composition and ART 116 Basic Design II: Color strongly recommended.

ART 120 FOUNDATIONS IN DIGITAL IMAGING PROCESSES
➢ *(4 credits) - offered Fall only*
Introduces Adobe Photoshop™ and Adobe Illustrator™ for image manipulation and creation. Students will be introduced to tools used in both applications. Investigate capturing, processing and publishing for different digital image types. Projects will investigate various aspects of shapes, paths, points, fills and gradients. Emphasis will be placed on file management, printing and color management. Student projects, notebooks, reading and exams will be required to complete the class.

ART 121 COMPUTERS IN VISUAL ARTS
(3 credits) - offered Winter only
Advances understanding of Photoshop™ and Adobe Illustrator™ controls. Students will use both applications for drawing and page layout purposes for art, design and the web. Class work includes filters, styles, automation, modifying paths, placing and importing objects, modifying text, and manipulating layers. Student projects, a notebook, class discussion, reading and exams will be required to complete the class. Upon completion of this course students are be ready to take the Adobe Certified Associate Exam for both applications. Prerequisite: ART 120 Foundations in Digital Imaging Processes with a "C" or better

ART 122 FOUNDATIONS IN MOTION 4-D
(3 credits) - offered Fall only
This course is designed to give you a foundational introduction to, and practice with, the aesthetics and histories of video art and its correlations to other digital media. You will explore the technical, theoretical, and conceptual facets of the digital video medium as a means of informing your own art-making process. Photoshop and iMovie will be used as software to compose along with digital SLR cameras. Student projects, notebooks, reading and exams will be required to complete the class. Prerequisites: ART 120 Foundations in Digital Imaging Processes or ART 121 Computers in Visual Arts with a "C" or better

ART 131 DRAWING I
➢ *(4 credits)*
Emphasizes the development of perceptual and technical skills needed to describe 3-D objects on 2-D surfaces. Exposes students to conceptual and technical art references and encourages students to think critically about art and expression as an integral part of learning to draw.

ART 132 DRAWING II
➢ *(4 credits) - offered Winter & Spring only*
Advanced study in the development of composition, drawing technique, and perceptual and technical skills. Exposes students to more challenging art processes and encourages students to think critically about art and expression as their practice regarding drawing is broadened. Prerequisite: ART 131 Drawing I with a grade of "C" or better. Recommended: ART 115 Basic Design I: Composition

ART 154 CERAMICS I
➢ *(4 credits)*
Introduces clay as an expressive material. Emphasis on throwing skills on the wheel with attention to form and function of pots. Clay, glaze and firing techniques included. Note: Offered only at the LBCC Benton Center, Corvallis.

ART 204 HISTORY OF WESTERN ART
➢ *(3 credits) - offered Fall & Winter only*
Studies the history of Western visual art prehistory up to Middle Ages and its significance and relationship to humanity. (Recommended, but not required, that courses be taken in sequence). Recommended: College-level reading and writing skills.

ART 205 HISTORY OF WESTERN ART
➢ *(3 credits) - offered Winter only*
Studies the history of Western visual art of the Middle Ages, Renaissance and Baroque and its significance and relationship to humanity. (Recommended, but not required, that courses be taken in sequence). Recommended: College-level reading and writing skills.

ART 206 HISTORY OF WESTERN ART
➢ *(3 credits) - offered Spring only*
Studies the history of Western visual art of the 17th, 18th, 19th and 20th centuries and its significance and relationship to humanity. (Recommended, but not required, that courses be taken in sequence). Recommended: College-level reading and writing skills.

ART 207 INDIGENOUS ART OF THE AMERICAS
➢ *(3 credits) - offered Fall only*
A historical survey of native arts of South, Central, and North America, including architecture, sculpture, painting, ceramics, textiles, basketry, and beadwork from prehistory to the present. Recommended but not required that courses be taken in sequence. Recommended: College-level reading and writing skills are strongly recommended for success in this course.

ART 234 FIGURE DRAWING
➢ *(4 credits) - offered Fall & Spring only*
An introductory course in drawing the nude figure. Emphasis is on basic anatomical structures, surface topography, foreshortening, composition, and form. Students are exposed to art historical references as they relate to the human form, as well as being encouraged to write and think critically about art and expression. May be repeated for credit. Prerequisite: ART131 Drawing I with a grade of "C" or better. Recommended: ART132 Drawing II, college-level reading and writing skills are strongly recommended for success in this course.

ART 254 CERAMICS II
➢ *(4 credits)*
Provides instruction in clay construction for the experienced student, with advanced throwing and handbuilding, glazing and firing techniques. Note: Offered only at the LBCC Benton Center, Corvallis. Prerequisite: ART 154 Beginning Ceramics I with a grade of "C" or better

ART 263 DIGITAL PHOTOGRAPHY
➢ *(4 credits) - offered Fall & Spring only*
Introduces digital imaging as an expressive medium. Covers the capture, editing and printing of photographic images in the digital environment, including scanning, image manipulation software, and photo quality output. Emphasis on technique, composition and creative expression. Computer lab work included. Recommended: ART115 Basic Design I: Composition and ART116 Basic Design II: Color

ART 281 PAINTING
➢ *(4 credits) - offered Winter only*
Explores visual expression on a two-dimensional surface. Uses oil, acrylic or watercolor paints for spatial development of color, shape and surface. Drawing and design experience recommended. Required: ART 131 Drawing I or instructor's approval. Recommended: Drawing and design experience highly recommended.

AT: ANIMAL TECHNOLOGY

AT 143 INTRO TO HORSE MANAGEMENT
(2 credits) - offered Fall only
Presents facility and herd management techniques in detail. Gives special focus to operating a "green" equine facility. Students learn alternative training methods and are given tools to assess those methods.

AT 154 EQUINE BUSINESS MANAGEMENT
(3 credits) - offered Spring only
Covers the basic concepts of equine business management. The decision-making process, tools of decision making, and types of business organization are covered. Organizing, acquiring and managing land, labor and capital resources are taught. Students learn teamwork, cooperation and leadership skills through classroom activities and assignments.

AT 155 EQUINE DISEASES AND PARASITES
(3 credits) - offered Fall only
Covers the nature of equine diseases and parasites including common infectious and noninfectious diseases, diagnosis, treatment and prevention. Modern drugs and medications, immunology and basic microbiology are also included. Also covers common unsoundnesses of the foot and leg.

AT 156 LIVESTOCK DISEASE & PARASITES
(3 credits) - offered Spring only
Covers the nature of livestock diseases caused by infectious and noninfectious organisms. Nutritional, metabolic and chemical-related diseases are studied as well as internal and external parasites. Emphasis is on diagnosis, control, treatment and prevention of economically important diseases and conditions. Note: Course is offered alternate years only. Offered Spring 2013.

AT 163 SCHOOLING THE HORSE I
(3 credits) - offered Winter only
Provides hands-on horse training experience. The student learns the fundamentals of horse training, including longeing, working in the round pen, driving, bitting, riding, rein aids, lateral work, and basic train techniques. Equipment, safety and horse "psychology" also are taught. Prerequisite: ANS 222 Young Horse Training with a grade of "C" or better

AT 164 SCHOOLING THE HORSE II
(3 credits) - offered Spring only
Provides hands-on horse training experience. The student learns the fundamentals of horse training, including advanced arena and trail work. Equipment, safety and horse "psychology" also are taught. Prerequisite: AT 163 Schooling the Horse I with a grade of "C" or better

AT 277A HORSE BREEDING MANAGEMENT
(2 credits) - offered Winter only
Familiarizes students with all aspects of reproductive management of the horse. Reproductive physiology, estrus cycles, breeding management, mare and foal care, stallion handling and recordkeeping are covered. Prerequisite: ANS 222 Young Horse Training with a grade of "C" or better or instructor's approval.

AT 277B HORSE BREEDING MANAGEMENT LAB
(2 credits) - offered Spring only
Exposes students to hands on" aspects of breeding management including teasing, semen collection and processing, stallion handling, artificial insemination, foaling, foaling management and mare care. Prerequisite: AT 277A Horse Breeding Management with a grade of "C" or better.

AU: AUTOMOTIVE TECHNOLOGY

AU 3.295 MANUAL DRIVE TRAIN & AXLES
(5 credits) - offered Spring only
In this class you add to the skills already taught in AU3.301 Drive Train Service by learning to repair, replace and troubleshoot these advanced computerized systems. Prerequisites: AU3.316 Drive Train Service with a "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.296 ADVANCED STEERING/SUSPENSION/BRAKES SYSTEMS
(6 credits) - offered Winter only
In this class you add to the skills already taught in Suspension, Steering and Braking Systems by learning to repair, replace and troubleshoot these advanced computerized systems. This course also includes 20 hours of advanced electrical troubleshooting techniques. Prerequisites: AU3.319 Suspension, Steering and Braking Systems and AU3.317 Electrical Systems & Engine Performance with a grade "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record.

AU 3.298 ADVANCED ENGINE PERFORMANCE
(6 credits) - offered Fall only
In this class you add to the skills already taught in Electrical Systems & Engine Performance by learning to repair, replace and troubleshoot these advanced computerized systems along with related Emission controls. This course also includes 20 hours of advanced electrical troubleshooting techniques. Prerequisite: AU3.317 Electrical Systems & Engine Performance with a grade of "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.299 ENGINE REPAIR
(5 credits) - offered Fall only
In this class you add to the skills already taught in Drive Train Service by learning to repair, replace and troubleshoot Engine related faults. Prerequisites: AU3.316 Drive Train Service with a grade of "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.300 AUTOMATIC TRANSMISSIONS & TRANSAXLES
(6 credits) - offered Spring only
In this class you add to the skills already taught in Electrical Systems & Engine Performance and Drive Train Service by learning to repair, replace and troubleshoot automatic transmission and transaxles. This course also includes 20 hours of advanced electrical troubleshooting techniques. Prerequisites: AU3.316 Drive Train Service and AU3.317 Electrical Systems & Engine Performance with a grade of "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.303 AUTO HEATING/AIR CONDITIONING
(5 credits) - offered Winter only
In this class you add to the skills already taught in Drive Train Service by learning to repair, replace and troubleshoot these advanced computerized systems. Includes 10 hrs of Advanced Electrical troubleshooting techniques. Prerequisite: AU 3.316 Drive Train Service with a grade of "C" or better. Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisites: two credits of CWE. Recommended: valid driver's license, proof vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.316 DRIVE TRAIN SERVICE
(10 credits) - offered Fall & Winter only
Learn to service the Engine-Transmissions drive train systems and the Heating Ventilation and Air Conditioning Systems. Practice proper technique to repair gaskets, seals and fasteners. Emphasis on using vehicle specific electronic service information to recommend proper service intervals, replacement fluid types, capacities, specifications and procedures. You will practice fluid, filter, belt, and hose replacement along with techniques to identify the source of leaking components. Included will be operational theory for Engines, Manual and Automatic Transmissions, and HVAC systems. Prerequisites: Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisite: AU3.318 Maintenance & Light Repair Practices. Recommended: Valid driver's license, proof of vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html

AU 3.317 ELECTRICAL SYS & ENGINE PERFORMANCE
(10 credits) - offered Winter & Spring only
In this class you learn electrical, ignition and compression systems theory along with the use of electronic diagnostic equipment. You will learn to verify proper engine operation and emission controls and to service the starting, charging and secondary ignition systems. Prerequisites: Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisite: AU3.318 Maintenance & Light Repair Practices Recommended: Valid driver's license, proof of vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html

AU 3.318 MAINTENANCE & LIGHT REPAIR PRACTICES
(3 credits)
Students will practice the Maintenance and Light Repair(MLR) of modern vehicles as outlined by the National Automotive Technicians Education Foundation(NATEF). This class will be taken each term a student is enrolled in the MLR certificate program. All students will first certify in, and then practice, safety precautions necessary to protect yourself as an automotive technician, vehicles, and the environment. Next you will learn computer skills needed certify in the use of modern diagnostic scan tools and electronic service information. Online testing skills needed to become ASE certified as an Automotive Technician will also be practiced. You will practice specific MLR supplemental tasks as outlined by the National Automotive Technicians Education Foundation. Once the above skills are demonstrated you will practice NATEF-MLR tasks taught in automotive courses you have already completed, or are concurrently enrolled in. Prerequisites: Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Recommended: Valid driver's license, proof of vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html

AU 3.319 SUSPENSION, STEERING & BRAKING
(10 credits) - offered Fall & Spring only
In this class you learn Suspension, Steering, and Braking systems theory for modern vehicles. You will certify on equipment commonly used in the Maintenance and Light Repair of these vehicle systems. You will learn alignment theory while practicing the prealignment inspection of suspension and steering system components. You will gain experience servicing wheels, wheel bearings and tires. You will learn to evaluate, remove, replace and recondition brake system components. Prerequisites: Placement Test scores for RD 090 College Success & Reading Strategies, and WR 095 College Writing Fundamentals or higher and placement into MTH 060 Introduction to Algebra. Corequisite: AU3.318 Maintenance & Light Repair Practices. Recommended: Valid driver's license, proof of vehicle insurance, clean driving record as outlined at www.linnbenton.edu/auto/drive_record.html.

AU 3.643 CUSTOMER SERVICE FOR AUTO TECH
(3 credits)
This course helps Automotive technicians to create effective troubleshooting methods that incorporate customer service skills coupled to communicating effectively with people from different social and cultural backgrounds. Included are job search skills for obtaining employment in the industry, as well as repair and design options that promote energy efficiency.

BA: BUSINESS

BA 101 INTRODUCTION TO BUSINESS
(4 credits)
Provides a general survey of the functional and interdependent areas of business management, marketing, accounting and finance, and management information systems. Includes: business trends, operation and management of a business, ethical challenges, environmental responsibility, change, global perspectives and the dynamic roles of management and staff. Incorporates aspects of team interaction and continuous process improvement. Provides the opportunity to explore the Internet and information technology relating to business operations. Prerequisite: WR 095 College Writing Fundamentals with a grade of "C" or better.

BA 111 PRACTICAL ACCOUNTING I
(4 credits) - offered Fall only
Covers the fundamental principles of double-entry accounting, general journals and ledgers, business forms, simple financial statements and the completion of the accounting cycle. Emphasis on cash receipts and payments, payroll accounting, purchases and sales.

BA 112 PRACTICAL ACCOUNTING II
(4 credits) - offered Winter only
Continuing Practical Accounting I with explanation of the accounting cycle. Covers special journals, ledgers, business forms, including vouchers. Emphasizes accounting for partnerships. Prerequisite: BA 111 Practical Accounting I with a "C" or better.

BA 113 PRACTICAL ACCOUNTING III
(4 credits) - offered Spring only
Third course in Practical Accounting series. Includes entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, manufacturing accounting and other managerial accounting procedures. Prerequisite: BA 112 Practical Accounting II with a "C" or better.

BA 120 PROFESSIONAL ACCOUNTING I
(3 credits)
Provides an advanced study of accounting theory and practice for measurement of income and valuation of assets in financial statement presentation. Reviews accounting concepts and alternative approaches to various problems. Prerequisites: BA 113 Practical Accounting III or BA 211 Principles of Accounting: Financial and BA 213 Principles of Accounting: Managerial with a "C" or better.

BA 121 PROFESSIONAL ACCOUNTING II
(3 credits)
Provides an advanced study of accounting theory and practice for measurement of income and valuation of assets in financial statement presentation. Reviews accounting concepts and alternative approaches to various problems. Prerequisites: BA 113 Practical Accounting III or BA 211 Principles of Accounting: Financial and BA 213 Principles of Accounting: Managerial with a "C" or better.

BA 122 PROFESSIONAL ACCOUNTING III
(3 credits)
Continues the Professional Accounting sequence. Emphasizes fund flow analysis, financial ratios, preparing statements from incomplete data, correcting errors in prior year statements and price level changes. Job search skills are also emphasized. Prerequisite: BA 121 Professional Accounting II with a "C" or better.

BA 177 PAYROLL ACCOUNTING
(3 credits)
Designed to teach, reinforce and supplement payroll skills in both manual and computerized formats. Prerequisites: BA 111 Practical Accounting I or BA 211 Principles of Accounting: Financial with a grade of "C" or better

BA 206 PRINCIPLES OF MANAGEMENT
(3 credits)
An overview of the processes involved in managing a business, including business planning, organizing, controlling, staffing and leading. Covers various theories of management with emphasis on managing a business in the local, national or international marketplace. Prerequisite: BA 101 Introduction to Business with a grade of "C" or better.

BA 211 PRINCIPLES OF ACCOUNTING: FINANCIAL
(4 credits)
Presents financial accounting concepts and the use of accounting information in decision making. Includes an overview of the accounting cycle. Prerequisite: MTH 095 Intermediate Algebra and BA 101 Introduction to Business with a grade of "C" or better.

BA 213 PRINCIPLES OF ACCOUNTING: MANAGERIAL
(4 credits)
Demonstrates the use of accounting information to meet organization goals. Methods of extracting accounting information for decision making, management of resources, planning, and product and service costing are covered. Prerequisite: BA 211 Principles of Accounting: Financial or equivalent with a grade of "C" or better.

BA 215 SURVEY OF ACCOUNTING
(4 credits)
Introduces financial accounting techniques, measuring and recording transactions, preparing financial statements, managerial decision making, and planning and control devices, such as budgeting, cost accounting, capital budgeting and break-even analysis. Includes assessment of financial information from managers, lenders, and investors' perspective to understand evaluation of profitable business alternatives. Prerequisite: MTH 065 Elementary Algebra with a grade of "C" or better.

BA 216 COST ACCOUNTING
(3 credits)
Relates theory to practical problems in analysis and control of material, labor and overhead costs in manufacturing. Emphasizes the job cost system. Prerequisites: BA 120 Professional Accounting I or BA 211 Principles of Accounting: Financial with a "C" or better

BA 218 PERSONAL FINANCE PLANNING
(3 credits)
Introduces the concept of managing your money. Topics covered include how to achieve personal wealth by making sound financial choices for spending, borrowing, saving and investing. Prerequisite: MTH 065 Elementary Algebra with a grade of "C" or better. Recommended: MTH 095 Intermediate Algebra

BA 219 GOVERNMENTAL ACCOUNTING
(3 credits)
Course covers accounting theory and procedures for governmental and not-for-profit entitites including budgetary and expenditure control. Prerequisites: BA 113 Practical Accounting III or BA 211 Principles of Accounting: Financial with a "C" or better.

BA 222 FINANCIAL MANAGEMENT
(3 credits)
Covers topics dealing with financing a business, analysis of financial statements, working capital management, short- and long-term financial planning, budgeting and control. Prerequisite: BA 121 Professional Accounting II or BA 211 Principles of Accounting: Financial with a grade of "C" or better.

BA 223 PRINCIPLES OF MARKETING
(4 credits)
Provides a general survey of the nature, significance and scope of marketing. Emphasizes customers (marketing analysis and strategy); business marketing decisions in promotion, distribution and pricing; and control of marketing programs. Prerequisite: BA 101 Introduction to Business with a grade of "C" or better or instructor's approval.

BA 224 HUMAN RESOURCE MANAGEMENT
(3 credits)
Explores the basics of human resource management including selection and hiring, performance appraisal, compensation, staff planning and job analysis. This course also addresses current HR issues such as job search in a difficult economy, discrimination and harassment, workplace violence and on-the-job drug abuse.

BA 226 BUSINESS LAW
(3 credits)
Introduces the framework of the law as it affects a business, including the origins of the American Legal system, how the law operates and how it is enforced. Covers legal regulation of business, including civil and criminal law, formation of contracts, employment law, environmental regulation, real estate and consumer rights.

BA 228 COMPUTERIZED ACCOUNTING
(3 credits)
Provides hands-on computer experience in accounting applications, including general ledger, accounts receivable, accounts payable, payroll, and financial statements. Prerequisites: BA 111 Practical Accounting I or BA 211 Principles of Accounting: Financial with a "C" or better

BA 249 RETAIL MANAGEMENT
(3 credits)
Introduces students to retailing and provides an understanding of the types of businesses, strategies, operations, formats and environments through which retailing is carried out. The course takes a multi-disciplinary approach to consider the process and structure of retailing. Retailing topics to be covered will include: planning, research, consumers' behavior, store design, merchandising strategy, management strategy, promotional strategy and pricing strategy. The global dimensions of retailing as well as the relationship between retailing and our society will be stressed throughout the course.

BA 256 INCOME TAX ACCOUNTING
(3 credits)
Introduces the basics of income tax accounting for individuals and business organizations. Develop an understanding of basic tax calculations and of how the Internal Revenue Code impacts individuals and businesses. Explore methods of incorporating and extracting income tax information from an organization's existing financial accounting system. Prerequisite: BA 120 Professional Accounting I with a grade of "C" or better.

BA 260 ENTREPRENEURSHIP & SM BUSINESS
(4 credits)
Focuses on the entrepreneurial phases associated with the start-up and management of small business. This course will teach future entrepreneurs and managers to recognize opportunities and to use effective entrepreneurial and small business management practices. Prerequisite: BA 101 Introduction to Business with a grade of "C" or better.

BA 275 BUSINESS QUANTITATIVE METHODS
(4 credits)
Presents statistical analysis and quantitative tools for applied problem solving and making sound business decisions. Gives special attention to assembling statistical description, sampling, inference, regression, hypothesis testing, forecasting and decision theory. Prerequisite: MTH 241 Calculus for Biological/ Management/Social Science or MTH 251 Differential Calculus and, MTH 245 Math for Biological/Management/Social Science with a grade of "C" or better, and sophomore standing.

BA 285 BUSINESS RELATIONS:GLOBAL ECON
(4 credits)
Examines culture and cultural diversity and their impact on organizations. Examines issues such as motivation, communication, value development, prejudice and discrimination. Focuses on understanding how and why cultures develop differently, including the impact of economic and political influences on culture. Also focuses on helping students develop an understanding of their own culture and gain an appreciation for and understanding of other cultures.

BA 291 BUSINESS PROCESS MANAGEMENT
(4 credits)
This course integrates management information systems with operations management and introduces a process-oriented view of the flows of materials, information, products and services through/across functions within an organization. Prerequisite: BA 101, Introduction to Business, CIS 125, Introduction to Software Applications, and BA 275, Business Quantitative Methods with a grade of "C" or better.

BA 280A CWE ACCOUNTING TECHNOLOGY
(2-14 credits)
An instructional program designed to give students practical experience in supervised employment related to accounting. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Required: CWE coordinator approval.

BA 280B CWE BUSINESS MANAGEMENT
(2-14 credits)
Gives students practical experience in supervised employment related to business management. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Required: CWE coordinator approval.

BA 280C CWE MARKETING
(1-14 credits)
Gives students practical experience in supervised employment related to business marketing. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Required: CWE coordinator's approval.

BI: BIOLOGY

BI 101 GENERAL BIOLOGY
● *(4 credits)*
An introductory lab science course intended for majors in disciplines other than the biological sciences. Topics presented include ecological principles, biodiversity, and impact of human activities on the environment. Additionally the course is designed to help students discover the applications of science to their everyday lives, as well as provide elements of critical thinking. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include: Environmental Issues, Oregon Ecology, Marine Biology, and Marine Biology for Education Majors or General Biology. Students may select the theme that interests them most, but the course may be used only once to meet graduation requirements. Biology 101, 102, and 103 need not be taken in numerical order. Recommended: MTH 065 Elementary Algebra, college-level reading and writing strongly recommended. This course includes a laboratory component.

BI 102 GENERAL BIOLOGY
● *(4 credits)*
An introductory lab science course intended for majors in disciplines other than the biological sciences. Topics presented include biological molecules, cellular biology, genetics and inheritance, biotechnology and evolutionary processes. Additionally the course is designed to help students discover the applications of science to their everyday lives, as well as provide elements of critical thinking. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include Microbial World and General Biology. Students may select the theme that interests them most, but the course may be used only once to meet graduation requirements. Biology 101, 102 and 103 need not be taken in numerical order. Recommended: MTH 065 Elementary Algebra, college-level reading and writing strongly recommended for success in this course. This course includes a laboratory component.

BI 103 GENERAL BIOLOGY
● *(4 credits)*
An introductory lab science course intended for majors in disciplines other than the biological sciences. Topics presented include plant anatomy and physiology, human anatomy and physiology, and human diseases. Additionally the course is designed to help students discover the applications of science to their everyday lives, as well as provide elements of critical thinking. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include: Nutrition and Health, Human Body, Plant and Animal Systems, Dynamic Plant and General Biology. Students may select the theme that interests them most, but the course may be used only once to meet graduation requirements. Biology 101, 102 and 103 need not be taken in numerical order. Recommended: MTH 065 Elementary Algebra, college-level reading and writing strongly recommended for success in this course. This course includes a laboratory component.

BI 112 CELL BIOLOGY FOR HEALTH OCCUP
(4 credits)
Introduces the Health Occupations student to the generalized human cell, including its structure, function, basic genetics and reproduction. The chemical and physical processes that affect the cell and its components will be examined throughout the course. This course covers the basic principles and vocabulary to prepare students for the study of human organ systems that occur in Human Anatomy and Physiology BI 231, BI 232 and BI 233. College-level reading and writing are strongly recommended for success in this course.

BI 121 ESSENTIALS OF HUMAN ANATOMY & PHYSIOLOGY I
(4 credits) - offered Fall only
The first in a 2-course series (BI 121, BI 122) that covers the basic structures and functions of the human body. This course addresses the following body systems: skeletal, muscular, integumentary and nervous. It includes an overview of kinesiology. Required: Admission into the OTA program.

BI 122 ESSENTIALS OF HUMAN ANATOMY & PHYSIOLOGY II
(4 credits) - offered Winter only
The second in a 2-course series (BI 121, BI 122) that covers the basic structures and functions of the human body. This course addresses the following body systems: cardiovascular, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive. Required: Admission into the OTA program.

BI 200 PRIN OF ECOLOGY: FIELD BIOLOGY
● *(4 credits)*
Provides an introduction to the concepts of ecology. The broad concepts of ecology are emphasized in a field setting using natural ecosystems as a model. The classroom lecture component will cover concepts of ecology and diversity of life and the field component allows the surveying of the plants and animals in their interaction with the environment. Ecological concepts are examined in detail using student-collected field data.

BI 211 PRINCIPLES OF BIOLOGY
● *(4 credits) - offered Fall & Winter only*
One of three introductory courses intended for science majors: biochemistry, botany, zoology, forestry, microbiology, fisheries and wildlife, agriculture, pre-medical, pre-dental, pre-veterinary, pre-pharmacy, biology, etc. A survey of biodiversity: the major groups of organisms, their classificiation, and their evolutionary relationships. Biology 211, 212 and 213 need not be taken in numerical order. This course includes a laboratory component. Prerequisite: CH 112 Chemistry for Health Occupations or CH 150 Preparatory Chemistry or CH 121 College Chemistry (only offered at OSU) or CH 221 General Chemistry. This course includes a laboratory component. All prerequisites must be completed with a grade of "C" or better.

BI 212 PRINCIPLES OF BIOLOGY
● *(4 credits) - offered Winter & Spring only*
One of three introductory courses intended for science majors: biochemistry, botany, zoology, forestry, microbiology, fisheries and wildlife, agriculture, pre-medical, pre-dental, pre-veterinary, pre-pharmacy, biology, etc. Focuses on cell structure and metabolism and the structure and function of plants and animals. Biology 211, 212 and 213 need not be taken in numerical order. This course includes a laboratory component. Prerequisite: CH 112 Chemistry for Health Occupations or CH 150 Preparatory Chemistry or CH 121 College Chemistry (only offered at OSU) or CH 221 General Chemistry. This course includes a laboratory component. All prerequisites must be completed with a grade of "C" or better.

BI 213 PRINCIPLES OF BIOLOGY
● *(4 credits) - offered Fall & Spring only*
One of three introductory courses intended for science majors: biochemistry, botany, zoology, forestry, microbiology, fisheries and wildlife, agriculture, pre-medical, pre-dental, pre-veterinary, pre-pharmacy, biology, etc. Focuses on genetics, evolution, and ecology. Biology 211, 212 and 213 need not be taken in numerical order. This course includes a laboratory component. Prerequisite: CH 112 Chemistry for Health Occupations or CH 150 Prepartory Chemistry or CH 121 College Chemistry (only offered at OSU) or CH 221 General Chemistry. This course includes a laboratory component. All prerequisites must be completed with a grade of "C" or better.

BI 231 HUMAN ANATOMY & PHYSIOLOGY
● *(5 credits)*
The first term of an introduction to the structure and function of the human body. This course is of particular benefit to students in the health professions and physical education, but is valuable to others interested in the anatomy and physiology of the body. Focuses on the structure and function of the cell, basic biochemistry, tissues, skin, skeleton and muscles. This course includes a laboratory component. Prerequisites: MTH 065 Elementary Algebra and BI 112 Cell Biology for Health Occupations with a grade of "C" or better or BI 212 Principles of Biology with a grade of "C" or better, or equivalent.

BI 232 HUMAN ANATOMY & PHYSIOLOGY
● *(5 credits)*
The second term of an introduction to the structure and function of the human body. Benefits students in the health professions and physical education, but is valuable to others interested in the anatomy and physiology of the body. Focuses on the nervous system, endocrine system, and cardiovascular system. Includes a laboratory component. Prerequisite: BI 231 Human Anatomy and Physiology with a grade of "C" or better. Students who are currently enrolled in BI 231 or BI 232 will be allowed to register for the next sequence course (BI 232 or BI 233) before priority registration for continuing students. Current BI 231 and BI 232 faculty will announce the day, time and restrictions for this special registration day. Students will be permitted to register for only the Anatomy and Physiology class at this time. All holds on student accounts must be resolved prior to this registration day. Students must earn a grade of "C" or better in BI 231 or BI 232 to move to the next sequence course. The week after grades are submitted, students who earned less than a "C" in BI 232 or BI 233 will be dropped from the pre-registered sequence course.

BI 233 HUMAN ANATOMY & PHYSIOLOGY
● *(5 credits)*
The third term of an introduction to the structure and function of the human body. This course is of particular benefit to students in the health professions and physical education, but is valuable to others interested in the anatomy and physiology of the body. Focuses on the lymphatic system, respiratory system, urinary system, fluid and electrolyte balance, digestive system and reproductive system. Prerequisite: BI 232 Human Anatomy and Physiology with a grade of "C" or better. This course includes a laboratory component.

BI 234 MICROBIOLOGY
● *(4 credits)*
An introductory lecture/laboratory course covering all microbial life, with emphasis on bacterial forms. This course covers cell structure, metabolism, genetics, growth, and control of growth. We also will investigate host-pathogen relationships that lead to disease and health. In the laboratory, students learn basic microscope and culture procedures and will investigate the occurrence and behavior of microorganisms in our environment.

CA: CULINARY ARTS

CA 101 CULINARY ARTS PRACTICUM I
(7 credits) - offered Fall only
Practicum classes I, II, and III provide a comprehensive hands-on sequence designed to develop, through practice, the basic skills and attitudes necessary for a successful career in Food Service. Stations include Baking, Pantry, Garde Manger, Soups and Sauces, Entree Cookery, Vegetable Cookery, Healthy and Natural Foods, and Dining Room. High professional standards and attitudes are stressed. These practicums are designed for the serious career-oriented individual. Co-Requisites: CA 111 Foodservice Safety and Sanitation; CA 112 Stations, Tools and Culinary Techniques

CA 102 CULINARY ARTS PRACTICUM II
(8 credits) - offered Winter only
The Practicum classes I, II, and III provide a comprehensive hands-on sequence designed to develop, through practice, the basic skills and attitudes necessary for a successful career in Food Service. Stations include Baking, Pantry, Garde Manger, Soups and Sauces, Entree Cookery, Vegetable Cookery, Healthy and Natural Foods and Dining Room. High professional standards and attitudes are stressed. These practicums are designed for the serious career-oriented individual. Prerequisite: CA 101 Culinary Arts Practicum I with a grade of "C" or better

CA 103 CULINARY ARTS PRACTICUM III
(8 credits) - offered Spring only
The Practicum classes, I, II and III provide a comprehensive hands-on sequence designed to develop, through practice, the basic skills and attitudes necessary for a successful career in Food Service. Stations include Baking, Pantry, Garde Manger, Soups and Sauces, Entree Cookery, Vegetable Cookery, Healthy and Natural Foods, and Dining Room. High professional standards and attitudes are stressed. These practicums are designed for the serious career-oriented individual.

CA 111 FOODSERVICE SAFETY AND SANITATION
(1 credit) - offered Fall only
This course helps students gain an awareness of the hazards of poor sanitation and safety practices and how to properly address those issues. Students, through lecture, assigned reading and case study, learn the essentials of food handling, proper personal hygiene, equipment handling and facilities management, environmental responsibility, ethics, how to control and eliminate foodborne illness, and proper handling of hazardous materials.

CA 112 STATIONS, TOOLS, AND CULINARY TECHNIQUES
(3 credits) - offered Fall only
A program orientation course providing students a thorough first exposure to the history of food service; the identification and use of common ingredients; professional work habits and attitudes; and to a basic understanding of equipment, knife handling techniques and culinary terms and methods. Co-Requisite: CA 101 Culinary Arts Practicum I, CA 111 Foodservice Safety and Sanitation

CA 201 CULINARY ARTS CAREER PLANNING
(1 credit) - offered Spring only
Students will prepare for entering the Culinary workforce. Students will organize a search for work including the preparation of a resume for use in mock interview, writing a letter of application, and completing a standard application form. They will prepare a five-year career plan and will explore different career opportunities using resources such as the Internet, industry periodicals, and employment department career information.

CA 8.301 CULINARY ARTS CAREER PLANNING
(1 credit) - offered Spring only
Prepares the student for entering the culinary work force. Students create a r'sum? for use in a mock interview. They prepare a five-year career plan and explore different career opportunities using resources such as the Internet, industry periodicals, and employment department career information.

CA 8.302 APPLIED MATH FOR CULINARY ARTS
(3 credits)
Related instruction course for the Associate of Applied Science degree. Includes operations with multiplication, percentages, fractions, conversions, decimals and ratios. Further emphasis on measuring skills and yield percentages. Explores the use of common math functions in relation to recipe costing, cost per unit, cost analysis, and creating budgets. Includes the use of common measuring tools employed in the kitchen and examines the types of computation and problem solving methods utilized in kitchen scenarios.

CA 8.309 PURCHASING FOR CHEFS
(2 credits) - offered Spring only
Through lecture, role-playing, research and written assignments, students learn to write specifications for projects and skills needed for working with purveyors. All reports, menus and projects will be completed using a word processing program. Students will also learn standard storeroom procedures.

CA 8.321 ADVANCED COOKING MANAGEMENT I
(7 credits) - offered Fall only
From the fundamental skills attained in Practicum I, II & III, students refine and advance their culinary skill to include a la carte, front line cookery, advanced baking and pastry, advanced garde manger and dining room management skills. Students are directly involved in running a working restaurant, giving them a realistic experience while honing work habits and awareness of production demands. Prerequisite: Grade of "B" or higher in CA 101 Culinary Arts Practicum I, CA 102 Culinary Arts Practicum II, and CA 103 Culinary Arts Practicum III. (Exceptions may be made on a case by case basis.)

CA 8.322 ADVANCED COOKING MANAGEMENT II
(7 credits) - offered Winter only
From the fundamental skills attained in Practicum I, II & III, students refine and advance their culinary skill to include a la carte, front line cookery, advanced baking and pastry, advanced garde manger and dining room management skills. Students are directly involved in running a working restaurant,giving them a realistic experience while honing work habits and awareness of production demands. Prerequisite: CA 8.321 Advanced Cooking Management I with a grade of "C" or better. Required: "B" or higher grade in CA 101 Culinary Arts Practicum I, CA 102 Culinary Arts Practicum II, and CA 103 Culinary Arts Practicum III. (Exceptions may be made on a case by case basis.)

CA 8.323 ADV COOKING MANAGEMENT III
(7 credits) - offered Spring only
From the fundamental skills attained in Practicum I, II & III, students refine and advance their culinary skill to include a la carte, front line cookery, advanced baking and pastry, advanced garde manger and dining room management skills. Students are directly involved in running a working restaurant,giving them a realistic experience while honing work habits and awareness of production demands. Prerequisites: CA 8.322 Advanced Cooking Management II. Required: "B" or higher grade in CA 101 Culinary Arts Practicum I, CA 102 Culinary Arts Practicum II, and CA 103 Culinary Arts Practicum III. (Exceptions may be made on a case by case basis.)

CA 8.341 SOUPS AND SAUCES
(3 credits) - offered Winter only
Students study and practice the art of classical and modern, soup and sauce making from varied national and ethnic cuisines. Hands-on class activities stress both large scale and a la carte production techniques.

CA 8.344 BEER & FOOD PAIRING
(3 credits) - offered Spring only
Explore the use of beer in the preparation and pairing of food. Includes experimentation and tasting in a hands-on environment. Also learn to identify the characteristics of food and match them with complementary beer. Required: All students must be over 18 years of age (proof of age will be required).

CA 8.350 BANQUETS & BUFFETS LAB A
(1 credit) - offered Winter only
Provides students the opportunity to participate in actual banquet and buffet functions, from small caterings to very large banquets. Set up, production load, banquet and catering plans, service techniques, organizational skills, costs and breakdown systems are presented.

CA 8.351 BANQUETS & BUFFETS LAB B
(2 credits) - offered Spring only
Provides students the opportunity to participate in actual banquet and buffet functions, from small caterings to very large banquets. Set up, production load, banquet and catering plans, service techniques, organizational skills, costs and breakdown systems are presented.

CA 8.352 BANQUETS & BUFFETS LAB C
(1 credit) - offered Winter only
Provides students the opportunity to participate in actual banquet and buffet functions, from small caterings to very large banquets. Set up, production load, banquet and catering plans, service techniques, organizational skills, costs and breakdown systems are presented. Prerequisite: CA 8.350 Banquets and Buffet Lab A and CA 8.351 Banquets and Buffet Lab B with a grade of "C" or better.

CA 8.353 BANQUETS & BUFFETS LAB D
(2 credits) - offered Spring only
Provides students the opportunity to participate in actual banquet and buffet functions, from small caterings to very large banquets. Set up, production load, banquet and catering plans, service techniques, organizational skills, costs and breakdown systems are presented. Students will exercise leadership skills as they actively participate, communicate and help others learn as a member of a team. Students will provide service and satisfy the expectations of diverse groups of customers. Prerequisite: CA 8.350 Banquets and Buffet Lab A and CA 8.351 Banquets and Buffet Lab B with a grade of "C" or better.

CA 8.354 BANQUETS & BUFFETS LAB E
(1 credit) - offered Fall only
Covers the planning and execution of a banquet, buffet or catering as a member of a team. Students evaluate food for taste arrangement, adherence to theme, cost, etc. Students learn set-up, service and clean up procedures for a large food function. Required: Instructor approval.

CA 8.355 BANQUET & BUFFET PLANNING
(1 credit) - offered Winter only
To be taken in conjunction with CA 8.353 Banquet and Buffet Lab D. Students participate in the planning and execution of spring term banquets, food show and other special events. Prerequisites: CA 8.350 Banquets and Buffet Lab A; CA 8.351 Banquets and Buffet Lab B with a grade of "C" or better.

CA 8.368 CREATING THE MENU
(2 credits) - offered Fall only
Students are expected to create a menu and support documentation for a restaurant or other food operation using the skills and concepts presented in this class. Throughout the term students will work on components of the final project. Prerequisite: CA 8.373 Costing with a grade of "C" or better.

CA 8.373 COSTINGS
(1 credit) - offered Spring only
Teaches theory and practice of determining food cost for restaurant and institutional cooking.

CA 8.380 PLATED DESSERTS
(3 credits) - offered Winter only
An advanced pastry class focusing on the techniques for plate presentation of chocolate, confections, and frozen desserts. This course will cover chocolate tempering, chocolate decorating, and garnishes to maximize impact. We will discuss sugar work and cover techniques for making garnishes. This course will also cover equipment, ingredients, and trouble shooting for confection work. We will cover freezing, mixing, and consistency for frozen dessert products.

CA 8.381 FRUIT DESSERTS AND LAMINATED DOUGHS
(3 credits)
An advanced course focusing on fruit desserts and presentation techniques. We will integrate laminated doughs for structure, appearance, and flavor.

CA 8.382 CHOCOALTE, CONFECTIONS AND FROZEN DESSERTS
(3 credits) - offered Spring only
An advanced pastry class focusing on the techniques chocolate, confections and frozen desserts. This course will cover chocolate tempering, chocolate decorating, truffles and confections. We will discuss sugar work, cover techniques for making candy. This course will also cover equipment, ingredients and trouble shooting for confection work. We will cover freezing, mixing and consistency for frozen dessert products.

CA 8.383 THE BREADS OF FRANCE
(3 credits) - offered Spring only
An advanced bread class focusing on the techniques of the French Boulanger. This course will cover breads from cities of France and cover the techniques that make these breads unique. This course will also cover equipment, ingredients, and trouble shooting for the perfect loaf of French bread.

CA 8.384 ADVANCED CAKES AND PASTRIES
(3 credits) - offered Winter only
An advanced cake and pastry cake course focusing on complex cake construction, Bavarians, mousses, decorating, and presentation techniques.

CA 8.385 ADVANCED BREADS
(3 credits) - offered Fall only
An advanced bread class focusing on the ten steps of yeast production, and techniques for roll-in doughs, enriched doughs, pre-fermentation, sourdough, bagels, and flatbreads.

CA 8.386 PRESERVING & CANNING HARVEST
(2 credits) - offered Fall only
This is a hands-on kitchen canning and preservation course. This course will focus on extending the shelf life of foods and providing nutrition throughout the year. This is a class focusing on the science of canning and the art of tastefully preserving food products for entertaining and long term storage.

CA 8.409 MEATS
(3 credits) - offered Fall only
Addresses fabricating primal and sub-primal cuts of beef, pork and lamb for profitable use in restaurants. Includes knife techniques, portion cutting, and safe and sanitary meat handling and storage. Proper cooking procedures and techniques also are presented. Handling and tasting of meat products is an integral and required part of this class. Prerequisite: CA 103 Culinary Arts Practicum III with a grade of "C" or better.

CA 8.414 PRESENTATION/GARDE MANGER
(4 class hrs/wk, 2 cr) offered Spring only
Traditional and contemporary presentation techniques are presented and practiced as part of this hands-on class. Charcuterie, horsd'oeuvres, appetizers and patés are explored.

CA 8.421 WORLD CUISINE
(2 credits) - offered Winter only
Focuses on styles and flavor components of a variety of regional and national cuisines. The class will cover influences of geography, religion and culture on cuisine. Students will write reports, design menus and complete other assignments that focus on world cuisine.

CE: CIVIL ENGINEERING-VOCATIONAL

CE 6.488 ADVANCED SURVEYING & LAND DEVELOPMENT
(4 credits) - offered Fall only
Advanced course in surveying and land development. Emphasizes land and construction surveying and the process of developing land. Prerequisite: EG 4.456 Civil Drafting Lab and CEM 263 Plane Surveying with a grade of "C" or better. Recommended: Completion of MTH 111 College Algebra.

CEM: CIVIL ENGINEERING

CEM 263 PLANE SURVEYING
(3 credits) - offered Spring only
Basic course in surveying techniques. Includes distance measuring, leveling, cross sectioning, traversing, topographic surveying, use of surveying instruments, GPS, and office procedures. Required: Completion of MTH 111 College Algebra and familiarity with Right Angle Trigonometry.

CG: COUNSELING/GUIDANCE

CG 100 COLLEGE SUCCESS STRATEGIES
(3 credits)
Combines academic study skills with the personal success skills needed to be successful in a community college. Academic study skills are based on knowledge about how we learn and include note taking, reading and studying textbooks, and preparing for and taking tests. Personal success skills include strengthening personal responsibility, self-motivation, self-management, and self-advocacy. Prerequisite: Placement into RD 090 College Success & Reading Strategies.

CG 111 APPLIED COLLEGE LEARNING SKILLS FOR ACADEMIC SUCCESS
(1 credit)
Students will learn and apply academic strategies skills required for success in college.

CH: CHEMISTRY

CH 112 CHEM FOR HEALTH OCCUPATIONS
● *(5 credits) - offered Fall & Spring only*
Introductory topics in inorganic chemistry selected to prepare students entering Nursing, Emergency Medical Technician, Radiation Technicians and related Health Occupations programs. Includes a laboratory component. Corequisite: MTH 095 Intermediate Algebra

CH 121 COLLEGE CHEMISTRY
● *(5 credits)*
The first of a three-term sequence for students in science-related fields, including health occupations, agriculture, animal science, fisheries and wildlife, life sciences, education, general science, and earth sciences. Topics include measurement, chemical calculations, chemical formulas and equations, chemical reactions, gases, thermochemistry, atomic structure, and periodicity. Prerequisite: MTH 095 Intermediate Algebra with a grade of "C" or better.

CH 150 PREPARATORY CHEMISTRY
(3 credits)
As needed Introduces chemistry for science, engineering and the professional health occupations. Designed to meet the prerequisite for CH 221, this fast-moving curriculum covers the basic tools offered in a one-year high school chemistry course. A good selection for students who need a refresher in chemistry or have little or no background in chemistry and need to meet the prerequisite for CH 221. Topics emphasized include chemical calculations and problem-solving techniques encountered in both inorganic and organic chemistry. There is no lab with CH 150. Prerequisite: MTH 095 Intermediate Algebra with a grade of "C" or better.

CH 201 CHEMISTRY FOR ENGINEERING MAJORS I
● *(5 credits) - offered Winter only*
The first of a two-term sequence of selected chemistry topics for pre-engineering students. Designed specifically to provide engineering majors a fundamental understanding of chemical reactions and scientific measurement. This course will introduce students to principles, laws and equations that govern our understanding of chemical combination. Prerequisites: Completion of high school chemistry with a grade of "C" or better and a passing score on the chemistry entrance exam; or CH 150 Preparatory Chemistry with a grade of "C" or better or CH 121 College Chemistry with a grade of "C" or better, or CH 112 Chemistry for Health Occupations with a grade of "C" or better; MTH 095 Intermediate Algebra with a grade of "C" or better. Corequisite: MTH 111 College Algebra. This course includes a laboratory component.

CH 202 CHEMISTRY FOR ENGINEERING MAJORS II
● *(5 credits) - offered Spring only*
The second of a two-term sequence designed specifically to provide engineering majors with a fundamental understanding of chemical reactions and scientific measurement. This course will introduce students to principles, laws and equations that govern our understanding of chemical combination. Prerequisites: CH 201 Chemistry for Engineering Majors I, MTH 111 College Algebra with a grade of "C" or better. This course includes a laboratory component.

CH 221 GENERAL CHEMISTRY
● *(5 credits) - offered Fall & Winter only*
A general chemistry sequence for students majoring in most sciences, pharmacy, and chemical engineering. This is the first of a three-term sequence for students in science, engineering and the professional health programs. Prerequisite: Completion of high school chemistry with a grade of "C" or better and a passing score on the chemistry entrance exam; or CH 150 Preparatory Chemistry with a grade of "C" or better, or CH 121 College Chemistry with a grade of "C" or better or CH 112 Chemistry for Health Occupations with a grade of "C" or better; MTH 095 Intermediate Algebra with a grade of "C" or better. Corequisite: MTH 111 College Algebra. This course includes a laboratory component.

CH 222 GENERAL CHEMISTRY
● *(5 credits) - offered Winter & Spring only*
A general chemistry sequence for students majoring in most sciences, pharmacy, and chemical engineering. The second course of a three-term sequence for students in science, engineering and the professional health programs. Includes a laboratory component. Prerequisites: CH 221 General Chemistry with a grade of "C" or better and MTH 111 College Algebra with a grade of "C" or better.

CH 223 GENERAL CHEMISTRY
● *(5 credits) - offered Spring & Summer only*
A general chemistry sequence for students majoring in most sciences, pharmacy, and chemical engineering. Third course of a three-term sequence for students in science, engineering and the professional health programs. Includes a laboratory component. Prerequisite: CH 222 General Chemistry with a grade of "C" or better

CH 241 ORGANIC CHEMISTRY
● *(4 credits) - offered Fall only*
The first course of a three-term sequence for students in the sciences, chemical engineering, and professional health programs. Topics include nomenclature, in-depth treatment of major classes of organic compounds, mechanisms and synthesis. Includes a laboratory component. May be eligible for upper-division credit at a four-year institution. For details, please see the program description for an Associate of Science with an emphasis in Chemistry. Prerequisite: CH 123 College Chemistry or CH 223 General Chemistry with a grade of "C" or better.

CH 242 ORGANIC CHEMISTRY
● *(4 credits) - offered Winter only*
The second course of a three-term sequence for students in the sciences, chemical engineering, and professional health programs. Topics include nomenclature, in-depth treatment of major classes of organic compounds, spectroscopy, mechanisms and synthesis. Includes a laboratory component. May be eligible for upper-division credit at a four-year institution. For details, please see the program description for an Associate of Science with an emphasis in Chemistry. Prerequisite: CH 241 Organic Chemistry with a grade of "C" or better.

CH 243 ORGANIC CHEMISTRY
● *(4 credits) - offered Spring only*
The third course of a three-term sequence for students in the sciences, chemical engineering, and professional health programs. Topics include nomenclature, in-depth treatment of major classes of organic compounds, spectroscopy, mechanisms and synthesis. Includes a laboratory component. This course may be eligible for upper division credit at a four-year institution. For details, please see the program description for an Associate of Science with an emphasis in Chemistry. Prerequisite: CH 242 Organic Chemistry with a grade of "C" or better.

CIS: COMPUTER INFORMATION SYSTEMS

CIS 125 INTRO TO SOFTWARE APPLICATIONS
(3 credits)
Designed to use technology as a productivity tool within a business environment through the use and integration of various software packages. Students will use word processing software for formatting business correspondence, creating tables, multipage documents, graphical elements, mail merge, and other features. Spreadsheet software will be used to create formulas, use built-in functions for calculations, create charts and graphs, reference other worksheets, create absolute and relative cell references as well as other formatting and editing features. Presentations software will be used to produce, edit, and create visually compelling presentations for business outcomes. Prerequisite: CS 120 Digital Literacy with a grade of "C" or better.

CIS 125D INTRODUCTION TO DATABASES
(1 credit)
Introduces database software and how it is utilized in business and personal applications to organize information, produce reports, prepare data entry forms, and store data in retrievable format using filters and queries available in the software. Prerequisite: CS 120 Digital Literacy with a grade of "C" or better.

CIS 135S ADVANCED SPREADSHEETS
(3 credits) - offered Fall & Spring only
Provides advanced techniques and features of spreadsheet software for business applications and financial analysis. Uses the applications expected in the business environment, including but not limited to an operating budget, and following a company's stock price and other information. New concepts to be introduced include break-even analysis, financial projections, statistical analysis, and data and pivot tables to summarize data. Prerequisite: CIS 125 Introduction to Software Applications or OA 120 Information Technology for Adminstrative Professionals; or OA 131O Windows & Computer Fundamentals and OA 131S Excel Fundamentals with a grade of "C" or better.

CIS 151 INTRODUCTION TO NETWORKS
(4 credits) - offered Fall only
The first course of a two-part sequence in a Cisco curriculum directed toward the Cisco Certified Entry level Network Technician Certification (CCENT) and the first course in a four-part sequence directed toward the Cisco Certified Network Associate Certification (CCNA). Introduces students to the architecture, structure, functions, components, and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Corequisites: CIS 125 Introduction to Software Applications with a minimum "C" grade or equivalent computer experience as determined by a Computer Systems advisor and MTH 065 Elementary Algebra.

CIS 152 ROUTING & SWITCHING ESSENTIALS
(4 credits) - offered Winter only
The second course of a two-part sequence in a Cisco curriculum directed toward the Cisco Certified Entry level Network Technician Certification (CCENT) and the second course in a four-part sequence directed toward the Cisco Certified Network Associate Certification (CCNA). Describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Prerequisite: CIS 151 Networking Essentials with a grade of "C" or better.

CIS 153 SCALING NETWORKS
(4 credits) - offered Spring only
The third course in a four-part sequence directed toward the Cisco Certified Network Associate Certification (CCNA). Describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Prerequisite: CIS 152 Network Router Configurations with a grade of "C" or better.

CIS 154 CONNECTING NETWORKS
(4 credits) - offered Fall only
The last course in a four-part sequence directed toward the Cisco Certified Network Associate Certification (CCNA). Discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network Prerequisite: CIS 153 Scaling Networks with a grade of "C" or better.

CIS 195 WEB DEVELOPMENT I
(4 credits) - offered Winter only
Introduces web design through an examination of (X)HTML, CSS and relevant computer graphic file formats. Students will learn to create standards-compliant, accessible web pages using modern design techniques and technologies. Emphasis will be placed on learning to write (X)HTML and CSS script without the help of advanced web design software; writing accessible, standards compliant code; and separating content, presentation and action. Prerequisite: experience as determined by a Computer Systems Department advisor.

CIS 196 WEB DEVELOPMENT II
(4 credits) - offered Fall only
Introduces web design through an examination of HTML, CSS and relevant computer graphic file formats. Students will learn to create standards-compliant, accessible web pages using modern design techniques and technologies. Emphasis will be placed on learning to write HTML and CSS without the help of advanced web design software; writing accessible, standards compliant code; and separating content, presentation and action. Prerequisite: CIS 195 Web Development I with a grade of "C" or better or instructor approval.

CIS 197 CONTENT MANAGEMENT SYSTEMS
(4 credits) - offered Spring only
Content management systems are software system providing website authoring, collaboration, and administration tools designed to allow users with little knowledge of web programming languages or markup languages to create and manage website content with relative ease. Web developers are often tasked with setting up and maintaining such systems and their constituent parts. Prerequisite: CS 133J Javascript with a "C" or better.

CIS 295 WEB DEVELOPMENT USING THE MICROSOFT STACK
(4 credits) - offered Winter only
A exploration of web development utilizing development technologies and platforms from Microsoft. Prerequisite: CS 233J JavaScript II with a grade of "C" or better.

CIS 296 WEB DEVELOPMENT USING OPEN-SOURCE SOFTWARE
(4 credits) - offered Winter only
Provides hands-on experiences developing dynamic Web applications using selected Open-Source operating systems such as Linux, Web servers such as Apache, databases such as MySQL, programming languages such as PHP and Python, and development frameworks. Prerequisites: CS 140U Fundamentals of Linux/UNIX, CS 161 Introduction to Computer Science (Java), CIS 195 Web Development I, all with a grade of "C" or better, or equivalent as determined by the instructor. Recommended: Concurrent enrollment in CS 275 Database Systems: SQL and Oracle.

CJ: CRIMINAL JUSTICE

CJ 100 SURVEY OF CRIMINAL JUSTICE SYS
■ *(3 credits)*
Introduction to the criminal justice system. Explores the components of the criminal justice system and how the components of the system operate together.

CJ 101 INTRODUCTION TO CRIMINOLOGY
■ *(3 credits)*
Presents an overview of criminology, research, data gathering and analysis. Introduces theoretical perspectives on the nature of crime, criminals and victimization and identifies current trends and patterns of crime. Development and conceptualization of crime, including historical perspectives, social and legal definition and classifications. Offered as needed.

CJ 110 INTRO TO LAW ENFORCEMENT
■ *(3 credits)*
Introduces students to the law enforcement profession. The historical development of policing in America, the police role, and the various branches and divisions of law enforcement are examined, as well as corruption and stress. The social dimensions of policing in America are examined so students will understand the hazards inherent in the profession. Recommended: WR121 English Composition

CJ 112 POLICE FIELD OPERATIONS
■ *(3 credits)*
Introduces the nature and purpose of patrol activities, including routine and emergency procedures, types of patrol, arrest procedures and field interviews. Covers equipment, technology and vehicle operation. Emphasizes report documentation, courtroom testimony and police tactical communications.

CJ 120 INTRO TO THE JUDICIAL PROCESS
(3 credits)
Surveys the process of justice from arrest through rehabilitation; the jurisdiction of city, county, state and federal police agencies, and the constitutional rights of individuals using the medium of the mock trial. Students study, investigate and present a criminal trial, acting as ''lawyers'', witnesses and investigators.

CJ 130 INTRODUCTION TO CORRECTIONS
■ *(3 credits)*
Examines the total correctional process from law enforcement through administration of justice, probation, prisons and correctional institutions, and parole.

CJ 132 INTRO TO PAROLE AND PROBATION
(3 credits)
Introduces the use of parole and probation as a means of controlling felons. Covers contemporary functioning of parole and probation agencies.

CJ 198 INDEPENDENT STUDY:CRIMINAL JUS
(1 credit)
Students examine in depth a selected criminal justice topic. Develops skills in independent research. Corequisite: WR 123 English Composition: Research.

CJ 201 JUVENILE DELINQUENCY
■ *(3 credits)*
Explores delinquency in American society. Theories, families, gangs, and a study of youth violence help provide students with an understanding of the social and institutional context of delinquency. Students work cooperatively as team members to teach others in the class about a research topic related to a juvenile delinquency issue.

CJ 202 VIOLENCE AND AGGRESSION
■ *(3 credits)*
Explores and analyzes violence and aggression from biological, psychological and sociological perspectives. Includes topics such as: homicide, suicide, rape, assault, mob violence, terrorism, violence within the family and related phenomenon, which are presented from a human relations perspective.

CJ 210 INTRO TO CRIMNL INVESTIGATION
(3 credits)
Introduces the fundamentals of criminal investigation theory and history, from the crime scene to the courtroom. Emphasizes techniques appropriate to specific crimes.

CJ 211 ETHICAL ISSUES:LAW ENFORCEMENT
(3 credits)
The law enforcement community has an established code of ethics embedded in all professional activities. This course provides an overview of ethics theory as it applies to the criminal justice professional. This course also focuses on practical and ethical solutions to common dilemmas experienced by those working in law enforcement.

CJ 220 INTRO TO SUBSTANTIVE LAW
■ *(3 credits)*
Surveys the historical development and philosophy of law and constitutional provisions; the definition and classification of crimes and their application to the system of administration of justice; and the legal research, case law and concepts of law as a social force.

CJ 222 PROCEDURAL LAW
(3 credits)
Reviews the evolution and status of U.S. case law relating to search and seizure, warrants, arrests, self-incrimination, right to counsel, Miranda,and other issues arising out of the U.S. Constitution relevant to the function of law enforcement professionals. Offered as needed.

CJ 226 CONSTITUTIONAL LAW
(3 credits)
Focuses on the study of the fundamentals of the U.S. Constitution, including the separation of power; the structure of the federal court system; preemption; the Bill of Rights and subsequent amendments; U.S. case law and its relation to law enforcement; and the effects of constitutional limitations on police power.

CJ 230 INTRO TO JUVENILE CORRECTIONS
(3 credits)
An introductory perspective of the historical and contemporary aspects of the juvenile offender, including examination of juvenile court philosophy and current treatment programs.

CJ 232 CORRECTIONS/COUNSELING/CASEWRK
(3 credits)
Reviews the corrections system today combined with an overview of basic counseling techniques.

CJ 250A CAPSTONE: JOB SEARCH & INTERVIEWING
(1 credit)
The first of three capstone courses in the Criminal Justice Department. This course is designed to instruct the student in interview techniques, job search strategies, and interviewer characteristics specific to law enforcement and corrections, and it identifies common mistakes made by applicants. May be taken concurrently with CJ 250B. This course must be passed with a grade of ''C'' or better. Students are expected to have second year status before registering for this course.

CJ 250B CAPSTONE: REGULATIONS & COMMUNICATION
(1 credit)
The second of two capstone courses in the Criminal Justice Department. The first half of this course will feature speakers from various law enforcement and corrections agencies; review of Oregon statutory law and Oregon Administrative Rules as they relate to law enforcement and corrections professionals; examination of the Oregon Physical Agility Test (ORPAT); background investigations; OSHA and general workplace safety; dealing with the public, and; legal liability of law enforcement and corrections professionals. The second half of this course is designed to assess and improve writing skills and to provide instruction on writing professional police reports, memoranda, and documents used in the courtroom. May be taken concurrently with CJ 250A. This course must be passed with a grade of ''C'' or better. Prerequisite: WR 121 English Composition with a grade of ''C'' or better.

CJ 280A CWE CORRECTIONS
(2-15 credits)
Gives students practical experience in supervised employment related to corrections. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

CJ 280B CWE LAW ENFORCEMENT
(2-14 credits)
Gives students practical experience in supervised employment related to law enforcement. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

CMA: CERTIFIED MEDICAL ASSISTANT

CMA 101 MEDICAL TERM & BODY SYSTEMS I
(4 credits) - offered Fall only
This course prepares the student to use appropriate medical terminology to identify the structural organization of the body, identify body systems, and describe body special orientation. Students will identify the normal function of each body system. Students will identify word parts and abbreviations as they relate to body systems.

CMA 102 MEDICAL TERM & BODY SYSTEMS II
(4 credits) - offered Winter only
This course prepares the student to list major organs in each body system, describe their function and identify and analyze pathologies related to each system. The student will be able to discuss implications for disease and disability as it relates to each system, as well issues related to treatment for each pathology and how it changes throughout the lifespan.

CMA 103 MEDICAL TERM & BODY SYS III
(4 credits) - offered Spring only
This course prepares the student to list major organs in each body system, describe their function, and identify and analyze pathologies related to each system. The student will be able to discuss implications for disease and disability that relates to each system, as well as issues related to treatment for each pathology and how it changes throughout the lifespan.

CMA 110 MEDICAL OFFICE COMMUNICATIONS
(3 credits) - offered Fall only
This course prepares the student to use effective communication in the medical setting. The student will learn a variety of communication methods specific to the medical office.

CMA 111 MEDICAL DOCUMENTATION & SCREENING
(3 credits) - offered Spring only
This course prepares the student to properly document and organize information for the medical record. This class prepares the student to initially screen patient calls for emergency and other medical intervention.

CMA 112 BASIC LAW & ETHICAL ISSUES IN HEALTHCARE
(3 credits) - offered Winter only
This course prepares the student to comprehend, interpret and respond to legal and ethical issues in the healthcare setting.

CMA 130 PHARMACOLOGY I
(3 credits) - offered Winter only
This course prepares the student to identify the classifications of medication, including desired effects, side effect and adverse reactions.

CMA 200 MEDICAL OFFICE MANAGEMENT
(4 credits) - offered Fall only
Students will develop the skills needed to know and perform the clerical and administrative duties and procedures of a medical office.

CMA 201 BASIC CLINICAL OFFICE PROCEDURES
(5 credits) - offered Fall only
This course prepares the student to function at a basic level as a clinical assistant in the oupatient medical setting. Prerequisite: CMA 103 Medical Terminology & Body Systems III and CMA 130 Pharmacology I with a "C" or better. Corequisite: CMA 200 Medical Office Management.

CMA 202 ADV CLINICAL OFFICE PROCEDURES
(5 credits) - offered Winter only
This course prepare the student to function as a medical assistant in the clinical outpatient setting. Prerequisite: CMA 201 Basic Clinical Office Procedures with "C" or better.

CMA 203 PHYSICIANS OFFICE LABORATORY
(4 credits) - offered Fall only
This course prepares Medical Assistant students to perform CLIA-waived tests in a physician's office laboratory using quality control and practicing safety precautions. Prerequisite: CMA 101 Medical Terminology & Body Systems I with "C" or better; Corequisite: CMA 201 Basic Clinical Office Procedures with "C" or better

CMA 204 BASIC ELECTROCARDIOGRAPHY TECHNIQUES
(1 credit) - offered Winter only
Medical Assistant students will be prepared to perform electrocardiograms in the clinical setting.

CMA 205 PHLEBOTOMY FOR MED ASSISTANT
(2 credits)
Medical Assistant students will be prepared to collect patient blood samples safely using universal precautions. Prerequisite: CMA 202 Advanced Clinical Office Procedures with a grade of "C" or better.

CMA 211 MATH FOR MEDICAL ASSISTANTS
(1 credit) - offered Fall only
This course prepares the Medical Assistant student to perform advanced math skills for clinical procedures.

CMA 212 HUMAN RELATIONS IN HEALTHCARE
(3 credits)
Prepares students to understand the mental processes and behaviors of individuals in the medical office.

CMA 230 PHARMACOLOGY II
(3 credits) - offered Spring only
This course prepares the student to describe the relationship between the anatomy and physiology of each body system as it relates to pathology and treatment with medications. Prerequisite: CMA 101 Medical Terminology & Body Systems I with a "C" or better.

CMA 250 ADMINISTRATIVE PRACTICUM
(3 credits) - offered Winter only
Students apply all major administrative competencies and concepts learned in the two-year medical assistant program to a real-world experience in local medical facilities. Prerequisites: CMA 201 Basic Clinical Office Procedures and CMA 200 Medical Office Management with a "C" or better.

CMA 251 PREP CMA EXAM/SEMINAR ADMIN
(2 credits) - offered Winter only
The Medical Assistant students and instructor will debrief and discuss CWE practicum training and experiences and review administrative competencies to prepare for the national certification exam administered by the American Association of Medical Assistants. Prerequisite: CMA 200 Medical Office Management with a "C" or better; Corequisite: CMA 250 Administrative Practicum

CMA 260 CLINICAL PRACTICUM
(6 credits) - offered Spring only
Students apply all major clinical competencies and concepts learned in the two-year Medical Assistant program to a real-world experience in local medical facilities. Prerequisite: CMA 202 Advanced Clinical Office Procedures with a "C" or better.

CMA 261 PREP CMA EXAM/SEMINAR CLINICAL
(2 credits) - offered Spring only
Medical Assistant students wil review clinical competencies to prepare for the national certification exam administered by the American Association of Medical Assistants. Medical Assistants and instructor will debrief and discuss CWE practicum training experiences. Corequisite: CMA 260 Clinical Practicum

COMM: COMMUNICATION

COMM 100 INTRO TO SPEECH COMMUNICATION
(3 credits)
Survey course covering the complexities of the communication process and the impact of communication on obtaining employment. Includes insights into the causes and effects of general communication behaviors, involvement in active exploration of basic communication theories and concepts, and opportunities to develop communication strengths.

COMM 111 FUNDAMENTALS OF SPEECH
(3 credits)
Provides the opportunity to discuss and understand the nature of public speaking and discourse in both ancient and modern society, and to create, adapt and deliver original speeches before an audience. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

COMM 112 INTRO TO PERSUASION
(3 credits)
Studies the theory and practice of persuasion and persuasive techniques. Students learn to analyze, develop and present persuasive messages. Introduces the nature and logic of reasoning, persuasive propositions, issues and claims, the use of evidence and rational discourse. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

COMM 218 INTERPERSONAL COMMUNICATION
(3 credits)
Introduces students to various aspects of the communication process in one-to-one relationships. Emphasis is placed on enhancing personal and professional relationships by expanding knowledge, increasing understanding and developing practical skills necessary for competent communication. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

CRS: CODING REIMB SPECIALIST

CRS 110 MEDICAL INSURANCE & REIMBURSEMENT SYSTEMS
(4 credits) - offered Fall & Winter only
This course prepares students to understand the evolution and function of health insurance, to include Medicare, Medicaid, commercial and managed care. The students will learn to understand, prepare and process claims.

CRS 111 BASIC CODING I
(3 credits) - offered Winter & Spring only
This course begins the preparation of a student in the Coding & Reimbursement Specialist program for the national CPC exam. This course also completes the basic coding competency based education for medical assistant students in coding as required by the AAMA.

CRS 112 HOSPITAL ENVIRONMENT CODING
(3 credits) - offered Spring only
Students learn how to use the most current procedural and diagnostic coding for the hospital environment and how to use the most current diagnostic coding classification system.

CRS 210 ADVANCED CODING & EXAM PREP
(4 credits) - offered Spring only
This course prepares the student to successfully sit for the national coding exam given by the American Academy of Professional Coders.

CS: COMPUTER SCIENCE

CS 120 DIGITAL LITERACY
(3 credits)
Introduces terminology and overview of the cojmputer and information science. Focuses on the basic concepts of computer hardware and software systems, software applications, online inquiry, and evaluation of materials including ethical decisions., Includes concepts reinforced in a laboratory environment. Through specific hands-on experience students gather, evaluate, and solve real-world problems and form decisions based upon critical examination of today's technology.

CS 133C PROGRAMMING IN C
(4 credits) - offered Winter only
Introduces problem analysis and programming to solve computation problems. Introduces the C language for those with previous programming experience. Prerequisites: CS161 Intro to Computer Science I Java with a grade of "C" or better or equivalent experience as determined by a Computer Systems Department instructor; MTH 095 Intermediate Algebra with a grade of "C" or better

CS 133J JAVASCRIPT
(4 credits) - offered Spring only
For the web developer already familiar with (X)HTML and CSS who wants to add interactively, error checking, simple animations and special effects via client-side scripting. Prerequisite: CIS 195 Web Development I with a grade of "C" or better or equivalent experience as determined by a Computer Systems Department advisor.

CS 140M OPERATING SYSTEMS: MICROSOFT
(4 credits) - offered Fall only
A Workbench course that provides experience with common computer software tasks in a Microsoft Windows operating system environment. Emphasizes troubleshooting, problem solving and building skills in the area of computer user support. Includes registry patches, tech support and installations including printer sharing and client deployment. Prerequisite: CIS 125 Introduction to Software Applications, CIS 151 Networking Essentials, both with a grade of "C" or better.

CS 140U FUNDAMENTALS OF UNIX/LINUX
(4 credits) - offered Spring only
A laboratory-intensive course that provides new users with an introduction to the Linux™ operating system. Students will install and administer their own Linux™ systems, primarily using professional command-line tools. Topics will include file system navigation and permissions, text editors, shell scripting and network-oriented utilities. Provides partial preparation for the Linux+™ exam. Prerequisite: MTH 065 Elementary Algebra and CIS 151 Networking Essentials, both with a grade of "C" or better.

CS 160 ORIENTATION TO COMPUTER SCIENCE
(4 credits)
Introduces the field of computer science and programming for students interested in careers in related fields. Covers digital logic, binary and hexadecimal encoding of data, computer organization, operating systems, algorithms, control structures, and an overview of programming languages and pseudo-code. Computing's impact on culture and society is a recurring theme throughout this course. Prerequisite: MTH 060 Introduction to Algebra with a grade of "C" or better. Recommended: Concurrent enrollment in CS 120 Digital Literacy and MTH 065 Elementary Algebra or higher.

CS 161 INTRO COMPUTER SCI I (JAVA)
(4 credits)
Introduces the principles of computer programming using an object-oriented language. Includes problem-solving concepts, verification and validation, representation of numbers and Strings, sources of errors, debugging techniques, conditionals, loops, and arrays. The Java programming language is used. Prerequisite: MTH 095 Intermediate Algebra or higher and CS 160 Orientation to Computer Science, both with a grade of "C" or better.

CS 162 INTRO COMPUTER SCI II (JAVA)
(4 credits)
Covers software engineering principles, basic data structures and abstract data types (arrays, strings, array-list and graphics). Introduces analysis of algorithms, testing, sorting and searching. Expands on Graphical User Interfaces, Swing components, layout managers and event driven programming. Also covers polymorphism, inheritance, recursion and exceptions. The Java programming language is used. Prerequisite: CS 161 Introduction to Computer Science I (Java) with a grade of "C" or better.

CS 225 IT CAREER SKILLS
(4 credits) - offered Fall & Spring only
Presents the interpersonal skills that are so important in the modern workplace. Topics include communicating effectively on the job in three ways: orally, non-verbally and in writing; appropriate business place behavior and etiquette, teamwork in both small and large groups, conflict resolution, work ethics, creative thinking and problem solving; personality types and communication styles and personal managment. Students will gain awareness of individual work styles and how to work effectively with people with different styles in a diverse workplace. Class activities, oral presentations and assignments will stress practical application of skills.

CS 227H SYSTEMS SUPPORT: HARDWARE
(3 credits)
A survey of current hardware designs, components, and uses of Personal Computers (PC's), other endpoint devices, and peripherals. Emphasizes troubleshooting, problem solving, and hardware support. Assists students in preparing for the CompTIA A+ certification. Prerequisite: CS 120 Digital Literacy, with a minimum "C" grade.

CS 233J JAVASCRIPT II
(4 credits) - offered Fall only
Continues the exploration of client-side programming technologies used for creating dynamic content for the Web. Covers advanced JavaScript Concepts and Techniques. Prerequisite: CS 133J JavaScript I with a grade of "C" or better

CS 240A MICROSOFT WINDOWS SERVER ADMIN I
(4 credits) - offered Winter only
The first of two courses in the administration of Microsoft Windows™ client/server networked operating systems. The courses CS240A & B are laboratory-intensive courses which provide hands-on experience in the planning, installation, and administration of Microsoft Windows™ client/server networks. The combination of courses provides partial preparation for the entry-level Microsoft systems exams. Prerequisites: CS 140M Operating Systems I: Microsoft, with a grade of "C" or better.

CS 240B MICROSOFT WINDOWS SERVER ADMIN II
(4 credits) - offered Spring only
The second of two courses in the administration of Microsoft Windows™ client/server networked operating systems. The courses CS240A & B are laboratory-intensive courses and provide hands-on experience in the planning, installation, and administration of Microsoft Windows™ client/server networks. The two courses help students prepare for Microsoft exams in entry-level system administration. Prerequisite: CS 240M Microsoft Windows? Server Administration I with a grade of "C" or better.

CS 244 SYSTEMS ANALYSIS & PROJ MGMT
(4 credits) - offered Winter only
A practice-oriented course with examples, applications and proven techniques that demonstrate systems analysis and design. Actual organization, business settings, and project management software are used to show how systems concepts can apply to many different types of enterprises. Project lifecycle as well as project management software, terminology and concepts are discussed. Prerequisite: CIS 125 Introduction to Software Applications with a grade of "C" or better.

CS 260 DATA STRUCTURES (JAVA)
(4 credits) - offered Spring only
Course explores the correct use of a variety of data structures in Java programs. Include the topics of complexity analysis, simple and complex sorting algorithms, stacks, queues, priority queues, arrays, linked-lists, file processing, tree structures, binary search trees, hashing algorithms and recursion. Prerequisite: CS 162 Introduction to Computer Science II with a grade of "C" or better.

CS 271 COMPUTER ARCHITECTURE/ASSEMBLY LANGUAGE
(4 credits) - offered Fall only
Introduces functional organization and architecture of digital computers. Topics include digital logic; machine arithmetic and logical functions; component construction and interconnections. Coverage of assembly language: addressing, stacks, argument passing, arithmetic operations, decisions, and modularization is also provided. Prerequisites: CS 161 Introduction to Computer Science I with a grade of "C" or better.

CS 275 DATABASE SYSTEMS: SQL & ORACLE
(4 credits) - offered Winter only
Introduces the design, purpose, and maintenance of a database system. Covers the entity-relationship (ER) model, relational systems, data definition, data manipulation, query language (SQL) and the Oracle and Access database management environments. Prerequisites: CS 161 Introduction to Computer Science I (Java) with a grade of "C" or better.

CS 276 DATABASE SYSTEMS: PL/SQL
(4 credits) - offered Spring only
Fundamentals of the programming procedural language extension to SQL. Areas of concentration include: PL/SQL structures, Boolean logic, stored procedures, functions and packages, blocks and nested blocks, triggers and error checking. Students will design and construct a database, then write programs in the procedural code (PL) to manipulate the data in an efficient, results oriented manner. Prerequisite: CS 275 Database Systems: SQL and Oracle with a grade of "C" or better.

CS 279 NETWORK MANAGEMENT
(4 credits) - offered Fall only
Through the use of lectures, reading and hands-on practice, students learn to administer a Network Operating System and its interactions with endpoint client devices. Topics include router/firewall setup, networking applications, the Domain Name System, network file systems and the adminstration of virtual machines. Prerequisite: CIS 125 Introduction to Software Applications, CIS 151 Networking Essentials, CS 140U Fundamentals of UNIX™/ Linux™, all with a grade of "C" or better.

CS 280 CWE COMPUTER SYSTEMS
(1-14 credits)
Gives students practical experience in supervised employment related to computer systems. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Minimun of 24 credit hours in the program. CWE coordinator approval.

CS 284 COMPUTER SECURITY/ INFORMATION ASSURANCE
(4 credits) - offered Spring only
This introductory course deals with the fundamental basic principles and surveys modern topics in computer security. It covers privacy concerns, policies and procedures, hardware security, software security, network security, and data security. Multi-level security, Public Key Infrastructure (PKI) and access control are discussed along with an introduction to cryptography. Prerequisite: MTH 095 Intermediate Algebra with a grade of "C" or better and CS 160 Orientation to Computer Science with a grade of "C" or better.

CS 285 NETWORK DEFENSE SECURITY
(4 credits) - offered Winter only
This course provides an introduction to the core security concepts and skills needed for the installation, troubleshooting and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices. It helps prepare students for entry-level security career opportunities and the globally recognized Cisco CCNA Security certification. The National Security Agency (NSA) and the Committee on National Security Systems (CNSS) recognizes that Cisco CCNA Security certification courseware meets the CNSS 4011 training standard. By being compliant, the Cisco CCNA Security course and certification program provides the required training for network security professionals who assist federal agencies and private sector entities to protect their information and aid in the defense of the nation's vital information resources. This course is a hands-on, lab-oriented curriculum with an emphasis on practical experience to help students develop specialized security skills, along with critical thinking and complex problem solving skills. Students who enroll in Network Defensive Security are expected to have fundamental router/switching level networking knowledge and skills, along with basic PC and internet navigation understanding. Prerequisites: CIS 151 Networking Essentials, CIS 152 Router Configurations, CS 284 Computer Security & Information Assurance with a "C" or better.

CSS: CROP & SOIL SCIENCE

CSS 200 CROPS IN OUR ENVIRONMENT
(3 credits) - offered Fall only
The class offers an introduction to the concepts of agricultural ecology and crop morphology. It serves as a foundation for other crop science classes. Examines the dynamics and function of crop communities, and the biotic and environmental interactions that influence crop productivity. Fundamentals of the developmental morphology of crop seeds, seedlings, and plants are covered as well as morphological features of seeds and plants in relation to the identification of crop families and species of economic importance.

CSS 205 SOILS: SUSTAINABLE ECOSYSTEMS
(4 credits) - offered Fall only
Explores soil ecosystems as a medium, for plant and crop growth, the cycling of nutrients, supply and purification of water, and a habitat for diverse population of soil organisms. Also studies the relationship of human activities to the sustainability of soil ecosystems.

CSS 210 FORAGE CROPS
(3 credits) - offered Spring only
Emphasizes practices that produce maximum economic returns for land devoted to hay, pasture or range. Includes establishment and management, fertilization, pest control, rotations, irrigations and renovation. Note: This is a professional technical course that may not be accepted by four-year institutions.

CSS 215 SOIL NUTRIENTS AND PLANT FERTILIZATION
(3 credits) - offered Winter only
Introduces the essential soil nutrients and their use in agronomic and horticultural crops. Processes in soil nutrient supply and plant nutrient uptake are discussed. Students become familiar with common synthetic and organic fertilizers and soil amendments and learn how to apply fertilizers using various application methods. Environmentally sound use and holistic management of agricultural nutrients are emphasized.

CSS 240 PEST MANAGEMENT
(4 credits) - offered Fall only
An introduction to the classification, structure, growth, life cycles, recognition, and control principles of selected weeds, insects, disease, and other pests of plants. The principles and applications of Integrated Pest Management are emphasized.

CT: CONSTRUCTION EQUIPMENT

CT 3.122 CUSTOMER SVC FOR HEAVY EQUIP TECHNICIANS
(3 credits) - offered Fall only
Effective troubleshooting and fabrication project design requires communicating with internal and external customers. This course helps heavy equipment technicians create effective troubleshooting and project management methods that incorporate customer service skills coupled to communicating effectively with people from different social and cultural backgrounds. Included are job seach skills for obtaining employment in the industry, as well as repair and design options that promote energy efficiency.

CT 3.123 FUNDAMENTALS SHOP SKILLS
(3 credits) - offered Fall only
Give the student practical working knowledge of safety in the trade areas of employment. It uses safety regulatory agencies as a foundation, and also includes forklift training. Students will complete online training specific to safety and pollution prevention. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.129 HEAVY EQUIPMENT/DIESEL ENGINES
(7 credits) - offered Winter only
This section of our program pertains to the operating principles, maintenance, repair and overhaul of various types and sizes of diesel engines. Diesel engines, their component parts, and related accessories are studied in depth. In conjunction with this is the study of manufacturer's specifications as they pertain to correct engine operation, performance and emissions. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.130 HEAVY EQUIPMENT/DIESEL TUNE-UP
(10 credits) - offered Spring only
This is a capstone class that introduces diesel tune-up and techniques for optimum engine performance, including diagnostic troubleshooting, engine break-in procedure through use of the dynamometer. The student will use all of the critical thinking skills they have learned in past classes to solve real world problems on mechanical and computer managed engine and truck. This class also includes the ITS Diesel Club. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.132 ADVANCED MOBILE HYDRAULICS
(5 credits) - offered Spring only
This course covers advanced hydraulic theory along with service and repair of valves, pumps, motors, and connectors used in mobile equipment hydraulic systems. Systems design and modification will be covered. Machine systems will be learned using hydraulic schematic drawings. Common customer concerns with specific heavy equipment and their solutions will be learned. Operational check-out and laptop computer testing of heavy equipment will be performed in labs, as well as repair and adjustment and electronic controls. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher and CT 3.134 Basic Hydraulics with a grade of "C" or better.

CT 3.134 BASIC HYDRAULICS
(3 credits) - offered Winter only
This course covers hydraulic theory along with pump, actuator application, and valve design and theory. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.146 PNEUMATIC BRAKES & CONTROLS
(5 credits) - offered Winter only
This course acquaints the student with the theory and application of pneumatic braking systems. The student will learn to service, diagnosis and repair ABS, foundation, accessory and safety air systems. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.295 POWER TRAIN SYSTEMS
(10 credits) - offered Fall only
Studies include power train terminology, theory and operation, driveshaft function and construction, maintenance practices, power train schematics, troubleshooting and failure analysis, and component rebuild and replacement. Students will use electronic resources such as John Deere Service Advisor and CAT SIS technical manuals to perform required tasks. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.296 STEERING, SUSPENSION AND BRAKES
(5 credits) - offered Spring only
Covers the theory and operation of heavy duty steering and suspension systems, automotive alignment, and braking systems. Diagnosis and service techniques are taught with the use of components and vehicles. Learning strategies include multi-media presentations, discussion, research, and lab practice. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.297 ELECTRICAL & ELECTRONIC SYSTEM
(10 credits) - offered Fall only
Introduces the theory, application and diagnosis of the electrical and electronic control systems for modern vehicles. Emphasis will be placed on batteries, starting, charging, lighting, accessories and driver information systems. Preparation for ASE certification in electrical/electronic systems. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

CT 3.303 MOBILE AIR CONDITIONING & COMFORT SYSTEM
(3 credits) - offered Spring only
Principles of mobile heating and air conditioning systems with an emphasis on design, function, adjustment, service and testing of components. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher, and CT 3.297 Electrical and Electronic Systems with a grade of "C" or better.

DA: DENTAL ASSISTANT

DA 5.453 DENTAL PATHOLOGY/PHARMACOLOGY
(2 credits) - offered Spring only
The study of oral pathology will cover the recognition of gross symptoms of oral disease, the treatment procedure and the prevention of oral disease to include the drugs and medications most commonly associated with treatment. An in-depth study of pathological diseases, normal and injured tissues, developmental anomalies, dental caries, abscesses and cysts will be discussed. Required: Acceptance into the Dental Assistant Program

DA 5.461 DENTAL RADIOLOGY I
(3 credits) - offered Fall only
An introduction to the principles and hazards of radiation, exposing and processing films, visual identification of anatomical landmarks, operation of X-ray equipment, including safety factors for patient and operator. Required: Admission to the Dental Assistant Program.

DA 5.462 DENTAL RADIOLOGY II
(3 credits) - offered Winter only
A continuation of DA 5.461. An in-depth study of X-ray and patient considerations, increased skills including exposures of X-rays on mannequins and patients. Students will participate in exposing, processing and mounting dental radiographs. Other radiographic methods will include extraoral, panoramic, endodontic, pedodontic, occlusal and disto-oblique techniques. Required: Successful completion of DA 5.461 Dental Radiology I.

DA 5.463 DENTAL RADIOLOGY III
(3 credits) - offered Spring only
Advanced X-ray clinical application of dental radiographic procedures and skills proficiency for periapical and bitewing X-rays. Students will expose radiographs on patients in the radiology labs. Emphasis is placed on identification of errors and corrective techniques. Required: Successful completion of DA 5.462 Dental Radiology II.

DA 5.484 DENTAL MATERIALS I
(3 credits) - offered Fall only
An introduction to laboratory applications in the handling and manipulating of dental materials is designed to improve proficiency and efficiency at chairside procedures, emphasis on principles of physical and chemical properties of gypsum, impressions materials, waxes, custom trays and basic principles and asepsis of laboratory procedures, including fixed prosthetic materials and gold products. Precautions and safe handling of dental laboratory materials will be presented through use of Material Safety Data Sheets (MSDS). Required: Admission to the Dental Assistant Program.

DA 5.485 DENTAL MATERIALS II
(3 credits) - offered Winter only
An introduction to the diverse materials used in the dental office. The physical and chemical properties of bases, adhesives, cements, anticario-genic agents, and restorative materials in reference to manipulation and usage. Precautions and safe handling of dental materials will be presented through the use of Material Safety Data Sheets (MSDS). Required: Successful completion of DA 5.484 Dental Materials I.

DA 5.488 EXPANDED DUTIES I
(3 credits) - offered Winter only
A study of procedures beyond the scope of general chairside assisting. The Oregon Dental Practice Act allows for instruction in placement and removal of matrix retainers, placement of temporary restorations, coronal polishing and fluoride treatments, and methods of fitting and adjusting permanent crowns. Also includes techniques to acquire skills for placing and removing rubber dams, taking alginate impressions, and taking bit registrations for study model articulation. Emphasis is on patient care and post operative instructions. Required: Acceptance into the Dental Assistant Program.

DA 5.489 EXPANDED DUTIES II
(2 credits) - offered Spring only
A continuation of DA 5.488. This course will complete the remaining expanded function duties that are approved by the Oregon Dental Practice Act. An in-depth study with major emphasis on student practical application and fabrication of temporary crowns, cement removal techniques, placement of temporary soft denture relines, pit and fissure sealants, and amalgam polishing. Use of correct hand and motion techniques, selection of armamentarium, recognition of polishable amalgam restorations, and safety precautions for patient comfort are emphasized. Required: Successful completion of DA 5.488 Expanded Duties I.

DA 5.491 DENTAL OFFICE RECORDS AND EMERGENCIES
(2 credits) - offered Spring only
Basic office principles as related to their application in a dental office. Patient reception, communication, and telephone techniques, appointment scheduling, office record maintenance, financial arrangements and coordination. Purchasing and supply control, management of office equipment, scheduling of meetings/conferences and preparing written communications. Billing insurance companies, collection procedures and computerized billing systems are covered in depth. Provides familiarization with various emergency situations that may occur in a dental office and the primary first aid choice. The signs and symptoms of medical emergency, the equipment, treatments and drugs are discussed. Emphasis is placed on the responsibility of the dental team to be prepared for an emergency. Required: Successful completion of Dental Assistant Program fall term.

DA 5.494 INTRODUCTION TO DENTISTRY
(3 credits) - offered Fall only
An introduction to clinical dentistry. Emphasis is placed on dental health team members, historical developments, introductory terminology, office communications, ethics and jurisprudence, dental practice acts, work ethics and patient management. Treatment room preparation, health history data collection, dental equipment identification, aesepsis and disinfection, preset trays, operator positioning, basic instruments, instrument transfer, oral charting, general office routine, productivity, marketing and performance appraisals are covered in detail. A brief introduction to dental specialties will be presented to include all aspects of dental care available to the public. Required: Admission to Dental Assisting program.

DA 5.495 CLINICAL PRACTICE
(4 credits) - offered Winter only
A continuation of DA 5.494. Principles of operative dentistry and fixed prosthetics are covered in detail, the order of procedure, hand and rotary instrumentation, anesthesia, handpieces, isolation and control of the operative field and post operative instructions are acutely emphasized. Required: Successful completion of Dental Assistant Program fall term.

DA 5.496 DENTAL SPECIALITIES
(3 credits) - offered Spring only
Dental specialties, role of dental auxiliaries, specialized instrumentation, materials and equipment will be encompassed to demonstrate a thorough knowledge of the following Dental Specialty Practices: Endodontics, Pedodontics, Prosthodontics, Periodontics, Oral Surgery, Orthodontics and Implant Surgery. The didactic preparation will strengthen the students understanding of specialty practices as they precede to the specialty observations spring term. Required: Successful completion of Dental Assistant Program fall term.

DA 5.497 DENTAL HEALTH EDUCATION AND NUTRITION
(2 credits) - offered Spring only
Development of concepts and principles of plaque related diseases, fluoride therapy, brushing and flossing techniques, patient education, including oral hygiene, preventative dentistry, and motivational techniques. In addition nutritional information applied to good oral health, including the food pyramid, nutrients, food diaries, and nutritional deficiencies as they relate to dental conditions. Basic principles of prevention of oral disease through patient and public education are stressed. Student community projects emphasize the principles of communication and preventative dentistry. Required: Successful completion of Dental Assistant Program winter term.

DA 5.500 DENTAL ANATOMY & HISTOLOGY
(2 credits) - offered Fall only
An in-depth study of dental terminology as it relates to normal anatomy, physiology and histology of the teeth and associated structures, their embryological development and histological characteristics, the function of oral structures. The universal numbering system for individual teeth is used in extensive detail, surfaces and comparison of similarities and differences of all teeth. Required: Acceptance to the Dental Assistant program.

DA 5.501 INFECTION CONTROL/STERILIZATIO
(2 credits) - offered Fall only
An in-depth study of principles in dental infection control, decontamination, disinfection and sterilization. This course will provide basic requirements for OSHA's blood borne pathogens, hazard communication and general safety standards in a dental environment, and includes sterilization principles, machines and techniques. Students will be eligible to take the infection control examination (ICE) administered by the Dental Assisting National Board (DANB) upon successful completion of this course. Required: Acceptance to the Dental Assistant program.

DA 5.502 BASIC SCIENCE FOR DENTISTRY
(2 credits) - offered Fall only
This course will provide a generalized overview of basic science as it relates to normal anatomy and physiology of the body and associated structures. Basic principles and terminology will be used to assist the student with the more detailed studies of oral anatomy/pathology. Focus will be on location, structure and function of the body with more integrated detail in landmarks, anatomy and physiology of the head and neck area. Required: Acceptance to the Dental Assistant program.

DA 5.510 OFFICE PRACTICUM
(4 credits) - offered Summer only
The dental assisting student is provided with work experience that places practical application of all clinical skills in community dental offices. A total of 256 hours in two separate general dentistry offices. Emphasis is placed on the individual's ability to work in a dental health team setting with minimal direction. Required: Successful completion of Dental Assistant Program spring term.

DA 5.515 OFFICE PRACTICUM SEMINAR
(2 credits) - offered Summer only
A series of weekly seminars in which students share work related experiences with the instructor and peers. Information regarding employment, skills improvement, job applications, resume formats and interviewing techniques are covered as well as preliminary reviewing and testing for the national certification examination. Required: Successful completion of Dental Assistant Program spring term.

DA 5.550 HUMAN RELATIONS IN DENTISTRY
(2 credits) - offered Spring only
An introduction to human relations as they pertain to success in a dental setting (as well as personal lives) utilizing methods of dealing with stress, motivation, behavioral management and problem solving for personal growth. In addition, social perception, emotions and historical elements of psychology of interpersonal relationships, including self-concept, emotion, gender, culture and cultural diversity issues of everyday living will be addressed. This course will aid in developing patient/customer service skills through team participation and communication in respect to professional/personal encounters affecting work values, ethics and leadership skills. Required: Successful completion of Dental Assistant Program winter term.

DI: DIAGNOSTIC IMAGING

DI 100 COMPREHENSIVE PATIENT CARE
(3 credits) - offered Summer only
Content provides the concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified as the content provides an overview of the foundations of radiography and the practitioner's role in the health care delivery system. Content provides a foundation in ethics and law related to the practice of medical imaging. Students will examine a variety of ethical and legal issues found in clinical practice. An understanding of the role of effective communication is stressed. Cultural competence is emphasized.

DI 110 RADIOGRAPHIC PROC-CHEST/ABD
(3 credits) - offered Summer only
Content provides the knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal diagnostic images. Establishes a knowledge base in anatomy and physiology. Content provides a basis for analyzing radiographic images to Include the importance of optimal imaging standards, discussion of a problem-solving techniques for image evaluation and the factors that can affect image quality. Actual images will be included for analysis. Understanding radiographic orders and diagnostic report interpretation are essential components. Critical thinking and cultural competence is incorporated into multiple content areas. The first course in a series of three.

DI 111 RAD PROC-EXTREMITIES & SPINE
(6 credits) - offered Fall only
Content provides the knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal diagnostic images. Establishes a knowledge base in anatomy and physiology. Content provides a basis for analyzing radiographic images to Include the importance of optimal imaging standards, discussion of a problem-solving techniques for image evaluation and the factors that can affect image quality. Actual images will be included for analysis. Understanding radiographic orders and diagnostic report interpretation are essential components. Critical thinking and cultural competence is incorporated into multiple content areas. The second course in a series of three.

DI 112 RADIOGRAPHIC PROC:SKULL&REVIEW
(4 credits) - offered Winter only
Content provides the knowledge base necessary to perform standard imaging procedures and special studies. Consideration is given to the evaluation of optimal diagnostic images. Establishes a knowledge base in anatomy and physiology. Content provides a basis for analyzing radiographic images to include the importance of optimal imaging standards, discussion of a problem-solving techniques for image evaluation and the factors that can affect image quality. Actual images will be included for analysis. Understanding radiographic orders and diagnostic report interpretation are essential components. Critical thinking and cultural competence is incorporated into multiple content areas. The third course in a series of three.

DI 113 RADIOGRAPHIC PROC-FLUOROSCOPY
(4 credits) - offered Winter only
Content provides the knowledge base necessary to perform standard fluoroscopic imaging procedures and fluoroscopic special studies. Consideration is given to evaluation of optimal diagnostic images and the analyzing of fluoroscopic radiographic images. Included are the importance of optimal imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images will be included for analysis. Critical thinking and cultural competence is incorporated into multiple content areas. The lab component provides a hands on opportunity to practice positioning and exam skills.

DI 120 EXPOSURE I - PRODUCTION
(3 credits) - offered Summer only
Content establishes a basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Establishes a knowledge base in radiographic equipment design. Establishes a knowledge base in factors that govern the image production process. Critical thinking is incorporated into multiple content areas. The first course in a series of three.

DI 121 EXPOSURE II
(3 credits) - offered Fall only
Content establishes a basic knowledge of the nature and characteristics of radiation, x-ray production. Imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Establishes a knowledge base in radiographic, fluoroscopic and mobile equipment requirements and design. Establishes a knowledge base in factors that govern the image production process. The content also provides a basic knowledge of quality control. Critical thinking is incorporated into multiple content areas. The second course in a series of three.

DI 122 EXPOSURE III: DIGITAL IMAGING
(2 credits) - offered Winter only
Content establishes a basic knowledge of the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Establishes a knowledge base in radiographic, fluoroscopic and mobile equipment requirements and design. Establishes a knowledge base in factors that govern the image production process. The content also provides a basic knowledge of quality control. Critical thinking is incorporated into multiple content areas. The third course in a series of three.

DI 130 PHARMACOLOGY FOR IMAGING
(2 credits) - offered Winter only
Content provides basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications. The appropriate delivery of patient care during these procedures is emphasized. Critical thinking is emphasized.

DI 140 RADIATION PROTECTION
(3 credits) - offered Summer only
Content presents an overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Critical thinking is incorporated into multiple content areas.

DI 141 RADIATION BIOLOGY
(3 credits) - offered Fall only
Content provides an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation. Critical thinking is incorporated into multiple content areas.

DI 200 RADIOGRAPHIC COMP REVIEW I
(1 credit) - offered Fall only
Content provides a review of all knowledge, skills, and instruction provided in all other Diagnostic Imaging courses. Course is designed to help students prepare to take the ARRT examination upon completion of all coursework. Job search skills are incorporated into content. The first course in a series of two.

DI 201 RADIOGRAPHIC COMP REVIEW II
(1 credit) - offered Winter only
Content provides a review of all knowledge, skills, and instruction provided in all other Diagnostic Imaging courses. Course is designed to help students prepare to take the ARRT examination upon completion of all coursework. Test taking strategies are incorporated into content. Perform a job search. The second course in a series of two.

DI 210 CLINICAL EXTERNSHIP I
(11 credits) - offered Spring only
Externship experiences designed to develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development. Specific activities include: patient care and assessment, competent performance of radiologic imaging and total quality management. Critical thinking and cultural competence is emphasized. The first course in a series of four.

DI 211 CLINICAL EXTERNSHIP II
(11 credits) - offered Summer only
Externship experiences designed to develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development. Specific activities include: patient care and assessment, competent performance of radiologic imaging and total quality management. Critical thinking and cultural competence are emphasized. The second course in a series of four.

DI 212 CLINICAL EXTERNSHIP III
(11 credits) - offered Fall only
Externship experiences designed to develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development. Specific activities include: patient care and assessment, competent performance of radiologic imaging and total quality management. Critical thinking and cultural competence is emphasized. The third course in a series of four.

DI 213 CLINICAL EXTERNSHIP IV
(11 credits) - offered Winter only
Externship experiences designed to develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development. Specific activities include: patient care and assessment, competent performance of radiologic imaging and total quality management. Critical thinking and cultural competence is emphasized. The last course in a series of four.

DI 220 RADIOGRAPHIC PATHOLOGY
(3 credits) - offered Spring only
An overview of common pathological conditions encountered in the clinical setting. Pathology is categorized by body systems. The students will learn the pathology as they relate to: signs and symptoms, etiology, imaging diagnosis and prognosis and treatment. Content introduces concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection. Cross-sectional anatomy is introduced. Critical thinking is emphasized.

DI 230 BASIC PRIN COMPUTED TOMOGRAPHY
(1 credit) - offered Summer only
Content is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency. Critical thinking is emphasized.

EC: ECONOMICS

EC 115 OUTLINE OF ECONOMICS
■ *(4 credits)*
Provides an overview of micro- and macroeconomics. The U.S. economic system is discussed from both national and individual perspectives. Discusses topics such as supply and demand, national accounting, monetary policy, fiscal policy, productivity, market models, income, wealth and taxation.

EC 201 INTRODUCTION TO MICROECONOMICS
■ *(4 credits)*
Introduces the theory of relative prices in a market system, consumer choice, marginal analysis, and the allocation of productive resources among alternative uses in a market economy. Other topics may include market power and price discrimination, public finance, the labor market and environmental policy. Prerequisite: MTH 111 with a grade of "C" or better.

EC 202 INTRODUCTION TO MACROECONOMICS
■ *(4 credits)*
Introduces the determination of levels of national income, employment and prices, and the basic causes of fluctuations in the business cycle, the banking system, monetary policy and financial intermediation. Other topics may include international trade and international finance. Prerequisite: MTH 111 with a grade of "C" or better.

EC 215 ECONOMIC DEVELOPMENT IN THE US
■ *(4 credits)*
Provides historical study and understanding of the sources of economic growth and change in the United States. Discussions about how changes in industry, agriculture, commerce, transportation, labor, and finance have affected the speed of change of the American lifestyles and the increased economic well-being of society.

EC 220 CONTEMPORARY US EC ISSUES:DISCRIMINATION
■ *(3 credits)*
Focuses on discrimination in the U.S. and its impact within our market economy. Primary focus is inequities for women and minorities in the labor market.

ED: EDUCATION

ED 101 OBSERVATION AND GUIDANCE
(3 credits)
An introductory practicum experience focusing on methods of interacting with young children in classroom or child care settings. Students work with children individually and in small groups. Required: Students must successfully complete a criminal history background check prior to starting class.

ED 101A OBSERVATION AND GUIDANCE
(3 credits)
Students observe children and teachers in an elementary or secondary classroom setting and assist the teacher as appropriate. Students spend six hours each week in the classroom and one hour each week in seminar. Appropriate for students with limited prior experience with children or in a structured teaching setting. Must be arranged one term in advance. Required: Successful completion of a criminal history background check prior to starting class. Recommended: ED 216 Purpose, Structure and Function of Education in a Democracy or HDFS 233 Professional Foundations in Early Childhood or HDFS 225 Child Development before taking this class.

ED 102 EDUCATION PRACTICUM
(3 credits)
Students observe children and teachers in an elementary or secondary classroom setting and assist the teacher as appropriate. Students spend six hours each week in the classroom and one hour each week in seminar. Appropriate for students with limited prior experience with children or in a structured teaching setting. Must be arranged one term in advance. Prerequisite: ED 101 Observation and Guidance with a grade of "C" or better. Required: Successful completion of a criminal history background check prior to starting class. Recommended: HDFS 225 Child Development or HDFS 248 Learning Experiences for Children, or ED 152 Creative activities/Dramatic Play, or ED 179 Literature, Science and Math, or ED7.730 Early Childhood Ages and Stages.

ED 102A EDUCATION PRACTICUM
(3 credits)
Students assist the teacher in providing learning activities for children in an elementary or secondary classroom setting. In cooperation with the teacher, students develop and deliver at least one lesson during the quarter. Students spend six hours each week in the classroom and one hour each week in seminar. Must be arranged one term in advance. Required: Successful completion of a criminal history background check prior to starting class. Recommended: ED 216 Purpose, Structure and Function of Education in a Democracy or HDFS 233 Professional Foundations in Early Childhood or HDFS 225 Child Development.

ED 103 EXTENDED EDUCATION PRACTICUM
(3 credits)
Field experience in a classroom or child care setting with young children. Students apply in-depth knowledge, methods and skills gained from education courses. Includes one full-day teaching experience. Prerequisite: ED 102 Education Practicum with a grade of "C" or better. Required: Successful completion of a criminal history background check prior to starting class. Recommended: HDFS 225 Child Development, ED7.710 Principles of Observation; HDFS 248 Learning Experiences for Children or ED 152 Creative Activities/Dramatic Play or ED 179 Literature, Science and Math or ED7.730 Early Childhood Ages and Stages.

ED 152 CREATIVE ACTIVITIES/DRAMATIC PLAY
(3 credits)
Focuses on understanding and implementing a developmental approach to creative activities for young children. Involves hands-on experience with a wide variety of activities and mediums. Includes methods of presentation and evaluation. Emphasizes art, music and movement, dramatics, and creative play. Required: Successful completion of a criminal history background check prior to starting class.

ED 179 LITERATURE, SCIENCE & MATH
(3 credits)
This course focuses on understanding and creating appropriate curricula for young children. It involves hands-on experience with a wide variety of activities in literature, science, and math. Class includes planning, implementing, and evaluating learning experiences for young children. Required: Successful completion of a criminal history background check prior to starting class.

ED 216 PURPOSE/STRUCTURE/FUNCTION
(3 credits)
Examines the system of education in a democratic society - past, present, and future. Historical, social, philosophical, political, legal and economic foundations of education in Oregon, the USA, and other countries provides a framework for analyzing contemporary educational issues in schools, communities, and workplaces.

ED 219 CIVIL RIGHTS AND MULTICULTURAL ISSUES IN EDUCATION
(3 credits)
Examination of the context of working with students' schools, communities and workplaces. Students will consider the diversity of learners, and learning cultures (e.g. urban, suburban, rural). The diversity among learners within those different cultures, and the influence of culture on one's learning will also be explored.Recommended: Instructors recommend that students be able to do the following before enrolling in class; write papers using grammatically correct writing functions; send documents via e-mail attachment; read a textbook and synthesize ideas, understand the author's ideas, and be able to talk about those ideas whether the student personally agrees with them or not; listen and converse with those who do not think the same as the student.

ED 252 BEHAVIOR MANAGEMENT
(3 credits)
Presents the principles of behavior management in order to maximize instructional potential. Attention is given to individual differences, developmental issues, learning and personality styles, and to positive communication techniques designed to develop prosocial competence.

ED 253 LEARNING ACROSS THE LIFESPAN
(3 credits)
This course will explore how learning occurs at all ages from early childhood through adulthood. Students will consider the evolution of major and emerging learning theories over time, the interrelation between biology, psychology and social forces, and their application to human development. Focus will be on individual learning styles, including one's own, reflection on the implications of learning, and the impact of these issues on the development and delivery of instruction.

ED 282 WORKING W/CHILD W/SPECIAL NEED
(3 credits)
Overview of special education legislation and the role of family, school and community in educating and supporting individuals with disabilities. Class is tailored to meet the needs of students who enroll, with a focus on in-school special needs issues or community agency issues. Implementation of current legislation and its impact in the classroom are addressed.

ED 7.710 PRINCIPLES OF OBSERVATION
(3 credits)
Observe children in a classroom or child care environment using a variety of techniques. Focuses on using information gathered from observation to draw conclusions about children's typical development and plan appropriate curriculum activities.

ED 7.725 JOB SEARCH SKILLS
(3 credits)
Learn how to organize and conduct a search for work in the field of education. Develop your resume, prepare for interviews, and go through the job application process.

ED 7.730 EARLY CHILDHOOD AGES & STAGES
(3 credits)
Focuses on understanding normative stages of children's development (ages 0-8 years) and introduces child development research and terminology. Application of concepts to daily interactions with young children.

ED 7.731 POSITIVE GUIDANCE: YOUNG CHILD
(3 credits)
Focuses on understanding and guiding behavior of young children (ages 0-8 years) in child care settings. Students look at the research supporting guidance practices, develop criteria for selection of strategies, evaluate popular guidance techniques and develop a toolbox of strategies that promote the healthy development of young children.

EG: ENGINEERING GRAPHICS

EG 4.409 DRAFTING I
(2 credits) - offered Fall only
Presents fundamentals of technical drawing. Emphasizes line language, geometric construction, sketching and layout procedures and multiview drawings.

EG 4.411 CAD I
(4 credits) - offered Fall only
An introduction to the application and functions of computer aided drafting. Emphasizes hands-on operation of CAD systems. Prerequisite: EG 4.409 Drafting I with a grade of "C" or better. Recommended: CS 120 Digital Literacy or demonstrated working knowledge through competency test.

EG 4.416 INTERMEDIATE CAD
(4 credits) - offered Winter only
Teaches experienced AutoCAD users productivity enhancing tools and methodology to produce and edit drawings to ANSI standards using advanced commands. Includes advanced AutoCAD concepts and configuration. Prerequisite: EG 4.407 Introduction to CAD with a grade of "C" or better or instructor permission.

EG 4.421 CAD II
(4 credits) - offered Winter only
Covers methods of technical drawing utilizing ANSI standards to produce two-dimensional technical drawings. Introduces more advanced techniques in drafting using AutoCAD's drawing and editing commands. Prerequisites: EG 4.411 CAD I and EG 4.409 Drafting I with a grade of "C" or better

EG 4.423 ARCHITECTURAL DESIGN I
(4 credits) - offered Winter only
Introduces basic architectural drafting techniques and methods. Covers the fundamental concepts of residential building design with identification and use of professional architectural standards used in residential building drawings. Includes architectural symbols and construction methods used in residential and light commercial buildings. Prerequisites: EG 4.411 CAD I with a grade of "C" or better.

EG 4.431 CAD III
(4 credits) - offered Spring only
Basic through advanced 3-D solids modeling using AutoCAD. Mechanical parts, assemblies, presentations and drawings to ANSI standards. Prerequisite: EG 4.421 CAD II with a grade of "C" or better.

EG 4.443 SCHEMATICS
(3 credits) - offered Fall only
Covers methods for drawing electrical, mechanical and plumbing schematic diagrams and pictorial layouts. Includes logic diagrams, electronic component layout, printed circuit boards, schematics. Piping, plumbing and HVAC standards and practices also are studied. Prerequisite: EG 4.421 CAD II with a grade of "C" or better.

EG 4.445 PLANE SURVEYING
(3 credits) - offered Fall only
A basic course in surveying. Includes distance measuring, leveling, cross sectioning, traversing, topographic surveying, use of survey instruments, and office procedures. Prerequisite: EG 4.456 Civil Drafting Lab with a grade of "C" or better. Recommended: MTH 095 Intermediate Algebra and familiarity with right angle trigonometry.

EG 4.446 STRENGTH OF MATERIALS
(3 credits) - offered Spring only
An introduction to engineering mechanics, including force, force vectors, moments, resultants, centroids, moments of inertia, bending stress, shear and tortion. Prerequisite: MTH 095 Intermediate Algebra with a grade of "C" or better.

EG 4.451 SOLIDS I
(4 credits) - offered Fall only
This class explores basic parametric solid modeling, engineering design and rapid prototyping. Students will create solids, assemblies, and dimensioned drawings from the solids. Extrusions, Boolean operations and feature editing will also be covered. Prerequisite: EG 4.431 CAD III with a grade of "C" or better.

EG 4.452 SOLIDS II
(4 credits) - offered Winter only
Explores advanced parametric solid modeling, collaborative engineering design and rapid prototyping. Students gain practical, hands-on experience in design and production using the most advanced tools and technologies available today. Students create animation for client presentation as well as use stress analysis tools to refine design. Prerequisite: EG 4.451 Solids I with a grade of "C" or better.

EG 4.453 CUSTOMIZING CAD SYSTEMS
(3 credits) - offered Winter only
Customize the user interface of current CAD system focusing on increased productivity regardless of discipline. Includes keyboard and menu customization, editing toolbars, macros and programming. Prerequisite: EG 4.431 CAD III with a grade of "C" or better.

EG 4.454 APPLIED SOLIDS DESIGN
(3 credits) - offered Spring only
Capstone class designed to challenge students with a team design project that is manufactured and tested, simulating a real world application of knowledge and skills. Prerequisite: EG 4.452 Solids II with a grade of "C" or better.

EG 4.455 STRUCTURAL DRAFTING
(2 credits) - offered Winter only
Introduces structural drafting. Emphasizes framing plans, connections, fabrication details, foundation drawings, and other drawings required for structural steel, precast concrete, and poured-in-place concrete drawings. Prerequisites: EG 4.411 CAD I with a grade of "C" or better.

EG 4.456 CIVIL DRAFTING LAB
(1 credit) - offered Spring only
A lab course covering basic civil drafting techniques. Designed for students concurrently enrolled in CEM 263 Plane Surveying who wish to include a civil drafting component in the surveying course. Includes drafting survey maps, plats, plan and profile, and topo maps. Recommended: Completion of EG 4.421 CAD II with a grade of "C" or better.

EG 4.457 WORKPLACE SURVEY
(1 credit) - offered Spring only
Introduction to actual workplace environments. Students experience workplace environments and end use of drawing efforts.

EG 4.463 ARCHITECTURAL DESIGN II
(4 credits) - offered Spring only
Covers intermediate residential design principles including design of floor plans, elevations, 3-D presentation and working drawings using advanced 3-D architectural software. Prerequisite: EG 4.423 Architectural Design I with a grade of "C" or better.

EG 4.465 CIVIL DRAFTING II
(3 credits) - offered Winter only
Covers advanced topics in surveying and civil engineering drafting/design. Includes an introduction to Civil 3D. Recommended: Completion of CEM 263 Plane Surveying or EG4.445 Plane Surveying and EG 4.456 Civil Drafting Lab.

ENG: ENGLISH

ENG 104 LITERATURE: FICTION
➢ *(3 credits)*
Examines fiction through selected literary works, such as the short story and the novel, and increases understanding of the conventions of fiction. Encourages exploration of the human experience through the reading of significant short stories and novels, with an emphasis on analysis, interpretation, and the fiction-writer's craft. Note: Need not be taken in sequence. Recommended: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 106 LITERATURE: POETRY
➢ *(3 credits)*
Studies poetry drawn from American, English and world literature, enhances understanding of the conventions of poetry and poetic forms, and encourages exploration of the human experience. Works are read in entirety when possible, with emphasis on elements such as form, style, imagery, figurative language and musical devices. Note: Need not be taken in sequence. Recommended: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 107 WESTERN WORLD LITERATURE: CLASSICAL TO MEDIEVAL
➢ *(4 credits)*
Surveys the literature of three cultures of the ancient western world from 3000 BC to 1500 CE. Students explore the themes, stories and ideas that concern our literary ancestors up to writings of the middle ages and renaissance. Note: Need not be taken in sequence. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 109 WESTERN WORLD LIT: MODERN
➢ *(4 credits)*
Surveys European literature from the Romantic, Realist, Naturalist, and Modernistic periods. Note: Need not be taken in sequence. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 110 FILM STUDIES
➢ *(3 credits)*
Explores the power of film to shape and reflect culture and ideology; raises questions about film and its relationship to self, others, and social values. Studies film genres and styles; aesthetics; film history; film as a collaborative medium; Hollywood, independent and international cinema; techniques and grammar of film; and major film theories. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 201 SHAKESPEARE
➢ *(4 credits) - offered Fall only*
Studies major plays of Shakespeare, including the structure, characterization, setting and imagery employed in selected comedies, tragedies, histories and poems. Note: Need not be taken in sequence. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 202 SHAKESPEARE
➢ *(4 credits) - offered Spring only*
Studies major plays of Shakespeare, including the structure, characterization, setting and imagery employed in selected comedies, tragedies, histories and poems. Note: Need not be taken in sequence. Recommended: College-level reading and writing skills (WR121) are strongly recommended for success in this course.

ENG 204 BRITISH LITERATURE: EARLY
➢ *(3 credits)*
Studies representative works in English literature for their inherent worth and for their reflection of the times in which they were written. Note: ENG 204, ENG 205 and ENG 206 need not be taken in sequence. Recommended: WR121 English Composition, ENG104 Literature: Fiction or ENG106 Literature: Poetry.

ENG 205 BRITISH LITERATURE: MIDDLE
➢ *(3 credits)*
Studies representative works in English literature for their inherent worth and for their reflection of the times in which they were written. Note: ENG 204, ENG 205 and ENG 206 need not be taken in sequence. Recommended: WR121 English Composition, ENG104 Literature: Fiction or ENG106 Literature: Poetry.

ENG 206 BRITISH LITERATURE: MODERN
➢ *(3 credits) - offered Spring only*
Studies representative works in English literature for their inherent worth and for their reflection of the times in which they were written. Note: ENG 204, ENG 205 and ENG 206 need not be taken in sequence. Recommended: WR121 English Composition, ENG104 Literature: Fiction or ENG 06 Literature: Poetry.

ENG 207 NON-WESTERN WORLD LIT: ASIA
➢ *(3 credits)*
Surveys ancient and modern literature from India, China and Japan. Note: Need not be taken in sequence. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 208 NON-WESTERN WORLD LIT: AFRICA
➢ *(3 credits)*
Explores literary works of African writers from tribal, colonial and post-colonial eras. Note: Need not be taken in sequence. Recommended: WR121 English Composition, ENG104 Literature: Fiction.

ENG 209 NON-WESTERN WORLD LIT:AMERICAS
➢ *(3 credits)*
Surveys American literature, analyzing works by writers from North, Central, and South America and the Caribbean, from prior to the European Contact through the modern period. Recommended: WR121 English Composition

ENG 215 LATINO/A LITERATURE
➢ *(3 credits) - offered Fall only*
Examines the evolution of Latino/a literature in the United States beginning in the mid 16th century, including the original contact between European and pre-Columbian societies. The class explores thematic issues that have influenced and shaped the literature of Latino minorities, as well as students? own perceptions of Latin culture. Readings may include works of history, memoirs, letters and essays, as well as fiction, poetry and drama by U.S. born Latino/ Chicano authors such as Richard Rodriguez, Sandra Cisneros and Luis Valdez. Recommended: WR121 English Composition.

ENG 220 LITERATURE OF AMERICAN MINORITIES
➢ *(3 credits) - offered Fall only*
Features a selection of works by writers from ethnic minority cultures within the United States. The works of these cultures generally have not been well-represented in traditional literature courses, and the views from these cultures often are in contrast to the more familiar representations of mainstream literature. These works reflect historical and cultural examples of discrimination and difference across the society. This course will explore how humans have dealt with this discrimination and how these cultures enrich the patterns of the American experience despite their experiences as minorities. Recommended: College-level reading; WR 121 English Composition; and ENG 104 Literature Fiction or ENG 106 Literature: Poetry is strongly recommended for success in this course.

ENG 221 CHILDREN'S LITERATURE
➢ *(3 credits) - offered Winter & Spring only*
Designed for students who have an interest in children's literature and for education majors who are or will be working with children. The course covers the history and various genres of children's literature and focuses on defining, valuing and evaluating. Recommended: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 253 AMERICAN LITERATURE: EARLY
➢ *(4 credits) - offered Winter only*
American Literature beginnings to 1865 focuses on major early movements in American Lit including Native American literature, the African American vernacular (songs and tales) and slave narratives. European exploration writings, the writings of Colonial America (1620-1776), the Literature of the New Republic (1776-1836) and the Literature of the American Renaissance (1836-1865). Emphasis will be on the historical, social, and philosophical backgrounds. ENG 253 provides an understanding of and appreciation for American culture as expressed in literature. Recommended: College-level reading; WR 121 English Composition; and ENG 104 Literature Fiction or ENG 106 Literature: Poetry is strongly recommended for success in this course.

ENG 255 AMERICAN LITERATURE: MODERN
➢ *(4 credits) - offered Spring only*
Focuses on a century and a half of fiction, poetry, drama, and essays (The Literature of an Expanding Nation: 1865 - 1912, The Literature of a New Century: 1912-1946 and The Literature Since Mid-Century: 1945-Present). Questions how "American Literature" has been defined and how those definitions have been challenged and changed over the last century. Emphasis on long recognized "major" authors as well as "minority" ones. Exploration of the literature in relation to literary and historical movements as well as on its own merit. ENG 255 provides an understanding of and appreciation for American culture as expressed in literature. Recommended: College-level reading; WR 121 English Composition; and ENG 104 Literature: Fiction or ENG 106 Literature: Poetry is strongly recommended for success in this course.

ENG 257 AFRICAN AMERICAN LITERATURE
➢ *(3 credits)*
Focuses on African-American culture and tradition (social, political, historical) through an exploration of the literature by African-Americans. Studies works by African-American writers on their own terms, understanding the genres they created, the subjects they expressed, and their indelible voices in the American grain. This emphasis on African American voices, on their own terms, enriches understanding not only of these primary American authors, but also enriches an understanding of the rich cultural diversity of American literature. Recommended: WR 121 English Composition skill level suggested.

ENG 261 SCIENCE FICTION
➢ *(3 credits) - offered Winter only*
Explores science fiction, fantasy and speculative futures through popular fiction. Discusses content, styles, techniques and conventions of the genre. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENGR: ENGINEERING

ENGR 111 ENGINEERING ORIENTATION I
(4 credits) - offered Fall & Winter only
Covers engineering as a profession, historical development, ethics, curricula and engineering careers. Introduces design, problem analysis and solution, and the general skills necessary for success in the Engineering program.

ENGR 112 ENGINEERING ORIENTATION II
(4 credits) - offered Winter & Spring only
Covers systematic approaches to problem solving using the computer. Includes logic analysis, flow charting, input/output design, introductory computer programming, and the use of engineering software. Prerequisite: Math 111 College Algebra with a grade of "C" or better.

ENGR 201 ELECTRICAL FUNDAMENTALS: DC CIRCUITS
(4 credits) - offered Fall only
Covers fundamentals of circuit analysis, including node and mesh analysis, superposition, and Thevenin and Norton's Theorem. Introduces op-amps, capacitors and inductors. Prerequisite: MTH 251 Differential Calculus with a grade of "C" or better.

ENGR 202 ELECTRICAL FUND: AC CIRCUITS
(4 credits) - offered Winter only
Covers AC circuit analysis techniques; covers sinusoidal steady state and analysis of three-phase circuits; introduces mutual inductance and transformers; looks at resonant circuit; investigate filters and continue to look at op-amp circuits. Prerequisites: ENGR 201 Electrical Fundamentals: DC Circuits with a grade of "C" or better.

ENGR 203 ELECTRIC FUND:SIGNALS/CONTROLS
(4 credits) - offered Spring only
Covers transient circuit analysis-RL, RC, RLC. Introduces LaPlace Transform and its use in circuit analysis, the transfer function, Bode diagram and two port networks. Prerequisites: ENGR 202 Electrical Fundamentals: AC Circuits with a grade of "C" or better.

ENGR 211 STATICS
(4 credits) - offered Fall & Winter only
Includes an analysis of 2D and 3D force systems, moments, resultants, equilibrium, trusses, frames and machines, centroids, moment and product of inertia, shear and moment in beams, and friction. Required: Working knowledge of spreadsheets, MTH 252 Integral Calculus.

ENGR 212 DYNAMICS
(4 credits) - offered Winter & Spring only
Includes particle and rigid body kinematics and kinetics, Newton's laws, work energy and impulse momentum. Required: ENGR 211 Statics; MTH 252 Integral Calculus. Recommended: PH 211 General Physics with Calculus or PH 201 General Physics; and a working knowledge of spreadsheets.

ENGR 213 STRENGTH OF MATERIAL
(4 credits) - offered Spring only
Includes simple stress and strain, biaxial stress and strain, pressure vessels, torsion, shear and moment, shear and normal stresses in beams, deflection, column analysis, and analysis of statically indeterminate structures. Required: ENGR 211 Statics, MTH 252 Integral Calculus, and a working knowledge of spreadsheets.

ENGR 242 INTRODUCTION TO GIS
(3 credits) - offered Spring only
An introductory course in geographic Information systems (GIS). Uses Arc GIS software to display and work with spatial data, work with attributes, query databases, and present data. Required: Knowledge of computer and Windows operation.

ENGR 245 ENGINEERING GRAPHICS: CIVIL
(4 credits) - offered Spring only
Includes two-dimensional and three-dimensional graphics, sketching, multiview projection, dimensioning, descriptive geometry, engineering design and an introduction to AutoCad®. Required: Working knowledge of Windows Recommended: MTH 111 College Algebra.

ENGR 248 ENGINEER GRAPHICS: MECHANICAL
(3 credits) - offered Spring only
Includes two-dimensional and three-dimensional graphics, sketching, multiview projection, dimensioning, descriptive geometry, and an introduction to computer based solid modeling. Prerequisite: Working knowledge of Windows and MTH 111 College Algebra with a grade of "C" or better.

ENGR 271 DIGITAL LOGIC DESIGN
(3 credits) - offered Spring only
Provides an introduction to digital logic and state machine design. Covers logic design, including logic gates, gate minimization methods and design with standard medium scale integration (MSI) logic circuits. Includes basic memory elements (flip-flops) and their use in simple-state machines. Prerequisites: MTH 231 Elements of Discrete Mathematics or MTH 251 Differential Calculus with a grade of "C" or better.

ENGR 272 DIGITAL LOGIC DESIGN LAB
(1 credit) - offered Spring only
Laboratory to accompany ENGR 271 Digital Logic Design. Illustrates topics covered in the lectures of ENGR 271 using computer-aided design, verification tools, and prototyping hardware. Prerequisite: ENGR 201 Electrical Fundamentals: DC Circuits with a grade of "C" or better.

FW: FISHERIES AND WILDLIFE

FW 251 PRIN OF WILDLIFE CONSERVATION
(3 credits) - offered Fall only
Introduces the relationships between the physical environment and wild animal populations. Examines the history of wildlife conservation and natural resource use, man's relationship to his natural environment, dynamics of animal populations, principles and practices of fisheries and wildlife management, and the role of wildlife biologists. MTH 065 Elementary Algebra and college-level reading and writing strongly recommended.

G: GEOLOGY

G 101 INTRO TO GEOLOGY: SOLID EARTH
● *(4 credits) - offered Fall only*
Introduces geology and the processes that shape the landscape. Includes a study of rocks and minerals, volcanic activity, plate tectonics, earthquake activity, and earth's geologic resources. Field trips highlight topics discussed. Includes a laboratory component. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

G 102 INTRO GEOLOGY: SURFACE PROCESS
● *(4 credits) - offered Winter only*
Introduces geology and the processes that shape the landscape. Includes a study of mass wasting and landslides, river dynamics and morphology, ground water, glaciers, coastal processes, and an overview of environmental geology and geologic hazards. Field trips highlight topics discussed. Includes a laboratory component. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

G 103 INTRODUCTION TO GEOLOGY
● *(4 credits) - offered Spring only*
Introduces geology by studying Earth and life as interpreted through the fossil and rock record. Includes fossils, relative and numerical-age dating, stratigraphic principles, global change, and the geologic history of the North American continent. Field trips highlight topics discussed. Includes a laboratory component. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

G 201 PHYSICAL GEOLOGY I
● *(4 credits) - offered Fall only*
A study of the Earth, fundamental geologic principles, and physical processes acting within and upon the Earth. Topics include Earth's interior, Earth materials, and tectonic processes and their influence on mountains, volcanoes, earthquakes, rocks and minerals. Laboratory component highlights rocks, minerals, and geophysical data. Field trips highlight topics. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

G 202 PHYSICAL GEOLOGY II
● *(4 credits) - offered Winter only*
A study of the Earth, fundamental geologic principles, and physical processes acting within and upon the Earth. Topics focus on surficial processes related to mass wasting, erosion, streams, groundwater, coasts, deserts, glaciers and climate. Laboratory component highlights use of topographic maps and imagery. Field trips highlight topics. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

G 203 HISTORICAL GEOLOGY
● *(4 credits) - offered Spring only*
A study of Earth and fundamental geologic principles as interpreted through the fossil and rock record. Topics include fossils and stratigraphic principles, geologic time and age dating, mountain building, global change, and the geologic history of the North American continent. Laboratory component highlights rocks, fossils, and geologic maps. Field trips highlight topics discussed. Geology courses do not need to be taken in sequence. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

GEOG: GEOGRAPY

GEOG 121 PHYSICAL GEOGRAPHY
(4 credits) offered Fall only
Provides liberal arts and non-science majors an introduction to the major physical subsystems of the planet earth. Topics studied include: weather, climate, climate change, climate classifications, plate tectonics, volcanism, earthquakes, erosion/deposition, glaciers, coastal processes, oceans, marine ecology. Maps and map use is introduced as an embeded skill. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

GEOG 202 WRLD REG GEO: LATIN AMER/CARIB
(3 credits) - offered Fall only
Analysis of Latin America/Caribbean according to physical features, environments, political divisions, cultural factors, and human activities/economies--emphasis on effect of geography on human culture. Recommended: College-level reading and writing skills.

GEOG 203 WORLD REG GEOGRAPHY: ASIA
(3 credits) - offered Winter only
Analysis of Asia according to physical features, environments, political divisions, cultural factors, and human activities/economies--emphasis on effect of geography on human culture. Recommended: College-level reading and writing skills.

GEOG 204 WRLD REG GEO: AFRICA/MID EAST
(3 credits) - offered Spring only
Analysis of Africa and Middle East according to physical features, environments, political divisions, cultural factors, and human activities/economies--emphasis on effect of geography on human culture. Recommended: College-level reading and writing skills.

GS: GENERAL SCIENCE

GS 104 PHYSICAL SCI: PRIN OF PHYSICS
● *(4 credits)*
Survey course providing non-science majors a broad background in the fundamentals of physics. No previous science background required. May not be taken for credit if six or more hours of college level physics have been completed. There is no restriction on the order in which the courses are taken. Prerequisite: MTH 065 Elementary Algebra or equivalent All prerequisites must be completed with a grade of "C" or better.

GS 105 PHY SCI: PRIN OF CHEMISTRY
● *(4 credits) - offered Winter only*
Survey course providing non-science majors a broad background in the fundamentals of chemistry. No previous science background required. May not be taken for credit if six or more hours of college level chemistry have been completed. There is no restriction on the order in which the courses are taken. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better..

GS 106 PHY SCI: PRIN OF EARTH SCIENCE
● *(4 credits)*
Survey course providing non-science majors a broad background in Earth science. No previous science background required. Field trips highlight the topics discussed. There is no restriction on the order in which the courses are taken. This course includes a laboratory component.

GS 108 OCEANOGRAPHY
● *(4 credits)*
Introductory lab science course that examines the four major categories of oceanographic study: geological, physical, chemical and biological. Emphasizes the geological and geophysical aspects of the sea floor; physical and chemical properties of sea water, waves, tides, ocean circulation and currents; marine ecosystems; and ocean utilization. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

GS 154 ENERGY & SUSTAINABILITY
● *(3 credits)*
Teaches students the fundamental concepts and skills related to alternative energy systems including wind, solar, bio-mass and small scale nuclear. Included is the study of personal, agricultural, and industrial energy efficiency. The relationship between energy efficiency, the laws of thermodynamics, economic realities, and technical operations are analyzed in relation to the interaction of societal needs.

HD: HUMAN DEVELOPMENT

HD 100 COLLEGE SUCCESS
(3 credits)
Focuses on personal development and behaviors that promote success in college. Topics include communication skills, time management, stress management, goal setting, learning styles and resources for students.

HD 120 DESTINATION GRADUATION
(1 credit)
Focus is on promoting student success. Students learn strategies for college success, become familiar with campus resources, establish a relationship with their advisor and develop an education plan for their college career.

HDFS: HUMAN DEV/FAMILY STUDIES

HDFS 200 HUMAN SEXUALITY
■ *(3 credits)*
Discusses the biological, social and psychological aspects of human sexual functioning, within a scientific context. Topics include sexual anatomy, sexual response, gender identity, gender roles, sexual orientation, love, contraception, sexually transmitted infections and sexual coercion. Cross-listed as PSY 231. Recommended: College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

HDFS 201 CONTEMPORARY FAMILIES IN THE U.S.
■ *(3 credits)*
An introduction to families with application to personal life. Focuses on diversity in family structure, social class, race, gender, work, and other social institutions.

HDFS 209 PRACTICUM: COMMUNITY AGENCIES
(3 credits)
Alternate years Designed to provide students with practical experience in an agency or organization that serves children, youth, families and/or the elderly. Students participate in a weekly seminar and spend six hours per week working in a community agency.

HDFS 222 PARTNER & FAMILY RELATIONSHIPS
(3 credits)
Students become familiar with different family structures and key processes such as communication, power, roles, affection and commitment. They understand how these processes emerge and change over the family life cycle. Students also examine the interface of family processes and social and work relationships.

HDFS 225 INFANT AND CHILD DEVELOPMENT
■ *(4 credits)*
An introduction to Human Development specifically focusing on prenatal, infant and child development. Describes issues, theories, and current research within a family context. Focuses on the domains of cognitive, physical, social and emotional development. Application to working with and understanding infants and young children.

HDFS 229 SCHOOL-AGE ADOLESCENT DEVELPMT
■ *(4 credits)*
Focuses on the Human Development, specifically in middle childhood and adolescence. Describes issues, theories, and current research on development within a family and community context. Focuses on the domains of cognitive, physical, social and emotional development as well as the influences of family, peers, schools, and community. Application to working with and understanding school-age and adolescent children. Recommended: HDFS 225 Infant and Child Development

HDFS 233 PROF FOUNDATIONS: EARLY CHILD
(3 credits)
Focuses on current issues in working with children and families in the early childhood profession. Students will become familiar with developmentally appropriate practice, legal and ethical issues, diversity, professionalism, and advocacy in early childhood care and education.

HDFS 248 LEARNING EXPERIENCES/CHILDREN
(3 credits)
Focuses on understanding how children learn and develop. Create quality, age-appropriate curricula, which include planning, implementing and evaluating materials and activities that promote language/cognitive, motor and social/emotional development. Emphasizes how to evaluate and integrate subject matter and internet sites for curriculum development and effective use of available materials and resources. Required: Students must successfully complete a criminal history background check prior to starting class.

HDFS 261 WORK W/INDIVIDUALS & FAMILIES
(3 credits)
Examines the fields of Human Services and Early Childhood Education, including career opportunities. Practices professional skills and strategies to use when working with individuals and families in a variety of settings. Studies communication, collaboration and partnerships to foster children's success.

HDFS 280 CWE CHILDHOOD DEVELOPMENT
(2-14 credits)
Provides practical experience in a child and/or family education and/or support program. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Credits are based on identified objectives and number of hours worked. This is a supervised work experience that must be approved by the CWE coordinator prior to enrolling in the class.

HE: HEALTH

HE 100 INTRO TO PUBLIC HEALTH
(4 credits)
This survey course covers the basic elements of public health and the complex ethical and political issues central to it. The class is open to undergraduate students of all majors who want to know more about the field of public health, what it is, how it is organized, and how it works.

HE 110 FIRST AID AND CPR
(1 credit)
Prepares the student in basic first aid and adult CPR and provides information to properly administer the necessary immediate care to an injured or suddenly ill person. An emphasis is placed on early recognition of emergency medical situations and taking appropriate steps to stabilize the victim while activating the emergency medical services system.

HE 112 EMERGENCY FIRST AID
(1 credit)
Covers basic first aid information in an attempt to prepare the student to properly administer the necessary immediate care to an injured or suddenly ill person. Note: Full day or two evening classes.

HE 125 OCCUPATIONAL SAFETY AND HEALTH
(3 credits) - offered Fall & Spring only
Introduces the student to fundamentals of occupational health and safety in regard to accident causation theory and accident prevention, health and safety management, health and safety practices, hazard identification and control, safety history and legislation, workers' compensation practices, and practical aspects of complying with current safety regulations.

HE 151 DRUGS IN SOCIETY
(3 credits) - offered Fall & Spring only
Addresses the pharmacology of some popular drugs in Western society. Discusses contemporary issues involving the effects of drug use, misuse and abuse on the individual and society in general.

HE 204 EXERCISE & WEIGHT MANAGEMENT
(3 credits)
Provides students with scientifically based strategies for controlling and managing weight. Offers students an opportunity to design and monitor participation in a personal weight management program that includes individual assessments, nutritional awareness, stress management and exercise. Since exercise is one of the most crucial factors in healthy weight management, students are encouraged to register for a physical education activity class when they register for this class.

HE 205 DIET & NUTRITION FOR ACTIVE LIFESTYLES
(3 credits)
Students will take an in-depth look at their individual diet. Students will have the opportunity to analyze their current diet and prepare modifications that would improve it. Development of a diet that can improve physical performance and health will be emphasized. Students must be willing to use (not necessarily own) a computer for some class activities.

HE 207 STRESS MANAGEMENT
(3 credits)
Students learn the theoretical and scientific basis for the various components of stress, the stress response and the relaxation response. Students learn how to recognize and cope appropriately with physical, occupational, social, school and environmental stressors. The course emphasizes achieving lifestyle balance and shows students how to develop and practice physiologic relaxation techniques and stress reduction methods.

HE 210 INTRO TO HEALTH SERVICES
(3 credits) - offered Winter only
An introductory overview of the U.S. health care system. Health care financing, inpatient and outpatient health service delivery, government regulatory agencies and topics relating to quality and access will be explored.

HE 220 INTRO: EPIDEMIOLOGY/HEALTH DATA ANALYSIS
(3 credits)
Introduction to epidemiology and the use of elementary statistics for students in health-related studies. This course is designed to provide preparatory background for taking subsequent course in epidemiology and health data analysis offered by the Department of Public Health. This course introduces measure of disease frequency, analytical epidemiology, study designs, experimental design, and basic elements of descriptive statistics and inferential statistics. Prerequisite: Completion of MTH 095: Intermediate Algebra or higher with a grade of "C" or better.

HE 225 SOCIAL & INDIVIDUAL HEALTH DETERMINANTS
(3 credits)
Provides students with an understanding of how social and individual factors and personal choices and behaviors contribute to health, premature death, disease and disability. Existing and emerging health problems and public health strategies and policies are examined.

HE 2500 INTRO TO HEALTH CARE ADMINISTRATION
(3 credits)
An introduction to the administrative operations of health care organizations. Examines the various service settings and their organization, personnel and resources as well as the role of the manager in health care settings. Prerequisite: HE 210 Intro to Health Services with a grade of "C" or better.

HE 252 FIRST AID
(3 credits)
Provides first aid instruction and practice in skills that enable students to take care of themselves and to aid others in the event of an accident or illness.

HE 253 AIDS AND SEXUALLY TRANSMITTED DISEASES
(3 credits) - offered Winter & Spring only
Provides a fundamental understanding of HIV/AIDS and other sexually transmitted disease from a national and global perspective. The history, etiology, epidemiology and prevention strategies will be examined. The course will assist students in developing an understanding of diverse cultures, customs, attitudes, values and beliefs in the context of disease transmission and eradication.

HE 261 CPR
(1 credit)
Designed to teach the skills of CPR and relief of foreign body airway obstruction (FBAO) for victims of all ages. It is intended for participants who may need to perform CPR or airway obstruction techniques in a wide variety of settings.

HE 261A CPR: PROFESSIONAL RESCUER
(1 credit)
The Healthcare Provider course is designed to teach the skills of CPR for victims of all ages (including ventilation with a barrier device, a bag-mask device and oxygen), use of an automated external defibrillator (AED) and relief of foreign-body airway obstruction (FBAO). It is intended for participants who provide health care to patients in a wide variety of settings.

HE 280 CWE HEALTH
(2-14 credits)
An instructional program designed to give students practical experience in supervised employment related to health. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

HORT: HORTICULTURE

HORT 211 HORTICULTURE PRACTICUM
(3 credits)
Students learn various aspects of practical horticulture by working as a part of a team managing the LBCC greenhouse, organic garden and landscape areas. Students learn basic procedures of plant propagation, soil, water, fertilizer, and pest management. Seasonal projects parallel Horticulture classes.

HORT 226 LANDSCAPE PLANT MATERIALS
(3 credits) - offered Fall only
Identification of trees, shrubs, vines and groundcovers used in landscape horticulture; their use in plant composition.

HORT 228 LANDSCAPE PLANT MATERIALS
(3 credits) - offered Spring only
Includes identification of trees, shrubs, vines and ground covers used in landscape horticulture and their use in plant composition.

HORT 230 SUSTAINABLE AG & FOOD SYSTEMS
(3 credits)
Principles of sustainable environments, ecological agriculture, and community food systems are discussed in class. Students practice fresh market food production and food preservation during field and laboratory sessions. Emphasis is on hands-on application of scientific principles to create sustainable food production systems.

HORT 247 ARBORICULTURE: PRINCIPLES & PRACTICES
(4 credits)
A comprehensive course of the study for students and practitioners of landscape horticulture who need to know how to select, plant, train, protect, fertilize and provide ongoing care for trees in the landscape. Class provides excellent preparation for the ISA Certified Arborist and Tree-worker certification exams. Recommended: BI 103 Dynamic Plant; HT8.140 Landscape Maintenance or other botany, ornamental horticulture and forestry related course work.

HORT 251 TEMPERATE TREE FRUIT, BERRIES, GRAPES, AND NUTS
(3 credits)
This course covers fruit and nut crops for temperate zones. Emphasis is placed on scientific and common names, plant adaptation, basic morphology, major cultivars, and markets. Students explore concepts of sustainable agriculture and environmental responsibility within the context of fruit and nut production. Recommended: BI 103 Dynamic Plant and/or HORT 260 Organic Farming and Gardening

HORT 255 HERBACEOUS ORNAMENTAL PLANTS
(3 credits) - offered Spring only
The identification and culture of herbaceous plant materials including perennials, annuals, groundcovers, ornamental grasses, and bulbs commonly grown in Oregon. Develops plant identification skills using recognition of visual details of form, texture, size, leaves, flowers, and fruit.

HORT 260 ORGANIC FARMING AND GARDENING
(3 credits) - offered Spring only
Organic farming and gardening methods are discussed in class and practiced in the field. The philosophical background of organic farming as well as the biological, environmental and social factors involved in organic food production are covered. Emphasis is on hands-on application of scientific principles to create food production systems that environmentally sound and economically sustainable.

HORT 261 ADV PRACTICE LOCAL FOOD PROD
(2 credits)
This course will be a required course of the new certificate program and an elective for the existing Horticulture and Crop Production AAS programs. Personal feedback from LBCC students, OSU students and community members, and farmers indicates great interest in a summer course. Currently no summer courses are offered in the Horticulture and Crop Production programs at LBCC. Oregon State University economics and USDA statistics show that the demand for local, sustainably produced products from small farms is increasing. This trend is resulting in new business opportunities and the need for trained individuals in the field of local food production. Prerequisite: HORT 260 Organic Farming & Gardening with "C" or better. Corequisite: HORT 261A Advanced Practice in Local Food Production Lab. Recommended: Farm management skills and completion of courses in sustainable agriculture (e.g. HORT 230); pest management (e.g. CSS 240); irrigation systems (e.g. AG 250); small livestock production; sustainable small farm management

HORT 261A ADV PRACTICE LOCAL FOOD PRODUCTION LAB
(1 or 4 credits)
This course represents the lab section of the course, "Advanced Practice in Local Food Production". Students work in groups and learn how to grow crops, develop crop rotations, and integrate livestock into a complex market garden farming system, irrigation, cover crops and post-harvest crop management are practiced as is marketing of college farm products. Prerequisite: HORT 260 Organic Farming & Gardening with a "C" or better. Corequisite: HORT 261 Advanced Practice in Local Food Production. Recommended: Farm management skills and completion of courses in sustainable agriculture (e.g. HORT 230); pest management (e.g. CSS 240); irrigation systems (e.g. AG 250); small livestock production; sustainable small farm management

HORT 280 INTRO TO LANDSCAPE DESIGN
(3 credits) - offered Winter only
Students learn how to develop functional, aesthetically pleasing and environmentally responsible landscapes. Site assessment, basic design principles, plant selection and drafting skills will be emphasized. Introduction to computer-aided design (CAD), using color in landscape designs and rendering section/elevation views. Recommended: HORT 225 Landscape Plant Materials, HORT 255 Herbaceous Ornamentals

HS: HUMAN SERVICES

HS 205 YOUTH ADDICTION
(3 credits)
Designed to assist students in working with youth who are chemically dependent. Includes prevention, intervention, assessment, individual and group recovery methods.

HST: HISTORY

HST 101 HISTORY OF WESTERN CIV
■ *(3 credits) - offered Fall & Winter only*
This course identifies and analyzes the origins and development of western civilization from its beginning through the High Middle Ages. It includes analysis of culturally and historically diverse practices, values, and beliefs among the civilizations of Mesopotamia, Egypt, Greece, and Rome. Recommended: College-level reading and writing skills (WR115 Introduction to College Writing and WR121 English Composition are strongly recommended for success in this course.

HST 102 HISTORY OF WESTERN CIV
■ *(3 credits) - offered Winter & Spring only*
Surveys western civilization from the High Middle Ages through the American and French Revolutions. Other topics are the Renaissance, the Scientific Revolution, and the Enlightenment. Recommended: College-level reading and writing skills.

HST 103 HISTORY OF WESTERN CIV
■ *(3 credits) - offered Spring only*
Surveys western civilization from the Industrial Revolution through the modern era. Also includes Romanticism, the Revolutions of 1830 and 1848, Imperialism, World Wars I and II and the Cold War. Recommended: College-level reading and writing skills.

HST 150 SCI & CULTURE IN WESTERN TRAD
■ *(3 credits)*
Surveys the history of western civilization from the perspective of developments in science and technology. Emphasizes the interaction between scientific developments and cultural developments.

HST 157 HIST OF MIDDLE EAST & AFRICA
■ *(3 credits) - offered Fall only*
Surveys the cultural, social, economic and political development in the Middle East and Africa. Recommended: College-level reading and writing skills.

HST 158 HISTORY OF LATIN AMERICA
■ *(3 credits)*
Surveys the cultural, social, economic and political development of Latin America. Recommended: College-level reading and writing skills.

HST 159 HISTORY OF ASIA
■ *(3 credits)*
Surveys the cultural, social, economic and political development of Asia. Emphasizes 20th century issues. Recommended: College-level reading and writing skills.

HST 201 US HISTORY: COLONIAL & REV
■ *(3 credits) - offered Fall only*
Provides an overview of the United States from pre-Columbian North American and European antecedents to colonization, Colonial America, Revolutionary America; development of U.S. government, economy and society to 1830. Recommended: College-level reading and writing skills.

HST 202 US HISTORY: CIVIL WAR & RECON
■ *(3 credits) - offered Winter only*
Provides an overview of the causes, events and interpretations of the American Civil War and a summary of Reconstruction. This course emphasizes military events but also deals with social, political and economic changes and issues during the war. Emancipation and the complex issue of race are also covered. The aim of the class is to immerse students as much as possible in the material culture of the era, which complements their learning from books, class discussion, and films and creates a greater interest in learning more about the war. This immersion involves the use of replicas, artifacts, in-class activities, and field trips. Recommended: WR 121 English Composition, RD 090 College Success & Reading and COMM 111 Fundamentals of Speech

HST 203 US HISTORY: RISE TO WORLD POWER
■ *(3 credits) - offered Spring only*
Provides an overview of the United States in the 20th century. Examines the rise to global power, World Wars I and II, civil rights, labor, women's rights and the Cold War. Recommended: College-level reading and writing skills.

HT: HORTICULTURE TECHNOLOGY

HT 8.102 CAREER EXPLORE: HORTICULTURE
(1 credit) - offered Winter only
Surveys career opportunities in horticulture. A report on a specific career position is required. Includes resume' writing and job search skills.

HT 8.115 GREENHOUSE MANAGEMENT
(3 credits) - offered Spring only
Introduces greenhouse management emphasizing practical applications in the horticulture industry. Topics include growing structures and environment, root media containers, watering, plant nutrition, pest management and plant growth. Hands-on activities emphasize safe use of tools and creating a safe workplace environment. Includes an overview of available jobs in Oregon's nursery and industry and job interview with a greenhouse operator.

HT 8.135 TURF MANAGEMENT I
(3 credits) - offered Winter only
Introduces and develops the art and science of turf-grass culture. Grass identification and maintenance; fertilizer and water requirements; weed, insect and disease identification and control; and other turf problems are emphasized.

HT 8.137 PLANT PROPAGATION
(4 credits) - offered Winter only
Introduces the principles, methods, techniques and facilities used to propagate ornamentals. Techniques covered include seeding, grafting, cuttings, divisions and tissue culture. Lab activities utilize the LBCC Greenhouse. Students are responsible for the annual plant sale.

HT 8.139 ARBORICULTURE PRACTICUM
(4 credits) - offered Spring only
Gives practical field experience in climbing and tree work. Taught by certified arborists, emphasizing safety and skill. Note: Limited enrollment. Requires personal protective equipment, instructor's approval.

HT 8.140 LANDSCAPE MAINTENANCE
(3 credits) - offered Fall only
Introduces principles, methods, techniques and use of equipment for maintenance of landscape and turf areas. Course offered alternate years only. Offered Fall 2013.

HUM: HUMANITIES

HUM 101 HUMANITIES:PREHISTORY-MID AGES
➢ *(3 credits)*
Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures. Emphasizes arts and ideas as reflections of and influences on social and cross-cultural change. Attendance at out-of-class activities is required. Note: Need not be taken in sequence. College-level writing and reading skills (WR 121) are strongly recommended for success in this course.

HUM 102 HUMANITIES:RENAISSANCE-ENLIGHT
➢ *(3 credits)*
Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures. Emphasizes arts and ideas as reflections of and influences on social and cross-cultural change. Attendance at out-of-class activities is required. Note: Need not be taken in sequence. College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

HUM 103 HUM:ROMANTIC ERA-CONT SOCIETY
➢ *(3 credits)*
Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures. Emphasizes arts and ideas as both reflections of and influences on social and cross-cultural change. Attendance at out-of-class activities is required. Need not be taken in sequence. College-level reading and writing skills (WR 121) are strongly recommended for success in this course.

HV: HEAVY EQUIPMENT/DIESEL

HV 3.122 CUSTOMER SVC FOR HEAVY EQUIP TECHNICIANS
(3 credits) - offered Fall only
Effective troubleshooting and fabrication project design requires communicating with internal and external customers. This course helps heavy equipment technicians create effective troubleshooting and project management methods that incorporate customer service skills coupled to communicating effectively with people from different social and cultural backgrounds. Included are job seach skills for obtaining employment in the industry, as well as repair and design options that promote energy efficiency.

HV 3.123 FUNDAMENTAL SHOP SKILLS
(3 credits) - offered Fall only
Gives the student practical working knowledge of safety in the trade areas of employment. Uses safety regulatory agencies as a foundation, and also includes fork lift training. Students will complete online training specific to safety and pollution prevention. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.129 HEAVY EQUIPMENT/DIESEL ENGINES
(7 credits) - offered Winter only
This section of our program pertains to the operating principles, maintenance, repair and overhaul of various types and sizes of diesel engines. Diesel engines, their component parts, and related accessories are studied in depth. In conjunction with this is the study of manufacturer's specifications as they pertain to correct engine operation, performance and emissions. Prerequisite: Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.130 H.E./DIESEL TUNE-UP
(10 credits) - offered Spring only
Capstone class that introduces diesel tune-up and techniques for optimum engine performance including diagnostic troubleshooting, engine break-in procedure through use of the dynamometer. The student will use all of the critical thinking skills they have learned in the past classes to solve real world problems on mechanical and computer managed engines and trucks. This class also includes the ITS diesel club. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.132 ADVANCED MOBILE HYDRAULICS
(5 credits) - offered Spring only
This course covers advanced hydraulic theory along with service and repair of valves, pumps, motors, and connectors used in mobile equipment hydraulic systems. Systems design and modification will be covered. Machine systems will be learned using hydraulic schematic drawings. Common customer concerns with specific heavy equipment and their solutions will be learned. Operational check-out and laptop computer testing of heavy equipment will be performed in labs, as well as repair and adjustment and electronic controls. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.134 BASIC HYDRAULICS
(3 credits) - offered Winter only
Covers hydraulic theory along with pump, actuator application, and valve design and theory. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.146 PNEUMATIC BRAKES AND CONTROLS
(5 credits) - offered Winter only
Acquaints the student with the theory and application of pneumatic braking systems. The student will learn to service, diagnose and repair ABS, foundation, accessory and safety air systems. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.295 POWER TRAIN SYSTEMS
(10 credits) - offered Fall only
Studies include power train terminology, theory and operation, driveshaft function and construction, maintenance practices, power train schematics, troubleshooting and failure analysis, and component rebuild and replacement. Students will use electronic resources such as John Deere Service Advisor and Cat SIS technical manuals to perform required tasks. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.296 STEERING, SUSPENSION & BRAKES
(5 credits) - offered Spring only
Covers the theory and operation of heavy duty steering and suspension systems, automotive alignment, and braking systems. Diagnosis and service techniques are taught with the use of components and vehicles. Learning strategies include mulit-media presentations, discussion research and lab practice. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.297 ELECTRICAL & ELECTRONIC SYS
(10 credits) - offered Fall only
Introduces the theory, application and diagnosis of the electrical and electronic control systems for modern vehicles. Emphasis is placed on batteries, starting, charging, lighting, accessories and driver information systems. Preparation for ASE certification in electrical/electronic systems. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher.

HV 3.303 MOBILE AIR CONDITIONING & COMFORT SYSTEM
(3 credits) - offered Spring only
Principles of mobile heating and air conditioning systems with an emphasis on design, function, adjustment, service and testing of components. Prerequisites: Placement into RD 090 College Success and Reading Strategies or higher, and placement into WR 095 College Writing Fundamentals or higher, and placement into MTH 060 Introduction to Algebra or higher, and HV 3.297 Electrical and Electronic Systems with a grade of "C" or better.

IN: INDUSTRIAL TECHNOLOGY STUDY SK

IN 1.197 INTRO TO INDUSTRIAL COMPUTERS
(1 credit) - offered Winter only
Introduces students to basic applications of computers in industry; a variety of applications including Windows,Word, Excel, AutoCAD,and PLC programming basics. Students will have hands-on opportunities with these applications and will be able to identify strengths and weaknesses.

IN 4.164 TECHNICAL WRITING FOR CTE
(3 credits)
Covers processes and fundamentals of writing field-specific technical documents, including structure, organization and development, audience analysis, diction and style, revision, editing, mechanics and standard usage, and writing process required for successful workplace writing. This course focuses on writing work place documents commonly written by technicians: emails, descriptions, customer intake documents, documentation of work completed, bad news messages, instructions, summaries, accident reports, resumes, cover letters, troubleshooting procedures, proposals, request for quotes, etc.

IN 4.165 LIFETIME HEALTH & FITNESS FOR TECHNICIANS
(3 credits)
This is a non-transfer course designed to help prepare technical education students to enter the workforce with good health, fitness and first aid skills. Evaluates selected areas of the student's present health and fitness level. Provides information on each of the wellness dimensions as they relate to physical fitness, back care, chronic disease, stress management, nutrition, weight management, behavior change, and lifestyle choices. Considers work-life balance and self-responsibility. Shows the student how to enter the work site as a fit and healthy individual and suggests ways to maintain that level of health.

JN: JOURNALISM

JN 134 INTRO TO PHOTOJOURNALISM
(3 credits) - offered Fall & Spring only
Introduces students to photojournalism traditions and techniques, from taking photos for publication to exploring the law, ethics and history of documentary photography and its impact on audiences. Covers topics such as taking photos for story-telling, evaluating images for relevance and impact, basic camera techniques and digital reproduction and online presentation. Includes digital photo lab work. Basic digital photography experience suggested, though not required.

JN 201 MEDIA AND SOCIETY
(4 credits)
Studies the history, development, technology and social impact of the various mass media. Includes critical analysis of media practice and ethics, the study of significant figures and developments, and the examination of the media as channels of expression in popular culture.

JN 215A JOURNALISM LAB
(1 credit)
Offers supervised editorial work on the college's student newspaper (The Commuter) in reporting and editing. Provides training and experience with computerized word processing. Note: Course serves as the lab for JN 216 News Reporting and Writing and JN 217 Feature Writing. May be taken independently from those courses. May be repeated for up to six credits.

JN 215B DESIGN & PRODUCTION LAB
(2 credits)
Offers supervised experience in newspaper page design, headline writing, computer pagination, digital imaging, photography, advertising and related newspaper production skills. Students apply skills in production lab for the college's student newspaper (The Commuter). May be repeated for up to six credits.

JN 216 NEWS REPORTING & WRITING
(3 credits) - offered Winter & Spring only
Introduces basics of reporting and journalistic writing, including news style, grammar and story structure. Students also study journalism history, literature, ethics, law and critical thinking as applied to information gathering. Corequisite: JN 215A Journalism Lab.

JN 217 FEATURE WRITING
(3 credits) - offered Spring only
Covers various forms of nonfiction writing, including profiles, human interest, travel and analysis, with emphasis on backgrounding, depth reporting, descriptive writing and free-lancing.Continues examination of issues in journalismhistory, literature, ethics and law. Special attention to the literary journalism form. Recommended: College level reading and writing skills(WR 121) are strongly recommended for success in this course.

JN 280 CWE JOURNALISM
(2-14 credits)
An instructional program designed to give students practical experience in supervised journalism-related employment. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

JPN: JAPANESE

JPN 201 SECOND YEAR JAPANESE I
(4 credits)
Continuing from the first year, Second Year Japanese provides training for more complicated situations, using four skills: listening, speaking, reading and writing. It also introduces more cultural background, with authentic materials, to help students to understand the concept of the language. Required: First Year Japanese.

LIB: LIBRARY SCIENCE

LIB 139 GRAPHIC NOVELS IN THE CLASSROOM AND LIBRARY
(3 credits)
An introduction to graphic literature, both fiction and nonfiction, in a variety of genre and formats. Includes the selection, evaluate, promotion and uses with students in K-12 classrooms and libraries and with adults in public libraries.

LIB 140 INTRO TO SCHOOL LIBRARIES
(3 credits)
Presents an overview of school librarianship within the context of the educational mission of the school. Includes the role of the library assistant, basic library terminology, procedures and services, and library materials.

LIB 141 CIRCULATION: LIBRARY MATERIALS
(3 credits)
Principles and practices of library circulation, print and electronic circulation systems, shelving, over-dues, and interlibrary issues.

LIB 142 REFERENCE MATERIALS & SERVICES
(3 credits)
Introduction to using print and electronic reference materials and providing information services to students. Includes information literacy skills and working with teacher and student assignments.

LIB 143 COLLECTION DEPARTMENT
(3 credits)
Presents an overview of the principles and practices of building and maintaining the library collection, including identifying the needs of the users and the elements and importance of a collection development policy in managing the collection. Students develop tools for dealing with library collection management issues.

LIB 144 ORGANIZATION: LIBRARY MATERIAL
(3 credits)
Introduction to classification and cataloging practices including the Dewey Decimal System, subject headings, filing rules, MARC records, and print and electronic systems.

LIB 145 ONLINE INFO LITERACY:LIBRARIAN
(3 credits)
An introduction to using electronic resources in searching for information. Includes information literacy approaches to locating information for students and library patrons. Some library and computer experience helpful.

LIB 146 CHILDREN'S LITERATURE & READING PROMOTION
(3 credits)
An overview of literature for use with elementary, middle and high school students. Includes fiction and nonfiction in a variety of genre, reading levels and interests, techniques for sharing literature with students.

LIB 147 MULTICULTURAL LITERATURE K-12
(3 credits)
An introduction to children's and young adult literature that respectfully depicts the range of cultures in the United States. Includes the selection, evaluation, and promotion of multicultural literature in the library and classroom.

LIB 148 LIBRARY SKILLS CURRICULUM
(3 credits)
An introduction to children's and young adult literature that respectfully depicts the range of cultures in the United States. Includes the selection, evaluation, and promotion of multicultural literature in the library and classroom.

LIB 149 GLOBAL LITERATURE K-12
(3 credits)
An introduction to children's and young adult literature, fiction and nonfiction, set in countries around the world. Both contemporary and historical literature for use at the elementary and secondary school levels.

LIB 151 READING PROMOTION/READERS ADVISORY
(3 credits)
An overview of approaches, activities and techniques for providing readers advisory services and promoting reading in school and public libraries.

LIB 152 DESIGN & PRODUCTION OF LIBRARY RESOURCES
(3 credits)
An overview of the design of the library and the use of library materials to respond to patron needs and interests. Includes the use of library space, signage, and visual communication of resources. Covers the creation and maintenance of print and electronic library and instructional materials.

MA: MANUFACTURING TECH

MA 3.396 MANUFACTURING PROCESSES I
(6 credits)
Provides training in the skills necessary to pursue a career in the machinist's trade. The lecture portion of Manufacturing Processes I introduces students to the fundamentals of good machining practices; theory/practical considerations are covered. In the laboratory aspect of this course each student completes a series of projects that emphasize safe operation of machine tools. The safety aspect of the course includes: Prevention of accidents, injuries and illness at the work site; Measures that provide protection from exposure to hazards and hazardous materials; Legal obligations mandated by OR-OSHA that directly relate to future occupations. Successful completion of MA3.396B, MA3.397B, and MA3.398B will be the equivalent of MA3.396.

MA 3.396B MANUFACTURING PROCESSES I
(2 credits)
This course provides training and learning experiences in basic machining operations. Students will be using the lathe, milling machine and other machine tools to complete a project. The finished projects are used to participate in a contest; judging is based on performance, craftsmanship and technology utilization. Students are required to demonstrate some design responsibilities. Skills for successful employment are emphasized.

MA 3.397 MANUFACTURING PROCESSES II
(6 credits)
Provides machine tool technology training and learning opportunities at an intermediate level. Instruction will be given in the safe and efficient operation of machine tools. Theory and practical considerations will be covered. Environmental awareness information is included in this course.

MA 3.397B MANUFACTURING PROCESSES II
(2 credits)
This lecture/lab course focuses on advanced machine tool operation. Determining machine tool selection, setup and planning for multi-tool projects will be covered. Shop math, including trigonometry and elementary algebra, will be used to make calculations. Students will complete a series of machining projects. This course includes instruction on basic computer numerical control (CNC) machining and turning.

MA 3.398 MANUFACTURING PROCESSES III
(6 credits)
Focuses on advanced machine tool operation. Determining machine tool selection, set-up and planning for multi-tool projects will be covered. Shop math, including trigonometry and elementary algebra will be used to make calculations. Students will complete a series of advanced machining projects. A career specialist will deliver information about job search skills.

MA 3.398B MANUFACTURING PROCESSES III
(2 credits)
This lecture/lab course focuses on advanced machine tool operation. Determining machine tool selection, setup and planning for multi-tool projects will be covered. Shop math, including trigonometry and elementary algebra, will be used to make calculations. Students will complete a series of advanced machining projects.

MA 3.405 INSPECTION I
(2 credits) - offered Fall only
This course provides training and learning opportunities in the science of measurement as it relates to manufacturing. The correct use of measuring tools to collect data at logical intervals throughout the manufacturing process will be covered. Students will be introduced to some of the practical considerations that relate to size, tolerance and other specifications. The measuring tool we will be studying include inch and metric rulers, micrometers, dial and digital calipers, the surface plate, sine bars, gage blocks and the combination set.

MA 3.406 INSPECTION II
(2 credits) - offered Winter only
Provides training in measurement as it relates to manufacturing. Geometric Dimensioning and Tolerancing (GD&T), surface plate inspection methods and tools, optical comparator, surface roughness, inspection of threads and other topics will be covered. This course includes information on human relations skills including; working cooperatively as a member of a team or manufacturing cell, customer relations, and working with diverse populations.

MA 3.407 MATHEMATICS FOR NC MACHINISTS
(1 credit) - offered Fall only
Provides mathematics training for NC machinists and programmers. Scientific calculator functions, basic algebra, right angle trigonometry, geometry and the Cartesian coordinate system as it applies to CNC machining will be covered.

MA 3.412 CAM I
(3 credits) - offered Fall only
Provides training and learning in the use of Mastercam Computer Aided Manufacturing (CAM) software. Students learn how to create accurate part geometry, select tools, specify toolpaths and generate Computer Numeric Control (CNC) machine code. A primary focus of this course is Mastercam applications as they relate to Turning Center operations.

MA 3.416 CNC: SPECIAL PROJECTS
(4 credits) - offered Spring only
Provides advanced Computer Numerical Control (CNC) training. Students are required to demonstrate CNC machine operator skills on several controls as well as set up knowledge. Students will have some design responsibilities as they complete projects. Careful planning, good machining practices, economic/ business concerns, documentation and safety will be emphasized. Prerequisites: MA 3.420 CNC Mill and MA 3.421 CNC Lathe with a "B" or better.

MA 3.420 CNC: MILL
(4 credits) - offered Fall only
Provides training in the operation and part programming of the modern vertical machining center. Students learn safe manufacturing methods by completing a series of assignments using one of two Haas vertical machining centers. Students will gain experience reading, writing and editing part programs using industry standard G & M code programming.

MA 3.421 CNC: LATHE
(4 credits) - offered Winter only
Introduces students to a modern CNC turning center and part programming using industry standard ISO/EIA machine code for the Fanuc controller. Students turn aluminum parts to specifications on a Hitachi Seiki CNC Lathe. Safety procedures are emphasized. Prepares students for mastery of the two axis lathe coordinate plane.

MA 3.427 SOLIDWORKS I
(3 credits) - offered Winter only
This introductory course provides training and learning experiences in Solid Works mechanical design automation application software. This software makes it possible for designers to quickly sketch out ideas, experiment with features and dimensions, and produce models and detailed drawings.

MA 3.428 SOLIDWORKS II
(3 credits) - offered Spring only
Provides advanced training and learning experiences in Solid Works mechanical design automation application software. This software makes it possible for designers to quickly sketch out ideas, experiment with features and dimensions, and produce models and detailed drawings. This course is the second in the series.

MA 3.431 BASIC PRINT READING: METALS
(2 credits) - offered Fall only
Provides training in interpreting blueprints.

MA 3.432 INTRODUCTION TO MASTERCAM
(3 credits) - offered Fall only
Introduction to Mastercam provides training on the use of Mastercam CAD/CAM software to design parts and toolpaths for a modern CNC vertical machining center. Students complete a series of exercises that progress from designing a two-dimensional part and creating a contour toolpath to more advanced CNC mill applications. Safety and efficient machining will be stressed throughout the course.

MA 3.433 MASTERCAM II: SURFACES
(3 credits) - offered Winter only
Second course in the three-course Mastercam series. Students complete a series of exercises that include building more advanced surface toolpaths.

MA 3.434 MASTERCAM III: SOLIDS
(3 credits) - offered Spring only
Third course in the mastercam series. Introduces students to solid modeling as it relates to CAD/CAM/CNC technology. Practical examples of current manufacturing methods are used for the exercises. Students are encouraged to assume design responsibility when working through projects.

MA 3.437 MATERIALS SCIENCE
(2 credits) - offered Spring only
This course investigates the relationships that exist between structures and the properties of materials. The study of atomic structure and chemical makeup provides the basis for material classification. The subjects of bonding forces and crystal structures are explored. Lecture topics include dislocations, strengthening mechanisms, slip systems, phase transformations and plastic deformation in polycrystalline materials. The emphasis is on ferous metals; non-ferrous metals, ceramics, polymers and composite materials will be included.

MA 3.438 MANUFACTURING PROCESSES IV
(3 credits) - offered Fall & Winter only
This course provides training in manual machining skills at an advanced level. A series of lectures, textbook assignments and tests will be utilized. Students will complete a series of machine shop projects using manual machine tools including lathes and mills. Inspection procedures are emphasized. Quality and safety are key concepts of this course. Prerequisites: MA3.396 Manufacturing Processes I, MA3.397 Manufacturing Processes II and MA3.398 Manufacturing Processes III with a "C" or better.

MA 3.439 MANUFACTURING PROCESSES V
(3 credits) - offered Fall & Winter only
This course provides training in manual machining skills at an advanced level. A series of lectures, textbook assignments and tests will be utilized. Students will complete a capstone project using manual machine tools including lathes and mills. Function of mating parts of an assembly is emphasized. Quality and safety are key concepts of this course. Prerequisites: MA3.396 Manufacturing Processes I, MA3.397 Manufacturing Processes II, MA3.398 Manufacturing Processes III and MA3.438 Manufacturing Processes IV with a "C" or better.

MA 3.451 ADVANCED CNC TECHNOLOGY I
(3 credits) - offered Fall only
This course provides training and learning experiences in Computer Numeric Control (CNC) technology. Students will receive training on safe CNC operation skills on a number different of CNC machines and controls. Environmental Awareness topics include: ethics and environmental responsibility, environmental quality, conservation, recycling, resource depletion, work environment, disease control, handling hazardous materials, hazardous materials disposal. reactions to spill emergencies. Prerequisites: MA3.420 CNC Mill and MA3.421 CNC Lathe with a "B" or better.

MA 3.452 ADVANCED CNC TECHNOLOGY II
(3 credits) - offered Winter only
This course provides training and learning experiences in Computer Numeric Control (CNC) technology. Students will receive training on safe CNC operation skills on a number different of CNC machines and controls. Prerequisites:MA3.420 CNC Mill, MA3.421 CNC Lathe and MA3.451 Advanced CNC Technology I with a "B" or better.

MA 3.453 ADVANCED CNC TECHNOLOGY III
(3 credits) - offered Spring only
This course provides training and learning experiences in Computer Numeric Control (CNC) technology. Students will receive training on safe CNC operation skills on a number different of CNC machines and controls. Students will design parts, generate machine code, design and machine fixtures. Prerequisites: MA3.420 CNC Mill, MA3.421 CNC Lathe, MA3.451 Advanced CNC Technology I and MA3.452 Advanced CNC Technology II with a "B" or better.

MO: MEDICAL OFFICE

MO 5.414 DRUG NAMES & CLASSIFICATIONS
(3 credits) - offered Winter & Spring only
Prepares student training to work as a member of a health care team to effectively communicate pharmaceutical information to a variety of health care professionals, using correct spelling and pronunciations of selected pharmaceuticals, which help ensure patient safety in pharmaceutical usage. Prerequisite: MO 5.630 Medical Terminology and Body Systems I with a grade of "C" or better.

MO 5.625 BASIC CLINICAL OFFICE PROCEDURES
(5 credits) - offered Fall only
Students prepare patient, assist medical personnel, and provide aseptic environments in ambulatory care settings. Prerequisite: MO 5.632 Medical Terminology and Body Systems III and MO5.414 Drug Names & Classifications with a grade of "C" or better.

MO 5.630 MEDICAL TERMINOLOGY & BODY SYSTEMS I
(3 credits)
Prepares students to use basic medical language in written and oral form to communicate as a member of a health care professional team and understand the basics of physician's diagnosis and treatment.

MO 5.631 MEDICAL TERMINOLOGY & BODY SYSTEMS II
(3 credits)
Prepares students to use an expanded medical vocabulary to communicate with health care professionals. Learn to recognize the structure and function of the human body, basic pathology and diagnostic tools. Prerequisite: MO 5.630 Medical Terminology and Body Systems I with a grade of "C" or better.

MO 5.632 MEDICAL TERMINOLOGY & BODY SYSTEMS III
(3 credits)
This course builds upon Medical Terminology and Body Systems I and II to provide a comprehensive knowledge of medical terminology. Students will communicate, document, and comprehend terminology as it pertains to medical specialties, reports and patient data. Prerequisite: MO 5.631 Medical Terminology and Body Systems II with a grade of "C" or better.

MO 5.665 DOCUMENTING/SCREENING IN A MEDICAL OFFICE
(2 credits) - offered Winter & Spring only
Prepares medical office personnel to answer telephone, assess and document conversation, and disseminate information in an ambulatory care setting. Prerequisite: MO 5.630 Medical Terminology and Body Systems I and CIS125 Intro to Software Applications or OA 202M Word Processing for Medical Assistants with a grade of "C" or better; Required: OA 2.671 Medical Law and Ethics

MP: MUSIC PERFORMANCE

MP 101 SYMPHONIC BAND
(1 credit)
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a symphonic band. Note: May require an audition. An unsuccessful audition will result in disenrollment. May be repeated three times for credit.

MP 102 CONCERT BAND
(1 credit)
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a concert band. Note: May be repeated three times for credit.

MP 103 MARCHING BAND
(1 credit) - offered Fall only
Provides opportunity for participation in a marching band in conjunction with the Oregon State University Department of Music. This performance group of more than 160 musicians performs for home football games as well as one trip each year to an off-campus game. Note: May be repeated three times for credit. For more information see http://osumb.oregonstate.edu An audition is required. An unsuccessful audition will require disenrollment. Extra uniform fees are required for new members.

MP 104 BASKETBALL BAND
(1 credit) - offered Winter only
Instrumental performing group concentrating on rock, pop and contemporary styles in the small- to medium-size group setting. Provides an opportunity for performance and participation in the OSU Basketball Band in conjunction with the Oregon State University Department of Music. Note: Each class may be taken three times for credit. Audition required. An unsuccessful audition will require disenrollment. Required: Students must have been a member of the OSU Marching Band during the previous fall term to participate in this ensemble. Please contact the OSU Music Department for more information.

MP 105 LARGE JAZZ BAND
(1 credit) - offered Spring only
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a jazz band. Note: Audition required. An unsuccessful audition will result in disenrollment. May be repeated three times for credit.

MP 122 CONCERT CHOIR
(2 credits)
Concert choir is a traditional choral performance class that includes the singing of a wide range of choral music from around the world. Participation in final concert is required. This ensemble is open to all members of the college community. Audition for vocal placement with the instructor. Each level of this course can be repeated up to three times for credit.

MP 131 CHAMBER CHOIR
(2 credits)
Chamber Choir (“Re-Choired Element”) is a performing group that includes the singing and performing of advanced choral literature, including madrigals, motets, jazz arrangements and musical theater. Students will develop high-level sight reading and aural skills. Participation in this course may include a number of off-campus performances, as well as a final concert. Required: Audition and Instructor Permission. Note: Each level of this course can be repeated up to three times for credit.

MP 141 SYMPHONY ORCHESTRA
(1 credits)
In conjunction with the Oregon State University Department of Music, provides opportunity for participation in a symphony orchestra. This large ensemble of 65 80 players performs orchestra repertoire from the 18th, 19th and 20th centuries. Required: Audition. An unsuccessful audition will result in disenrollment. Note: May be repeated three times for credit.

MP 151 REHEARSAL AND PERFORMANCE
(1-3 credits)
Offers credit for music rehearsal directly related to Performing Arts Department performance. Course may involve musical performance in musical theater, workshop course specially designed, or combination courses as outlined by the department. Note: May be repeated three times for credit. Required: Instructor approval

MP 201 SYMPHONIC BAND
(1 credit)
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a symphonic band. Note: May require an audition. An unsuccessful audition will result in disenrollment. May be repeated three times for credit.

MP 171A INDIVIDUAL LESSONS PIANO
Student must contact the instructor to set up individual lesson times.
(1 credit)
Designed to facilitate the student’s general music background and to address their skill level on the piano. Attention is also given to the individual’s goals in learning to play the piano and an interest they may have in learning to play particular styles of piano music. Note: Requires additional tutorial fee.

MP 171B INDIVIDUAL LESSONS PIANO
Student must contact the instructor to set up individual lesson times.
(2 credits)
Designed to facilitate the student’s general music background and to address their skill level on the piano. Attention is also given to the individual’s goals in learning to play the piano and an interest they may have in learning to play particular styles of piano music. Note: Requires additional tutorial fee.

MP 174A INDIVIDUAL LESSONS VOICE
Student must contact the instructor to set up individual lesson times.
(1 credit)
Provides individual instruction in voice. Students will focus on improving vocal technique in a variety of areas such as pitch matching, breath control, posture, and vocal quality. Note: Requires additional tutorial fee.

MP 174B INDIVIDUAL LESSONS VOICE
Student must contact the instructor to set up individual lesson times.
(2 credits)
Provides individual instruction in voice. Students will focus on improving vocal technique in a variety of areas such as pitch matching, breath control, posture, and vocal quality. Note: Requires additional tutorial fee.

MP 180A INDIVIDUAL LESSONS IN GUITAR
Student must contact the instructor to set up individual lesson times.
(1 credit)
Individual guitar lessons for beginners or those with minimal formal training are designed to facilitate the student’s general music background and to address their skill level on the guitar. Attention is also given to the individual’s goals in learning to play the guitar and an interest they may have in learning to play particular styles of guitar music. Each level may be repeated 3 times for credit. Required: Students must provide their own instrument. Recommended: Students should have a basic knowledge of reading music, but it is not required.

MP 180B INDIVIDUAL LESSONS IN GUITAR
Student must contact the instructor to set up individual lesson times.
(2 credits)
Individual guitar lessons for beginners or those with minimal formal training are designed to facilitate the student’s general music background and to address their skill level on the guitar. Attention is also given to the individual’s goals in learning to play the guitar and an interest they may have in learning to play particular styles of guitar music. Each level may be repeated 3 times for credit. Required: Students must provide their own instrument. Recommended: Students should have a basic knowledge of reading music, but it is not required.

MP 202 CONCERT BAND
(1 credit)
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a concert band. Note: Each class may be taken three times for credit.

MP 203 MARCHING BAND
(1 credit) - offered Fall only
Provides opportunity for participation in a marching band in conjunction with the Oregon State University Department of Music. This performance group of more than 160 musicians performs for home football games as well as one trip each year to an off-campus game. Note: May be repeated three times for credit. For more information see http://osumb.oregonstate.edu An audition is required. An unsuccessful audition will require disenrollment. Extra uniform fees are required for new members

MP 204 BASKETBALL BAND
(1 credit) - offered Winter only
Instrumental performing group concentrating on rock, pop and contemporary styles in the small- to medium-size group setting. Provides an opportunity for performance and participation in the OSU Basketball Band in conjunction with the Oregon State University Department of Music. Note: Each class may be taken three times for credit. Audition required. An unsuccessful audition will require disenrollment. Required: Students must have been a member of the OSU Marching Band during the previous fall term to participate in this ensemble. Please contact the OSU Music Department for more information.

MP 205 LARGE JAZZ BAND
(1 credit) - offered Spring only
In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a jazz band. Note: Audition required. An unsuccessful audition will result in disenrollment. May be repeated three times for credit.

MP 222 CONCERT CHOIR
(2 credits)
Concert choir is a traditional choral performance class that includes the singing of a wide range of choral music from around the world. Participation in final concert is required. This ensemble is open to all members of the college community. Audition for vocal placement with the instructor. Each level of this course can be repeated up to three times for credit.

MP 231 CHAMBER CHOIR
(2 credits)
Chamber Choir (''Re-Choired Element'') is a performing group that includes the singing and performing of advanced choral literature, including madrigals, motets, jazz arrangements and musical theater. Students will develop high-level sight reading and aural skills. Participation in this course may include a number of off-campus performances, as well as a final concert. Required: Audition and Instructor Permission. Note: Each level of this course can be repeated up to three times for credit.

MP 241 SYMPHONY ORCHESTRA
(1 credit)
In conjunction with the Oregon State University Department of Music, provides opportunity for participation in a symphony orchestra. This large ensemble of 65 80 players performs orchestra repertoire from the 18th, 19th and 20th centuries. Required: Audition. An unsuccessful audition will result in disenrollment. Note: May be repeated three times for credit.

MP 251 REHEARSAL AND PERFORMANCE
(1-3 credits)
Offers credit for music rehearsal directly related to Performing Arts Department performance. Course may involve musical performance in musical theater, workshop course specially designed, or combination courses as outlined by the department. Note: May be repeated three times for credit. Required: Instructor approval

MP 271A INDIVIDUAL LESSONS PIANO
Student must contact the instructor to set up individual lesson times.
(1 credit)
Designed to facilitate the student's general music background and to address their skill level on the piano. Attention is also given to the individual's goals in learning to play the piano and an interest they may have in learning to play particular styles of piano music. Notre: Requires additional tutorial fee. Prerequisite: Instructor permission.

MP 271B INDIVIDUAL LESSONS PIANO
Student must contact the instructor to set up individual lesson times.
(2 credits)
Designed to facilitate the student's general music background and to address their skill level on the piano. Attention is also given to the individual's goals in learning to play the piano and an interest they may have in learning to play particular styles of piano music. Notre: Requires additional tutorial fee. Prerequisite: Instructor permission.

MP 274A INDIVIDUAL LESSONS VOICE
Student must contact the instructor to set up individual lesson times.
(1 credit)
Provides individual instruction in voice. Students will focus on improving vocal technique in a variety of areas such as pitch matching, breath control, posture, and vocal quality. Note: Requires additional tutorial fee. Prerequisite: Requires instructor permission.

MP 274B INDIVIDUAL LESSONS VOICE
Student must contact the instructor to set up individual lesson times.
(2 credits)
Provides individual instruction in voice. Students will focus on improving vocal technique in a variety of areas such as pitch matching, breath control, posture, and vocal quality. Note: Requires additional tutorial fee. Prerequisite: Requires instructor permission.

MP 280A INDIVIDUAL LESSONS IN GUITAR
Student must contact the instructor to set up individual lesson times.
(1 credit)
Individual guitar lessons for intermediate level players are designed to facilitate the student's general music background and to address their skill level on the guitar including some more advanced instruction and skill training. Attention is also given to the individual's goals in learning to play the guitar and an interest they may have in learning to play particular styles of guitar music. Each level may be repeated 3 times for credit. Required: Students must provide their own instrument. Instructor permission required. Recommended: Students should have a basic knowledge of reading music, but it is not required.

MP 280B INDIVIDUAL LESSONS IN GUITAR
Student must contact the instructor to set up individual lesson times.
(2 credits)
Individual guitar lessons for intermediate level players are designed to facilitate the student's general music background and to address their skill level on the guitar including some more advanced instruction and skill training. Attention is also given to the individual's goals in learning to play the guitar and an interest they may have in learning to play particular styles of guitar music. Each level may be repeated 3 times for credit. Required: Students must provide their own instrument. Instructor permission required. Recommended: Students should have a basic knowledge of reading music, but it is not required.

MT: MECHATRONICS

MT 3.801 MECHATRONICS ORIENTATION
(1 credit) - offered Fall only
Learn an effective troubleshooting method used throughout the program. Develop specific scheduling and learning skills to apply to the various types of courses in the program. Create a completion plan to guide you through the program and into your first years on the job.

MT 3.802 CUSTOMER SVC FOR MECHATRONICS TECHNICIANS
(3 credits)
Effective troubleshooting and fabrication project design requires communicating with internal and external customers. This course helps mechatronics technicians create effective troubleshooting and project management methods that incorporate customer service skills coupled to communicating effectively with people from different social and cultural backgrounds. Included are job search skills for obtaining employment in the industry, as well as repair and design options that promote energy efficiency.

MT 3.803 INDUSTRIAL SAFETY
(3 credits) - offered Fall only
Learn how to protect yourself and your fellow workers from workplace accidents. Topics analyzed include, but are not limited to: electrical safety, personal protective equipment, confined space entry, hazardous materials, MSDS and blood borne pathogens. Emphasis is on personal responsibility for your own and others safety. You will create a personalized safety manual.

MT 3.805 PREDICTIVE & PREVENTIVE MAINTENANCE
(3 credits) - offered Spring only
Learn to manage the computerized maintenance management systems (CMMs) used in most modern plants and facilities. Using CMM systems as a troubleshooting tool and as a method for improving energy efficiency is stressed. Boiler operatoin and maintenance serves as the case study for this course. Customer service as a component of successful troubleshooting, maintenance, and repair is stressed.

MT 3.812 MECHANICAL SYSTEMS
(4 credits) - offered Fall only
This lab-based course introduces students to fundamental mechanical skills, concepts and practices. Intended for mechatronics technicians, the course includes but is not limited to: precision measurement, technical shop math, mechanical fasteners, hand and power tools, and fundamentals of rigging and lifting. Safe application of industrial skills in the workplace is emphasized. This course contains a portion of the embedded computation requirement for Related Instruction.

MT 3.815 MECHATRONICS SKILLS LAB
(1-6 credits)
Individual lab practice to improve mechatronics skills. May also be used for special projects. To be offered every term subject to instructor approval.For variable credit classes, additional tuition charges of 21% (based on the in-state tuition rate) will only be applied to the number of credits registered for.

MT 3.817 DRIVE SYSTEMS
(2 credits) - offered Fall only
Learn to troubleshoot and maintain drive systems. Fundamentals of vibration analysis and shaft alignment are covered in the lab. Emphasis is placed on effective maintenance of belt, chain and gear drives for maximum energy efficiency.

MT 3.819 BEARINGS & LUBE SYSTEMS
(2 credits) - offered Winter only
Learn to troubleshoot and maintain bearings and lubrication systems. Fundamentals of vibration and oil analysis, handling and mounting bearings, and operating lubrication systems are included in this training. Energy efficiency is a major focus of this course.

MT 3.821 ELECTRICAL SYSTEMS TROUBLESHOOTING
(4 credits) - offered Fall only
Learn to use electrical troubleshooting theory in troubleshooting common electrical problems: low voltage, high voltage, unwanted resistance, open circuits, high resistance shorts to ground, and current and voltage unbalance. Efficiency technology and sustainable practices are covered.

MT 3.822 TROUBLESHOOTING MOTORS & CONTROLS
(4 credits) - offered Winter only
Learn to troubleshoot and maintain motor control systems, single and three phase motors and stepper and servo motors. Analyzing motor control schematics and using advanced digital multimeters are stressed as is motor efficiency. Understanding motor controls is critical to understanding the operation of PLC and all automated control systems. An effective troubleshooting methodology is embedded in this course.

MT 3.823 INDUSTRIAL SENSORS & ACTUATORS
(3 credits) - offered Fall only
Gives students a working knowledge of a variety of industrial sensors and actuators and their operation in control systems. Students will learn how different types of sensors operate and how to select the appropriate sensors. Students will learn to install, maintain and troubleshoot different types of sensors and actuators. Students will construct electrical circuits that illustrate the function of various types of sensors.

MT 3.824 PROGRAMMABLE LOGIC CONTROLLERS
(3 credits) - offered Spring only
Programmable logic controls are industrial computers used to control electrical and mechanical systems. This course is a hands-on introduction to Programmable Logic Controllers (PLCs) with emphasis given to effective selection, installation, and troubleshooting of PLC systems. PLC ladder logic programming will be introduced. Field troubleshooting of input and output devices will be covered.

MT 3.825 PROCESS CONTROL & INSTRUMENTATION
(3 credits) - offered Spring only
Provides an introduction to process control and instrumentation. Students will develop a working production line that includes sensors, pneumatics, PLCs and motor controls. Energy efficiency and maintenance, troubleshooting, and repair of control systems is emphasized.

MT 3.826 ADVANCED PLC TROUBLESHOOTING
(3 credits) - offered Fall only
Designed to develop advanced skills in programming PLCs. Students will learn to convert common industrial control circuits to PLC ladder logic as well as create programs from narrative description. Special emphasis will be placed on interfacing the PLC with a selection of electro-pneumatic control devices. Also covered are interpreting PLC data sheets and systemic approach to testing and troubleshooting of PLC programs.

MT 3.827 AUTOMATED MATERIAL HANDLING
(3 credits) - offered Winter only
An introduction to automation and production-line technologies. Students will develop a working production line that includes sensor technology, electro-pneumatics, motor control technology, and programmed control. Maintenance, troubleshooting, and repair of manufacturing systems is emphasized as is energy efficiency.

MT 3.830 INDUSTRIAL PNEUMATICS SYSTEMS
(3 credits) - offered Winter only
Learn to analyze fundamental pneumatic schematics, how to troubleshoot common pneumatic problems, how to maintain and repair pneumatic systems used in a variety of production applications, and how to promote energy efficiency in pneumatic systems. Understanding pneumatic circuits is critical to working with all types of industrial control systems.

MT 3.833 PRINCIPLES OF TECHNOLOGY
(5 credits) - offered Spring only
Focuses on applying physical concepts and formulae to technology found in the industrial workplace. Students will develop and strengthen critical thinking and problem solving skills required to function and excel in rapidly changing and increasingly complex workplace environments. Lab experiments are intended to reinforce and enhance the scientific principles discussed in class as well as providing an opportunity to learn to work effectively in groups. The impact of technology on energy efficiency in the workplace is studied. This course contains a portion of the embedded computation requirement for Related Instruction.

MT 3.834 PRINCIPLES OF TECHNOLOGY II
(5 credits) - offered Fall only
Focuses on applying physical concepts and formulae to technology found in the industrial workplace. Students will develop and strengthen critical thinking and problem solving skills required to function and excel in rapidly changing and increasingly complex workplace environments. Lab experiments are intended to reinforce and enhance the scientific principles discussed in class as well as providing an opportunity to learn to work effectively in groups. The impact of technology on energy efficiency in the workplace is studied. This course contains a portion of the embedded computation requirement for Related Instruction. Prerequisite: MT3.833 Principles of Technology with a grade of "C" or better.

MT 3.836 INDUSTRIAL HYDRAULICS SYSTEMS
(3 credits) - offered Spring only
Learn to analyze fundamental hydraulic schematics, how to troubleshoot common hydraulic problems, and how to maintain and repair hydraulic systems and how to promote energy efficiency in a variety of production applications. You will construct and troubleshoot common hydraulic circuits.

MT 3.846 PUMPS AND VALVES
(2 credits) - offered Winter only
Learn to troubleshoot, maintain and repair industrial pumps and valves. Pump and valve selection is stressed as is print reading and correct installation. Emphasizes internet practical skills that lead to the efficient operation of valve and pumping systems.

MT 3.847 HVAC SYSTEM CONTROLS
(2 credits) - offered Spring only
This is an internet, hybrid course that will introduce the student to HVAC ducting systems and digital (DDC) controls. Students will learn about using the DDC system as an aid in troubleshooting and promoting energy efficiency, and indoor air quality.

MT 3.848 EPA TECHNICIAN CERTIFICATION
(2 credits) - offered Winter only
Anyone handling and refrigerants or working on refrigeration systems must have EPA certification or face large fines and legal proceedings. Students will sit for an EPA certification from the ESCO HVAC Excellence program. The student will study from a test prep booklet, optional texts, and a podcast of the class lectures then arrange the test date with the instructor sometime during the term. Completing 410A certification is an additional option for this class.

MT 3.849 HEATING SYSTEMS
(2 credits) - offered Spring only
Skills learned include the operation and servicing of oil and gas heating systems. All relevant safety and energy efficiency concerns are covered.

MT 3.852 REFRIGERATION BRAZING
(1 credit) - offered Spring only
Skills learned include: cutting and brazing safety, bend, cut, flare, and swag refrigerant tubing, and RHVAC silver soldering. Earn Oregon State Refrigeration Brazing Certification. Introduction to refrigeration systems as related to troubleshooting. This training requires 15-20 hours of hands-on practice or passing a challenge test.

MT 3.854 REFRIGERATION SERVICING
(2 credits) - offered Fall only
Skills learned include: take pressures, identify refrigerants, recover and recycle refrigerant, evacuate and charge refrigeration systems. All applicable safety precautions and EPA governed environmental regulations. This is a hybrid course that includes podcast and on-line activities combined with focused seminar activities that feature intensive, hands-on practice of these essential skills. Energy efficiency is stressed in this course. Required: Instructor's approval.

MT 3.855 REFRIGERATION TROUBLESHOOTING
(2 credits) - offered Winter only
Skills learned include: troubleshoot and repair refrigeration systems; evaluate system operation; check superheat and subcooling; test compressors, evaporators, condensers, and expansion devices; troubleshoot hot and cold calls; and servicing for energy efficiency. This is a hybrid course that includes podcast and on-line activities combined with focused seminar activities that feature intensive, hands-on practice of these essential skills.

MT 3.897 CAPSTONE PROJECT I
(3 credits) - offered Fall only
Begins the creation of operating and maintenance routines for a working, fully automated production system. Troubleshoot systems faults and devise a plan for optimizing system operation. Requires substantial research activity and lab time. Job search activities are covered during this course.

MT 3.898 CAPSTONE PROJECT II
(3 credits) - offered Winter only
Students create operating and maintenance routines for a working, fully automated production system. Troubleshoot systems faults and devise a plan for optimizing system operation. Requires substantial research activity and lab time. Prerequisite: MT 3.897 Capstone Project I with a grade of "C" or better.

MT 3.899 CAPSTONE PROJECT & ASSESSMENT
(3 credits) - offered Spring only
Complete the creation of operating and maintenance routines for a working, fully automated production system using skills learned in previous mechatronics coursework. Troubleshoot systems faults and devise a plan for optimizing system operation. Requires substantial research activity and lab time. Prerequisite: MT3.898 Capstone Project II with a grade of "C" or better.

MTH: MATHEMATICS

MTH 015 MATH FAST TRACK
(5 credits)
Math Fast Track is an Emporium-style math class that meets 5 hrs a week in a computer lab, led by an instructor. Class attendance is mandatory. Students will be working on computer software that covers material from Math 020 thru Math 095 (depending on the math level that the student enters the class at and the level that the student is trying to complete). Math Fast Track is an asynchronous course in that students in the same class are working on different skills at the same time. Students will be working on on-line homework and taking proctored on-line tests. Math Fast Track offers a student the chance to improve their math placement more than one level in one term. Math Fast track is designed for students who need to take several math courses before entering a program, students who have seen the material before and need to "fill in the gaps." At the end of Math Fast Track each student will be assigned a new math placement determined by their on-line tests scores. Recommended: students should be familiar with computers.

MTH 020 BASIC MATHEMATICS
(4 credits)
Provides a thorough review of arithmetic, including fundamental operations with whole numbers, fractions, decimals, percentages, geometry and measurement. Emphasizes use of formulas and the order of operations. Note: A minimum competency level is required to pass this course.

MTH 060 INTRODUCTION TO ALGEBRA
(4 credits)
This is a first course in algebra for students have no previous algebra experience or who need a thorough review. Introduces basic operations with integers, exponents, algebraic expression. Linear equations, graphing, dimensional analysis, scientific notation, ratio and proportion, realistic percent problems, and other problems that lend themselves to one-variable solutions. Also introduces basic statistics, including bar graphs, mean, median and mode. Problem solving is emphasized throughout the course. Application problems are realistic with some data to be collected, analyzed and discussed in a group setting and results submitted in written form. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 020 Basic Mathematics or equivalent with a grade of "C" or better.

MTH 065 ELEMENTARY ALGEBRA
(4 credits)
A nontraditional algebra course that incorporates some geometry, statistics and trigonometry. Designed for the student who is familiar with beginning algebra concepts. Topics include graphing linear, quadratic and exponential functions; solving linear and quadratic equations; solving application problems; using linear and other mathematical models. Problem solving is emphasized throughout the course. Application problems are realistic with some data to be collected, analyzed and discussed in a group setting with results submitted in written form. A minimum competency level is required to pass this course. Note: Students use graphing calculators in this course. Prerequisite: MTH 060 Introduction to Algebra or equivalent with a grade of "C" or better. Recommended: co-enrollment with RD 090 College Success & Reading

MTH 095 INTERMEDIATE ALGEBRA
● *(4 credits)*
Designed for the student who is familiar with elementary algebra, as well as basic geometry and statistics (see MTH 065). Topics include graphing quadratic, and other functions; multiplying and factoring polynomials; performing operations with rational expressions; solving systems of linear equations; solving quadratic equations by factoring; performing arithmetic with complex numbers; developing and applying mathematical models. Problem solving is emphasized throughout the course. Application problems are realistic with some data to be collected, analyzed and discussed in a group setting with results submitted in written form. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

MTH 097 PRACTICAL GEOMETRY
● *(4 credits) - offered Winter only*
Presents applied, informal geometry for students who did not take geometry in high school or who need a thorough review. Includes problem solving, geometric shapes, angle measure, perimeter, area and volume, congruence and similarity, circles, basic constructions and an introduction to right triangle trigonometry. Prerequisite: MTH 095 Intermediate Algebra or equivalent with a grade of "C" or better.

MTH 098 FOUNDATIONS OF COMTEMPORARY MATH
(5 credits)
A one-term course to prepare students for a liberal arts mathematics course (Math 105). Covers core concepts from arithmetic, algebra, and introductory statistics that are needed to understand the material in the liberal arts mathematics course. This course is designed for students who do NOT want to major in mathematics, science, engineering or computer science. Recommended: MTH 020 Basic Mathematics with a "C" or better or placement in MTH 060 Introduction to Algebra

MTH 105 INTRO TO CONTEMPORARY MATH
● *(4 credits)*
A survey course in mathematics for students in the liberal arts and other non-science majors. Topics are selected from areas such as management science, statistics, social choice, the geometry of size and shape, and computers and their applications. Emphasizes the application of mathematics to the problems of contemporary society and the critical role these applications play in economic, political and personal life. Prerequisites: MTH 095 Intermediate Algebra or MTH 098 Foundations of Contemporary Mathematics with a grade of "C" or better.

MTH 111 COLLEGE ALGEBRA
● *(5 credits)*
Explores relations and linear, quadratic, exponential, polynomial, rational and logarithmic functions. Includes theory of equations, matrices and determinants. Prerequisites: MTH 095 Intermediate Algebra or equivalent with a grade of "C" or better.

MTH 112 TRIGONOMETRY
● *(5 credits)*
Introduces trigonometric functions, trigonometric identities, inverse trigonometric functions, trigonometric equations, right triangle trigonometry and polar coordinates. Includes vectors, and conic sections. Prerequisites: MTH 111 College Algebra with a grade of "C" or better; Required: MTH 097 Practical Geometry, or equivalent.

MTH 211 FUND OF ELEMENTARY MATH I
● *(4 credits) - offered Fall only*
One of three courses in the mathematics cluster for prospective elementary and middle school teachers. Develops the understanding of basic mathematical concepts necessary for teaching mathematics in grades K-8. Topics include problem solving, whole numbers, algorithms for computation, numeration systems, number theory and fractions. Prerequisite: MTH 095 Intermediate Algebra or equivalent with a grade of "C" or better.

MTH 212 FUND OF ELEMENTARY MATH II
● *(4 credits) - offered Winter only*
One of three courses in the mathematics cluster for prospective elementary and middle school teachers. Develops the understanding of basic mathematical concepts necessary for teaching mathematics in grades K-8. Topics include decimals, percent, ratio and proportion, integers, real numbers, basic statistics and probability. Prerequisite: MTH 211 Fundamentals of Elementary Mathematics I with a grade of "C" or better.

MTH 213 FUND OF ELEMENTARY MATH III
● *(4 credits) - offered Spring only*
One of three courses in the mathematics cluster for prospective elementary and middle school teachers. Develops the understanding of basic mathematical concepts necessary for teaching mathematics in grades K-8. Covers basic geometry topics including shapes and their properties; symmetry; angle measure; measurement of length, area and volume; congruence and similarity; Pythagorean Theorem; and coordinate geometry. Prerequisite: MTH 095 Intermediate Algebra with a grade of "C" or better; Required: MTH 097 Practical Geometry or equivalent.

MTH 231 ELEMENTS OF DISCRETE MATH
● *(4 credits) - offered Winter only*
The first course in discrete mathematics for mathematics and computer science majors. Topics include elementary logic, mathematical proof, mathematical induction, functions and sequences, basic set theory, matrix algebra, relations and Boolean algebras. Prerequisite: MTH 112 Trigonometry or equivalent and MTH 251 Differential Calculus with a grade of "C" or better

MTH 232 ELEMENTS OF DISCRETE MATH
● *(4 credits) - offered Spring only*
The second course in discrete mathematics for mathematics and computer science majors. Topics include basic matrix linear algebra, combinatorics, graph theory and algorithms. Prerequisite: MTH 231 Elements of Discrete Mathematics with a grade of "C" or better.

MTH 241 CALCULUS FOR BIO/MGMNT/SOC SCI
● *(4 credits)*
Introduces calculus as applied to business, the social sciences and life sciences. It uses an intuitive development of the calculus of polynomial, exponential and logarithmic functions, extrema theory and applications. Prerequisite: MTH 111 College Algebra with a grade of "C" or better.

MTH 243 INTRODUCTION TO STATISTICS
● *(4 credits) - offered Fall & Spring only*
An introductory statistics course emphasizing interpretation of statistical results. The course focuses on sampling procedures, experimental design, descriptive statistics, and inferential statistical techniques to analyze survey and experimental data from a wide range of fields including health care, biology, psychology, physics and agriculture. Includes basic concepts in graphical interpretation of one and two variable data, probability, probability distributions (binomial, normal, t-Distribution, and chi-square), confidence intervals for means and proportions, and hypothesis testing. Prerequisite: MTH 111 College Algebra or equivalent with a grade of "C" or better.

MTH 245 MATH FOR BIO,MGMT,SOC SCIENCE
● *(4 credits)*
A survey course of discrete mathematics for non-physical science majors. Topics include systems of inequalities, linear programming, probability and probability distributions, and an introduction to descriptive statistics. The course emphasizes problem solving through the use of computer spreadsheets. Prerequisite: MTH 111 College Algebra with a grade of "C" or better.

MTH 251 DIFFERENTIAL CALCULUS
● *(5 credits)*
The first course in the calculus sequence for students majoring in mathematics, science and engineering. Limits and derivatives are approached using graphical, numeric, and symbolic methods. Linear approximations, related rates, curve sketching and optimization are among the applications of differentiation covered in this course. Prerequisite: MTH 112 Trigonometry or equivalent with a grade of "C" or better.

MTH 252 INTEGRAL CALCULUS
● *(5 credits)*
The second course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include techniques of integration, numerical integration, improper integrals, applications of integration, and an introduction to differential equations. Prerequisite: MTH 251 Differential Calculus with a grade of "C" or better.

MTH 253 CALCULUS
● *(5 credits)*
The third course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include sequences and series of real and complex functions, matrix algebra, linear dependence and independence, eigen values and eigenvectors. This course satisfies the OSU requirement of MTH 306 for engineering programs. Prerequisite: MTH 252 Integral Calculus with a grade of "C" or better.

MTH 254 CALCULUS
● *(4 credits)*
The fourth course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include vectors in 2 and 3- space, graphs, contour maps and equations of multivariable functions and partial derivatives, directional derivatives, optimization of services, cylindrical and spherical coordinates, multiple integrals and their applications. Prerequisite: MTH 252 Integral Calculus or equivalent with a grade of "C" or better.

MTH 255 VECTOR CALCULUS
● *(4 credits) - offered Winter only*
An intermediate treatment of multivariate calculus with a vector approach. Provides the mathematical skills for courses in advanced calculus, fluid mechanics and electromagnetic theory. Prerequisite: MTH 254 Calculus with a grade of "C" or better.

MTH 256 APPLIED DIFFERENTIAL EQUATIONS
● *(4 credits) - offered Spring only*
Beginning course in differential equations for students majoring in mathematics, sciences or engineering. Covers ordinary differential equations, series solutions, systems of first order differential equations, and Laplace transforms. Prerequisite: MTH 254 Calculus or equivalent with a grade of "C" or better.

MTH 265 STAT FOR SCIENTIST & ENGINEERS
● *(4 credits) - offered Winter only*
Covers probability and inferential statistics applied to scientific and engineering problems. Includes random variables, expectation, sampling, estimation, hypothesis testing, regression, correlation and analysis of variance. This course satisfies the OSU requirement of ST 314 for engineering programs. Prerequisite: MTH 252 Integral Calculus with a grade of "C" or better.

MUS: MUSIC

MUS 101 MUSIC FUNDAMENTALS
➢ *(3 credits)*
Introduction to the basics of music reading and writing from the very beginning. Studies basic music theory, scales, chord recognition, music analysis, interval relationships, and an introduction to composing one's own music.

MUS 105 INTRODUCTION TO ROCK MUSIC
➢ *(3 credits)*
Examines the relationship between rock music and society, emphasizing the musical and lyrical significance of rock music as contemporary social commentary. Students will identify anfd analyze a variety of complex practices, values and beliefs defined both culturally and historically through music including meanings of difference and change.

MUS 108 MUSIC CULTURES OF THE WORLD
➢ *(3 credits)*
Survey of the world's music with attention to musical styles and cultural contexts. Included are the musical and cultural histories of Ociania, Indonesia, Africa, Asia, and Latin America.

MUS 111 MUSIC THEORY I
➢ *(3 credits) - offered Spring only*
Covers basic structure of music (tonality, modality, melody, harmony, rhythm, modulation and phrase structure) as it is exhibited through diatonic harmony. Required: Grade of C or higher in MUS 101 Music Fundamentals.

MUS 114 AURAL SKILLS I
(1 credit) - offered Winter only
A course for students to develop some of the most important skills a musician should have. Students will concertrate on their abilities to hear relationships in music, notate music correctly and to audiate written notation including dictation exercises and sight-signing. This course is intended for both music and non-music majors.

MUS 115 AURAL SKILLS II
(1 credit) - offered Spring only
A course for students to continue to develop some the most important skills a musician should have. The skills in this course will build on the skills learned in MUS 114: Aural Skills I. Students will concentrate on their abilities to hear relationships in music, notate music correctly and to audiate written notation including dictation exercises and sight-singing. This course is intended for both music and non-music major. Music majors should take this course with MUS 111.

MUS 161 MUSIC APPRECIATION
(3 credits)
Studies music through the elements or language of music, musical forms and the history of music. This includes the identification and analysis of a variety of different culturally and historically defined practices related to the development of music, its composition and performance.

NFM: NUTRITION AND FOODS MANAGEMENT

NFM 225 NUTRITION
(4 credits)
Introduces nutrients: their functions, sources, effects of deficiency, and toxicity. Examines current recommendations for Americans and topics of current interest. Includes digestion, metabolism and changing nutrient needs through the life cycle. Provides opportunity to evaluate personal dietary intake for three days. Prerequisites: MTH 065 Elementary Algebra and one of the following: BI 112 Cell Biology for Health Occupations or BI 102 General Biology or CH 112 Chemistry for Occupations or CH 150 Preparatory Chemisty or CH 121 College Chemistry or CH 221 General Chemistry. All prerequisites must be completed with a grade of "C" or better. College-level reading and writing and are also strongly recommended for success in this course.

NU: NURSING/NURSING ASSISTANT

NU 5.406 NURSING ASSISTANT HIGH SCHOOL HEALTH OCCUPATIONS
(9 credits)
This course is designed for current high school students and includes instruction in basic nursing skills, restorative care, personal care, social and mental health needs, and patient rights. Students will learn to care for residents in a long-term care and hospital environment under the direct care of a licensed nurse. This is a 150 hour course and meets the Oregon State Board of Nursing (OSBN) requirement for Nursing Assistant training with 75 hours of classroom/lab instruction and 75 hours of clinical instruction. Students will receive certificate of completion and be eligible for state certification. Student's must comply with all course Policies and Procedures regarding attendance, behavioral expectations, clinical policies, course requirements, criminal background checks, dress code, drug testing, exam administration, and grading. Students must be in 100% attendance and on-time to all scheduled classes, lab, and clinical. The student will be prepared to take the written and skills portion of the Oregon Nursing Assistant Competency Exam (ONACE) to be certified by OSBN. Pursuant to ORS 678.150, the Oregon State Board of Nursing (OSBN) now requires, for licensure or certification, applicants to provide fingerprints in order for the Board to conduct a national criminal history record check. Prerequisite: Complete a College Placement Reading Test for placement in RD090 College Success and Reading Strategies. Required: All students must be able to turn and lift patients, hear and see patients in need, communicate with patients, families and co-workers, take action in stressful situations, and read and keep medical records. Show proof of negative TB test within the last nine months as well as other site specific immunizations. Complete a criminal history check and be

deemed ?qualified? by Oregon State Board of Nursing. Students must cooperate with the drug testing policies of any non-LBCC clinical teaching site as a condition for continued enrollment in the course. A current CPR certification either, Healthcare Provider-American Heart Association or the Professional Rescuer-American Red Cross.

NUR: NURSING

NUR 101 FUNDAMENTALS OF NURSING PRAC
(9 credits) - offered Fall only
NUR101 is the first nursing course. Beginning students learn core concepts associated with the role of professional nurses within a caregiving environment. Students are introduced to fundamental concepts including patient safety, health and illness, infection control and prevention, development, pain, nutrition, elimination, sleep/rest/mobility, communication, documentation, critical thinking and research investigation, fluid and electrolyte balance, and physical assessment. Clinical application of both theory and skills occurs in the hospital setting Students begin to identify patient problems/nursing diagnosis, plan, and implement basic nursing care. Simulated practice and nursing skill performance are included Prerequisites: BI 231 Human Anatomy and Physiology with a "C" or better and CNA Certification. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care.

NUR 102 INTRO TO MEDICAL-SURGICAL CARE
(9 credits) - offered Winter only
NUR102 is the second nursing course offered. Students continue to learn core concepts required for professional nursing practice. This course contains topics related to nursing care of patients with cardiopulmonary disorders, musculoskeletal disorders, metabolic disorders, digestive disorders, general surgical procedures, wound care, diabetes, genito-urinary, and introductory mental health concepts. Clinical application of both theory and skills occurs in the hospital setting. Students continue to identify patient problems/nursing diagnosis, plan, and implement basic nursing care. Simulated practice and nursing skill performance are included. Prerequisite: NUR 101 Nursing I with a grade of "C" or better. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care

NUR 103 CARE THROUGHOUT THE LIFESPAN
(9 credits) - offered Spring only
NUR103 is the third nursing course. This course focuses on patients who are experiencing physical and psychological changes as they relate to mental health, neurology, pediatrics, perinatal and newborn nursery settings, cardiopulmonary disorders, oncology and immunities. The nursing roles of provider of care, teacher, and member of a profession are explored. Clinical application of both theory and skills occurs in the hospital setting, mental health and rehab settings. Students continue to identify patient problems/nursing diagnosis, plan, and implement basic nursing care. Simulated practice and nursing skill performance are included. Prerequisite: NUR 102 Nursing II with a grade of "C" or better. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care.

NUR 201 ADV MEDICAL-SURGICAL CARE
(9 credits) - offered Fall only
NUR 201 is the fourth nursing course focusing on advanced medical-surgical care and concepts. Content includes adult and pediatric neurology, complex fluid management, chronic illness, advanced mental health, cardiovascular disorders, oncology II, genetics, and hematology. Clinical application of both theory and skills occurs in the hospital setting, mental health and rehab settings. Students continue to identify patient problems/nursing diagnosis, plan, and implement basic nursing care. Simulated practice and nursing skill performance are included. Prerequisite: NUR 103 Nursing III with a grade of "C" or better. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care.

NUR 202 CRITICAL TRANSITIONS IN CARE
(9 credits) - offered Winter only
NUR 202 is the fifth nursing course focusing on critical transitions in care. Content in this course includes: Renal disorders, gastrointestinal disorders, high-risk obstetrics, acute complex respiratory disorders, neurological trauma, cardiovascular disorders and trauma. Emphasis on critical thinking, communication, collaboration, and supervision of ancillary staff. Clinical application of both theory and skills occurs in the hospital setting, mental health and rehab settings. Students continue to identify patient problems/nursing diagnosis, plan, and implement basic nursing care. Simulated practice and nursing skill performance are included. Prerequisite: NUR 201 Nursing IV with a grade of "C" or better. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care.

NUR 203 NURSING PRACTICUM EXPERIENCE
(6 credits) - offered Spring only
Nursing 203 is the final and sixth course in the core nursing sequence. The focus of this course is on complex and comprehensive patient care. Supervisory skills and case management proficiencies are applied to small groups of hospitalized or community based patients. A registered nurse preceptor oversees the clinical care given by the student. This nurse directly supervises the student under the guidance of the nursing faculty liaison within the scope of practice of the entry-level nurse. The student will practice leadership, manage patient assignments, and collaborate with health team members from a variety of backgrounds. Clinical application of theory and skills occurs in the acute,sub-acute and community-based settings. Prerequisite: NUR 202 Nursing V with a grade of "C" or better. Required: Core Performance Standards (see nursing policies). Recommended: AH 111 Medical Terminology I for Health Care and AH 112 Medical Terminology II for Health Care.

NUR 222 PROFESSIONAL PRACTICE ISSUES
(2 credits) - offered Spring only
Introduces and discusses ethical, legal and professional responsibilities in relation to employment, licensure, professional organizations and changing trends in health care;includes employment search skills.

NUR 268A DRUG THERAPY & NURSING IMPLICATIONS
(1 credit) - offered Fall only
This one-credit course focuses on nursing management and critical thinking regarding medication therapy. Introductory topics are pharmacokinetics, drug interactions and nursing implications. These topics are then applied to the drug groups which are applicable to the content provided in NUR 101. Drug lists for each major category of drugs will be used to direct learning for drug action, safe dosage, side effects, drug interactions, adverse reactions, and nursing implications.

NUR 268B DRUG THERAPY & NURSING IMPLICATIONS
(1 credit) - offered Winter only
This one-credit course builds on the knowledge acquired in NUR 268A and continues to focus on nursing management and critical thinking with regard to medication therapy. Topics included in this unit of study are pharmacokinetics, pharmacodynamics, interactions of the drug groups which are applicable to the content provided in NUR 102. Drug lists for each major category of drugs will be used to direct learning for drug action, safe dosage, side effects, drug interactions, adverse reactions and nursing implications. Prerequisites: NUR 268A Drug Therapy and Nursing Implications with a grade of "C" or better.

NUR 268C DRUG THERAPY & NURSING IMPLICATIONS
(1 credit) - offered Spring only
This one-credit course focuses on nursing management and critical thinking pertaining to medication therapy. Drug classifications and prototype drugs will be studied. This class will focus on therapeutic uses, drug actions, adverse reactions, drug interactions, and nursing implications for the following drug groups which are applicable to the content provided In NUR 103. Prerequisites: NUR 268B Drug Therapy and Nursing Implications with a grade of "C" or better.

OA: OFFICE ADMINISTRATION

OA 104 BUSINESS MATH
(2 credits) - offered Fall only
Reviews basic math concepts and utilizes mathematical operations to solve practical business application problems. Prerequisite: MTH 020 Basic Mathematics with a grade of "C" or better or placement test score.

OA 109 JOB SUCCESS SKILLS
(1 credit) - offered Spring only
Learn to effectively communicate employability skills to a prospective employers. Includes employability skills, job research techniques, resume writing, job applications, employment tests, cover letters, mock interviews, and professional dress and grooming. Recommended: word processing and document formatting skills

OA 110 EDITING SKILLS FOR INFO PROCESSING
(3 credits) - offered Fall only
Reviews basic grammar fundamentals with an emphasis on proofreading and editing skills. Prerequisite: WR 090 The Write Course with a grade of "C" or better or writing CPT score of 40 or higher

OA 116 ADMINISTRATIVE PROCEDURES
(4 credits) - offered Spring only
Students explore learning and communication styles and develop skills for effective professional communication, leadership, team building, problem solving, and conflict resolution in a diverse, modern office environment. General office procedures are incorporated along with multi-cultural concerns, safety and environmental considerations, and ethical decision-making processes as students work independently and in teams. Prerequisites: OA110 Editing Skills for Information Processing with a grade of "C" or better. Recommended: OA 110 Editing Skills for Information Processing, CIS 125 Introduction to Software Applications or OA 202 Word Processing for Business - MS Word

OA 125 FORMATTING AND SKILLBUILDING
(3 credits) - offered Fall only
Student will create and correctly format business documents including memos, letters, tables, and reports using word processing software. Student will also diagnose and correct keying deficiencies through prescribed drills leading to improved speed and accuracy while keying by touch. Student will input by touch 10-key and top-row numeric data. Workstation health and safety will be emphasized.

OA 202 WORD PROCESSING FOR BUSINESS: MS WORD
(3 credits) - offered Fall & Winter only
Use a variety of MS Word features to produce, format, edit and enhance business documents. Prerequisite: CIS 125 Introduction to Software Applications with a grade of "C" or better.

OA 203 ADVANCED WORD PROCESSING
(4 credits) - offered Fall & Spring only
Explore and master advanced functions of the popular word processing packages by applying concepts and software functionality to job-related projects. Prerequisite: OA 202 Word Processing for Business: MS Word with a grade of "C" or better.

OA 204L LEGAL ADMIN PROJECT MANAGEMENT
(4 credits) - offered Winter only
Participate in dynamic legal business simulations, using a variety of legal office procedures, communication, processes and team skills. Prerequisite: OA 2.676 Legal Practices, Procedures & Terminology II with a grade of "C" or better.

OA 205 DESKTOP PUBLISHING
(3 credits) - offered Fall & Winter only
Explore and master basic functions of popular web design and publishing software packages by applying concepts and software functionality to job-related projects. Design and create attractive, effective materials for today's business needs such as letterheads, flyers, newsletters, advertisements, brochures, online publications and web pages. Required: OA 1310 Windows & Computer Fundamentals or equivalent knowledge.

OA 215 COMMUNICATIONS IN BUSINESS
(4 credits) - offered Fall & Winter only
Effectively communicate in both oral and written forms in a variety of business situations and work collaboratively in teams to problem solve challenging communication issues. Prerequisite: OA 110 Editing Skills for Information Processing and OA125 Formatting and Skillbuilding or OA 122 Formatting. All prerequisites must be completed with a grade of "C" or better.

OA 216 TRENDS IN TECHNOLOGY
(3 credits) - offered Spring only
Introduce and expose students to new and emerging technologies and how they can be used to enhance career and life.

OA 225 APPLIED DOCUMENT PROCESSING
(3 credits)
Learn to apply editing, word processing, formatting and transcribing skills to produce a variety of business documents. Prerequisites: OA 110 Editing Skills for Information Processing with a grade of "C" or better.

OA 241 RECORDS MANAGEMENT
(3 credits) offered Spring only
Perform manual filing using ARMA simplified filing rules and electronic filing using MS Access database and develop fundamentals of managing the records life cycle. Prerequisites: CIS 125D Introduction to Databases with a grade of "C" or better.

OA 251 MANAGEMENT FOR THE OFFICE PROFESSIONAL
(3 credits) - offered Fall only
Student will discover and refine administrative office management skills needed by present and future office professionals. Recommended: OA 116 Administrative Procedures.

OA 270 PREP FOR IAAP CERTIFICATION
(1 credit) - offered Winter & Spring only
Student will review theoretical and technical skills needed to successfully pass the national exams administered by the International Association of Administrative Professionals and take skills tests sponsored by the Office Professional Assessment and Certification organization.

OA 271 ADVANCED BUSINESS PROJECTS
(4 credits) - offered Winter only
Students will participate in dynamic business simulations, using a variety of traditional office procedures, communication processes, and team skills.

OA 280 CWE FOR OFFICE PROFESSIONALS
(1-14 credits) - offered Winter & Spring only
Student will obtain relevant employment opportunity in chosen field of study to develop and refine a broad range of employability skills. Thirty hours of work equals one college credit. Required: Instructor signature.

OA 2.505 VOICE RECOGNITION
(2 credit) - offered Winter & Spring only
Students will use speech recognition software and voice commands as tools to control computer operations and create professional documents. Required: CS 120 Digital Literacy or CIS 125 Introduction to Software Applications or experience with Word and Excel.

OA 2.515M BUSINESS MATH: MEDICAL
(2 credits) - offered Fall & Spring only
Review and apply basic math skills as used in health care settings. Prerequisite: MTH 020 Basic Mathematics or placement test score with a grade of "C" or better.

OA 2.524 HEALTHCARE DOCUMENTATION
(3 credits)
Medical transcription techniques, technologies, and editing skills are used to provide students with knowledge of the content and formats of medical reports typically dictated in clinics, hospitals, and hospital ancillary and support facilities. Progressive transcription skill-building is achieved through medical specialty-based patient studies. Prerequisite: OA 2.656M Medical Information Processing with a grade of "C" or better.

OA 2.544 MEDICAL INSURANCE PROCEDURES
(4 credits)
Students will learn major insurance protocols and how to submit and process claims for each.

OA 2.551M COMM IN BUSINESS: MEDICAL
(3 credits) - offered Spring only
Student will learn to effectively communicate, both in oral and written forms, in a variety of medical situations. This will include internal memos and e-mails, written communication to various external entities, and transcription of brief simulated dictation. Student will individually and/or in teams prepare and deliver presentations appropraite to a medical environment. Prerequisites: OA 110 Editing Skills for Information Processing and OA 202M Word Processing for Medical Assistants or CIS 125 Introduction to Software Applications. All prerequisites must be completed with a grade of "C" or better.

OA 2.656M MEDICAL INFORMATION PROCESSING
(3 credits) - offered Winter & Spring only
Prepares student to develop, practice and apply editing and transcription skills to produce accurate medical documents for use in a health care setting. Prerequisites: OA 110 Editing Skills for Information Processing, MO 5.630 Medical Terminology and Body Systems I and CIS 125 Introdcution to Software Applications with a grade of "C" or better. Required: MO 5.631 Medical Terminology II

OA 2.670 MEDICAL OFFICE PROCEDURES
(4 credits) - offered Fall & Spring only
Students will develop the skills needed to know and perform the clerical and administrative duties and procedures of a medical office. Prerequisites: MO5.631 Medical Terminology and Body Systems II; OA 2.671 Medical Law and Ethics; OA 2.656M Medical Information Processing. All prerequisites must be completed with a grade of "C" or better.

OA 2.671 MEDICAL LAW AND ETHICS
(3 credits) - offered Winter only
Students learn an ethical framework for evaluating themselves and their environment and the legal requirements assigned to them. Prerequisite: MO5.630 Medical Terminology and body Systems I with a grade of "C" or better.

OA 2.672 BASIC CODING
(3 credits)
Learn to utilize ICD-9 and CPT manuals to translate medical information into billable financial data. Prerequisite: MO 5.630 Medical Terminology and Body Systems I; OA 2.544 Medical Insurance Procedures with a grade of "C" or better.

OA 2.675 LEGAL PRACTICES, PROCESSES, & TERMS I
(3 credits) - offered Winter only
Students examine procedures required for administrative support in legal or judicial office setting. Legal document formatting and legal terminology are introduced. Focus on required work ethics and privacy concerns in legal setting and examine Oregon Rules and Civil Procedures in relation to various areas of civil criminal law. Recommended: OA 110 Editing Skills for Information Processing; word processing skills and keyboarding skills

OA 2.676 LEGAL PRACTICES/PROC/TERMS II
(3 credits) - offered Spring only
Continue examination of procedures required for administrative support in legal career areas; legal document formatting; legal terminology; required work ethic and privacy concerns in legal settings; and examination of Oregon Rules and Civil Procedures. Prerequisite: OA 2.675 Legal Practices, Procedures and Terminology I with a grade of "C" or better.

OTA: OCCUPATIONAL THERAPY ASSISTANT

OTA 117 PROFESSIONALISM
(1 credit) - offered Fall only
This course provides the opportunity to explore the concept of professionalism, and to develop foundational skills, behaviors, and attitudes for a successful career as an occupational therapy assistant.

OTA 118 DOCUMENTATION
(1 credit) - offered Winter only
This course provides an introduction to documentation for the occupational therapy assistant. It examines purposes of documentation, guidelines for documentation, and a variety of documentation types and styles. Students will develop knowledge and skills for reading and writing SOAP notes and narrative notes. Students will incorporate prior knowledge from technical writing and medical terminology courses.

OTA 119 PREPARING SUCCESS IN OTA PROG
(1 credit) - offered Fall only
Self-paced on-line course that offers students the opportunity to develop skills for effective communication, time management, and learning in a virtual environment, including use of the learning-management and video-conferencing systems used in the OTA program. Requirement: Admission into the OTA program.

OTA 120 OCCUPATIONAL THERAPY FOUNDATIONS
(5 credits) - offered Fall only
Provides an introduction to and foundation for the study of occupational therapy. Includes an overview of the history and philosophy of the profession, the basic theories that underlie its practice, and the role of occupation in the achievement of health and wellness. Explores the profession's practice framework, scope of practice, and standards of practice, as well as ethical and legal issues that pertain to the field. Emphasizes the roles and responsibilities of the occupational therapy assistant as practitioner, advocator, educator, and research assistant, as well as the professional relationship between the occupational therapy assistant and the occupational therapist. Explores the concepts of environmental protection, human safety and patient rights. Required: Admission into the OTA program.

OTA 122 MENTAL HEALTH THEORY & PRACTICE
(4 credits) - offered Spring only
This course explores mental health conditions and the occupational performance challenges commonly associated with these conditions. Students learn theory and practice skills for performing assessments and providing interventions (preparatory, purposeful, and occupation-based) for occupational therapy clients with mental health challenges. Safety, documentation, and mental health promotion are addressed.

OTA 124 PHYSICAL HEALTH THEORY & PRACTICE
(4 credits) - offered Spring only
Explores physical health conditions and the occupational performance challenges commonly associated with these conditions. Students learn theory and practice skills for performing assessments and providing interventions (preparatory, purposeful, and occupation-based) for occupational therapy clients with physical health challenges. Safety, documentation, and physical health promotion are addressed. Required: Admission into the OTA program.

OTA 124A PHYSICAL HEALTH LAB
(2 credits) - offered Spring only
This course is taken concurrently with OTA 124 Physical Health Theory & Practice. In this lecture/lab course, students develop clinical skills for performing assessments and providing interventions (preparatory, purposeful, and occupation-based) for occupational therapy clients with physical health challenges. Safety is emphasized. Corequisite: OTA 124 Physical Health Theory & Practice

OTA 125 THERAPEUTIC USE OF SELF
(1 credit) - offered Winter only
This course provides the opportunity to develop basic skills related to establishing and maintaining therapeutic relationships with clients. Cultural diversity issues and their effect on the "therapeutic use of self" are examined.

OTA 140 ACTIVITY ANALYSIS
(4 credits) - offered Winter only
Provides an introduction to activity analysis. Examines the impact of the interaction between activity demand, client factors, and contexts on occupational performance. Students will develop basic skills for analyzing, grading, and adapting purposeful activites to enhance occupational performance. Students will demonstrate a variety of purposeful activities used in occupational therapy practice including use of technologies that support the delivery of occupational therapy services. Required: Admission into the OTA program.

OTA 160 LEVEL I FIELDWORK
(1 credit) - offered Fall only
Provides students the opportunity to observe occupational therapy in one or more settings, and to participate in select aspects of the occupational therapy process. Students begin to integrate theory learned in the classroom with practice observed in the workplace. Particular emphasis is placed on observation, communication, and professional attitudes and behaviors. Required: Admission into the OTA program

OTA 161 FIELDWORK SEMINAR
(1 credit) - offered Fall only
This course allows for individual reflection and group discussion of occupational therapy practice issues while students are gaining experience in Level I Fieldwork. Emphasis is placed on tying theory to practice. Additionally, students undergo further orientation to and preparation for Level II Fieldwork.

OTA 222 PEDIATRIC THEORY & PRACTICE
(4 credits) - offered Fall only
Explores normal development, common diagnoses, and occupational context associated with infancy, childhood, and adolescence. Students learn theory and practice skills for performing assessments and providing treatment for pediatric clients. Emphasis is placed on safety, activity analysis, therapeutic use of self, and documentation. Required: Admission into the OTA program.

OTA 224 GERIATRIC THEORY & PRACTICE
(4 credits) - offered Fall only
Explores normal development, common diagnoses, and occupational contexts associated with aging. Students learn theory and practice skills for performing assessments and providing treatment for geriatric clients. Emphasis is place on safety, activity analysis, therapeutic use of self, and documentation. Required: Admission into the OTA program.

OTA 230 INNOVATIVE THEORY & PRACTICE
(3 credits)
Offers students the opportunity to explore emerging and potential areas of practice in occupational therapy. Students develop basic skills for assisting with research in occupational therapy. Required: Admission into the OTA program.

OTA 240 ADMINISTRATION & MANAGEMENT
(2 credits)
This course provides students the opportunity to learn health administrative concepts and to practice clinical management skills. Topics include governmental regulation, organizational improvement, workload management, reimbursement methods, and inventory systems. Resume-writing, job-searching, and job-interviewing are also covered.

OTA 260 LEVEL II FIELDWORK A
(10 credits) - offered Winter only
Provides students the opportunity to further develop the knowledge, skills, behaviors, and attitudes needed to function as competent, entry-level, generalist occupational therapy assistants. Students will carry out professional responsibilities of the occupational therapy assistant under supervision, including delivery of occupational therapy services to a variety of clients. Together, Level II Fieldwork A and Level II Fieldwork B form the "capstone" experience for the Occupational Therapy Assistant Associate of Applied Science Degree Program. Co-requisite: OTA 261 Level II Fieldwork A Seminar; Required: Admission into the OTA program.

OTA 270 LEVEL II FIELDWORK B
(10 credits) - offered Spring only
Provides students the opportunity to further develop the knowledge, skills, behaviors, and attitudes needed to function as competent, entry-level, generalist occupational therapy assistants. Students will carry out professional responsibilities of the occupational therapy assistant under supervision, including delivery of occupational therapy services to a variety of clients. Together, Level II Fieldwork A and Level II Fieldwork B form the "capstone" experience for the Occupational Therapy Assistant Associate of Applied Science Degree Program. Co-requisite: OTA 271 Level II Fieldwork B Seminar; Required: Admission into the OTA program

PE: PHYSICAL EDUCATION

PE 131 INTRO TO HEALTH AND PHYSICAL EDUCATION
(3 credits)
Surveys professional opportunities in the area of health and physical education. Provides a basic philosophy of physical education and health as well as objectives. Qualifications of a variety of related occupations are discussed. Required for all physical education and health majors.

PE 158 CARE/PREVENT ATHLETIC INJURIES
(3 credits)
An introduction to the theoretical and practical aspects of preventing, treating and rehabilitating athletic injuries.

PE 180G ADV VOLLEYBALL: WOMEN
(1 credit) - offered Winter & Spring only
Emphasizes the development of skills for team play. Recommended: Previous volleyball experience and a higher level of athleticism are recommended as it can be a safety hazard to have a beginner playing with experienced players.

PE 180H VOLLEYBALL CONDITIONING: WOMEN
(1 credit) - offered Fall only
Emphasis on development of strength conditioning, aerobic fitness, agility and pylometric drills needed in improving volleyball skills.

PE 185A CIRCUIT WEIGHT TRAINING
(1 credit)
Provides instruction and participation in circuit training routines designed to improve muscular strength, muscular endurance, flexibility and body composition.

PE 185F BOWLING
(1 credit)
Students will increase proficiency in bowling skills and techniques. Rules and courtesies of the game as well as social and recreational values to the student are stressed.

PE 185G BODY CONDITIONING
(1 credit)
Provides instruction and practice in exercises that condition the body. Techniques taught for the use of free and fixed weights, and aerobic equipment. Flexibility, strength and physical endurance emphasized.

PE 185GS SOCCER
(1 credit) - offered Fall & Spring only
Basic skills, rules, and strategies for soccer. Includes dribbling, kicking, trapping, heading, throw-in, tackling, shooting, goalie play, corner kicks, penalty kicks, soccer formations, and offensive and defensive play.

PE 185J ZUMBA FITNESS
(1 credit)
Zumba Fitness promotes improved cardio respiratory conditioning, muscle endurance, flexibility, and/or body composition through structured group exercises featuring rhythmic dance and interval training sessions.

PE 185L YOGA
(1 credit)
A beginning or intermediate level class where students learn basic yoga poses and are given options so that they can work at their own level. Breathing, stretching and relaxation are focused on in class. Benefits include greater flexibility and strength and reduced stress. Classes end with five minutes of deep relaxation.

PE 185LS YOGA STRENGTH
(1 credit)
This class combines the benefits of yoga with strength training. Sets of repetitions with weights are performed throughout the class to tone and strengthen all major muscle groups of the body. This challenging class improves flexibility and leaves participants enjoying the positive, calming effects of yoga and the strengthening, toning benefits of weight training.

PE 185M BEGINNING GOLF
(1 credit) - offered Fall & Spring only
Introduces the mental and physical needs involved in golf, including grip, stance, swing techniques, rules, strategy and etiquette. Note: Eight-week class.

PE 185M Intermediate Golf
(1 credit) - offered Fall & Spring only
Provides a more detailed presentation of golf techniques and strategy to improve and correct basic swing errors. Note: Eight-week class. PE 185M Beginning Golf recommended or intermediate skill..

PE 185M Advanced Golf
(1 credit) - offered Fall & Spring only
Provides a detailed presentation of golf technique and strategy to improve and correct basic swing errors. Also includes on-course play. Note: Eight-week class. Prerequisite: PE 185M Beginning or Intermediate Golf.

PE 185P JOGGING
(1 credit)
Emphasizes the health and fitness benefits of a regular jogging program, including strengthening and stretching activities. Instruction focuses on mechanics of jogging, physiological and psychological effects of jogging, injury prevention, equipment and long-term exercise commitment.

PE 185Q KARATE
(1 credit)
Introduces the student to the American Kenpo Karate System. Includes basic such as blocking, striking and kicking. Self Defense movements and katas (forms) will also be covered. Emphasizes proper warm-up, calisthenics and stretching to establish and maintain good body condition.

PE 185Q Intermediate Karate
(1 credit)
Focuses training in the American Kenpo Karate System and includes continued development of basics, higher level katas (forms) and the enhancement and development of self defense techniques. Emphasizes proper warm-up, calisthenics and stretching to establish and maintain good body condition.

PE 185Q Freestyle Karate
(1 credit)
A course designed to deal with freestyle techniques of the martial arts including several different styles and philosophies. Prerequisite: PE 185Q Beginning Karate.

PE 185R HIP HOP DANCE
(1 credit)
An introductory class that utilizes elements of Hip-Hop, jazz dance and other contemporary dance forms. It is a fun, high-energy class. Students should be in good physical condition without chronic injuries.

PE 185S BEGINNING SCUBA
(1 credit)
Provides instruction in the use of self-contained underwater breathing apparatus (SCUBA) Includes six academic (classroom) modules, six confined water (pool) modules and open-water dives to certify students as a PADI Open Water Scuba Diver. Note: Eight-week class.

PE 185S Advanced Open Water SCUBA
(1 class hrs/wk, 1 cr)
Provides additional supervised dives developing new SCUBA skills in the areas of night, deep, navigation, search and recovery and naturalist diving. Prerequisite: PADI open water or equivalent. Students must provide snorkle, fins, and mask.

PE 185U SAND VOLLEYBALL
(1 credit) - offered Spring only
Introduces skills and techniques to basic and intermediate sand volleyball, including different offensive and defensive formats of team play, strategies, and etiquette of the game.

PE 185V ULTIMATE FRISBEE
(1 credit) - offered Fall & Spring only
Introduces the skills and techniques basic to ultimate frisbee, including offensive and defensive play, strategies, etiquette and rules of the game.

PE 185X CARDIO CORE CONDITIONING
(1 credit)
Designed to improve daily functioning, this class integrates rhythmic cardiovascular and resistance exercises with core conditioning techniques. Students develop deep muscles within the torso to improve stability, mobility, strength and endurance. Steps, hand weights and elastic bands are utilized to maximize exercise benefits. This class format is suitable for students of various fitness levels.

PE 185ZS ZUMBA STEP
(1 credit)
A new Zumba program intended to improve cardiorespiratory fitness while toning and strengthening glutes and legs, blending Zumba routines and Step Aerobics. The Zumba routines are specifically adapted for use with steps and risers.

PE 190H ADVANCED BASKETBALL: MEN
(1 credit) - offered Fall & Spring only
Provides a detailed presentation of individual basketball skills and on-court strategy for team play. Required: Instructor's approval.

PE 190J BASKETBALL CONDITIONING: MEN
(1 credit) - offered Fall only
Emphasis is on development of strength conditioning, aerobic fitness and agility drills needed in improving basketball skills. Three-week course.

PE 212 SOCIOCULTURAL DIMENSIONS OF PHYSICAL ACTIVITY
(3 credits)
Students will explore physical activity in contemporary society, and its relationships to social processes such as athletic teams, coaches, media and fans. Students will explore the interrelationships that occur between physical activity and cultural institutions.

PE 231 LIFETIME HEALTH & FITNESS
(3 credits)
Evaluates selected areas of the student's present health and fitness level. Provides information on each of the wellness dimensions as they relate to physical fitness, back care, chronic disease, stress management, nutrition, weight management, behavioral change, and lifestyle choices. Considers work-life balance and self-responsibility. Shows the student how to enter the work site as a fit and healthy individual and suggests ways to maintain that level of health. Recommended: Placement in WR 090 The Write Course or higher

PE 232 BACKPACKING-MAP & COMPASS
(3 credits) - offered Spring only
Prepares the individual for safe, challenging and enjoyable wilderness trips. Emphasizes physical conditioning, equipment, clothing, food, safety and the use of map and compass.

PE 270 SPORT PSYCHOLOGY
(3 credits)
Introduces mental, physical, social and psychological aspects of athletic performance and the significance of sport as it relates to culture, socialization, character development, personality, race, gender, economics, and mass media. Prerequisite: Ability to read and write at the college level. Critical thinking skills and problem solving strongly desired.

PE 280A CWE PHYSICAL EDUCATION
(2-14 credits)
An instructional program designed to give students practical experience in supervised employment related to physical education. Students identify job performance objectives, work a specified number of hours during the term, and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

PE 280B CWE RECREATION
(2-14 credits)
An instructional program designed to give students practical experience in supervised employment related to recreation. Students identify job performance objectives, work a specified number of hours during the term and attend a related CWE seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

PE 1851 VOLLEYBALL
(1 credit)
Introduces the skills and techniques basic to volleyball, including different offensive and defensive forms of team play, strategies, etiquette and rules of the game.

PE 1851 INTERMEDIATE VOLLYBALL
(1 credit)
Emphasizes increasing a player's abilities within a team situation. Designed for the player who has mastered beginning volleyball skills.

PE 1851 ADVANCED VOLLEYBALL
(1 credit)
Increases skill levels and mental strategies, with emphasis on increasing a player's abilities within a team situation.

PE 1852 WALK FOR HEALTH
(1 credit)
Emphasizes the health and fitness benefits of a regular walking program, including strengthening and stretching activities. Instruction focuses on fitness walking and mechanics, physiological and psychological effects of walking, injury prevention, equipment and long-term exercise commitment.

PE 1854 WEIGHT TRAINING
(1 credit)
Provides instruction and practices in conditioning programs specific to sports participation.

PE 1855 RELAXATION AND MASSAGE
(1 credit) - offered Fall only
Provides the knowledge and skills needed to incorporate and practice a variety of techniques of relaxation and massage. Massage and relaxation are two basic and effective ways of attaining and maintaining good health and reducing stress.

PE 1857 BASKETBALL
(1 credit)
Emphasizes basketball conditioning, skill development and game situations. Features game format.

PH: PHYSICS

PH 104 DESCRIPTIVE ASTRONOMY
● *(4 credits)*
An introductory course covering the historical and cultural context of discoveries concerning planets and stars and their motion. Topics include models and the scientific method, astronomical tools, the solar system, start and stellar evolution, galaxies and cosmology. An accompanying laboratory is used for experiments, including outdoor observations. Prerequisite: MTH 065 Elementary Algebra or equivalent with a grade of "C" or better.

PH 201 GENERAL PHYSICS
● *(5 credits) - offered Fall & Winter only*
The first of a three-term sequence of introductory college physics for students who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. Topics covered include: mechanics, force and motion in one- and two-dimensions, circular motion, gravitation, energy, linear and angular momentum, and simple harmonic motion. This is a laboratory class. Prerequisites: Completion of MTH 112 with grade of "C" or better.

PH 202 GENERAL PHYSICS
● *(5 credits) - offered Winter & Spring only*
The second of a three-term sequence of introductory college physics for students who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. The themes of thermodynamics, waves and electricity will be explored. Specific topics include fluids, temperature, heat, thermodynamics, wave motion, sound, electrostatic force, field, potential, and circuits. This is a laboratory class. Prerequisite: Completion of PH 201 General Physics with a grade of "C" or better.

PH 203 GENERAL PHYSICS
● *(5 credits) - offered Spring only*
The third term of a three-term sequence of introductory college physics for students who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. The topics covered in this course include geometric and physical optics, magnetism, electromagnetic induction, AC and DC circuits, atomic physics, and nuclear processes. This is a laboratory class. Prerequisites: Completion of PH 201 General Physics and completion of PH 202 General Physics with a grade of "C" or better.

PH 211 GENERAL PHYSICS WITH CALCULUS
● *(5 credits) - offered Fall & Winter only*
The first of a three-term calculus-based sequence of introductory college physics for students in science, engineering and other curricula who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. Topics include measurement; scientific models; motion in a straight line; motion in two dimensions; vectors; force and motion; Newton's laws of motion; energy; momentum; conservation laws; center of mass; linear and angular momentum; universal gravitation. Lab exercises help elucidate physical principles and teach measurement and analysis skills. This is a laboratory class. Prerequisites: Completion of MTH 251 Differential Calculus and MTH 252 Integral Calculus with a grade of "C" or better. Recommended: Co-requisite of MTH 254 Calculus for students who will take PH212 & PH213.

PH 212 GENERAL PHYSICS WITH CALCULUS
● *(5 credits) - offered Winter & Spring only*
The second of a three-term calculus-based sequence for students in science, engineering and other curricula who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. Topics include universal gravitation; rotational mechanics and dynamics; static equilibrium; fluid mechanics; simple harmonic motion; waves; superposition of waves; sound; and geometric and physical optics; matter waves. Lab exercises help elucidate physical principles and teach measurement and analysis skills. This is a laboratory class. Prerequisites: MTH 252 and PH 211 General Physics with Calculus with a grade of "C" or better. Corequisite: MTH 254 Calculus for those students who will take PH 213.

PH 213 GENERAL PHYSICS WITH CALCULUS

● *(5 credits) - offered Spring only*

The third of a three-term calculus-based sequence of introductory college physics for students who are planning to transfer credit to a four-year college or university, or for anyone desiring an understanding of physics principles. Topics include electrostatic force, field and potential; current and resistance capacitance; magnetic field; forces on charged particles due to a magnetic field; Hall effect and other applications of electric and magnetic fields; Law of Biot and Savart; Ampere's law; magnetic dipoles; Faraday's law of induction; Lenz's law; induced electric fields; self and mutual induction; RC and RL direct current circuits; magnetic properties of matter; AC and DC circuits; displacement currents and Maxwell's equations; electromagnetic waves. This is a laboratory class. Prerequisites: PH 212 General Physics with Calculus and MTH 254 Calculus with a grade of "C" or better.

PH 265 SCIENTIFIC COMPUTING

● *(3 credits)*

Covers basic computational tools and techniques for courses in science and engineering. Project approach to problem solving using symbolic and compiled languages with visualization. Basic computer literacy assumed. Prerequisite: MTH 251 Differential Calculus with a grade of "C" or better or co-enrolled.

PH: PHLEBOTOMY

PH 5.310 PHLEBOTOMY

(8 credits) - offered Summer only

Provides skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection, devices syringes, capillary skin punctures, butterfly needles, blood cultures and specimen collection on adults, children and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing and accessioning, patient confidentiality, HIPPA and professionalism. An overview of Medicare billing will also be covered.Prerequisite: MTH 020 Basic Mathematics and WR095 College Writing Fundamentals with a grade of "C" or better. Required: High school diploma or GED; pass a drug screen and criminal background check; ability to travel to CWE sites.

PH 5.311 MEDICAL TERMINOLOGY PHLEBOTOMY

2 credits - offered Summer only

Phlebotomy students will learn basic medical language in written and oral forms to communicate as members of a health care professional team and to understand the basics of physician's diagnosis and treatment that influence blood draws. Prerequiste: MTH 020 Basic Mathematics and WR 095 College Writing Fundamentals with a grade of "C" or better; Corequisite: CS 120 Digital Literacy, OA 109 Job Success Skills, OA 2.671 Medical Law and Ethics, PH 5.310 Phlebotomy, PH 5.320 Anatomy and Physiology for Phlebotomists and PH 5.330 Communication and Customer Service for Phlebotomists

PH 5.320 ANATOMY/PHYSIOLOGY:PHLEBOTOMST

(2 credits) - offered Summer only

Provides an overview of basic anatomy and physiology of body systems and anatomic terminology. Relates major areas of the clinical laboratory to general pathologic conditions associated with the body systems. Systems include: circulation, heart, lymph, respiratory, urinary, cells and blood, and muscular/skeletal. Students acquire skills to identify veins of arms, hands, legs and feet on which phlebotomy is performed. Students acquire skills to identify veins of arms, hands, legs and feet on which phlebotomy is performed. Prerequisite: MTH 020 Basic Mathematics and WR 095 College Writing Fundamentals with a grade of "C" or better. Required: High School Diploma or GED

PH 5.330 COMM/CUSTOMER SERV:PHLEBOTOMST

(2 credits) - offered Summer only

Students acquire skills in the basic concepts of communication, personal and patient interaction, stress management and professional behavior. Topics include: proactive listening; giving and receiving constructive feedback; maintaining a professional image; working well as a team; proper manner for greeting and interacting with a patient, physician, nurse, respiratory therapist and other hospital personnel; communicating instructions effectively; telephone skills; knowledge of basic ICD-9 coding systems and CPT-4 codes for insurance billing. Prerequisite: MTH 020 Basic Mathematics and WR 095 College Writing Fundamentals with a grade of "C" or better. Required: High school diploma or GED

PH: PHARMACY TECHNICIAN

PH 5.901 PHARMACY TECHNICIAN

(3 credits) - offered Winter only

Focuses on the competencies required by pharmacy technicians in institutional and community pharmacy settings. Students will learn and practice the roles and responsibilities for the pharmacy technician. Also, this course prepares learners to take the national Pharmacy Technician Certification Exam administered by the Pharmacy Technician Certification Board. Prerequisite: MTH 060 Introduction to Algebra and WR 095 College Writing Fundamentals with a grade of "C" or better; Required: High school diploma or GED

PH 5.905 PHARMACY LAWS AND ETHICS

(2 credits) - offered Winter only

Covers the rules and regulations that govern pharmacies in the state of Oregon. By the end of the course, each student will be able to look up any rule regarding the practice of pharmacy in the Oregon Revised Board of Pharmacy Statutes. Prerequisite: MTH 060 Introduction to Algebra and WR 095 College Writing Fundamentals with a grade of "C" or better; Required: High School Diploma or GED

PH 5.910 PHARMACY MATH

(4 credits) - offered Winter only

Develops math skills needed to become a pharmacy technician in a retail or hospital setting. Topics include: fractions, decimals, ratios and proportions in dosage calculation; changing within the household; metric and apothecary systems of measurement; calculations necessary for preparing pharmaceutical solutions and determining IV flow rates. Prerequisites: MTH 060 Introduction to Algebra and WR 095 College Writing Fundamentals with a grade of "C" or better; Required: High school Diploma or GED

PH 5.915 PHARMACOLOGY AND DRUG CLASSIFICATION

(5 credits) - offered Winter only

Prepares students training to work as a member of a Pharmacy Technician health care team to effectively communicate pharmaceutical information to a variety of health care professionals using correct spelling and pronunciations of selected pharmaceuticals, which will help ensure patient safety in pharmaceutical usage. Students will obtain knowledge of a large number of pharmaceuticals, including generic and trade names and an understanding of how they work in the body, as well as the usual dosage of a drug. Prerequisite: MTH 060 Intro to Algebra and WR 095 College Writing Fundamentals with a grade of "C" or better; Required: High School Diploma or GED

PH 5.920 PHARMACY OPERATIONS: RETAIL/INSTITUTIONAL

(2 credits) - offered Winter only

Focuses on drug distribution systems, record management and inventory control, and ambulatory and institutional practices. Students will learn how hospital and retail pharmacies operate. Prerequisite: MTH 060 Intro to Algebra and WR 095 College Writing Fundamentals with a grade of "C" or better; Required: High School Diploma or GED

PHL: PHILOSOPHY

PHL 201 INTRO TO PHILOSOPHY
(3 credits)
Introduces students to the following: the nature of critical thinking and its role in everyday life; the history of critical thinking, especially in the Western World; the major themes that have dominated philosophy over the past three thousand years, and the trends these themes are taking in contemporary society. Recommended: College level reading and writing skills.

PHL 202 ELEMENTARY ETHICS
(3 credits)
Introduces students to the following: a brief history of ethical theory; a proposed explanation for the beginning of ethical theory during the Axial Age; the effect religion has had on ethical theories; the effect that science has had on ethical theories; the relationship of ethics to the reasoning process and the application of ethics to modern moral dilemmas. Recommended: College level reading and writing skills.

PHL 215 HISTORY OF WESTERN PHILOSOPHY
(3 credits) offered Spring only
Introduces students to the major philosophers and issues of the past 2,500 years and the historical conditions that have affected, and been affected by, the development of philosophy. An attempt is made to embrace a study of significant thinkers from all cultures throughout the ages. The major emphasis of the course, however, is on the philosophies of the Western World. Recommended: College level reading and writing skills.

PS: POLITICAL SCIENCE

PS 201 INTRO AMER POLITICS/GOVERNMENT
■ *(3 credits) - offered Winter only*
Introduces and analyzes the American political system. Studies the development and operation of the institutions of national government, the political process (elections, public opinion, interest group activities, policy-making), the American political culture, and the American political-economy (capitalism and American politics). Includes case studies of federalism, election rules, civil society, and lobbying. Recommended: College level reading and writing skills.

PS 204 INTRO TO COMPARATIVE POLITICS
■ *(3 credits)*
Introduces major political, economic, and social concepts applied comparatively to a variety of governments and political systems including democracies, dictatorships, and theocracies. Focus is on Europe, former communist states, and Third World states of Africa, the Middle East, Asia, and Latin America. Uses case studies of political conflicts and social movements as well as role-playing and simulations. Recommended: College level reading and writing skills.

PS 205 INTRO INTERNATIONAL RELATIONS
■ *(3 credits)*
Introduces analyses of current world events; the nature of the international political and economic systems; and alternative perspectives, strategies, and approaches to contemporary world problems. Topics include global diversity; poverty and economic development; environmental and resource issues; and war and peace. Recommended: College level reading and writing skills.

PS 206 COMPARATIVE EUROPEAN GOV
(3 credits)
Focuses on current European issues. Introduces the foundations and processes of governmental policy making in European nations; examined within a historical and comparative framework. Note: Course is offered alternate years only.

PS 211 PEACE AND CONFLICT
■ *(3 credits)*
Examines the sources and causes of violence in relations involving individuals, groups, nations, and the global community. Focuses on alternatives to oppressive behavior, undemocratic politics, and the violent resolution of conflict by exploring the ideas and strategies of nonviolence. Recommended: College level reading and writing skills.

PSG: POLYSOMNOGRAPHIC TECHNOLOGY

PSG 102 BASIC POLYSOMNOGRAPHY
(5 credits) - offered Summer only
History and overview of sleep medicine and the role of the polysomnography technician. Introduction to the physiology of sleep and indications, contraindictions, purposes, and hazards of polysomnographic care modalities. Focus is placed on an understanding of basic neurology, with emphasis on basic electrencephalography (EEG) patterns and anatomy of the central and peripheral nervous system. Prerequisite: MTH 060 Intro to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading & Learning Strategies, BI 103 General Biology: Human Body and MO5.630 Medical Terminology and Body Systems I. All prerequisites must be completed with a grade of "C" or better. Medical Terminology can also be waived by passing the LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 103 THERAPEUTIC MODALITIES I
(5 credits) - offered Summer only
Overview of the preparation and role of the polysomnography technician as a health care professional. Topics include professionalism, understanding physician orders, charting, health/illness continuum, therapeutic, communication, functional cardiopulmonary anatomy, and the basics of assessment. Prerequisite: MTH 060 Intro to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading & Learning Strategies, BI 103 General Biology: Human Body and MO5.630 Medical Terminology and Body Systems I. All prerequisites must be completed with a grade of "C" or better. Medical Terminology can also be waived by passing the LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 204 CLINICAL SLEEP DISORDERS
(5 credits) - offered Winter only
Comprehensive examination of a wide range of sleep disorders, their etiology, and treatment options. Prerequisite: Prerequisite: MTH 060 Intro to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading & Learning Strategies, BI 103 General Biology: Human Body and MO5.630 Medical Terminology and Body Systems I. All prerequisites must be completed with a grade of "C" or better.Medical Terminology can also be waived by passing the LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 205 ADVANCED POLYSOMNOGRAPHY
(5 credits) - offered Fall only
Course covers advanced sleep studies and treatment modalities in polysomnography.Prerequisite: MTH 060 Intro to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading & Learning Strategies, BI 103 General Biology: Human Body and MO5.630 Medical Terminology and Body Systems I. All prerequisites must be completed with a grade of "C" or better. Medical Terminology can also be waived by passing the LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 207 THERAPEUTIC MODALITIES II
(2 credits) - offered Winter only
Presents basic principles of positive airway pressure (PAP) through the use of CPAP and BiPAP. Topics covered will include determination of need, equipment set up, oxygen/pressure titration, and instructing the patient on home use. Prerequisite: Prerequisite: MTH 060 Intro to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading & Learning Strategies, BI 103 General Biology: Human Body and MO5.630 Medical Terminology and Body Systems I. All prerequisites must be completed with a grade of "C" or better. Medical Terminology can also be waived by passing the LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 208 PREPARATION FOR RPSGT EXAM
(2 credits) - offered Winter only
This course is intended for individuals currently working as polysomnography technologists and students currently enrolled in the Polysomnography program. The Registered Polysomnographic Technologist (RPSGT) exam is broken down into units and examined through lecture and practice exams. Areas of test weaknesses are identified through practice exams with individual instructor feedback provided. Students use the online discussion board to work on group projects with classmates to enhance the learning experience. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I, or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 211 FUND OF SLEEP MONITORING EQUIP
(5 credits) - offered Summer only
Introduces students to the basic technology used in the monitoring of sleep. Principles of electricity and amplification are introduced. Covers safe patient hook-up and monitoring including effective patient communication skills; hygiene and disease control; calibration and troubleshooting of equipment; data acquisition; and basic scoring. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 215 POLYSOM SCORING & ANALYSIS
(5 credits) - offered Fall only
Introduction to scoring and analysis of polysomnography testing. Students will learn the procedures necessary to generate and validate a report of the scoring of objective and subjective data obtained in a polysomnographic study. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 221 CURRENT TOPICS IN SLEEP MED
(1 credit) - offered Winter only
Lectures on current topics in polysomnography and related areas of medicine. Case studies are presented by various sleep technicians. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment.

PSG 297A POLYSOMNOGRAPHY PRACTICUM
(4 credits) - offered Fall only
Clinical practice experiences are designed for development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of polysomnographic procedures. The planned clinical experience provides the student with the opportunity to observe and apply theoretical principles while performing procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment. Passing all previously taken Polysomnographic classes with a "C" or better.

PSG 297B POLYSOMNOGRAPHY PRACTICUM
(5 credits) - offered Winter only
This clinical practice experience is designed for the development, application, critical analysis, integration, synthesis and evaluation of concepts and theories in the performance of polysomnographic procedures. The planned clinical experience provides the student with the opportunity to observe and apply theoretical principles while performing procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on a specified number of competency evaluations, including the ability to communicate effectively and reassure patients; safely hook up and monitor patients; monitor and troubleshoot equipment during sleep studies. Prerequisites: Passing the following classes with a grade of "C" or better: MTH 060 Introduction to Algebra, WR 090 The Write Course, RD 115 Advanced College Reading and Learning Strategies, BI 103 General Biology: Human Body, MO5.630 Medical Terminology and Body Systems I or passing the MO5.630 LBCC challenge exam. Required: Obtaining a High School Diploma or GED, securing transportation to/from the clinical site, having a current CPR card, passing a criminal background check, passing a drug screen, and obtaining all required immunizations necessary to work in a medical environment. Passing all previously taken Polysomnographic classes with a "C" or better.

PSY: PSYCHOLOGY

PSY 201 GENERAL PSYCHOLOGY
■ *(4 credits)*
Discusses biological and scientific aspects of psychology including history, methodology, biological foundations of behavior, human development, sensation, perception, learning, memory, language and problem-solving. Recommended: Placement at or above the RD 115 Advanced College Reading and Learning Strategies and WR 115 Introduction to College Writing levels are highly recommended for success in this course.

PSY 202 GENERAL PSYCHOLOGY
■ *(4 credits)*
Discusses the social and personality aspects of psychology, including intelligence, motivation and emotion, health and stress, personality development, classification and treatment of psychological disorders, and the social context of human behavior and attitudes. Recommended: Placement at or above the RD 115 Advanced College Reading and Learning Strategies and WR 115 Introduction to College Writing levels are highly recommended for success in this course. Successful completion of PSY 201 is recommended but not required for this course.

PSY 215 INTRO DEVELOPMENTAL PSYCHOLOGY
■ *(3 credits)*
Explores physical, psychological, emotional, and social development from birth to death. Topics include: historical foundations; research methodology; and prominent theories/research of each developmental sequence across the lifespan. Recommended: College-level reading and writing skills. RD 115 Advanced College Reading and Learning Strategies, PSY 201 General Psychology

PSY 216 SOCIAL PSYCHOLOGY
■ *(3 credits)*
Social psychology studies the social nature of human behaviors, attitudes, perceptions, thoughts and emotions. Major areas of study include: research methods, social perception and judgment, attitude formation and change, prejudice, discrimination, sexism, aggression, interpersonal attraction altruism, conformity, group dynamics, and the application of social psychology findings to current social issues. Recommended: College level reading and writing skills.

PSY 219 INTRO TO ABNORMAL PSYCHOLOGY
■ *(3 credits)*
An introduction to the study of psychological disorders, including issues of diagnosis and treatment. Topics include: models of abnormality; overview of major disorders, including diagnostic considerations; current research on treatment effectiveness; and the impact of psychological disorders on society and its legal system. Recommended: College-level reading and writing skills.

PSY 231 HUMAN SEXUALITY
■ *(3 credits)*
Discusses the biological, social and psychological aspects of human sexual functioning within a scientific context. Topics include sexual anatomy, sexual response, gender identity, gender roles, sexual orientation, love, contraception, sexually transmitted infections and sexual coercion. Cross-listed as HDFS 200 Recommended: College level reading and writing skills.

R: RELIGION

R 101 INTRO TO RELIGIOUS STUDIES
➢ *(3 credits)*
Explores the nature of religion as experienced historically throughout the world. Examines the nature of religious experience with the divine and the relationship between science and religion. Discusses the roles of language, myths, and symbols in religion. Recommended: College level reading and writing skills.

R 102 RELIGIONS OF WESTERN WORLD
➢ *(3 credits)*
Investigates religion in the Western World. Includes discussion of how the outward forms of religious expression integrate with other cultural traditions. Recommended: College level reading and writing skills.

R 103 RELIGIONS OF EASTERN WORLD
➢ *(3 credits)*
Surveys cultures and religions of the eastern world with a focus on the teaching of compassion and tolerance in these religions. Includes understandings of Hinduism, Buddhism, Taoism, and Sikhism. Recommended: College level reading and writing skills.

RD: READING

RD 090 COLLEGE SUCCESS & READING STRATEGIES
(5 credits)
Helps students make a successful transition into and through college. Combines reading, thinking, and study strategies with personal skills needed for success in a community college. Study strategies include note taking, reading and studying textbooks, using critical thinking skills, and preparing for and taking tests. Personal success skills include taking personal responsibility and strengthening motivation, self-management, and self-advocacy. Prerequisite: Appropriate placement on the reading portion of the CPT and placement into WR 090 The Write Course.

RD 115 ADVANCED COLLEGE READING & LEARNING STRATEGIES
(4 credits)
Develops students' ability to comprehend, analyze, and retain information from various disciplines. Students learn to become literate, active college students by developing academic strategies necessary for success in a community college or four-year college. Teaches skills for learning from lectures and textbooks, applying memory strategies, preparing for and taking tests, and managing student responsibilities. Prerequisite: Placement into WR 115 Introduction to College Writing or successful completion of WR 095 College Writing Fundamentals with a grade of "C" or better.

RD 120 CRITICAL THINKING
(3 credits)
Students improve the quality of their thinking by applying elements of reasoning and intellectual standards. In this skill-building course, students will critically evaluate complex issues from a variety of sources and develop lifelong critical thinking skills. Prerequisite: Placement into RD 120 Critical Thinking or successful completion of RD 115 Advanced College Reading and Learning Strategies. Recommended: Placement into WR 121 Writing Composition or successful completion of WR 115 Introduction to College Writing with a grade of "C" or better.

SMT: SOCIAL MEDIA TECHNOLOGY

SMT 110 SOCIAL MEDIA TECHNOLOGY
(4 credits)
This is an introductory course that gives students an overview of the major social media sites and provides examples as to how individuals are using social media. Social media (Twitter, Facebook, blogging, podcasting, etc) are relatively accessible technologies that enable individuals, almost instantaneously, to create, publish, edit, and/or access messages intended for audiences; students will learn how to explore the possibilities and limitations of various social media.

SMT 111 SOCIAL MEDIA COMM & HUMAN RELATIONSHIPS
(2 credits)
This course will assist students in developing effective and successful social media marketing campaigns. Students will examine how the choice of social network and social media tools affects the distribution of the message and the audience that is reached. Students will have the opportunity to formulate a social media marketing plan with an appropriate target market using relevant social media channels.

SMT 112 SOCIAL MEDIA MARKETING & INFO
(4 credits)
This course will assist students in developing effective and successful social media marketing campaigns. Students will examine how the choice of social network and social media tools affects the distribution of the message and the audience that is reached. Students will have the opportunity to formulate a social media marketing plan with an appropriate target market using relevant social media channels.

SMT 113 SOCIAL MEDIA PRIVACY, ETHICS & LEGAL ISSUES
(2 credits)
This course provides students with a foundation that enables them to identify and analyze ethical issues in relation to social media. Case studies discuss the role of the media and social media in society in relation to privacy online; free speech; opinion-oriented media, and editorials relate to our freedoms. Students will explore the legal responsibilities associated with social media.

SOC: SOCIOLOGY

SOC 204 INTRODUCTION TO SOCIOLOGY
■ *(3 credits)*
Development and application of sociological concepts and perspectives concerning human groups; includes attention to socialization, culture, organization, stratification and societies. Consideration of fundamental concepts and research methodology. Recommended: College-level reading and writing skills are strongly recommended.

SOC 205 INSTITUTIONS AND SOCIAL CHANGE
■ *(3 credits) - offered Winter only*
Sociological study of the dynamic organizational nature of society through analysis of social change and major social institutions such as family, education, religion, the economy and political systems. Required: SOC 204 General Sociology or instructor's approval.

SOC 206 SOCIAL PROBLEMS AND ISSUES
■ *(3 credits) - offered Winter & Spring only*
Examination of social problems with particular focus upon U.S. society. Sociological perspectives on definition, description, and analysis of contemporary and recurrent problems in industrialized societies. Investigation of causes and consequences of social problems are considered in societal context. Required: SOC 204 Introduction to Sociology or instructor's approval. Recommended: College-level reading (RD 120 Critical Thinking) and writing skills (WR 090 The Write Course).

SOC 222 MARRIAGE RELATIONSHIPS
■ *(3 credits) - offered Fall only*
Examines intimate relationships, courtship, marriage and family patterns -- old, new and unconventional. Focuses on how relationships are built, maintained, changed and terminated. Required: SOC 204 General Sociology or instructor's approval. Recommended: College-level reading (RD 120 Critical Thinking) and writing skills (WR 090 The Write Course).

SPN: SPANISH

SPN 101 FIRST YEAR SPANISH I
(4 credits)
Introduces basic structures of Spanish in order to help students communicate basic ideas. The class stresses all language skills (listening, speaking, reading and writing) through a communicative approach, as well as cultural topics. The class provides a background of Hispanic populations, especially those largely represented in the U.S. population. This is NOT a conversation class, but there is an emphasis on oral communication. Conducted mainly in Spanish. Students with previous knowledge of Spanish are encouraged to take the placement examination.

SPN 102 FIRST YEAR SPANISH II
(4 credits) - offered Winter & Spring only
Continues to build language proficiency and introduce new grammar structures, particularly those used to communicate about past events. This class augments students? ability to deal with different practical situations in Spanish, and it explores the history and cultures of more Spanish speaking countries. Further development of all language skills and culture. Conducted in Spanish. Required: SPN 101 First Year Spanish I with a grade of "C" or better, or take the placement examination, or obtain instructor's approval.

SPN 103 FIRST YEAR SPANISH III
(4 credits) - offered Spring only
Continues to build language proficiency and introduce new grammar structures. This class augments students? ability to successfully interact in more situations in Spanish, and explores the history and cultures of additional Spanish speaking countries. Further development of all language skills and culture. Conducted in Spanish. Required: Complete SPN 102 First Year Spanish II with a grade of "C" or better, or take the placement examination, or obtain instructor's approval.

SPN 201 SECOND YEAR SPANISH I
(4 credits) - offered Fall only
Review and further development of all language skills toward proficiency and cultural understanding. SPN 201 prepares students to use Spanish in more academic settings. All four main skills of the language are emphasized (reading, writing, speaking, and listening). Acquaints students with Hispanic cultures through authentic materials. There is an emphasis in presenting different cultural manifestations. Conducted in Spanish. Required: SPN 103 First Year Spanish III with a grade of "C" or better, or four years of high school Spanish equivalent, or instructor's approval. Native speakers are required to have instructor's approval.

SPN 202 SECOND YEAR SPANISH II
(4 credits) - offered Winter only
Further development of all language skills toward language proficiency and cultural understanding. Conducted in Spanish. Acquaints students with more complex grammar structures, and with Hispanic cultures through authentic materials. Required: SPN 201 Second Year Spanish I with a grade of "C" or better, or five years of high school Spanish equivalent or instructor's approval. Native speakers are required to have instructor's approval.

SPN 203 SECOND YEAR SPANISH III
(4 credits) - offered Spring only
Prepares students to use Spanish in more academic settings and use the language for critical and analytical purposes. Acquaints students with more complex grammar structures, and with Hispanic cultures through authentic materials. Conducted in Spanish. Required: SPN 202 Second Year Spanish II with a grade of "C" or better, or instructor's approval. Native speakers are required to have instructor's approval.

SPN 214 SPANISH FOR HERITAGE SPEAKERS I
(4 credits)
Part of a three-course sequence designed specifically for the needs of Spanish heritage speakers. The main goal is to improve their reading, writing, grammar and speaking skills, while deepending their understanding and appreciation of Hispanic cultures in the world and within the United States. All classroom interaction occurs in Spanish. Required: Spanish native speaker or heritage speaker (grew up speaking Spanish at home).

SPN 215 SPANISH FOR HERITAGE SPEAKERS II
(4 credits)
This class is the second part of a three-course sequence specifically for the needs of Spanish heritage speakers. The main goal is to improve their reading, writing, grammar and speaking skills, while fostering critical thinking and deepening their understanding and appreciation of Hispanic cultures in the world and within the United States. All classroom interaction occurs in Spanish. Required: Spanish native speaker or heritage speaker (grew up speaking Spanish at home); completion of SPN 214 or instructor's approval.

SPN 216 SPANISH FOR HERITAGE SPEAKERS
(4 credits)
This class is the third part of a three-course sequence designed specifically for the needs of Spanish heritage speakers. The main goal is to improve their reading, writing, grammar and speaking skills, while fostering critical thinking and deepening their understanding and appreciation of Hispanic cultures in the world and within the United States. All classroom interaction occurs in Spanish. Required: Spanish native speaker or heritage speaker (grew up speaking Spanish at home); completion of SPN 215 or instructor's approval.

TA: THEATRE

TA 121 ORAL INTERPRETATION OF LITERATURE
(3 credits) - offered Winter only
Fosters an appreciation of literature and develops creative skills in publicspeaking and performance. Analyzes various literary forms (poetry, novels,plays, letters, diaries, etc.) as texts for oral presentation. Explores oral traditionsand other nonliterary sources and events as oral presentation material. Classexercises introduce vocal, physical and other speaking techniques to effectivelycommunicate a point of view. Recommended: College-level reading and writingskills are highly recommended for success in this course.

TA 140 PLAYREADING
(3 credits) - offered Spring only
The reading, discussion and examination of plays from world theaters of the past and present from the perspective of production and theater history.

TA 145 IMPROVISATION
(3 credits) - offered Fall & Winter only
This class will teach the basic techniques of comedic improvisation. The class will focus on short-form improv and will teach students a variety of games and exercises to enhance their improvisational abilities. Ultimately, the techniques the students acquire will improve their presentational and conversational abilities by strengthening their confidence, intuition and decision-making. Students will gain the tools needed to go out into the world to create his/her own Improv Comedy Show.

TA 147 INTRODUCTION TO THEATER
(3 credits)
A comprehensive introduction to the art, history and workings of the theater. Students will be given a broad and general background in theater including production elements (lights, sound, sets, costumes, make-up, etc...) of acting, theater history and criticism. Students will attend live performances, view videos of plays and write reviews of live and filmed theater.

TA 180 REHEARSAL PRACTICUM
(1-3 credits)
Offers credit for participating in a public theater production of the college. Productions provide both extracurricular activity for non-majors and practical application of classroom theory for theater students. May be repeated for up to nine credits. Required: Instructor approval

TA 240 CREATIVE DRAMA FOR CLASSROOM
(3 credits) - offered Spring only
Demonstrates the skill of taking any lesson plan and turning it into an enjoyable, exciting and fulfilling experience for both the teacher and the student. Using simple strategies and a little creativity allows students to be completely engaged while they absorb the information from a lesson. This technique is typically characterized as creative drama for the classroom and has been proven to be an effective teaching tool.

TA 244 STAGECRAFT
(3 credits)
Introduces basic theater technology emphasizing the practical skills and crafts used in the performing arts which will include equipment, materials and techniques used in the scenic construction and mounting of a theatrical production. Prior experience not required or expected.

TA 247 MAKE UP
(3 credits) - offered Fall only
Includes basic theory, techniques and practical laboratory experience of stage make up valuable to all individuals interested in working on stage or behind the scenes. Serves as an introductory experience for those interested in make up applications in film television and video production. Previous experience is not required.

TA 248 FUNDAMENTALS OF ACTING
(3 credits) - offered Winter only
Designed for the beginning actor. Students will be introduced to the basics of stage acting through the use of games, exercises and improvisation. All of which, will support future character development within a scripted scene to be presented at the end of the course. Students will gain basic skills in acting, analyzing, improvisation, visualization, breathing, and relaxation as well as a working vocabulary of theater terms. For the non-theater major, he/she will recognize that the dynamic field of theater is a useful tool for communicating in any arena.

TA 250 WORKSHOP: THEATER ARTS
(1-3 credits)
Offers practical experience in the preparation of scenery, costumes, properties, sound and publicity for a college theatrical production. May be repeated for up to six credits.

TA 253 COMMUNITY ENGAGED THEATER
(3 credits) - offered Spring only
Community Engaged Theatre is an introduction to the history, theories, and practice of community-based theatre. Hallmark troupes and artists, and techniques of theatre for social change. Involves outreach in the community, critical reflection, and the creation our own community-based performance. Course includes a service-learning project during the semester that either employs skills or knowledge learned in the course or teaches new skills or knowledge related to course objectives. Students will be involved in the planning and implementation of the project(s) and may spend time outside of the classroom. Students will be engaged in the service-learning component for approximately 25-50% of overall instructional time.

TA 254 DIRECTING I
(3 credits) - offered Winter only
This course is designed to introduce you the basic fundamentals of directing plays for the stage. We will carefully examine play structure and analysis, communication with the actors and designers, and rehearsal process and performance.

TA 282 PERFORMANCE PRACTICUM
(1-3 credits)
Offers credit for participating in a public theater production of the college. Productions provide both extracurricular activity for non-majors and practical application of classroom theory for theater students. May be repeated for up to 6 credits. Required: Audition and Instructor approval

TA 295 TOURING CHILDREN'S THEATER
(3 credits) - offered Fall only
This course is a workshop/rehearsal/performance course in traveling children's theatre. Student will prepare a short original play for presentation at area primary and elementary schools for Kindergarten-2nd grade audiences. This piece will be built, rehearsed and toured by the members of the class during the Fall quarter. Course may be repeated more than once.

VT: VETERINARY TECHNOLOGY

VT 8.601 FOUNDATION SCIENCES
(3 credits) - offered Winter only
Provides students with knowledge and skills in basic biological sciences, including a knowledge of microbiology, virology, anatomy, physiology and parasitology. Prerequisite: MTH 060 Intro to Algebra and WR115 Intro to College Writing with a grade of "C" or better; Required: High School Diploma or GED, Transportation back and forth from clinical site.

VT 8.605 VETERINARY MEDICINE
(7 credits) - offered Winter only
Provides students with an understanding of common medical procedures and diseases of small and large animals. Students receive training and practice in nursing skills, knowledge of vaccines and standard protocols, foundation areas such as reproduction and nutrition, and specialized areas such as dentistry, cardiology, endocrinology and dermatology. Students gain skills relevant to these areas and current information regarding appropriate treatment methods. Prerequisite: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better.

VT 8.610 VETERINARY CLINIC PRACTICES
(1 credit) - offered Winter only
Students gain information regarding general medical and clinical procedures. Students learn office-call procedures, medical terminology, basic business methods, interpersonal skills, and federal and state regulations specific to veterinary clinics. Prerequisite: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better.

VT 8.615 CLINICAL SCIENCES
(2 credits) - offered Winter only
Helps students develop the knowledge and skills to perform clinical tasks relevant to veterinary clinics. Both in the classroom and the laboratory, students perform clinical procedures such as intravenous catheterization, urinalysis, diagnostic cytology and complete blood counts. Prerequisite: MTH 060 Intro to Algebra and WR 115 Intro to Writing with a grade of "C" or better; Required: High School Diploma or GED; transportation back and forth to clinical sites.

VT 8.620 SURGERY AND ANESTHESIA
(2 credits) - offered Winter only
Gives students the knowledge and skills necessary to perform the tasks associated with induction and maintenance of anesthesia, as well as those specific to surgery. Through lecture, demonstration and lab exercises, students learn to monitor planes of anesthesia, correct physiologic imbalances, and prepare materials essential to surgery. Prerequisites: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better.

VT 8.625 VETERINARY RADIOLOGY
(2 credits) - offered Winter only
Students gain a basic knowledge of the nature of radiation and how to take diagnostic-quality radiographs. Students acquire the necessary number of hours in education in veterinary radiation use and safety required by the Oregon Administrative rules. Upon completion of the course, students are radiation safety certified and therefore qualified to take radiographs at the completion of the section. Prerequisites: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better.

VT 8.626 VETERINARY OFFICE SOFTWARE
(3 credits) - offered Winter only
Designed as a survey course to familiarize students with veterinary practice front office software systems, on-line applications, e-mail, word processing, spreadsheets and customer contact software. Emphasis will be on the veterinary practice front office software systems. Prerequisite: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better; Required: Basic use of a computer. Recommended: Basic internet, email, word processing and spreadsheet skills.

VT 8.630 PHARMACOLOGY
(2 credits) - offered Winter only
Students gain a working knowledge of the commonly used drugs in veterinary medicine. This includes a knowledge of pharmacokinetics, drug classifications, indications and routes of administration, and the skills to calculate drug dosages. Prerequisites: MTH 060 Intro to Algebra and WR 115 Intro to College Writing with a grade of "C" or better.

VT 8.635 ALTERNATIVE MEDICINES FOR VET ASSISTANTS
(1 credit) - offered Winter only
Introduces students to alternative therapies such as acupuncture, physical manipulation, therapeutic manipulation. Pain management medicine and multi-modal therapies are also covered. Prerequisite: MTH 060, WR 115 with a grade of "C" or better.

VT 8.640 LAW & ETHICS FOR VET ASSISTANTS
(1 credit) - offered Winter only
Covers the law and Oregon Administrative Rules pertaining to Veterinary Assistants and Technicians. It also presents ethical considerations typical in the practice of veterinary medicine. Prerequisite: MTH 060 and WR 115 with a grade of "C" or better. Required: High School Diploma or GED

WD: WELDING

WD 4.151 WELDING I
(2 credits)
Stresses safety and equipment familiarization, with lab exercises for skill development in basic gas and electric arc welding. Includes technical information lectures in related subjects.

WD 4.152 WELDING II
(2 Credits)
Provides welding skill level required in minor industrial applications. Includes more advanced electric arc-welding and an introduction to gas-shielded arc processes (MIG and TIG), as well as lab and technical information on related welding subjects. Prerequisite: WD4.151 Welding I with a grade of "C" or better.

WD 4.154 WELDING SEMINAR
(1-10 credits)
Open-entry/open-exit course providing skills upgrading.For variable credit classes, additional tuition charges of 21% (based on the in-state tuition rate) will only be applied to the number of credits registered for.

WD 4.156 MACHINERY OPERATION/MAINTENANC
(3 credits) - offered Fall only
A comprehensive study of the in-plant installation, operation and maintenance of manufacturing machinery. Includes safety, rigging, pumps, compressors, bearings, lubrication, motors with couplings, and clutches. Also includes machinery alignment and how it is accomplished. Prerequisite: Instructor's approval.

WD 4.157 MACHINERY OPERATION ESSENTIALS
(3 credits)
Introductory class to the mechanical aspects of manufacturing trades. The class provides an overview of many important aspects a student will encounter entering into the industrial trades.

WD 4.160 PREP FOR CERTIFICATION
(1-2 credits)
Designed to allow the individual who has achieved sufficient welding skill proficiency to prepare for applicable ASW Plate Welder Qualification Tests and/or ASME Pipe Welder Qualification tests. Students may test during the course upon receiving instructor written permission based on instructor evaluation of student demonstrated welding skill level, welding technique, weld quality and consistency. Testing is performed by an independent testing agency. Prerequisite: WD4.152 Welding II with a grade of "C" or better.For variable credit classes, additional tuition charges of 21% (based on the in-state tuition rate) will only be applied to the number of credits registered for.

WD 4.164 TECHNICAL WRITING FOR WELDERS
(3 credits) - offered Spring only
Covers processes and fundamentals of writing field-specific technical documents, including structure, organization and development, audience analysis, diction and style, revision and editing, mechanics and standard usage required for successful workplace writing. Placement is determined by pre-enrollment testing (CPT). Prerequisite: WR 095 College Writing Fundamentals with a grade of "C" or better.

WD 4.165 CUSTOMER SERVICE FOR WELDERS
(3 credits) - offered Winter & Spring only
Effective troubleshooting and fabrication project design requires communicating with internal and external customers. This course helps welding technicians create effective troubleshooting and project management methods that incorporate customer service skills coupled to communicating effectively with people from different social and cultural backgrounds. Included are repair and design options that promote energy efficiency.

WD 4.166 TEAMWORK SKILLS FOR WELDERS
(1 credit)
This is a required course for all first year LBCC Welding and Fabrication Technology majors for fall, winter and spring term. Students will learn teamwork skills, principles, and practices applicable to the industrial workplace, including respectful cooperation and communication, being a team player, and working collectively as a group to accomplish a common goal. Industrial Technical Society (ITS) Welding Co-Curricular Student Club embedded in this course.

WD 4.168 COMMUNICATION, CAREER PLANNING AND INTERVIEW SKILLS FOR WELD
(3 credits) - offered Winter only
Required course for first year Welding and Fabrication Technology majors designed to assist the student in awareness and understanding of the complexities of the communication process, impact of communication on obtaining employment, insights into the causes and effects of general communication behaviors, involvement in active exploration of the basic communication theories and concepts, opportunities to develop communication strengths, and to help the student develop verbal communication knowledge and skills applicable to employment in the Welding Trades. Also, includes developing a long-term career plan, developing and improving job interview skills, writing an error-free resume, resume writing tips, pre-interview research, selection of appropriate apparel for the job interview, use of communication skills, and professional presentation. Includes mock job interviews and guest interviewers from industry.

WD 4.240 BASIC ARC WELDING (SMAW)
(6 credits) - offered Fall only
A beginning career course stressing safety and equipment familiarization, with lab exercises for skill development in basic fundamentals of electric arc welding (SMAW) process. It includes technical information lectures in related subjects. Prerequisite: WD 4.151 Welding I with a grade of "C" or better, previous welding classes or experience, or instructor's approval.

WD 4.241 INTERM ARC WELDING (GMAW/GTAW)
(6 credits) - offered Winter only
A continuing career course stressing safety and equipment familiarization with lab exercises for skill development in the fundamentals of electric arc welding process. It includes technical information lectures in related subjects. The process covered in this course are GMAW and GTAW. Job search skills will also be covered. Prerequisite: WD4.240 Basic Arc Welding with a grade of "C" or better.

WD 4.242 FAB & REPAIR PRACTICES I
(4 credits) - offered Fall only
Introduces oxyacetylene welding and cutting practices on mild steel of various thicknesses and joint configurations in all positions. Covers basic fundamentals of fabrication and joint alignment.

WD 4.243 FAB & REPAIR PRACTICES II
(4 credits) - offered Winter only
Covers fundamentals of welding fabrication and repair. Introduces basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding. Prerequisites: WD4.240 Basic Arc Welding, WD4.242 Fabrication and Repair Practices I, and WD4.258 Basic Print Reading: Welders. All prerequisites must be completed with a grade of "C" or better.

WD 4.244 INTRO TO LEAN MANUFACTURING
(1 credit) - offered Winter only
This course provides an understanding of basic principles and concepts of Lean Manufacturing, with emphasis on Lean Manufacturing as applied within the industrial workplace.

WD 4.245 LAYOUT PROCEDURES FOR METALS
(3 credits) - offered Spring only
Introduces layout principles and applications. Tools and equipment for layout are studied in respect to their operating performance, with emphasis on maintenance. Includes planning and construction of templates, layout and specific fabrication to examine process quality. Prerequisites: WD4.247 Interpreting Metal Fabrication Drawings, and WD4.258 Basic Print Reading: Welders with a grade of "C" or better.

WD 4.246 ADV ARC WELDING (SMAW & FCAW)
(6 credits) - offered Spring only
Stresses safety and equipment familiarization with lab exercises for skill development in the fundamentals of electric arc welding SMAW and FCAW processes. It includes technical information lectures in related subjects and preparation for AWS welder's certification. Prerequisites: WD 4.240 Basic Arc Welding and WD 4.241 Intermediate Arc Welding with a grade of "C" or better.

WD 4.247 INTERPRET METAL/FAB DRAWINGS
(3 credits) - offered Winter only
Introduces the principles of interpretation and application of industrial fabrication drawings. Basic principles and techniques of metal fabrication are introduced by planning and construction of fixtures used in fabrication from drawings. Basic tools and equipment for layout fitting of welded fabrications are utilized. Covers the use and application of the AWS welding symbols. Prerequisite: WD 4.258 Basic Print Reading: Welders with a grade of "C" or better.

WD 4.250 FAB & REPAIR PRACTICES III
(4 credits) - offered Spring only
Continues WD 4.243 Fabrication and Repair Practices II. Provides a more in-depth approach to welding design, fabrication and repair. Uses the principles and techniques of metal fabrication from drawings. Prerequisites: WD4.241 Intermediate Arc Welding (GMAW & GTAW) and WD4.243 Fab & Repair Practices II with a grade of "C" or better.

WD 4.253 BASIC ELECTRICITY & FLUID POWER FOR WELDERS
(3 credits) - offered Winter only
Required course for 2nd Year Welding Technology majors that provides basic and important-to-know introductory-level electrical and fluid power fundamentals as applicable to the welding trade. Includes nomenclature, terminology, basics of electricity, 12-volt trailer wiring, hydraulic components and systems, mobile hydraulics, and pneumatics.

WD 4.255 FABRICATION OF STRUCTURAL SYS
(4 credits) - offered Fall only
In this skill-building course, students gain advanced oxy-fuel cutting and fabrication skills using various structural materials and components. Includes applied mechanical blue print reading, cost estimating, ordering, inventorying materials, layout and final assembly. Prerequisites: WD 4.250 Fabrication and Repair Practices III, WD 4.152 Welding II, WD 4.258 Basic Print Reading and WD 4.245 Layout Procedures for Welding. All prerequisites must be completed with a grade of "C" or better.

WD 4.256 BASIC PIPE WELDING SKILLS
(4 credits)
Introduces and provides hands-on skill development in basic vertical-up open-v groove butt-joint pipe welding techniques on carbon steel pipe with the shielded metal arc welding and gas tungsten-arc welding (TIG) processes. Includes technical information lectures in related subjects. Prerequisite: WD 4.152 Welding II with a grade of "C" or better.

WD 4.257 FAB/REPAIR: APPLIED PROB SOLVE
(4 credits) - offered Winter only
Introduces students to the problem-solving process in many fabrication and repair of welded structures and piping system applications. Prerequisite: WD 4.255 Fabrication of Structural Systems with a grade of "C" or better.

WD 4.258 BASIC PRINT READING: WELDERS
(3 credits) - offered Fall & Winter only
Introduces principles of welding fabrication drawings. Visualization of parts and projects, dimensioning and sketching are presented to develop the skills necessary to function in the fabrication and repair field and other related fields that require knowledge of prints.

WD 4.259 ADVANCED FAB TECHNIQUES
(3 credits) - offered Winter only
A course for 2nd year Welding Technology majors and individuals seeking additional advanced layout and fabrication skills beyond those offered in the prerequisite courses. Subject areas will include use of layout and fabrication tools, structural steel connections and components, chalk line layout, tank layout, ladder layout, stair layout, ring-flange layout, pipefitting fit-up, fall-protection, and rigging. Prerequisites: WD4.246 Advanced Arc Welding, WD4.250 Fabrication and Repair Practices III, WD4.258 Basic Print Reading: Welders, WD4.247 Interpreting Metal Fabrication Drawings. All prerequisites must be completed with a grade of "C" or better.

WD 4.263 FABRICATION & PIPE WELDING CAPSTONE
(2 credits) - offered Spring only
Required course for Welding & Fabrication Technology Program majors Spring Term of 2nd Year. The student will fabricate a predetermined, instructor-approved project that incorporates subject areas learned over the course of the Welding & Fabrication Technology Program including math and measurement, cost estimation and calculation, blueprint reading, interpretation of welding symbols, layout, pipe templet development, use of welding and metal cutting processes, use of tools of the Trade, working to tolerance, shop and field welding, fabrication, pipe layout, and pipe welding with Stick and TIG, meeting industry standards for workmanship and quality control. Evaluation of the student's completed Capstone project will be done to industrial standards for acceptability. Corequisite: WD4.268 Pipe Welding Practices III with a "C" or better

WD 4.264 METALLURGY FOR WELDERS
(2 credits) - offered Spring only
A required course for 2nd Year Welding And Fabrication Technology Program majors that provides practical metallurgy information and related information; emphasis on use and application of appropriate metallurgical principles. Prerequisite: WD4.246 Advanced Arc Welding (SMAW & FCAW) with a "C" or better or instructor approval.

WD 4.265 PRINT READING AND WELDING EXPLORATION
(3 credits) - offered Fall only
Basic introduction of print reading and welding principles. In the area of blue print, the class will emphasize views, how and when they are used, and terms and symbols. In the area of welding, the class emphasis will be safety, the basics of oxy-acetylene process, shielded metal arc welding and gas metal arc welding.

WD 4.266 PIPE WELDING PRACTICES I
(4 credits) - offered Fall only
Required course for Welding And Fabrication Technology majors; first course in a series of three pipe welding courses. Students practice to develop pipe welding skills in the 2G, 5G, and 6G positions with Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (TIG), and other welding processes. Students will gain practice in cutting pipe and weld joint preparation, fitting, and welding pipe of various joint types per configurations and welding positions encountered in the Pipe Welding Trades. Importance of good fit-up will be emphasized. Includes technical information lectures in related subjects. Prerequisites: WD4.245 Layout Procedures For Welders, WD4.246 Advanced Arc Welding or WD4.152 Welding II with a grade of "C" or better, or instructor permisson.

WD 4.267 PIPE WELDING PRACTICES II
(4 credits) - offered Winter only
Required course for Welding And Fabrication Technology majors; second course in a series of three pipe welding courses. Builds on the knowledge and skills developed in WD 4.266 Pipe Welding Practices I; allows students additional practice time to further develop and refine pipe welding skills in the 2G, 5G, and 6G positions with Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (TIG), and other welding processes. Students will gain additional practice in cutting pipe and weld joint preparation, fitting, and welding pipe of various joint types per configurations and welding positions encountered in the Pipe Welding Trades. Importance of good fit-up will be emphasized. Includes technical information lectures in related subjects. Prerequisites: WD 4.266 Pipe Welding Practices I with a grade of "C" or better or instructor permisson.

WD 4.268 PIPE WELDING PRACTICES III
(4 credits) - offered Spring only
Required course for Welding And Fabrication Technology majors; third course in a series of three pipe welding courses. Builds on the knowledge and skills developed in WD 4.266 Pipe Welding Practices I and WD 4.267 Pipe Welding Practices II; allows students additional practice time to further develop and refine pipe welding skills in the 2G, 5G, and 6G positions with Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (TIG), and other welding processes. Students will also gain additional practice in cutting pipe and weld joint preparation, fitting, and welding pipe of various joint types per configurations and welding positions encountered in the Pipe Welding Trades. Importance of good fit-up will be emphasized. Includes technical information lectures in related subjects. Prerequisites: WD 4.267 Pipe Welding Practices II with a grade of "C" or better or instructor permission.

WD 4.269 MATH & MEASUREMENT FOR WELDERS
(4 credits) - offered Fall only
Includes operations with whole numbers, fractions, decimals, algebraic expressions, and an introduction to practical geometry and trigonometry. Emphasis is on application, with realistic examples. Explores the use of common measuring tools employed in the industrial shop and trades and examines the types of computation and problem-solving methods utilized in industrial settings.

WD 4.270 INTRO TO WELDING FOR MACHINISTS
(1 credit) - offered Spring only
Designed to allow the student the opportunity to develop the welding skills necessary to accomplish basic welding tasks typically encountered by the machinist in the workplace including the building up of work surfaces for subsequent turning, milling, or other machining operations. Lecture and Lab topics will include safety, setup and operation of commonly used welding processes, base metal weldability considerations, filler metal selections, and minimizing warpage and distortion.

WD 4.280 ALUMINUM WELDING GTAW & GMAW
(2 credits) - offered Fall only
Provides additional hands-on skill development with the Gas Tungsten-Arc Welding process on aluminum alloys beyond the introduction provided in prerequisite WD4.152 Welding II; also provides an introduction to the Gas Metal-Arc Welding process on aluminum alloys. Includes technical information lectures in related subject areas. Prerequisite: WD4.152 Welding II with a grade of "C" or better.

WD 4.291 AWS STRUCTURAL CODE FOR WELDERS
(1 credit) - offered Fall only
Required course for 2nd Year Welding And Fabrication Technology students. This 1-credit course familiarizes the Welding And Fabrication Technology student with select concepts and areas of the American Welding Society D1.1 Structural Welding Code including inspection and weld acceptability criteria, qualification and use of Welding Procedures, welding and fabrication practices, and use of prequalified weld joints. Prerequisite: WD4.246 Adv Arc Welding (SMAW & FCAW) with a "C" or better.

WE: WORK EXPERIENCE

WE 202 CWE SEMINAR
(1 credit)
The CWE seminar is a course designed to provide opportunities for students involved in a CWE course to share work-related experiences with their work experience coordinator. Note: May be repeated for up to four credits.

WR: WRITING

WR 090 THE WRITE COURSE
(4 credits)
Introduces writing required for effective communication. This course focuses on English conventions, writing sentences, and basic paragraph writing. Prerequisite: Appropriate CPT score for writing and placement into RD 090 College Success and Reading Strategies.

WR 095 COLLEGE WRITING FUNDAMENTALS
(4 credits)
Prepares students to successfully use the writing process (plan, draft, revise, edit, proofread); use specific, sufficient, relevant support as evidence to support ideas; effectively use appropriate writer's resources; and edit and proofread for standard English and correct punctuation. Prerequisite: Successful completion of WR 090 the Write Course with a grade of "C" or better or appropriate CPT score and placement into RD 090 College Success and Reading Strategies or above. Recommended: Reading CPT placement into RD 115 Advanced College Reading and Learning Strategies or co-registered in RD 090 College Success and Reading Strategies.

WR 115 INTRO TO COLLEGE WRITING
(3 credits)
Introduces college level critical inquiry in academic and professional reading and writing. WR 115 students critically read, summarize, and respond in paragraph format. Students develop expository essay writing skills, review conventions, and use individual and collaborative processes. Note: This course does not satisfy institutional writing requirements for the degree seeking or transfer student. Prerequisite: Placement in WR 115 is determined by pre-enrollment testing (CPT) or by passing WR 095 or ENL 095W (College Writing Fundamentals for ELLs) with a grade of "C" or better. Students may challenge their mandatory placement, with an advisor's approval, by signing a self-placement form through their counselor. If this section is a Writing LAB, students are required to attend a Writing Lab Orientation at the beginning of the term. Orientation times and dates can be found at: linnbenton.edu/writinglab

WR 121 ENGLISH COMPOSITION
(3 credits)
Covers processes and fundamentals of writing expository essays, including structure, organization and development, diction and style, revision and editing, mechanics and standard usage required for college-level writing. Placement determined by pre-enrollment testing (CPT). Prerequisite: Placement in WR 121 is determined by pre-enrollment testing (CPT) or by passing WR 115 or ENL 115W (Introduction to College Writing for ELLs) with a grade of "C" or better. Students may challenge their mandatory placement, with an advisor's approval, by signing a self-placement form through their counselor. If this section is a Writing LAB, students are required to attend a Writing Lab Orientation at the beginning of the term. Orientation times and dates can be found at: linnbenton.edu/writinglab

WR 122 ENGLISH COMPOSITION: ARGUMENTATION
(3 credits)
Emphasizes the logical means of supporting claims in argumentative essays, thesis statements and reasoning. Includes logic, style and research. Prerequisite: WR 121 English Composition or equivalent with a grade of "C" or better. If this section is a Writing LAB, students are required to attend a Writing Lab Orientation at the beginning of the term. Orientation times and dates can be found at: linnbenton.edu/writinglab

WR 123 ENGLISH COMPOSITION: RESEARCH
(3 credits)
Introduces informative and analytical writing supported by research. Students design a research plan, use primary and secondary sources critically, develop research methods, use proper documentation and develop writing strategies for longer papers. Prerequisite: WR 121 English Composition with a grade of "C" or better. If this section is a Writing LAB, students are required to attend a Writing Lab Orientation at the beginning of the term. Orientation times and dates can be found at: linnbenton.edu/writinglab

WR 185 UNDERSTANDING ENGLISH GRAMMAR
(3 credits)
Explores the structure of the English language as well as its grammatical conventions. Students may then make grammatical choices realizing the rhetorical effects of those choices on the reader. This is not a remedial course. Prerequisite: WR 121 English Composition with a grade of "C" or better.

WR 214 BUSINESS COMMUNICATION
(3 credits)
Explores writing as a strategy for problem-solving in business settings. Develops analytical skills and audience awareness in complex writing situations. Includes group problem-solving, fact-finding interviewing, library research, evaluating ethical issues, developing appropriate formats and composing, revising, designing, and editing business documents. Emphasizes written and oral communication in business, including information gathering, writing, editing, listening, interviewing, nonverbal communication, and collaboration. Prerequisite: WR 121 English Composition.

WR 227 TECHNICAL WRITING
(3 credits)
Introduces students to the types of writing they will encounter in business, industry, the academic world and government. It examines the rhetorical nature of writing and asks students to think critically about content, audience, argument and structure. Students will learn how to effectively design documents, present instructions, create proposals and produce technical reports. Prerequisite: WR 121 English Composition with a grade of "C" or better. If this section is a Writing LAB, students are required to attend a Writing Lab Orientation at the beginning of the term. Orientation times and dates can be found at: linnbenton.edu/writinglab

WR 240 CREATIVE WRITING: NONFICTION
(3 credits)
Explores using creative writing techniques (plot, characterization, setting, metaphor, point of view, voice, etc.) in nonfiction essay writing. Emphasizes the elements of the creative process: personal reflective writing, creative drafting strategies, writing workshops, and revision. Note: May be repeated for up to six credits. Recommended: WR 121 English Composition.

WR 241 CREATIVE WRITING: FICTION
(3 credits) - offered Fall & Winter only
Applies elements of short fiction (dialogue, setting, character conflict, etc) using workshop sessions in which students discuss the exercises and stories of their classmates. Note: May be repeated for up to six credits. Prerequisite: WR 121 English Composition with a grade of "C" or better.

WR 242 CREATIVE WRITING: POETRY
(3 credits) - offered Spring only
Applies basic elements of poetry, types of poetry, uses for poetry and the process of creating poetry. Note: May be repeated for up to six credits. Recommended: WR 121 English Composition and ENG 104 Literature: Fiction or ENG 106 Literature: Poetry.

WR 243 CREATIVE WRITING: SCRIPT WRITING WORKSHOP
(3 credits) - offered Spring only
Focus on writing and submitting scripts for class discussion and analysis. Studies established writers and film for techniques, structures and styles. Note: May be repeated for up to six credits. Recommended: WR 121 English Composition; ENG 110 Film Studies.

WS: WOMEN'S STUDIES

WS 280 GLOBAL WOMEN
(3 credits)
Focuses on women's experiences throughout the world and examines women's issues and status cross-culturally. Recommended: College level reading and writing skills.

WW: WATER/WASTEWATER

WW 6.151 WE&T LAB SKILLS I
(3 credits) - offered Fall only
This couse covers the terminology, function and demonstration of glassware and instruments used in the examination of water and wastewater. Basic laboratory techniques and safety are covered as well as the background of chemistry and biology found in water and wastewater treatment systems.

WW 6.152 WE&T LAB SKILLS II
(3 credits) - offered Winter only
This coures builds on the skills and information offered in Lab Skills I and challenges the student to put the equipment, cleanliness, documentation, biological and chemical information together to produce a successful beer product. Prerequisite: WW6.151 WE&T Lab Skills I with a "C" or better

WW 6.153 WE&T INDUSTRIAL SAFETY
(3 credits) - offered Fall only
This course covers many of the safety programs currently in use by public works departments across the United States. An overview of these programs will be covered and this course is not intended to be a substitute for safety program training requirements.

WW 6.154 PROCESS CONTROL FOR WASTEWATER TREATMENT SYSTEMS
(3 credits) - offered Spring only
This course covers the operational control strategies for biological wastewater treatment facilities. Common biological control strategies are covered with an emphasis on advanced operator control skills as they are related to these processes. Evaluation of water treatment system will be enhanced through the use of data handling exercises using computer spreadsheets and existing Supervisory Control and Data Acquisition (SCADA) systems Required: WW6.192 Primary and Secondary Treatment.

WW 6.156 INDUSTRIAL ELECTRICITY
(4 credits) - offered Winter only
Provides the student with a hands-on survey of electricity/electronics. Topics include DC and AC electricity, Ohm's Law, series and parallel circuits, electrical sources, semiconductor electronics and motors. The student will have an opportunity to construct various electrical circuits and test the electrical parameters associated with them, thereby confirming theoretical predictions and gaining knowledge in the proper use of electrical test equipment. Prerequisite: MTH 060 Introduction to Algebra or MT3.812 Mechanical Systems with a "C" or better.

WW 6.164 WATER SOURCES
(3 credits) - offered Winter only
A basic class for students training to be water resource managers. Includes surface and groundwater sources. Covers hydrology, water quality, laws and regulations, flow measurements, storage, intake structures and wells.

WW 6.165 PUBLIC WORKS INFRASTRUCTURE II
(2 credits) - offered Spring only
Describes the maintenance of water distribution systems, sewage collection systems, stormwater systems, and roads. Required: WW6.167 Public Works Infrastructure I

WW 6.166 PROCESS CONTROL FOR WATER TREATMENT SYSTEMS
(3 credits) - offered Winter only
This course is defined as an advanced level course designed to cover the theory, application, and operation of potable water treatment systems. Theory, evaluation, and operation of mixing systems, coagulation chemistry, optimization of chemical applications, flocculation, sedimentation, and filtration, are the focus of this course. Evaluation of water treatment systems will be enhanced through the use of data handling exercises using computer spreadsheets and existing Supervisory Control and Data Acquisition (SCADA) systems. Required: WW 6.191 Water Treatment Processes.

WW 6.167 PUBLIC WORKS INFRASTRUCTURE I
(2 credits) - offered Winter only
Describes function and construction of water distribution systems, sewage collection systems, stormwater collection systems, and roads.

WW 6.168 COOPERATIVE WORK EXPERIENCE
(3 credits) - offered Spring only
Consists of full-time work in a water or wastewater treatment facility. Skills and knowledge developed in first-year courses are combined with on-the-job training by both plant supervisory personnel and LBCC visiting instructors. Required: WW 6.190 Introduction to Environmental Technology and instructor signature.

WW 6.169 EFFLUENT DISINFECTION, DISPOSAL & REUSE
(3 credits) - offered Winter only
Covers the importance of the disinfection of in the wastewater treatment facility. Disposal options and reuse processes for reclaimed wastewater are covered in this course. Disinfection processes include chlorination, ultraviolet light, and other options. Federal and state regulations for disposal and reuse are covered in this course. Required: WW6.190 Introduction to Environmental Technology, and WW6.192 Primary and Secondary Treatment.

WW 6.170 INTRODUCTION TO PUBLIC WORKS
(2 credits) - offered Fall only
This course covers the structure of public government, the development and implementation of municipal governance with an emphasis on public works. Topics covered include city council government, elective official responsibilities, state and federal environmental laws and public health responsibilities.

WW 6.172 INDUSTRIAL PRETREATMENT & STORMWATER CONTROL
(3 credits) - offered Winter only
This is the beginning of a sequence of classes dealing with wastewater treatment and stormwater control. This course covers the monitoring, regulation, and treatment of industrial wastewater discharges into public treatment systems. The second focus of this course is the collection and handling of stormwater in public treatment systems. Prerequisite: WW 6.190 Introduction to Environmental Technology with a grade of "C" or better.

WW 6.176 OREGON CDL EXAM PREP
(2 credits) - offered Fall only
This course will prepare the student to take the general knowledge portion of the Commercial Driver License exam. The Commercial Driver License focuses on safety aspects of the operation of commercial vehicles. All Oregon requirements to take the exam are the responsibility of the student. This course does not meet the requirements of any of the CDL endorsements but covers the safety and legal requirements of the endorsement. It is the responsibility of the student to meet Oregon licensing requirements, schedule testing, and pay all fees.

WW 6.190 INTRO TO ENVIRONMENTAL TECH
(4 credits) - offered Fall only
Introduces students to field of environmental science, pollution control, and environmental technology. This course will provide the basic understanding of the normal ecology of the planet and the risks associated with pollution of our the environment. Sources of environmental pollution and control technologies including safe drinking water, wastewater treatment, air pollution, solid waste, and hazardous waste management are covered. Required: Students must be registered in the Water, Environment and Technology Program to register for this course. Prerequisite: WW 6.170 Introduction to Public Works and MTH 060 Introduction to Algebra with a grade of "C" or better.

WW 6.191 WATER SYSTEMS PROCESSES
(3 credits) - offered Spring only
Develops the basic understanding and required skills for operation of a water treatment system including raw water storage and pretreatment, coagulation, flocculation, sedimentation, filtration, fluoridation, softening, corrosion control, membrane processes, and safety procedures in the workplace. Required: MTH 065 Elementary Algebra and WW 6.190 Introduction to Environmental Technology.

WW 6.192 PRIMARY & SECONDARY TREATMENT
(3 credits) - offered Spring only
Covers all common wastewater treatment processes involved in primary treatment sections and the biological secondary treatment steps of a wastewater treatment facility. Each treatment alternative is covered with the basic physical/ biological concepts of the process and the direct operator skills and activities required for successful operation. Observation, laboratory testing, safety and calculation interpretation are used as monitoring tools in this course. Required: WW6.190 Introduction to Environmental Technology and concurrent enrollment in or completion of MTH 065 Elementary Algebra.

WW 6.193 WATER LABORATORY PRACTICES
(4 credits) - offered Spring only
This course covers basic concepts relevant to drinking water treatment and applies them to common laboratory techniques (e.g. alkalinity, hardness, turbidity, Jar Test, PA test, chlorine residual). Required: WW 6.190 Introduction to Environmental Technology.

WW 6.194 WASTEWATER LAB PRACTICES
(4 credits) - offered Fall only
This course covers basic concepts relevant to wastewater treatment and applies them to common wastewater laboratory techniques (e.g. the BOD test, solids tests, microscopic identification, MPN). Required: WW 6.190 Introduction to Environmental Technology.

WW 6.196 WATER DISINFECTION WQ CONTROL
(3 credits) - offered Fall only
Covers the importance of the disinfection of drinking water supplies and the maintenance of water quality in the distribution system. Disinfection processes include chlorination, ultraviolet light, and other options. Maintenance of water quality focuses on both chemical and microbiological stability of the water as it is stored and distributed. Required: WW6.190 Introduction to Environmental Technology and WW6.191 Water Treatment Processes.

WW 6.197 SOLIDS PROCESSING AND REUSE
(3 credits) - offered Fall only
Covers the standard procedures and processes of solids handling and residuals management. Selected topics to be covered will include chemical addition for sludge conditioning, sludge thickening processes, sludge digestion, mechanical dewatering, composting, land application practices, and related lab procedures. Required: WW6.192 Primary and Secondary Treatment.

WW 6.198 INTRO TO PLCS & INDUSTRIAL CONTROL SYSTEMS
(4 credits) - offered Spring only
Provides an introduction to the instrumentation processes used to monitor and control contemporary water and wastewater treatment facilities. Measurement of temperature, pressure, liquid level and flow, and the transmission and control of these parameters will be discussed. Required: WW 6.156 Industrial Electricity.

WW 6.235 APPLIED HYDRAULICS
(3 credits) - offered Fall only
A practical course covering flow, head and head loss calculations, pump calculations and pump curves. Applications are made to water distribution systems and sewage collection systems. Prerequisite: MTH 065 Elementary Algebra or MT3.833 Principles of Technology with a grade of "C" or better.

LBCC's Alcohol- and Drug-Free Program

As one part of its Alcohol- and Drug-free (Workplace/School) Program, Linn-Benton Community College has developed a brochure to provide students and staff information about the health risks associated with the use of illegal drugs and abuse of alcohol. It also includes standards of conduct required of students and staff, LBCC sanctions, legal sanctions, and counseling and treatment resources available in the area. This document has been printed here in abbreviated form. To obtain the full-text document, contact LBCC's Human Resources Office, 541-917-4420, or view online at *www.linnbenton.edu/current-students/administration-information/policies/drug-free.*

I. Introduction

Linn-Benton Community College is legally required and morally committed to the prevention of illicit drug use and the abuse of alcohol by both students and employees. Drug and alcohol abuse is a significant public health problem which has spread throughout our society, affecting performance and productivity, as well as our level of general health. In addition, the use of drugs can adversely affect an organization's level of safety as well as its public confidence and trust. In brief, this section has been developed by LBCC to comply with the federal law and to educate and inform its students and employees of the health risks, counseling and treatment resources, and sanctions for noncompliance. Linn-Benton will biennially review this program to determine its effectiveness and implement changes if needed and to ensure that the sanctions required are consistently enforced.

II. Standards of Conduct

Students

The LBCC *Student Rights, Responsibilities & Conduct* document (page 6, number 14) defines the following behaviors as violations of the standards of student conduct: "use, possession, or distribution of alcoholic beverages, narcotics, or dangerous drugs except as expressly permitted by law." The document may be viewed online at www.linnbenton.edu/student-rights.

Employees

In compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226), it shall be the policy of Linn-Benton Community College to maintain an alcohol and drug-free workplace for all employees of the District. The unlawful manufacture, distribution, dispension, possession or use of alcohol or a controlled substance, except by physician's prescription, is strictly prohibited in the workplace(s) of the Linn-Benton Community College District.

III. A Description of the Health Risks Associated with the Use of Illicit Drugs and the Abuse of Alcohol

Illicit Drugs

Marijuana is addictive and can cause impaired short-term memory, visual tracking, heart rate, slowed reaction time/poor coordination, lung disease and damage to reproductive functions.

Cocaine and Crack are highly addictive and may cause impaired judgment, short attention span, irritability, depression, mood swings, malnutrition, severe weight loss and liver damage, coma, seizure and heart attack.

PCP, LSD, Heroin, Mescaline and Morphine have a wide variety of negative health effects which may include hallucinations, mental confusion and/or permanent loss of mental function, addiction, convulsions, coma or death.

Prescription Drugs are too often used to reduce stress and are not safe unless they are taken as prescribed. If abused, they can lead to malnutrition, sluggishness or hyperactivity, impaired reflexes, addiction and brain damage, coma, or death.

Alcohol is the most commonly abused drug and can cause loss of concentration, poor judgment and coordination, impaired memory, drowsiness and mood swings, liver damage/cirrhosis of the liver, high blood pressure and heart attack, pancreatitis, various cancers and heart disease.

IV. A Description of the Applicable Legal Sanctions under Local, State, and Federal Law for Unlawful Possession, Use, or Distribution of Illicit Drugs and Alcohol

The following chart describes the penalties in general for possession of key drugs according to the Federal Drug Schedules.

	Maximum Prison Time	Maximum Fine
Schedule I – Class B Felony Heroin, LSD, other hallucinogens, marijuana, others	10 years	$100,000
Schedule II – Class C Felony Methadone, morphine, amphetamine, cocaine, PCP	5 years	$100,000
Schedule III – Class A Misdemeanor Non-amphetamine stimulants, some depressants	1 year	$2,500
Schedule IV – Class C Misdemeanor Valium-type tranquilizers, some less potent depressants	30 days	$500
Schedule V – Violation Dilute mixtures, compounds with small amounts of controlled drugs	no maximum	$1,000

Delivery of less than five grams or possession of less than one ounce of marijuana is a violation. HB 2479 established mandatory evaluation, education and treatment services for those under 18 years of age. If services are successfully completed, the charge will be dropped. Oregon has strong laws allowing cars, boats, etc. that transport illegal drugs to be seized and forfeited. Alcohol is an illegal drug for those under 21 years of age. For drivers under 18, ANY detectable amount of alcohol (above .00 BAC) is grounds for losing their license until they are 18. There are many more laws pertaining to alcohol and other drugs. This is a sample to demonstrate that most drugs are VERY illegal, and a criminal conviction may bar a student from their chosen career path or an employee from successful employment with the college.

V. LBCC Sanctions

Students

Sanctions which may be imposed on students for violations of the code include *disciplinary warning, disciplinary probation* (a written warning by the dean of student services or college president), *temporary exclusion* (removal for up to two class periods or longer), *suspension* (exclusion from classes and activities and/or forfeiture of the right to enter the campus, *expulsion* (termination of student status), and others.

Employees

The college will impose sanctions or require satisfactory completion of a drug abuse assistance or rehabilitation program. Sanctions imposed may include *disciplinary probation* (the suspension of a more severe penalty for a specific time period, based upon good behavior), *suspension* (the temporary barring from employment for a specific time period, without pay), and/or *termination* (the severance of employment with the college).

VI. Assistance Programs Available to Students and Employees

Benton County Alcohol and Drug Treatment Program 541-766-6835
Linn County Alcohol and Drug Treatment Program 541-967- 3819
Alcoholics Anonymous, Linn & Benton counties 541-766-3677
Ala-Non, Linn & Benton counties 541-967-6262
Community Outreach/ASSETS 541-758-3000
Drug & Alcohol Abuse Hotline 1-800-621-1646
Milestones Family Recovery Program, Corvallis 541-753-2230
Narcotics Anonymous Helpline 1-877-233-4287
Serenity Lane, Albany 541-928-9681
Teen Challenge, Inc. 1-503-585-6278

College Resources for Students:
Counseling Center, Takena Hall 541-917-4780

College Resources for Employees:
LBCC provides an Employee Assistance Program (EAP), available to all contracted employees. Through this program, each employee and his or her dependents are allowed five visits per year at no cost for appraisal, limited counseling and/or referral. All employee contact with EAP is **strictly confidential.** Phone numbers for EAP include: (800-922-7009; Corvallis (541-754-8004) or Eugene (541-344-6929).

Faculty and Administrative Staff

STATE ADMINISTRATIVE STAFF:

Oregon State Board of Education

Angela Bowen

Samuel Henry

Artemio Paz, Jr.

Miranda Summer

Serilda Summers-McGee

Anthony Veliz

Department of Community Colleges and Workforce Development

Gerald Hamilton, Commissioner

LBCC ADMINISTRATIVE STAFF:

Board of Education

Barry Broadbent, Zone 1

Keith Frome, Zone 6-7

Shelly Garrett, Zone 4

Ron Mason, Zone 5

Jim Merryman, Zone 2-3

Lyn Riverstone, Zone 6-7

Dick Running, Zone 2-3

Administration

Greg Hamann, President

Beth Hogeland, Executive Vice President, Academic Affairs and Workforce Development

Dave Henderson, Interim Vice President, Finance and Operations

Bruce Clemetsen, Vice President, Student Affairs

Faculty and Management

Aflatooni, Arfa
Faculty, Sociology. BA, MA, Idaho State University; PhD, Washington State University.

Agnew, Virgil
Faculty, Developmental Studies. BA, University of Kansas; BEd, University of Kansas; MA, Lamar University.

Alvin, John
Faculty, Heavy Equipment Diesel Technology/ Construction and Forestry Technology. AS, Linn-Benton Community College; Master ASE Certificate (Diesel/Heavy Equipment).

Anderson, Larry
Counselor, High School Partnership Program. BA, MA, University of Denver.

Aynes, Danny
Director, Enrollment Services. BA, Arkansas Tech University; MEd, Oregon State University.

Backus, Bridgid
Faculty, Physical Sciences. AS, American River College; BA, MS, California State University-Sacramento; PhD, Oregon State University.

Bailey, Joseph
Faculty, Training Specialist, Business and Employer Services. BS, Western Washington University; MA, Antioch University.

Barbee, Louis
Faculty, Machine Tool. More than 20 years experience in the machining field.

Becker, David
Faculty, Computer Systems. BS, MS, Oregon State University.

Bessey, Barbara
Faculty, Faculty/Director, SBDC, MEd. Oregon State University, BA Arizona State University.

Buchele, Ann
Dean, Business, Healthcare and Workforce. BA, MEd, University of Toledo-Ohio; PhD, Oregon State University.

Burchard, Russ
Faculty, Adult Basic Skills. BA, University of Colorado; MAT, Oregon State University.

Caddy, Sheryl
Faculty, Nursing. ADN, Linn-Benton Community College; BSN, Oregon Health Sciences University; JD, Willamette University College of Law; RNJDMS, Walden University.

Campbell, Mary
Faculty, Mathematics, Benton Center. BS, Willamette University; MS, University of Massachusetts-Amherst.

Carman, Brad
Faculty, Health and Human Performance. BS, Oregon State University; MS, University of Oregon.

Carmichael, Perry
Faculty, Drafting and Engineering Graphics Technology. BS, Oregon Institute of Technology.

Carroll, Linda
Faculty, iLearn Campus. BS, MEd, University of Idaho.

Carter, Deron
Faculty, Physical Sciences. BA, Whitman College; MS, Central Washington University.

Carter, Rod
Faculty, Criminal Justice. BS, JD, University of Oregon.

Casas, Margarita
Faculty, Spanish. MA, Colorado State University.

Castillo, Tiffany
Counselor, High School Partnerships. AA Chemeketa Community College, BA Western Oregon University, MS Oregon State University.

Cervantes, Javier
Director, Department of Equity, Diversity & Inclusion, AA, East Los Angeles College; BA, University of Oregon; MA, Portland State University.

Chafin, Katherine
Counselor, Academic Advising Coordinator. BA, Weber State University; MS, Oregon State University, NCC.

Clark, Kim
Faculty, Nursing. MSN Walden University, BSN North Park University

Clayton, Jennifer
Faculty, Diagnostic Imaging. AAS, Linn-Benton Community College

Clemetsen, Bruce
Vice President, Student Affairs. BS, Willamette University; MA, Michigan State University; PhD, Bowling Green State University.

Coe, Jerry
Faculty, Medical Assistant, BS Oregon State University.

Coffeen, Warren
Faculty, Biology. BS, University of California-Riverside; PhD, Oregon State University.

Coreson, Darrelynn (Dodi)
Faculty, Computer Systems. BS, MS, Oregon State University; BS, Western Oregon University.

Cox, Lynne
Associate Dean of Student Affairs. BA, Oregon State University; JD, Willamette University College of Law.

Crabill, Jeff
Faculty, Mathematics. BS, MS, Northern Arizona University.

Currin, Cynthia
Manager, Grant Development. BS, Linfield

Custer, Ann
Faculty, Occupational Therapy Assistant Program. BS, University of Missouri-Columbia; MPH, University of Arizona.

Dance, Darci
Faculty, Psychology. BA, MS, Idaho State University.

Davis, Jeff
Regional Director for Benton County. BS, MEd, Oregon State University.

Doescher, Sue
Faculty, Education/Child and Family Studies. BS, Purdue University; MA, Michigan State University; PhD, Oregon State University.

Dowless, Dean
Faculty, Welding Technology. AS, Linn-Benton Community College; Journeyman Welder; AWS certifications.

Duncan, Hollis
Faculty, Mathematics. BS, University of Tennessee at Chattanooga; MS, Western Carolina University.

Durling, Kathleen
Faculty, Medical Assistant. RN, Good Samaritan Hospital School of Nursing.

Durling, Richard
Faculty, Medical Assistant. BS, Oregon State University.

Ehlers, R. J.
Faculty, Automotive/Diesel Technology. AAS, Linn-Benton Community College; BS, Weber State University; Master ASE Certified.

Elvin, John Richard
Manager, Technical Theater.

Emerson, Dana
Faculty, Communication. AA, El Camino College; BA, MA, California State University, Northridge.

Falk, Cindy
Faculty, Health and Human Performance. BS, Rocky Mountain College; MEd, University of Idaho.

Falk, Randy
Faculty, Health and Human Performance. BS, Rocky Mountain College; MEd, University of Idaho.

Feldman, Andrew
Dean, Science, Engineering and Mathematics. BS, PhD, The Florida State University.

Francis, Nicole
Faculty, Mathematics. BA, University of Oregon; MA, Arizona State University.

Franklin, Lewis
Faculty, Digital Imaging and Prepress Technology. AAS, AA, Linn-Benton Community College; BS, Art Institute of Pittsburgh

Fraser-Hevlin, Janice
Counselor. BA, University of Alberta; Diploma in Ed., University of Victoria; MS, Oregon State University.

Frazier, Jayme
Faculty, Health and Physical Education. BS, Eastern Oregon University; MS, Western Oregon University/ Oregon State University.

Fudge, Alan
Faculty, Business Management. AS, Middle Georgia College; BChE, Georgia Institute of Technology; MBA, Oregon State University; CPA.

Fuentes, Analee L.
Faculty, Art. LVN, College of the Redwoods; BFA, University of Oregon; MFA, University of Arizona.

Gable, Cyrel
Faculty, Parenting Education, BA, University of California at Santa Cruz; MSW, University of Denver Graduate School of Social Work

Gerger, Stacey
Faculty, Dental Assisting, BS, Corbin University.

Gerig, Beverly
Director, Financial Aid and Veteran's Affairs. AA, Linn-Benton Community College; BA, Northwest University.

Gibbs, Richard
Wellness Coordinator/Faculty, Health and Human Performance. BS, MS, CHES, Brigham Young University.

Gordon, Pam
Faculty, Developmental Studies. BS, University of Oklahoma; MS, Portland State University.

Grady, Noella
Faculty, Mathematics. BA, Whitman College, MS, Oregon State University.

Graham, Beth
Faculty, Life and Employment Development. BS, Southern Oregon University; MS, Oregon State University.

Green, Denis
Faculty, Mechatronics/RHVAC. BA, University of Waterloo; MEd, Western Washington University; PhD, Oregon State University. Oregon State LME; EPA Certified Technician; British Columbia Power Engineer.

Hamann, Greg
President. BA, University of Minnesota; MA, Trinity Evangelical Divinity School; PhD, Gonzaga University.

Hammond, Leslie
Associate Dean, Student Engagement. BA, Albertson College; MFA, Indiana University

Hansen-Prince, Carley
Faculty, Diagnostic Imaging. BS, Oregon State University; MEd, Western Washington University

Harrison, Robert
Faculty, Social Science. AA, Tyler Junior College; BA, Moorhead State University; MA, University of Texas at Tyler; PhD, Ohio State University.

Havenick, Robin
Faculty, English/Writing. BA, MA, University of Florida.

Hawkins, Richenda
Faculty, Library. BA, University of California-Davis; MLIS, San Jose State University.

Hawkwood, Paul
Faculty, English/Writing. BA, Whitworth College; MA, Eastern Washington University..

Hibbard, Paul
Faculty, Economics. BA, Whitman College; MS, University of Oregon.

Hobson, Linda
Faculty, Adult Basic Skills. BSEd, MATESOL, Northern Arizona University.

Hogeland, Elizabeth (Beth)
Executive Vice President, Academic Affairs and Workforce Development. BA, MS, PhD, Florida State University; MA, Northeast Missouri State University.

Houde, Terri
Faculty, CASE & Career Pathways, MS, Oregon State University

Jacobs, Rachel
Faculty, Biological Sciences. BS, University of Alaska-Fairbanks; DVM, Oregon State University.

Jarschke, John
Faculty, Culinary Arts/Food Services. Diploma, Horst Mager Culinary Institute, Diploma, Western Business College, AA, Oregon Institute of Technology.

Johnson, Carrie-Ann
Faculty/Department Chair, Dental Assisting. AA, Southwestern Oregon Community College; Certified Dental Assistant, Expanded Functions Dental Assistant.

Keady, Brian
Faculty, Spanish. BA, MA, University of Oregon.

Ketler, David
Faculty, Welding Technology. BS, Western Baptist College. Journeyman welder; AWS and state certifications; CWI; CWE.

Ketterman, Jennifer
Manager, Curriculum, Catalog and Scheduling. BS, Oregon State University.

Ketterman, Todd
Faculty, Culinary Arts, AA Western Culinary Institute.

Keuneke, Karen
Faculty, Nursing. AS, Linn-Benton Community College; MSN, American Sentinel University

Kidd, David
Faculty, Engineering/Wastewater. BS, Northern Arizona University; BEd, University of Alaska; MS, University of Alaska.

Klampe, Angelina
Counselor. BS, MS, Oregon State University.

Klampe, Rick
Faculty, Animal Science. AS, Linn-Benton Community College; BS, MS, California State University-Fresno.

Kralik, Pete
Faculty, Occupational Therapy Assistant. COTA Certificate, Adult Board of Education, Columbus, Ohio

Krambuhl, Scott
Director, Facilities. AS, Portland Community College; BS, Oregon Institute of Technology.

Krefft, Kevin
Faculty, Environmental Technology. AA, College of DuPage; BS, University of Georgia; MS, MAT, Oregon State University.

Krolick, Philip
Faculty, Automotive Technology. AAS Parkland College; BS University of Illinois; EdM Oregon State University; Master ASE Certification.

Lacey, Kevin
Associate Director, Facilities. BS, Oregon State University.

LaJoie, Lawrence
Manager, Bookstore. BS, State University of New York at Oneota.

LaRoux, Charlene
Faculty, Biology. AAO, Lane Community College; BS, Portland State; MS, PhD, University of Oregon.

Lassen, Bonnie
Faculty, Nursing. RN, BSN, University of Portland; MSN, University of Phoenix.

Lehman, Twila
Faculty & Department Chair, Business Technology. BS, MEd, Oregon State University.

Lewis, Robert
Faculty, Mathematics. BA, MAT, Duke University; MS, Montana State University; PhD, Oregon State University.

Litzer, Dori
Faculty, Art. BS, University of Wisconsin-Stevens Point; MA, Northern Illinois University; MFA, University of Wisconsin-Madison.

Lodge, Janet
Faculty, Business Technology. AAS, Linn-Benton Community College; BS, Linfield College; MS, Business Education, Emporia State University.

Mack, Dave
Faculty, Electrical Apprenticeship. AAS AS, Linn-Benton Community College; BS, Oregon State University; Electronics Technician Certification, Texas.

Madriaga, Charles
Counselor. AA, Hartnell Community College; BA, MA, California State University-Stanislaus.

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Manley, Marc
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Maurer, Vikki
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McAleer, Scott
Faculty, History. BA, Warren Wilson College; MA, Georgia Southern University.

McArdle, John
Director, Development and Government Relations. BS, University of Oregon.

McKiel, Carol
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Merino, Paula
Faculty, Diagnostic Imaging. AA, Certificate of Radiological Sciences, Linn-Benton Community College; BS, Oregon State University.

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Miyagishima, Bryan
Librarian. BA, MEd, University of California-Los Angeles; MLIS, University of Washington-Seattle.

Moling, Marci
Faculty, Physical Sciences. AB, Ripon College; MS, Washington State University.

Moon, Dale
Coordinator, Regional CTE. BS, MEd, Western Washington University.

Moore, Sally W.
Dean, Academic Foundations Division. BA, MA, University of California-Santa Barbara.

Mulder, Greg
Faculty, Physical Science. BA, Oregon State University; MS, University of Irvine.

Murphey, Kristina
Faculty, Health and Human Performance. BS, MS, Texas A & M University.

Niedermann, John
Faculty, Machine Tool Technology. AAS (two), Lane Community College. Certified manufacturing technologist and machinist.

Nielsen, Betty
Director, Accounting and Budget. AS, Oregon Institute of Technology; BS, Portland State University.

Noe, Nancy
Faculty/Department Chair, Business Technology. BS, Portland State University; MBE, Oregon State University.

Nystrom, Christine
Director, Community Education. BS, California State University Chico.

Olson, Marcene
Manager, Safety and Loss Prevention. BS, Iowa State University; MA, University of Phoenix.

Oubari, Hithm (Sam)
Manager, Applications and Systems Programming. BS, University of Toledo. Administration Certificates from Oracle and SCT Corporations.

Painter, Mashelle
Faculty, Occupational Therapy Assistant Program. BS, Eastern Oregon University., MEd, University of Texas.

Paris, Joseph
Faculty, Computer Systems. BS, MS, Western Oregon University.

Paver, Jonathan
Dean, Instruction. BA, Western Illinois University; MA, Trinity International University; EdD, Northern Illinois University.

Pearce, Liz
Faculty, Education/Child and Family Studies. BA, Tufts University; EdM, Harvard Graduate School of Education.

Pierce, Michelle
Manager, Employment Services. BS, Western Oregon.

Pokorney, Chelle
Faculty, CNA Program. RN, Olympic College; BSN, University of Washington.

Pope, Chad
Manager, Food and Conference Services.

Pratt, Bethany
Faculty, Mathematics. BA, Walla Walla College; MS, Oregon State University.

Price, Gary
Regional Director, East Linn Centers, Transportation Technology and Workforce Training. BS, University of Colorado; MEd, University of Northern Colorado.

Priestman, Ian
Faculty, Business Management. BA, MBA, University of Lincolnshire and Humberside; Post Graduate Certificate Education, University of Leeds.

Priewe, Rob
Faculty, Journalism. BA, University of Wisconsin-Milwaukee; MBA, Willamette University.

Reddan, James
Faculty, Music. BS, McDaniel College; MMus, University of Oregon.

Rehley, John
Manager, Printing and Mailing Services.

Reichert, Jeanee
Faculty, Developmental Studies. BS, Metropolitan State College; EdM, Oregon State University.

Rinker, Russell
Manager, Network Systems. BS, University of Oregon.

Riseley, Christopher
Faculty, English. BA, MA, Sonoma State University.

Robinson, Elaine
Assistant Director, Financial Aid. AA, Tacoma Community College; BA, University of Washington; MS, Warner Pacific College.

Rogers, Sheri
Faculty, Mathematics. BM, BS, Methodist University; MAT, Fayetteville State University.

Rolen, Scott
Director, Human Resources. BS, California State University-Sacramento; Master of Public Administration, University of San Francisco.

Rosen, Sherry
Faculty, Cooperative Work Experience/Service Learning. BA, Sonoma State University; MA, Goddard College.

Ruderman, Chris
Faculty, Business Management. Advanced Accounting Certificate, College of DuPage; BA, Western Illinois University; MA, University of Oregon.

Schiedler, Bryan
Faculty, Automotive Technology. AAS, Linn-Benton Community College; BA, Northern Montana College; Master ASE Certified.

Schulz, Marty
Faculty, Accelerated Short-Term Training. BS, MBA, Oregon State University.

Seiter, Stefan
Faculty, Agricultural Sciences. BS, University of Stuttgart-Hohenheim/Germany; MS, PhD, Oregon State University.

Shanks, Marcy
Faculty, Nursing. BSN, Oregon Institute of Technology; MS, Western Oregon University.

Sharman, Ronald
Faculty, Water/Wastewater Technology. AS, Linn-Benton Community College; BS, Oregon State University.

Shear, Jo
Faculty, Occupational Therapy Assistant Program. BS, Creighton University.

Sherlock, Joe
Manager, Publications and Web site. BFA, Oregon State University.

Shinkle, Sandra
Counselor. BA, California State University-Fresno; MA, San Francisco State University.

Skarda, Steve
Faculty, Biology. BS, Oregon State University; MS, Southern Illinois University.

Smith, Steve
Director, Instructional Technology. BA, University of Washington; MA, Oregon State University.

Smith, Justin
Manager, Institutional Research and Grant Support, BA, MPA, Stephen F. Austin University; PhD, University of California-Santa Barbara.

Smith, Vern
Network Administrator. AS, Linn-Benton Community College; Certified Novell Engineer.

Spencer, Shari
Faculty, Nursing. AS, Mount Hood Community College; BS, University of Phoenix.

Staffelbach, Vickie
Executive Assistant to President. BS, MPA, MS, University. of Oregon.

Stetz-Waters, Karelia
Faculty, English. BA, Smith College; MA University of Oregon.

Stevens, Christy
Faculty, Education/Child and Family Studies. AA, Virginia Western Community College; BA, Roanoke College; MA, Boise State University.

Stone, Dan
Faculty, Theater. BA, California State University–San Bernardino; MFA, Humboldt State University.

Stone, Jack
Faculty, Business Management. BA, MBA, George Fox University.

Strooband, Jenny
Faculty, Animal Science. BA, Lewis and Clark College; MS, Oregon State University.

Stowell, Dale
Executive Director, College Advancement. AS, Linn-Benton Community College; BA, Portland State University.

Stuewe, Fred
Faculty, Welding Technology. AS, Linn-Benton Community College.

Swanson, Parker
Faculty, Computer Systems. BA, Harvard University; BD, Pacific School of Religion; MA, University of California-Davis; MSEE, California State University-Sacramento.

Sweet, John
Faculty, Engineering. BS, MS, Oregon State University.

Sytsma, Sherrilyn
Faculty, Nursing, BSN Excelsior College, MEd. Plymouth State College.

Tadday, Ralph
Faculty, Physical Sciences. PhD, Ruprecht Karls University Heidelberg

Urista, Mark
Faculty, Communication. AA, El Camino College; BA, University of California–Berkeley; MA, University of the Pacific.

Usner, Matt
Faculty, Writing/Literature. BA, Slippery Rock University of Pennsylvania; MA, Westchester University of Pennsylvania.

Walker, Jane
Faculty, English/Writing. BS, University of Minnesota; MAIS, Oregon State University.

Weber, Clayton
Faculty, Animal Science. BS, Oklahoma State University; MS, California Polytechnic State University-San Luis Obispo.

Weiss, Mark
Counselor. BA, California State University-Long Beach; MEd, LPC, Oregon State University.

Wheat, Diana
Faculty, Biology. BS, MA, University of Kansas

Wimbley-Gouveia, Chareane
Faculty, Developmental Studies/Learning Center. BA, University of California-Davis; MPA, Stanislaus State University.

Winder, Katie
Dean, Liberal Arts, Social Systems and Human Performance. BA, Lewis and Clark College; PhD, The Johns Hopkins University.

Withrow, Kathy
Assistant Director, Human Resources. AA, Linn-Benton Community College; BA, MBA, George Fox University.

Wolfe, Jerri
Faculty, Parenting Education. BS, Oregon State University; MS, Portland State University; PhD, Oregon State University.

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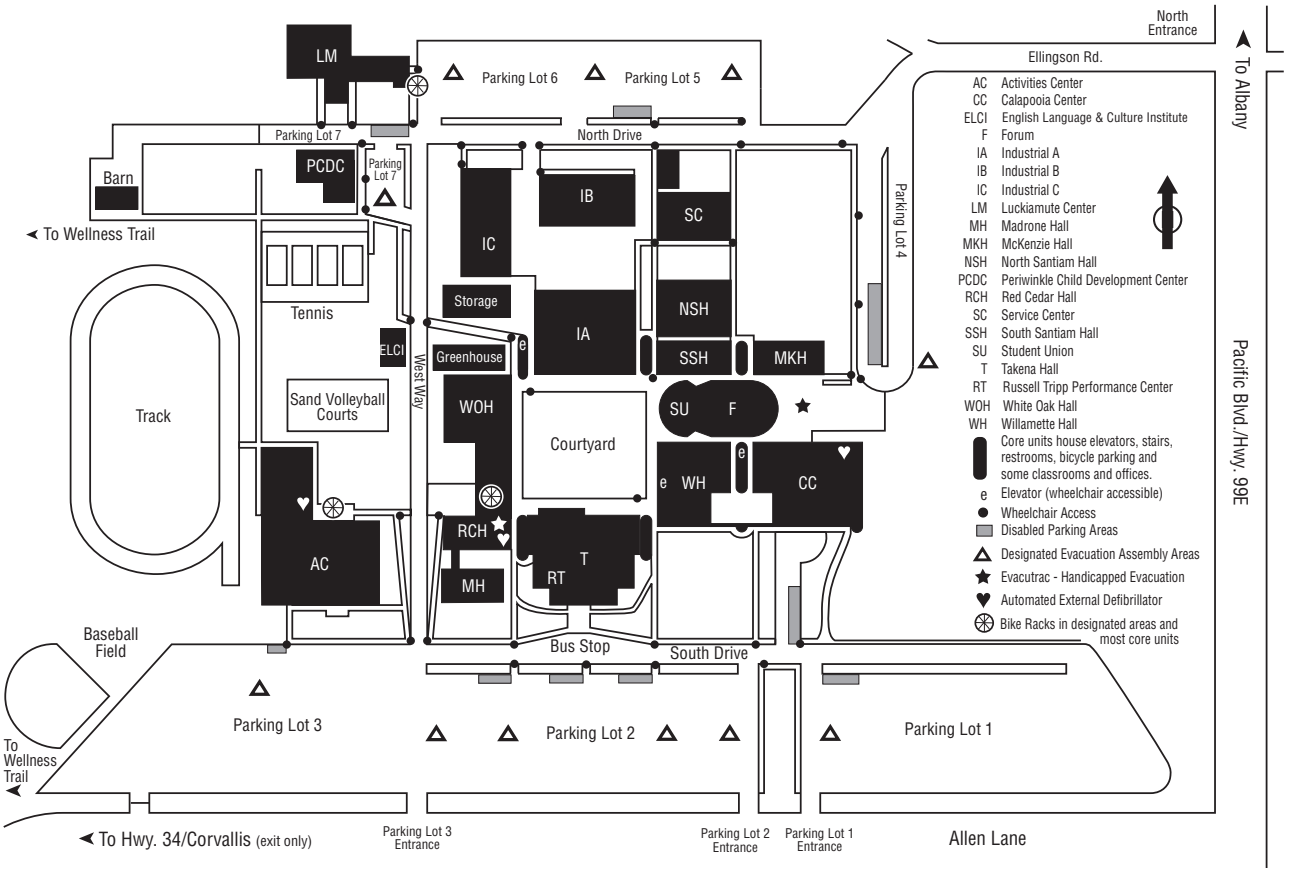

Direct-Dial Phone Numbers

All LBCC campus offices have direct-dial numbers for your convenience. These bypass the college switchboard and save time for you as well as for the college. Please use the direct-dial numbers whenever possible.

Switchboard 541-917-4999
ABE/GED 541-917-4710
Academic Foundations 541-917-4683
Admissions 541-917-4811
Albany Community Education 541-917-4840
Arts, Social Sciences & Humanities 541-917-4237
Benton Center (Corvallis) 541-757-8944
Bookstore 541-917-4950
Business, Applied Technology & Industry 541-917-4285
Business and Employer Services 541-917-4923
Business Office (payments, loan disbursements) 541-917-4312
Campus Public Safety 541-917-4440
Child Care 541-917-4899
Counseling/Advising/Career Center 541-917-4780
Disability Services 541-917-4690
Family Resources Department 541-917-4897
Financial Aid 541-917-4850
First Stop Entry Center 541-917-4811
Foundation/Development 541-917-4209
Healthcare, ELearning and Media 541-917-4923
Hospitality Services/Room Reservations 541-917-4385
Human Resources/Payroll 541-917-4420
JOBS Program 541-917-4875
Learning Center 541-917-4684
Lebanon Center 541-259-5801
Library 541-917-4638
Nursing 541-917-4511
President's Office 541-917-4200
Registration 541-917-4812
Russell Tripp Performance Center Box Office 541-917-4531
Science, Engineering & Math 541-917-4413
Student Assessment (Testing) 541-917-4781
Student Employment 541-917-4780
Student Life & Leadership 541-917-4457
Sweet Home Center 541-367-6901
Testing (Student Assessment) 541-917-4781
Transcripts 541-917-4830
Veterans Affairs 541-917-4858

For additional campus maps and driving directions, go to www.linnbenton.edu/campus-maps

2014-2015 CATALOG



Linn-Benton
COMMUNITY COLLEGE

Albany Campus & Center Locations

ALBANY CAMPUS
6500 Pacific Blvd. SW
Albany, Oregon
541-917-4811
admissions@linnbenton.edu

SWEET HOME CENTER
1661 Long Street
Sweet Home, Oregon
541-367-6901
sweethome@
linnbenton.edu

BENTON CENTER
757 NW Polk Avenue
Corvallis, Oregon
541-757-8944
bcinfo@linnbenton.edu

LEBANON CENTER
44 Industrial Way
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541-259-5801
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