

WRITE YOUR OWN STORY

Linn-Benton
COMMUNITY COLLEGE

CATALOG 2004-2005



A large, dark brick sign with a red brick pillar on the left. The sign features the text "LINN-BENTON" in large, bold, white capital letters, and "Community College" in a smaller, white, sans-serif font below it. The sign is set against a background of green trees and a clear blue sky. In the foreground, there are colorful flowers in shades of red, purple, and white.

LINN-BENTON
Community College

2004-2005 Academic Calendar*

	Summer 2004	Fall 2004	Winter 2005	Spring 2005	Summer 2005**
Registration begins	See quarterly Schedule of Classes				
Classes begin	June 21	September 27	January 3	March 28	June 20
Last day to drop without "W"	July 4	October 10	January 16	April 10	July 3
Last day to withdraw and qualify for a refund (full-term classes)	July 4	October 10	January 16	April 10	July 3
Last day to request P/NP (full-term classes)	August 8	November 14	February 20	May 15	August 7
Last day to officially withdraw (full-term classes)	August 8	November 14	February 20	May 15	August 7
Last day to add open-entry/late-starting classes	August 8	November 14	February 20	May 15	August 7
Final exams	Last week of class	December 6-8	March 14-16	June 6-8	Last week of class
Commencement Ceremony	-	-	-	June 9	-
Last day of term	August 27	December 10	March 18	June 10	August 26
Holidays/in-service: No classes	See quarterly Schedule of Classes				

*Deadlines for full-term courses are indicated here. Please see the quarterly Schedule of Classes for other deadlines. **Tentative

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.

Nondiscrimination Policy

It is the policy of LBCC that there will be no discrimination on the grounds of race, color, sex, sexual orientation, marital and/or parental status, religion, national origin, age, mental and physical disability, Vietnam Era or disabled veteran status, opposition to safety and health hazards, application for workers' compensation benefits, or any other status protected under applicable federal, state, or local law in its programs, activities or employment. Questions about equal opportunity and nondiscrimination in employment should be addressed to the LBCC Human Resources Office, Linn-Benton Community College, 6500 Pacific Blvd. S.W., Albany, OR 97321. Students should contact the Dean of Student Services at (541) 917-4806.


2004-2005 General Catalog

Linn-Benton
COMMUNITY COLLEGE

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Welcome to LBCC



LINN-BENTON
Community College

College Overview

Each year, more than 25,500 individuals take at least one class at Linn-Benton Community College and almost 6,000 attend full time, making LBCC one of the largest community colleges in Oregon. About 33 percent of local high school graduates come directly to LBCC after graduation. The average age of our students is 24.

LBCC was established in 1966 as a two-year public college to serve the residents of Linn and Benton counties. Students attend for many reasons: to obtain employment training, to improve their existing employment skills, to begin a four-year college program, or to enrich their lives through learning.

Because our students' needs are so diverse, we offer a variety of educational opportunities including:

- general education courses,
- professional technical training,
- lower-division college transfer courses,
- continuing education classes,
- lifelong learning opportunities,
- distance education,
- credit courses during evening hours and on weekends, so students can earn a degree without having to attend to class on weekdays,
- adult basic education programs, and
- education programs for students with disabilities.

The Campus

LBCC's 104-acre main campus is just two miles south of Albany, Oregon, and 11 miles east of Corvallis. The main campus houses a learning resource center, bookstore, 500-seat theater, library, conference facility, and student lounge/recreation rooms. Dining facilities include a cafeteria, a cafe and a restaurant operated by students in the Culinary Arts program.

The original 13 contemporary brick buildings are connected by covered walkways that encircle a landscaped courtyard. Additional buildings include the Family Resources Center, the Workforce Education Building, physical education and sports facilities, and a greenhouse. An LBCC horse management facility is located a short 1.5 miles from the main campus.

Student services include career counseling, academic and personal guidance, financial aid and student employment, and student leadership and involvement opportunities.

All campus facilities and parking are designed to accommodate the needs of people with disabilities, and public buses provide students with free transportation between LBCC and downtown Albany, Corvallis, Philomath, Lebanon, Sweet Home and other communities in East Linn County.

Special Services to the Community

Our Extended Learning centers offer a wide variety of credit and non-credit classes in Albany, Corvallis, Lebanon, Sweet Home and other locations throughout the district. Some of these courses are transferable and can be taken for credit; others are non-credit, special interest classes.

In addition, our special services for the community include:

- the Training and Business Development Center, which serves the needs of the business and industrial community;
- the Family Resources Department, where classes, workshops, consultations and other special services help strengthen families;
- the Cooperative Work Experience and Service Learning program, in which students receive practical experience in jobs related to their fields of study; and
- Life and Employment Development, which encompasses the JOBS program and the Turning Point Transitions program.

We also provide classroom space on the LBCC campus for students to take courses offered by Linfield College and the University of Phoenix.

Dual Enrollment

The LBCC/OSU Dual Enrollment program allows students to be admitted to and enroll at both Linn-Benton Community College and Oregon State University—simultaneously. You complete just one application process, pay just one application fee, and have the freedom to register for classes at either—or both—schools!

Dually enrolled students may choose to have access to OSU housing and to the student services at both institutions. When you have completed your two-year degree at LBCC and are ready to continue your work toward a bachelor's degree, you already will be admitted to OSU.



(See page 165 for LBCC's history, philosophy, mission, governance and accreditation, retention, graduation rates and Pledge to Quality Education.)

HOW TO ENROLL IN A CLASS AT LBCC

Student Category	Enrollment Procedures
New, Fully Admitted, Degree-Seeking, Full-Time Student and/or Student Applying for Financial Aid <i>If you want to take 12 or more credits, or you want to receive VA benefits or financial aid and get priority registration, you must be fully admitted.</i>	<ul style="list-style-type: none"> • Complete an application and submit it, along with the \$25 application fee, to the Admissions Office in Takena Hall. Note: If you are under 18 years of age, you must provide proof of high school graduation or GED completion. • Call the Student Assessment Center (917-4781) to schedule a College Placement Test (CPT). After you complete the CPT, you will receive an acceptance letter with the date and time of your orientation/advising appointment. • Attend your orientation/advising session at the assigned time or complete online orientation. • Register for classes by using the SIS (the Student Information System) on the Web or register at the Registration Counter in Takena Hall. • Pay your tuition and fees.
Continuing, Fully Admitted Student <i>An absence is considered to be one full term or more.</i>	<ul style="list-style-type: none"> • You may register for classes using SIS on the Web. Your registration time is based on your earned plus your currently registered LBCC credits and is printed in the Schedule of Classes. To determine your earned hours, check your registration status on the SIS. • If SIS will not allow you to register, you may need to provide more current information by completing a Student Data form (available on the Web, in the Admissions Office and in the Schedule of Classes). • Pay your tuition and fees.
New, Part-Time, Degree-Seeking, Part-Time Financial Aid Student. <i>This category does not have priority registration.</i>	<ul style="list-style-type: none"> • Complete an application and submit it, along with the \$25 application fee, to the Admissions Office in Takena Hall. Note: If you are under 18 years of age, you must provide proof of high school graduation or GED completion. • Register for classes by using the SIS (the Student Information System) on the Web or register at the Registration Counter in Takena Hall. • Pay your tuition and fees.
LBCC/OSU Dual Admission/ Enrollment	<ul style="list-style-type: none"> • For information and an application, visit www.linnbenton.edu/dualenrollment/ or call Admissions (917-4811).
New, Non-Admitted, Part-Time Student <i>If you are not admitted and are registering for noncredit classes or for fewer than 12 credits, you are a part-time student.</i>	<ul style="list-style-type: none"> • If you have never attended a class at LBCC, complete a Student Data form and submit it to the Admissions Office. (Forms are available at the Admissions Office and in the Schedule of Classes.) • If you are registering for a math or writing course, call the Assessment Center (917-4781) to schedule a College Placement Test (CPT). There is a \$2 per test charge. • Wait five days to make sure this information has been entered into our information system. • Register during Open Registration for classes using the SIS system. • Pay your tuition and fees.
Continuing, Non-Admitted, Part-Time Student	<ul style="list-style-type: none"> • If you are not a fully admitted student but you have taken a class at LBCC in the past, you may register using our SIS registration system during Open Registration. • If SIS won't allow you to register, complete and submit a Student Data form (available in the Admissions Office and in the Schedule of Classes). • Pay your tuition and fees.
After Four Evening Degree Program	<ul style="list-style-type: none"> • Call 917-4780 for information on how you can earn a degree by taking evening and weekend classes. Admission and registration are the same as above. • Follow the directions for fully admitted students.
English for Speakers of Other Languages (ESOL) <i>English classes are offered to adults whose first language is not English.</i>	<ul style="list-style-type: none"> • Call 917-4710 for information. • Register for and attend the six hour orientation session. • Pay \$25 enrollment fee at the time of registration.
Adult Basic Skills and GED <i>Learn basic skills, earn a GED or complete your high school education in these courses.</i>	<ul style="list-style-type: none"> • Call 917-4710 for information. • Register for and attend the six hour orientation session. • Pay \$25 enrollment fee at the time of registration.
Adult High School Diploma	<ul style="list-style-type: none"> • Call 917-4753 to learn how you can complete your high school education.
Distance Education www.linnbenton.edu	<ul style="list-style-type: none"> • Follow the directions for part-time students or fully admitted students, depending on the number of credits. To receive financial aid, students must be admitted.

How to Get Started—Admission

Admissions Office/First Stop Center:

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

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 12 credits without financial aid, you do not need to apply for admission and, in most instances, you do not need to take a placement test (there are some exceptions). You may simply register for the desired class any time during open registration. Before you can receive a certificate or degree, however, you must become admitted.

Whether you choose to be fully admitted or you simply want to enroll in a class or two, it's a good idea to get academic advising from a counselor. The Career and Counseling Center, located on the first floor of Takena Hall, has information about programs and majors, and you can obtain assistance in making decisions about your studies.

Students Seeking Degrees or Certificates

If you're working toward a degree or certificate, if you register for 12 or more credits or if you have applied for financial aid, you must complete the admission process. See page 6 for details.

As a fully admitted student, you will be eligible for priority registration and may register as either a full-time or part-time student. Admission 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—or if you are taking fewer than 12 credits per term without financial aid—you don't need to be fully admitted. You can simply register for your classes any time during open registration. First-time students must submit a Student Data form. Forms are available online or at the Registration Counter.

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.

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

If you are an international student, you must complete the admission process for international students before the term begins.

Questions may be addressed to the Director of Enrollment Management, Linn-Benton Community College, 6500 Pacific Blvd. S.W., Albany, OR 97321.

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, the college offers a variety of other programs, courses, and activities for high school youth. Two of the formal programs are:

- *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 917-4791.

- *Alternative Learning Opportunities*—The student is referred to LBCC by his or her high school and takes classes on campus. For more information, call 917-4753.

Please visit this Web site for more opportunities for high school age students: www.linnbenton.edu/highschool/

Students Younger than Age 18

If you're not yet 18, haven't completed high school, and don't hold a GED certificate, you must file an Underage Enrollment form before you can take a credit class. (Forms are available at the Admissions Office/First Stop Center and from high school counselors.) Call 917-4753 for details.

To take a noncredit class, you do not need to submit an Underage Enrollment form, but you do need the instructor's permission. If you are denied by the instructor, you may submit the form to be reconsidered for that specific course. If you're under 18 and want to start taking GED classes, you must provide evidence of release from compulsory attendance or home schooling, or be referred by your high school through use of the Underage Enrollment form.

LBCC/OSU Dual Enrollment

By completing only one application process, you can enroll at both Linn-Benton Community College and Oregon State University. This not only saves you money and paperwork, it also gives you access to classes and student services at both institutions.

The cost of services at the institution where you currently are taking 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. Contact the Admissions Office at either LBCC or OSU for more information on this program. www.linnbenton.edu/dualenrollment

Special Admission Programs

Some LBCC programs have stringent admission requirements, which have been 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 | • Public Safety Dispatcher |
| • Nursing/Practical Nursing | • Radiologic Technology |
| • Pharmacy Technician | • Veterinary Technology |
| • Phlebotomy | |

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 Management.

The requirements, application dates and deadlines are subject to annual change. Admission requirements and application materials for each program must be downloaded from the Admissions: Forms web site. www.linnbenton.edu/admissions. Click on "Forms" and select program from list.

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; score at the 60th percentile or better on the reading portion of the College Placement Test (CPT) or successfully complete RD 115 Reading Improvement II, CG 111 College Learning and Study Skills and WR 115 Introduction to College Writing; score at the 67th percentile or better on the math test (or successfully complete MTH 020); and attend a career exploration session. Students admitted to the program must meet additional requirements prior to the first day of classes.

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

Applicants for the two-year Nursing program, which begins fall term, must submit an application, proof of high school graduation or GED, and transcripts by a specified date; complete LBCC's College Placement Test; and show proficiency in math, writing and chemistry. Eligible applicants are ranked on a point system. Points are determined by the number of completed non-nursing, degree required courses and other factors. See current Nursing Bulletin for point system information. Students admitted to the program must meet additional requirements prior to the first day of classes. The admission procedure is reviewed annually for the ADN program and therefore subject to change. Please visit the Admissions web site for the current bulletin. Eligible Nursing students may complete the LPN certificate after one year.

Workforce Training

Special admissions requirements for pharmacy technician, phlebotomy, public safety dispatcher, radiologic technician and veterinary technician, see the Workforce Training section under "Programs of Study."

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
- Nondestructive Testing
- Radiologic Technology
- Refrigeration/Heating/Ventilation/Air Conditioning
- Water/Wastewater Technology

How to Get Started— Registration

Registration Office:

Takena Hall 115, (541) 917-4812

To Register for Classes

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

Pre-registration advisor conferences are recommended for the following students:

- all new students;
 - students sponsored by agencies;
 - students on probation or having academic difficulties;
 - students who are changing their major or who have questions regarding the courses they should take to meet program requirements.
 - transfer students in transfer programs
 - students considering application to special admissions programs
- Non-admitted students can register for 0-11 credits during open registration times.

You will be asked to use your Social Security number as your initial student identification number. A student ID will be generated for you. You may view this number on SIS.

To Register for Extended Learning Classes

You may register for Extended Learning classes by (1) using SIS on the Web, (2) stopping by one of the Extended Learning centers or (3) going to the Registration Office on the main campus. Registration materials for Extended Learning classes (both credit and noncredit) are available at the first class session. Please refer to the quarterly Schedule of Classes for details.

Wait List Procedures

If a particular class is full, you may be put on a Wait List if one is available or if the Wait List is not full. Please be aware that you are charged tuition for a Wait List registration. You will not be charged if you have not been registered by the add deadline.

Prior to the first day of class, students are moved from the Wait List to registered status as space becomes available. To find out whether you have achieved "registered" status, you may view your registration status on the SIS or contact the instructor at the first class session.

During the first week of classes, an instructor can change students from the Wait List to registered status or may add students to the class by signing a Schedule Change form (also called an Add/Drop form). Instructors may drop you from the Wait List if you do not attend the first day of the first week. If you are still on the Wait List on the last day of the Add period, your name will be dropped from the Wait List and your tuition for that class will be refunded if a refund is due. Refunds are made after the Add/Drop period is over.

How to Understand Course Numbers

All credit courses, whether lower-division transfer or professional technical, are taught on 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 college or university. Courses numbered 100-199 are considered freshman-level courses, and those numbered 200-299 are sophomore level.

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 professional technical classes; you may mix and match them depending on your program. Consult your advisor.

If a course number is changed from a professional 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 that you complete other courses prior to enrolling in them. Make sure you 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, ask your advisor or the instructor of that class. If you have not met the prerequisite, you may be withdrawn from the course.

If you have completed an LBCC class with a grade of "C" or better, then take a class that is clearly identified as a prerequisite to it, the credits will not count for graduation. If you register for credit in such a course, you may be disenrolled. Any exceptions must be authorized in writing to the Registrar by the appropriate faculty member and director or designee.

To Change Your Schedule

To change your schedule in any way, you may use the SIS on the Web 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. 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.

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. The fees for auditing are the same as for regular enrollment. Your final grade will be based solely on classroom attendance and may be entered as an "AU" or a "Y" at the discretion of the instructor. The instructor has the right to require 100 percent attendance from auditors.

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 before Christmas. Winter term begins in early January and runs until mid-March, and spring term begins in late March and ends in mid-June. The summer term runs from late June until late August.

Credit Hours and Credit Loads

Generally speaking, a class that meets one hour a week for one term will yield one credit; a class that meets three hours per week will yield three credits. A lab class usually yields one credit for each two or three hours of lab time.

If you are employed while you attend college, bear in mind that most classes require one or two hours of preparation for 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, 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. 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, credit earned (not computed in GPA).
- W Withdrawal; no credit earned (not computed in GPA).
- Y Amount of submitted coursework and of class participation was too insignificant to warrant assigning a grade, as defined in the course syllabus (not computed in GPA).
- NP No pass; no credit earned (not computed in GPA).
- WP Work in Progress; 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).

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

Honor Roll

If you obtain a 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), you are placed on the Honor Roll list for that quarter.

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

Any student registered for 12 or more credits after the second week of the term is subject to academic standards rules.

If your cumulative grade point average drops below 2.00 or you complete less than 50 percent of the credits you were registered for, you may be placed on academic probation. To continue in a program, you must maintain a grade point average of at least 2.00 in all specific major requirements. Some programs have more restrictive requirements; see the program descriptions in this catalog. If you drop under this requirement, you may petition the department for reinstatement.

If you have been on academic probation for three consecutive terms, you are subject to suspension. Students on suspension are limited to enrolling in a maximum of seven credits. You may petition to be reinstated to good standing by completing a Suspension Appeal Petition, available in the Admissions Office/First Stop Center.

Students also are expected to complete the courses for which they register. If you are a full-time student, you may be placed on academic warning, probation or suspension for non-completion of 50 percent of the credits for which you registered.

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 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. Any student desiring a grade replacement for GPA recalculation must initiate the process by filing a request at the Registration Office.

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 or through the instructor. 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, 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. "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 deadline (generally, the first two weeks of the quarter). A grade of "W" will be recorded for classes dropped after the refund period and before the withdrawal deadline. (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 108 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.

Credit for Nontraditional Learning

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 the end of the second week 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.

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/First Stop Center.

Student Educational Records

Transcripts and Records

LBCC official student transcripts may be ordered in the Registration Office, at the centers, by fax or by mail. 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. Unofficial transcripts can be obtained from the SIS for free. (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 5 days) cost \$10 each. 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 7071."

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 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 # 7071. 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, DC 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 and telephone listing; major field of study; participation in officially recognized activities and sports; weight and height of athletic 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 by the college, you must file a Directory Deletion form at the Registration Office *by the time you register*. Information will not be released except to the extent

TUITION AND FEES SCHEDULE

Please see notes below.

CLASSES TAKEN FOR CREDIT

Residency	Credit tuition	Student activity fee	Technology fee	Total tuition & fees
In-state students: per credit	\$47.24	\$1.76	\$1.00	\$50.00
In-state students: 15+ credits	\$708.60	\$26.40	\$15.00	\$750.00
Out-of-state students: per credit	\$148.24	\$1.76	\$1.00	\$151.00
Out-of-state students: 15+ credits	\$2,223.60	\$26.40	\$15.00	\$2,265.00
International students: per credit	\$166.24	\$1.76	\$1.00	\$169.00
International students: 15+ credits	\$2,493.60	\$26.40	\$15.00	\$2,535.00

NONCREDIT CLASSES

The tuition for noncredit classes is based on the number of hours of instruction. In the Schedule of Classes, the charge is listed with each class.

SPECIAL FEES

\$

Application for admission	\$25 (includes Placement test)
Photo I.D. card	\$5
Placement test (CPT)	\$2 per subject test
Official copy of LBCC transcript	\$5 for first copy; \$1 each for additional copies ordered at the same time
Unofficial copy of LBCC transcript	\$5 for first copy; \$1 each for additional copies (free from the SIS)
Physical education 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 an American citizen or immigrant or 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.*
- *You must pay international tuition rates if you are a citizen of another country and in the U.S. as a non-immigrant. International students do not become residents, regardless of the length of their residency within the state.*

the Oregon Administrative Rules allow disclosure without consent (for example, in cases of a 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.

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. You can obtain a copy of the policy from the Dean of Student Services in Takena Hall 107 or on the college web site at <http://www.linmbenton.edu/studentrights/>.

Students in the LBCC/OSU Dual Enrollment 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 CPR 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, athletic program participation rates and financial support data. See <http://www.linnbenton.edu/righttoknow> for details on where to find this information.

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 on page 11 will help you determine the amount of tuition you owe. You should be aware that some classes charge a fee in addition to tuition.

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, contact the Director of Enrollment Management in Takena Hall, 917-4811.

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 courses are listed under Regional Programs, page 8.) For subsequent terms, these students must establish and meet LBCC's residency requirements to qualify for in-state tuition.

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):

Student Activity and Program Fee

Each student is assessed \$1.76 per credit as a student activity and program fee. Income derived from the fee supports extracurricular activities and programs, including athletics, artist and lecturer guest appearances, clubs and organizations, 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.

Tuition Refunds

To receive a tuition refund, you must drop a full-term course using the SIS or submit a Schedule Change form to the Registration Office within the first two weeks of the class. You may petition for a refund after the deadline if "serious and compelling" circumstances beyond your control were significant enough to prevent you from dropping within the

refund period. Refund deadlines for shorter classes are printed in the Schedule of Classes. Refunds are mailed after the second week of classes. If a class is cancelled by the college, you will receive either a full refund or, if you prefer, enrollment in another class. If you choose to enroll in

AVERAGE COSTS FOR 3 TERMS	
Single (Living with Parents)	Average Cost *
Tuition & Fees (14 credits)	\$2,100
Books & Supplies	\$900
Living Expenses	\$4,191
Single (Not living with Parents)	Average Cost *
Tuition & Fees (15 credits)	\$2,100
Books & Supplies	\$900
Living Expenses	\$8,196
* Tuition estimates are provided here so total costs can be compared. Tuition and fees for the 2004-2005 school year had not been established at the time this catalog was published; current tuition rates may be found in the quarterly Schedule of Classes. Additional tuition charges are assessed for nonresident and foreign students. Books and supply costs vary greatly.	

another class, you may use the SIS, touch-tone phone system or submit a Schedule Change form to the Registration Office.

Lab and Materials Fees Refunds

Refunds of lab and materials fees vary from course to course and may not be refunded.

Financial Aid

Director of Financial Aid:

John Snyder, Takena Hall 117, (541) 917-4850

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. At the Financial Aid Office, you can obtain information regarding the availability of financial aid, eligibility requirements and application procedures. Certification and administration of veterans' educational benefits also are provided through this office.

Student Eligibility Requirements

You may be eligible for financial aid if you:

- are a matriculated student, whether full-time 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 (some exceptions apply);
- 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; and
- do not owe a refund on any federal grant program.

For the Federal Stafford, PLUS and Perkins Loan programs, you must be enrolled at least half time (six credit hours).

For a Pell Grant, you must be a fully admitted, degree-seeking student enrolled in one or more credit hours.

Program Eligibility Requirements

Eligible programs need to be at least one year in length 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.

Two-year programs that are acceptable for full credit toward a baccalaureate degree also are eligible, even if they do not offer degrees.

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 Stafford 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 (formerly known as the Oregon Need Grant).

The approved programs are:

- Pharmacy Technician
- Public Safety Dispatcher
- Phlebotomy Technician
- Radiologic Technology
- Veterinary Technology

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). Contact the Admissions Office in Takena Hall for information regarding admission.

You may apply for aid at any time throughout the year; however, financial aid funds are limited. If you apply after April 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 from the LBCC Financial Aid Office, from high school counselors or agency personnel, and on the Internet at www.fafsa.ed.gov.

You, the applicant, must complete the application form and mail or electronically send it to the FAFSA Central Processor, who then forwards the information. This process takes three to four weeks. No processing fee is charged.

After LBCC receives the FAFSA data electronically from the Central Processor, our financial aid staff will begin determining your eligibility for aid. They may ask you for additional information such as proof of independence, tax forms or information regarding aid received at other institutions. This review process takes two to six weeks. You will be notified by mail concerning your eligibility. Allow 8 to 10 weeks for the entire process from application to award. Pell Grant Student Aid Reports (SAR) are sent only to the student.

Academic Standards and Eligibility

To receive financial aid, you must fulfill the standards of satisfactory academic progress as outlined in the financial aid brochure and the award letter. 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.

Financial Aid Disbursement Policy

Financial aid is mailed to students after the add/drop period (second week) of each term. Typically, this means aid monies are received during the third week of each term. Before financial assistance can be disbursed, you must:

- sign and return to the Financial Aid Office an "Agreement 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 must be adjusted to reflect the reduction in course load. Generally, this will result in a reduction of and a delay in the aid you are eligible to receive.

Students admitted into the LBCC/OSU Dual Admissions and Enrollment Program may have their credit hours taken at both schools combined to determine their eligibility for federal, state and institutional financial aid. For more information regarding the program, contact LBCC's Financial Aid Office, or OSU's Financial Aid office at (541) 737-2241 or Fax (541) 737-4494 or go to www.linmbenton.edu/dualenrollment.

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 Stafford Loan
- Subsidized Stafford Loan
- Federal Perkins Loan
- Stafford 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.

Veterans Affairs

Veterans Affairs Office:

Takena Hall 117, (541) 917-4858

The Veterans Affairs coordinator is an LBCC staff member who provides assistance to veteran students and eligible dependents regarding college-related matters. A list of courses approved for benefits is available, as well as information regarding certification and general payment policies. The coordinator will help veterans and eligible dependents apply for benefits and will provide academic advising, counseling and referral assistance. The VA coordinator is located in the Financial Aid Office.

Standards of Satisfactory Progress for Students Receiving Veterans' Benefits

Students receiving VA benefits are responsible for demonstrating satisfactory progress toward a degree or certificate in a VA-approved program of study. The VA will pay only for classes that advance students toward their established program goals.

Admission and Evaluation of Prior Credit

Veterans must become fully admitted (matriculated) students. For information on how to apply for admission, look under "Admission" in the front of this catalog.

Grades

Satisfactory grades are "A," "B," "C," "D" and "P." All noncompletion grades ("Y," "W," "WP" and "IN") that reduce the student's total credits to less than the original certification amount are reported to the VA; any benefits that have already been paid for such courses be repaid to the VA. The VA may deduct overpayments from future benefits. A course in which you receive an "F" may be retaken with benefits only if that specific course is required for graduation. The VA allows one year for "IN" grades to be completed; failure to complete an "IN" within one year may result in an automatic reduction of benefits. However, college policy requires incompletes to be made up within one term.

Variable Credit Classes

You may be certified for all the credits of a variable credit class; however, failure to complete all the credits for which you are certified results in an overpayment of benefits.

Grade Point Average

A cumulative GPA of 2.00 is the minimum acceptable GPA necessary to qualify for any degree, diploma or training certificate from LBCC.

Unsatisfactory Progress

You will be notified of unsatisfactory progress at the end of any term in which you fail to meet minimum standards. A probation letter is sent to any student whose cumulative GPA falls below 2.00. A termination of benefits letter is sent to students who fail to bring their cumulative GPA above 2.00 for a second consecutive term. To qualify for graduation, you must complete 70 percent of all classes attempted. Therefore, if your total coursework consists of more than 30 percent "Y," "F" and "NP" grades, you will receive a probation or termination letter. Failure to complete any of the courses attempted in one term may result in immediate termination of benefits (e.g., "attempted 12 credits, completed none").

Reinstatement of VA Benefits

To re-establish VA benefits following unsatisfactory progress, you may:

1. continue without benefits until the unsatisfactory progress has been corrected; benefits then will be reinstated to include the unpaid period of attendance; or
2. submit the following to the LBCC Veterans Affairs Office—
 - a letter from an LBCC guidance counselor addressing the reasons for unsatisfactory progress and an assessment of the student's potential to correct academic problems; and
 - a statement explaining reasons for the unsatisfactory progress and how any reoccurrence will be avoided.

Changes in Course Scheduling

You are responsible for notifying the LBCC Veterans Affairs Office of any change in courses attempted or credit load (adds, drops, cancelled classes or withdrawal from classes). Failure to do so immediately may result in unnecessary overpayments that must be repaid or deducted from future benefits.

Financial Aid Programs and Sources

Eligibility Requirements

Amounts Available

Special Information

GRANTS

Federal Pell Grants

- You must not have a bachelor's degree.
- You should be enrolled for 6 or more credits per term.
- Fully admitted, degree-seeking students enrolling for less than half-time status (fewer than 6 credits) may be eligible.
- Amounts are based on financial need.
- Awards usually range from \$400 to \$4,050.
- The Department of Education will send you a Student Aid Report (SAR) indicating your eligibility.

Federal Supplemental Educational Opportunity Grants (SEOG)

- You must not have a bachelor's degree.
- You must prove an exceptional financial need.
- \$200 per term of attendance.
- SEOG is linked with Pell Grant eligibility.

Oregon Opportunity Grants

- You must be a resident of the state of Oregon.
- You also must apply for a Pell Grant.
- You must be enrolled as a full-time student and not have earned a bachelor's degree.
- \$388 per term; annual maximum is \$1,164.
- Oregon Opportunity Grants are transferrable to other Oregon institutions and are renewable for a maximum of 12 quarters.
- Amounts are awarded by Oregon Student Assistance Commission.

WORK STUDY

Federal Work Study Program

- Undergraduate students and students who have bachelor's degrees are eligible to participate.
- Students are paid at least \$7.05 an hour 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

Several different 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 will result in a damaged credit rating and make credit difficult to obtain in the future.

Federal Perkins Loans

- Eligibility is based upon need, other resources and availability of funds.
- Students who have bachelor's degrees are eligible to participate in this program.
- Typically, the college awards a maximum of \$850 per term of attendance.
- The aggregate maximum for a 2-year student is \$8,000 (this includes Perkins Loans from previously attended schools).
- You must apply through the FAFSA.
- The Perkins Loan is a federally supported loan program provided by the college to needy students.
- Loan repayment and interest charges of 5 percent begin nine months after you cease to be enrolled half time.
- Additional information is available at the Financial Aid Office.

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.

Eligibility Requirements

Amounts Available

Special Information

STUDENT LOANS-CONT.

Federal Stafford Student Loans

- Eligibility is determined by the FAFSA.
- Loans of up to \$2,625 per year are available to first-year students through local banks.
- Students in the second year of their programs (45+ credits) may borrow up to \$3,500 per academic year.
- The aggregate maximum amount for Federal Subsidized Stafford Loans for undergraduates is \$23,000.
- 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.
- At the time of application, you will be charged a 3 percent origination fee and a 1 percent insurance premium fee.
- The interest rate on a Federal Stafford Loan is variable annually, and is tied to the 91-day Treasury bill. This interest rate is capped at 8.25 percent.
- Loan repayment and interest charges begin six months after you cease to be enrolled at least half time.

Federal regulations require that subsequent loan disbursements be returned to the lender 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 Stafford Loan application. Your loan application will be voided, and you must start the loan application process over again. First-time Stafford Loan borrowers at LBCC must wait until 30 days after the start of classes to receive their initial loan checks.

Unsubsidized Federal Stafford Student Loans

- Students who are not eligible for subsidized Federal Stafford Loans are eligible for unsubsidized loans, regardless of need.
- Up to \$4,000 yearly.
- Students may borrow up to the same limits as their Federal Stafford Loan limits less any subsidized loan received.
- Loan conditions are similar to the subsidized Federal Stafford Loan except that the borrower is responsible for the interest on the loan while attending school.

Federal Plus Loans

- These loans are available to parents of dependent undergraduate students regardless of need.
- Loans are limited to parent borrowers who have "no adverse credit history."
- FAFSA must be filed.
- 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 variable and is determined annually by a formula linked to 52-week Treasury bill rates. However, the interest rate may not exceed 9 percent.
- There is no federal interest subsidy on PLUS Loans. However the lender may charge the borrower an up-front fee of up to 3 percent to offset the federal government's cost of the program.
- 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 Financial Aid Office.

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.
- 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 seventh week of the term.
- Applications are available at the Business Office.

**Eligibility
Requirements****Amounts
Available****Special
Information****SCHOLARSHIPS/OTHER**

Scholarships	<ul style="list-style-type: none"> • Determined by donor 	<ul style="list-style-type: none"> • Determined by donor 	<ul style="list-style-type: none"> • Scholarship information is available from the Financial Aid office and its Web site: www.linnbenton.edu/sservices/finaid
Talent Grants	<ul style="list-style-type: none"> • You must demonstrate an outstanding ability in athletics, drama, journalism, agriculture or business. 	<ul style="list-style-type: none"> • Full or partial tuition awards are made available to high school seniors and other prospective students. 	<ul style="list-style-type: none"> • Interested students should contact appropriate LBCC division offices.
Program Grants	<ul style="list-style-type: none"> • Awarded to new full-time students. • You must have at least a 2.00 GPA from your last high school, two letters of reference, and attend LBCC full time during the term for which the award is granted. • Students who are undecided in programs of less than one year in length or intend to pursue an Associate of General Studies degree cannot be considered. 	<ul style="list-style-type: none"> • One-term, full and partial tuition grants are available. 	<ul style="list-style-type: none"> • Interested students should contact LBCC division offices for more information and an application. • Students may not receive Board or Talent Awards in addition to Program Grants during the same term. • Not renewable.
Tuition Reduction for the Unemployed	<ul style="list-style-type: none"> • District residents who attend part time and are unemployed are eligible to apply. 	<ul style="list-style-type: none"> • 50 percent tuition reduction for up to six credits of enrollment. 	<ul style="list-style-type: none"> • Application available at Registration Office and Extended Learning centers.
Golden Age Program	<ul style="list-style-type: none"> • Oregon residents 62 years of age or older are eligible. 	<ul style="list-style-type: none"> • 50 percent tuition reduction. 	<ul style="list-style-type: none"> • Inquire at time of registration for classes at main campus or Extended Learning centers.
GED Tuition Waiver	<ul style="list-style-type: none"> • Students who complete 60 consecutive hours of GED prep classes at LBCC and who successfully complete their GED will be offered this waiver. 	<ul style="list-style-type: none"> • Waiver of the tuition for the term immediately following successful completion of attendance and GED requirements. 	<ul style="list-style-type: none"> • Form available from GED faculty.
Career Information System (CIS) Aid Sort	<ul style="list-style-type: none"> • Computer program identifies thousands of national, state and local sources of scholarships, loans and other awards. 	<ul style="list-style-type: none"> • Amount varies. 	<ul style="list-style-type: none"> • Call the Career Center, (541)917-4780, for an appointment at the computer to use AID SORT.

IMPORTANT WEBSITES

www.linnbenton.edu	LBCC's homepage
www.linnbenton.edu/sservices/finaid	LBCC's Financial Aid homepage - <i>includes LBCC scholarship listings</i>
www.linnbenton.edu/scholarships	LBCC scholarship information
www.fafsa.ed.gov	Electronic version of the Free Application for Federal Aid (FAFSA)
www.fastweb.com	Free electronic scholarship search with a database containing over 400,000 scholarships and grants
www.osac.state.or.us	Oregon Student Assistance Commission. Private listing of nearly 200 private scholarships and grants
www.finaid.org	Excellent site! Comprehensive collection of student financial aid information

Student Services— Academic Support

Admissions/First Stop Center

Takena Hall 115, (541) 917-4811; admissions@linnbenton.edu

The First Stop Center in Takena Hall welcomes students and community members and provides a central location for obtaining information and directions. The center's major goals are to reduce students' frustration in dealing with institutional processes and to increase their awareness of the many campus-wide services. The First Stop Center includes the Admissions Office.

Student ID Card

Admissions, Takena Hall 115

You must have a valid LBCC student photo identification card in order to utilize many of the services on campus, including the library, the Business Affairs Office, Assessment Center, Learning Center and the bookstore. A validated card allows you to ride free on Albany Transit buses, the Linn-Benton Loop bus and the Linn County Shuttle, and it also may entitle you to discounts on merchandise or services in the community.

You must be a registered student in order to obtain an ID card. ID cards are issued only on the main campus. There is a one-time fee of \$10; each term you register, your card will be revalidated at no charge. There is a processing fee for reissuing a lost card.

Advising

Takena Hall 103, (541) 917-4780

Academic advisors and counselors help students plan their programs of study and their class schedules. Students who are fully admitted must meet with an advisor and attend student orientation before they register. If you have selected a major, you will be assigned an advisor in your major field. If you are undecided, you will be assigned a counselor who will assist you in career planning. It is important to meet with your advisor each term. Part-time students also are encouraged to participate in the academic advising program. Contact the Career Center for more information.

Student Assessment Office/ Placement Testing

Takena Hall 227, (541) 917-4781

Before registering, all newly admitted full-time students are required to take the College Placement Test (CPT) to determine appropriate class placement or petition to have the exam waived based on prior completion of appropriate college courses. Non-admitted, part-time students who are registering for math or writing classes also must take the CPT or petition to have it waived. Call the Student Assessment Office for an appointment.

The Assessment Office also offers a variety of other tests for students and community members. They include:

- the General Education Development (GED) test for the certificate of high school equivalency;
- the 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;
- individualized testing for on-campus courses or programs; and
- proctored exams.

Career and Counseling Center

Takena Hall 103, (541) 917-4780

The Career and Counseling Center provides career, retention and crisis counseling. Regular contact with a counselor can help you clarify goals, select appropriate coursework, and progress smoothly through the college system. Counselors also teach classes in career planning, stress management, assertiveness training and life management skills.

If you'd like help choosing a career, use of the "CIS" computer program is available free to the public.

Counselors are available at the Extended Learning centers, also. Call the center for their hours or to make an appointment.

Student Employment Center

Takena Hall 101, (541) 917-4780

The Student Employment Center, a part of the Career and Counseling Center, helps LBCC students and alumni obtain part-time, full-time, temporary and permanent employment. Job sources include local employment listings, Oregon Civil Service openings, federal job information and a variety of listings in other states.

On the Web at www.linnbenton.edu/careerservices, you can learn about local job openings. Labor market information includes projected demand (employment and openings), salary data and employment outlook analysis for a wide variety of occupations in Oregon. The Center also has information on national labor trends.

Call the Career Center for an appointment to receive help in preparing a résumé and cover letter, completing an application form, interviewing techniques and job search strategies. At LBCC's annual career fair, you can become acquainted with the employment needs of local industries and connect with local employers.

General Education Development (GED) and Adult High School Diploma (AHSD)

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

Adult Basic Skills Development (ABSD)

Workforce Education Building 117, (541) 917-4710

The ABSD program offers a variety of classes to adults who want to improve their basic skills, prepare for a GED or learn to speak English. Instruction is varied, and the emphasis is on a positive learning environment.

Day and evening classes are available on the main campus and at the Benton, Sweet Home and Lebanon Extended Learning centers. Every new student must attend an orientation and pay a \$25 enrollment fee at the time of registration. If you are unable to attend classes or need extra help, you can request confidential tutoring services.

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)

Workforce Education Building 127, (541) 917-4710

These are non-credit classes for individuals whose first language is not English. Classes teach reading, writing, listening, speaking, grammar, pronunciation and other basic communications skills.

Day and night classes are available in Corvallis, Albany, and Lebanon. Every new student must attend an orientation before attending any ESOL class and pay a \$25 enrollment fee at the time of registration. Tutors may be requested for some individualized instruction.

Disability Services

Takena Hall 101, Voice: (541) 917-4789, TDD: (541) 917-4703

The Office of Disability Services (ODS) provides academic accommodations for LBCC students who are eligible for services. ODS staff advocate for students with disabilities, supporting their independence as well as providing information and assistance when appropriate. A variety of services (e.g., test accommodations (including college placement tests), sign language interpreting, notetaking may be requested. Appropriate accommodations are determined individually based on disability documentation.

If you are seeking academic accommodations, you need to register with the Office of Disability Services and provide appropriate documentation of your disability. Requests for services must be made each term at least two weeks in advance.

Additional resources through the Office of Disability Services include:

- the Takena Support Lab (Takena 221), where students receive learning strategies instruction, study tips, writing assistance and tutoring in select subjects;
- Life Enrichment classes, where students learn basic skills related to reading, math, money management, telling time, reading calendars, art etc.;
- priority access to lockers on campus during the first week of each term.

Takena Support Lab

Takena 221, Voice: (541) 917-4702

The Takena Support Lab offers assistance, support and a small, quiet study area to all students on campus. Learning the routines and how to organize time to complete coursework requires learning new skills. The staff in the Takena Support Lab are available to help you get started on your college career.

Services include:

- Writing/editing assistance
- Math assistance (MTH 020–MTH 095)
- Organizational/ time management help
- Computers/ large screen monitor with Zoom-Text
- Adaptive software
- Test accommodations
- Small, quiet study area

The Lab is located on the 2nd floor of Takena Hall in T-221. Lab hours are Monday through Friday, 7:30 a.m. to 4 p.m.

Developmental Studies Department

Developmental Studies Department, (541) 917-4683

The Developmental Studies Department provides classes and services to prepare students for success in college. Through classroom experiences and individualized help in the Learning Center, its programs focus on improving student skills in writing, reading, and studying. The department's broad services to diverse groups across campus act as a bridge between instructional areas and student services.

The Learning Center – Main Campus

Learning Resource Center 212, (541) 917-4684

The Learning Center is an informal study area with academic resources and assistance, plus other supplies and equipment needed to complete your assignments. You may work on assignments alone or with classmates. Food and drink are allowed. Academic support includes:

Mathematics Assistance

Students taking mathematics classes through LBCC can study and receive assistance in the Learning Center. During open hours, the Learning Center is staffed by at least one mathematics instructional

assistant, who can help you with homework, answer questions, clarify concepts or help you study for a test. Adjacent to the Learning Center is a classroom dedicated to mathematics; it is equipped with computers and other instructional equipment to accommodate a variety of learning styles.

Physical Science Assistance

Students taking any physics or chemistry course may receive assistance at the Science Help Desk. Call the Learning Center or check the Web site (<http://linnbenton.edu/depts/lrc/>) for the Science Help Desk hours.

Writing Assistance: Writing Desk

For help with writing assignments, students enrolled in any of LBCC's classes can use the Writing Desk. A writing assistant will help you interpret your assignment, focus your paper, say more clearly what you intend to say, offer reader feedback on drafts, and help you polish and proofread your work—all producing a better paper for your course. No appointment is needed.

Writing Assistance: Writing Lab

Improve your sentence structure, punctuation and grammar with individual help from instructional assistants in the Writing Lab. Through a variety of approaches, they can help you reduce sentence and punctuation errors for all your writing needs.

Computers

The 38 computers in the Learning Center are networked and equipped with software for writing, reading and study skills as well as additional software of general interest, such as a Learning Styles Inventory. These computers are connected to the Internet and often are available for general student use. A computer lab specialist is available to assist you. The entire Learning Center is a wireless Internet access point.

Reading and Study Skills Lab

Become a more effective student with individual help from instructional assistants. You can better understand your textbooks, manage your time, learn vocabulary, take notes and prepare for taking tests. Learn specific strategies for these and other skills that will increase your learning potential and success.

Study Skills: Mini-Courses

These self-paced, instructor-guided independent study courses are open-entry modules that earn you .25 to 1 credit upon passing. They cover individual skills such as vocabulary building, time-management, test-taking tips, taking lecture notes, or reading textbooks. For specific listings, inquire at the Learning Center or check the Schedule of Classes under "Study Skills/Reading."

Tutoring

You can receive up to three hours a week of free tutoring in a wide variety of classes. Tutors work with you one-on-one to clarify ideas, theories and processes, as well as offer study strategies. Tutors have academic competency and faculty approval and receive 10 hours of tutor training. See the Tutor Coordinator in the Learning Center for information and to sign up for the required tutor orientation. Most tutoring sessions are scheduled during weekdays.

Tutor Assisted Study Support (TASS)

Tutor Assisted Study Support (TASS) is available in subjects such as chemistry, physics, and anatomy and physiology. Students who regularly attend these out-of-class study sessions earn better grades than they would on their own. Sessions are led by students who have successfully completed the course. The session leaders attend classes, take notes, and meet with students weekly. Check with your instructor or in the Learning Center (541) 917-4662 to find out which courses currently have SI.

Testing

At the request of an instructor, the Learning Center provides testing for some math classes, for developmental classes, and for other subject areas. You will find this service particularly helpful if you need to make up an exam or take a retest. Photo ID is required.

Student Services— Student Support

Bookstore

College Center 111, (541) 917-4950

The LBCC Bookstore carries texts and supplemental readings for courses taken on the Albany campus. Textbooks and supplemental readings for classes offered at LBCC Extended Learning centers are available at the centers only. The Bookstore also offers art and school supplies, stationery, novelty items, insignia sportswear, computer software and general interest books.

Bookstore hours are 8 a.m. to 6 p.m., Monday through Thursday and 8 a.m. to 4 p.m. Friday. Visit our Web site at www.bookstore.linnbenton.edu.

Campus Security

College Center 123, (541) 917-4440, (926-6855 after hours)

The Campus Security Office is open 7:30 a.m. to 5:15 p.m., Monday through Friday. Services include FAX machine, first aid, lost and found, personal safety escorts, parking management and college-issued keys. You can obtain security services 24 hours a day by calling 926-6855 or by picking up one of the campus security phones located throughout the campus. For life-threatening emergencies on campus, dial 9 + 911 immediately, and then notify Campus Security at ext. 4440.

Child Care

(541) 917-4898

Family Resource Center

LBCC offers year-round on-campus child care for LBCC student and staff families, as well as community families. The Family Resource Center is open from 7 a.m. to 6 p.m. Breakfast, lunch, and afternoon snack are provided. Parents can choose to enroll their children for a full year, for an academic year (following the LBCC calendar), or for the summer. The Center cares for children ages 18 months through kindergarten. Care for children ages 5 to 8 years is offered during the summer. Care for school-age children (ages 5 through 10) is provided on public school in-service days (pre-registration is required). Classrooms are staffed by professional teachers, LBCC practicum students and student employees. Parents of children enrolled in the Center can choose to participate in a variety of parent education classes and programs.

The Family Resource Center is a state-licensed program accredited by the National Academy of Early Childhood Programs. For additional information about these programs, contact the Family Resource Center, (541) 917-4898, or Family Connections, (541) 917-4899.

Family Connections

Family Connections is located in the Workforce Education Building, room WEB-128. Students can drop in between 8 a.m. and 5 p.m. or call between 9 a.m. and 4 p.m. Monday–Friday to talk with a childcare expert. Experienced, friendly staff provide referrals to child care, parenting advice, written materials and more. Students can stop in to discuss a family issue, ask parenting questions or find out about available community resources. Call (541) 917-4899 or E-mail: connect@linnbenton.edu. This service is free to all LBCC credit students through a contract with ASLBCC.

Computer Lab

Forum 204, (541) 917-4470

As a registered LBCC student, you can receive friendly assistance from trained staff members in the Forum Computer Lab, whose primary concern is to help you master the skills needed to complete your course assignments.

The computers are Windows machines, with a variety of software programs including: word processing, spreadsheets, and several computer-programming languages.

The lab is open Monday through Friday, and Sunday. Please call for exact times.

You must be currently enrolled at LBCC to use the lab, or purchase non-credit computer lab hours during open registration.

Benton, Lebanon and Sweet Home Extended Learning centers also have computer labs. See the "Extended Learning Center Labs" section in this catalog or call:

- Benton Center: (541) 757-8944
- Lebanon Center: (541) 451-1014
- Sweet Home Center: (541) 367-6901

Conference Services

College Center 214, (541) 917-4385

Conference Services takes care of room scheduling and the coordination of related services (e.g., food, media, custodial services). The office is open 8 a.m. to 4:30 p.m.

Cooperative Work Experience/Service Learning

Students have the opportunity to gain college credit through work experience. This service is coordinated by Cooperative Work Experience faculty. For more information, see the "Programs of Study" section in this catalog.

Evening Services

Takena Hall 105, (541) 917-4840

The Evening Services Office in Takena Hall is available to assist students and staff with emergency needs during evening hours. The office also provides assistance with registration, transcript requests, connections to the Linfield program, and general information concerning LBCC.

First Aid

See Campus Security.

Food Service

College Center 214B, (541) 917-4385

Food Services operates three eating facilities on campus and caters special activities sponsored by the college or community.

The Commons Cafeteria

The Commons Cafeteria, located on the second floor of the College Center, offers service from 7:30 a.m. to 1:30 p.m., Monday through Friday.

Santiam Restaurant

In the student-operated Santiam Restaurant, menus are prepared and served by Culinary Arts students Monday through Thursday during the school year. Lunch is served from 11 a.m. to 12:30 p.m. Coffee and pastries are available between 9:30 and 11 a.m. The restaurant is in CC 201.

Courtyard Cafe

Located on the first floor of Takena Hall, the Courtyard Cafe serves a selection of soups, hot and cold sandwiches, pizza, fruit, espresso and other beverages. Service is available from 7:30 a.m. to 9 p.m., Monday through Thursday, and 7:30 a.m. to 3:30 p.m. on Friday.

Health Insurance

Registration Office:

Takena Hall 115, (541) 917-4811

LBCC makes available an insurance program in which students may elect to participate. Registered students at LBCC are not covered by health insurance, accident insurance or by workers' compensation insurance.

For a few classes, arrangements have been made in advance for workers' compensation coverage. This is not automatic and requires prior arrangement. LBCC also furnishes a limited secondary medical plan for athletes in varsity programs. Both workers' compensation and athletic insurance programs are very specific in applications covering relatively few students. Call 917-4811 for more information.

Housing

Student Life and Leadership Office:

Student Union, (541) 917-4457

Although the college does not provide housing on campus, the Student Life and Leadership Office maintains a self-service bulletin board with current housing listings from the Corvallis and Albany newspapers. In addition, a listing of housing options, services and addresses is available in the Student Life and Leadership Office.

Library

Department Chair:

(541) 917-4649

Circulation and Evening:

(541) 917-4638

Reference:

(541) 917-4645

The LBCC Library integrates its print, video, audio and multimedia materials, which are accessible via an online catalog. In addition to providing a basic reference collection, the library subscribes to approximately 200 periodicals and newspapers.

Online databases can help you locate recent magazine and journal articles, and computer workstations can connect you to the Internet. VCRs, DVD players, and photocopiers are available for your use. Library staff members provide instruction in how to use the library and its equipment on a drop-in basis or through scheduled library tours.

Materials not available at LBCC may be obtained at no charge through interlibrary loans. You also have borrowing privileges at the OSU library.

Lost and Found

See Campus Security.

Parking

College Center 123, (541) 917-4440

Parking for students, staff and visitors is free and available on a first-come, 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.

Printing Services

Industrial B 110, (541) 917-4673

From paper to laminating, the campus Printing Services Department has it all, and students are welcome to utilize the department's services.

The pre-press staff can help with setup of any size job from envelopes to posters. Software and equipment are compatible with both PCs and Macs, and employees offer expert assistance.

The Xerox DocuColor can output a single page or a large document at up to 135 pages per minute. The black and white high-speed copier can receive hard copy originals as well as electronic files.

The offset section has two single-color presses that can provide high-quality output, and the bindery offers many services including comb-binding, three-hole punching, laminating (up to 17 inches), stapling, folding, and padding.

Over the front counter you can purchase paper (by the sheet or by the case), printer cartridges, transparencies and much more. Specialty items include customized mousepads, puzzles and calendars.

Stop by any time Monday through Friday between 8 a.m. and 4:30 p.m. for help you with a project or a tour of the shop.

Student Life and Leadership

Student Union, (541) 917-4457

The Student Life and Leadership Office, which houses the Associated Student Government, Student Programming Board and the Student Ambassador program, provides opportunities for leadership, cooperative planning and development of social, cultural and physical fitness interests.

This office also maintains the Student Union and the Union Lounge, where you will find comfortable furniture, study tables and a big screen TV. The Recreation Room provides pool tables, video games, and small tables. Equipment for these activities is issued for a small fee.

Becoming involved with clubs and organizations can enhance your college experience. Currently active clubs include those for individuals interested in animal science, computer technology, drama, horticulture, racing performance, music and religious affiliations. Student activities, organizations and intramural sports are open to all students.

ASLBCC Student Government

The Associated Student Government gives you the opportunity to serve on college committees, participate in student government, and take part in leadership activities that enhance student life. The ASG, which serves as a representative and advisory group to faculty, administration and the LBCC Board of Education, consists of a president, vice president, public relations secretary, one representative from each academic division and one at-large representative. Any fully matriculated student who is in good standing and is taking at least six credits at LBCC is eligible to hold a position. Contact Student Life and Leadership at (541) 917-4457.

LBCC Student Programming Board

The Student Programming Board (SPB) is responsible for coordinating student activities and intramural/recreational sports. Activities include free trips and tickets to special events, service learning projects, blood drives, diversity programming, and basketball and volleyball tournaments. Special events include all-campus picnics, the annual Winter Festival, a Martin Luther King Jr. celebration and many others. The group consists of eight members: a team coordinator, an intramural/recreational sports coordinator, five events specialists and a multi-cultural events specialist. Board members serve for three terms and are appointed through an application process. If you are interested, contact Student Life and Leadership.

Student Ambassador Program

Student Ambassadors work to enhance college recruitment and retention. They assist with on- and off-campus events, including campus tours, high school visitations and welcome back tables. Each year, seven students are paid an hourly wage to serve as Student Ambassadors.

Intercollegiate Athletics

Linn-Benton Community College has developed a comprehensive program of intercollegiate athletics in affiliation with the Northwest Athletic Association of Community Colleges. Programs include women's volleyball, men's and women's basketball, men's and women's track, and men's baseball. Athletic programs are funded through student fees. For more information, contact the Health and Human Performance Department, (541) 917-4235, Activity Center 102.

Intramural and Recreational Sports

In conjunction with the Physical Education Department, Student Life and Leadership offers an intramural and recreational sports program. A member of the Student Programming Board serves as the student coordinator for Intramural and Recreational Sports. Contact the Student Life and Leadership Office, (541) 917-4457.

Multicultural Center

The Multicultural Center supports the college's diversity efforts by promoting understanding of cultural differences among students, staff and the community. The center provides the setting for informal dialogue and the opportunity to develop intercultural skills to better prepare students to enter the workforce in a culturally diverse society and global economy. Ongoing activities in the Multicultural Center include informal discussion groups, cultural celebrations, mentoring and networking. Located on the second floor of the Student Union, the Multicultural Center is a friendly space that is intended to welcome all newcomers. For more information, call the Multicultural Center, (541) 917-4461.

Music

The college offers several opportunities for participation in vocal and instrumental music, including Chamber Choir, Concert Choir, Community Chorale, and some performance groups in conjunction with the Music Department at Oregon State University. Contact the Performing Arts Department for more information, (541) 917-4530.

Publications

LBCC students publish a weekly newspaper, *The Commuter*, that has won many awards for excellence. If you are interested in participating, contact the Fine and Applied Arts Department or the Arts and Communication Division, AHSS 101.

Each spring, students publish *The Eloquent Umbrella*, a literary journal for poetry, fiction, essays and graphic arts that features works from students, staff and the community. Submissions are due by the end of the second week of winter term. *The Eloquent Umbrella* is sponsored by the ASLBCC and the English Department. It is available for sale in the LBCC Bookstore. For more information, call the English Department at 917-4556.

Theater

Each year, the Performing Arts Department provides several opportunities for students and community members to participate in theater productions. Please contact the Performing Arts Department for more information, (541) 917-4530.

Extended Learning Centers

LBCC's three Extended Learning centers offer hundreds of classes each term at locations throughout Linn and Benton counties. They include a wide variety of professional technical courses; transfer classes; employment training classes; and life enrichment courses such as art, music, consumer education, physical fitness, personal growth, and conversational classes in foreign languages.

Programs offered at the Extended Learning centers include Adult Basic Skills Development, General Education Development, and English for Speakers of Other Languages. For details, see "Adult Basic Skills Development Programs" in the "Student Services—Academic Support" section.

Albany Extended Learning and Evening Services

Director:

Gwenn Marchese, (541) 917-4840

Located in Tadena Hall on the main campus, the Albany Extended Learning and Evening Services Office establishes workshops and courses for professional development and life enrichment. Community educational activities often are co-sponsored with agencies such as the Albany Senior Center, Parks and Recreation, and Boys and Girls Club. The office primarily serves the communities of Albany, North Albany, Tangent and Shedd, but also is responsible for district-wide programs such as Driver's Education, Motorcycle Safety and the Retired and Senior Volunteer Program (RSVP). Classes are held at sites throughout the Albany area.

The center also coordinates services to evening students and instructors on the main campus, and programs such as Linfield College's bachelor degree programs are operated out of Albany Extended Learning and Evening Services.

During the academic year, office hours are 8 a.m. to 8 p.m., Monday through Thursday, and 8 a.m. to 4:30 p.m. on Friday.

Benton Center

Director:

Penny York, (541) 757-8944

Manager, Community Education:

Joel White, (541) 757-8944

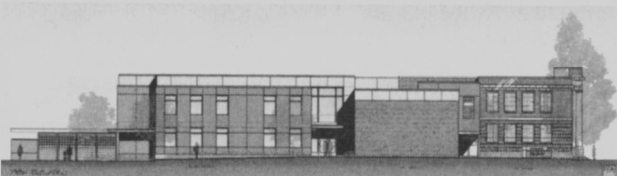
The Benton Center, located at 757 N.W. Polk Avenue in Corvallis, serves all of Benton County except North Albany. During the college term, the center is open 8 a.m. to 8 p.m. Monday through Thursday and 8 a.m. to 4 p.m. on Friday. Classes are offered in the evening as well as during the day.

The center provides lower-division transfer courses, professional technical courses and adult community education courses. Many programs are made possible through the cooperation of local school districts, organizations and agencies.

Services to students include registration, test proctoring, open computer lab, the Computerized Placement Test and a small bookstore. An academic/career counselor is available at no charge; for an appointment, call (541) 757-8944.

See "East Linn and Benton Center" for specific lab offerings.

Architect's rendering of the remodelled Benton Center in Corvallis.



East Linn-LBCC Center

Director:

Gwenn Marchese, (541) 259-5801

East Linn-LBCC includes centers at 44 Industrial Way in Lebanon, (541) 259-5801 and 1314 Long Street in Sweet Home, (541) 367-6901. These centers serve all of rural Linn County, in addition to Lebanon and Sweet Home. Classes are offered a number of sites.

The centers offer a broad range of credit and non-credit courses each term. College services available at the East-Linn centers include registration; career, academic and financial aid counseling; placement testing; test proctoring; distance education classes; LBCC library book pick up and drop off; textbook sales; and general information about LBCC and the other centers.

The Lebanon Center houses the Linn County Business Development Center and a Training and Business Development Business counselor.

See "East Linn and Benton Center Labs" below for specific lab offerings.

East Linn and Benton Center Labs

The Extended Learning centers in Lebanon, Sweet Home and Corvallis offer self-study, open-entry labs that allow busy, self-motivated students to maintain flexible schedules. Please refer to the quarterly Schedule of Classes for registration procedures and attendance requirements.

Accounting Labs

Located at the East Linn Lebanon Center and the Benton Center, the accounting labs provide a place where you can upgrade your accounting skills or learn accounting through the Practical Accounting series. A self-study program, Practical Accounting teaches you to set up journals and ledgers, prepare and understand financial statements, and prepare payroll and payroll taxes. These are open-entry labs, so you may start at any time during the term and work at your own pace. By the time you complete the series, you should be equipped to handle full-cycle book-keeping.



Business Technology Labs

Benton Center Faculty:

Joyce Moreira, (541) 757-8944

East Linn Faculty:

Carla Mundt, (541) 259-5816

At the East Linn Lebanon and Sweet Home centers and the Benton Center, business technology labs are offered where students can upgrade office skills or learn new ones. In a friendly and supportive environment, you can work at your own pace using an instruction manual and help from a qualified instructor. (An instructor and assistant are available during all open hours).

You may choose from a variety of classes such as Keyboarding, Data Entry Skill Building, Business Math with Calculators, Windows, Filing, Transcribing Machines, WordPerfect with Windows, MS Word with Windows or others. These courses apply toward the certificates and degrees offered by LBCC's Business Technology Department.

You also may choose what time you wish to attend the lab. The number of hours you attend will vary depending on the duration of the class and the number of credits. When you register, you must report to the lab to select your attendance times so equipment will be reserved for you. In addition to your reserved hours, you may use the lab at other times on a seat-available basis. For more information about registration procedures, attendance requirements and available hours for the business technology labs, refer to the quarterly Schedule of Classes or contact one of the faculty members listed above.

Preregistered students who do not attend during the first week of classes, including second-half-of-the-term classes, may be subject to administrative withdrawal if space is needed for students on the Wait List.

Computer Labs

The computer labs at the Extended Learning centers offer lecture/lab classes, open labs and self-study classes at various times throughout the week. Staff members are friendly and helpful, and the labs contain a wide variety of software, including computer basics, spreadsheets and data base programs. During open lab hours, the computers are available at no cost to all currently registered LBCC credit students. Community members may purchase lab time on a space-available basis.

Math Labs

Benton Center Faculty:

Mary Campbell, (541) 757-8944

East Linn Center Faculty:

Debbie Love, (541) 259-5814

At the Extended Learning math labs in Linn and Benton counties, you can take MTH 020 through MTH 112 in a self-paced, self-study setting. Available in Corvallis, Lebanon and Sweet Home, the lab classes are open entry and variable credit, with a two-term limit for completion. Instructors are always available to answer questions and show students how to use the supplementary instructional resources. The labs also are a resource for students who are traditional style lecture math classes and are designed to be a supportive place where students can get help with mathematics.

For more information regarding registration procedures, the orientation process, hours and attendance requirements, contact one of the faculty members listed above or refer to the quarterly Schedule of Classes.

The East Linn Workforce Development Center in Lebanon.

Writing Labs

East Linn Lebanon and Sweet Home centers and the Benton Center have writing labs where you can take WR115, WR121, WR122 and WR 123 in a lab setting. Eligibility for WR115 and WR121 is based on demonstrated skill level through completing the appropriate prerequisite with a "C" grade or higher or by an appropriate score on the Computerized Placement Test (CPT). After an initial group orientation, students meet individually with the instructor.

Family Resources and Education

Family Resources and Education offers information and assistance to parents interested in helping their children develop into healthy adults. Classes for child care providers and educators are offered each term.

Child Care Provider Training

Program Contact:

Pam Dunn, (541) 917-4899

Family Connections offers a variety of courses and short-term training for child care providers. These evening and weekend classes help providers meet state training requirements. After beginning their professional training with these courses, providers may elect to enroll in the certificate and degree programs in Child and Family Studies or to participate in Pathways to Professional Development. E-mail: connect@linnbenton.edu.

Family Connections

Program Contact:

Pam Dunn, (541) 917-4899

Family Connections offers comprehensive information and education on child care, respite care, parent education, family activities and support groups in Linn and Benton counties. E-mail: connect@linnbenton.edu.

Family Resource Center

Program Contact:

Jen Beudert, (541) 917-4961

The Family Resource Center offers full-time child care for children ages eighteen months through kindergarten. Care is provided for children ages 5 to 8 years during the summer. The Center also offers care for school age children, ages 5 through 10, on public school in-service days (registration in advance is required).



The Family Resource Center provides care for children of LBCC students and staff, as well as community families. The Family Resource Center is open year-round; families can choose to enroll for a full year or an academic year (following the LBCC calendar). Parents of children enrolled in the Family Resource Center can choose to participate in a variety of parent education classes and programs.

The Family Resource Center is a state-licensed program, accredited by the National Academy of Early Childhood Programs. For more information, contact the Family Resource Center at (541) 917-4898 or Family Connections at (541) 917-4899.

Parent Education

Program Contacts:

Linda Donald, (541) 917-4897

Jerri Wolfe, (541) 917-4891

Additional Faculty:

Joyce Brown, Joy Keiser

Family Resources and Education's Parent Education Program offers classes and workshops for parents interested in learning to help their children grow and develop, and for parent educators

Community-based Parent Education Classes

Parenting Classes. A wide variety of classes and workshops are offered in partnership with schools and community organizations in Linn and Benton counties.

Living and Learning Classes. Parents of babies through preschoolers 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.

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

Healthy Start helps new parents give their first baby a "healthy start" in life. Welcome baby visits provide new parents with information on parenting and community resources. Weekly home visits to interested families provide ongoing support and education.

The *Even Start Family Learning Program* is a family-oriented education program for adults and children up to eight years of age. Program components include: adult education, early childhood education, and parent support/parent-and-child together time. Parents work toward a GED or professional skills while learning how to help their children develop skills to succeed in school.

Specialized Parent Education Program

Intensive Parent Education reaches families through home visitation and adult and parent/child classes. These group and individualized classes are designed to prevent child abuse and neglect.

Parenting Time offers parent/child sessions, skill-building visits between parents and children in foster care that are designed to reunite families.

Parent Educator Training Program provides ongoing training and support for people who want to continue their professional development.

Workforce Training

Director:

Ann Malosh, (541) 917-4925

Fire Science

Program Contact:

Joseph Bailey, (541) 917-4935

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

Health Occupations/Services Education Center (HOSEC)

Faculty:

Rob Williams, (541) 917-4510

HOSEC's mission is to provide continuing education for the health care community. HOSEC delivers quality short-term contracted training, and provides conferences and workshops with nationally known speakers on a variety of health care topics. We offer continuing education classes in response to rapidly changing health care trends. HOSEC also administers the high school health careers class in Linn and Benton counties, and the Nursing Assistant Program. Please call us if you have a specific request or question. Our offerings change frequently.

Life and Employment Development Department

Director:

Dawn McNannay, (541) 917-4875

JOBS Program Faculty:

Carol Erickson, (541) 967-2078, ext. 411

Beth Graham, (541) 967-2078, ext. 438 (Albany)

Rica Amity, (541) 259-5829 (Lebanon)

Turning Point Transitions Program Faculty:

Joanne Apter, (541) 917-4876

The Life and Employment Development Department oversees two different training and workforce programs: Job Opportunities and Basic Skills (JOBS) and Turning Point Transitions. Each 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 Community 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.

Turning Point Transitions is a program for single parents, displaced homemakers, dislocated workers, spouses of dislocated workers and others who are experiencing a major life transition. Participants build self-confidence by improving communication and assertive abilities. They also learn skills such as time and money management; positive parenting; living alone; wellness; and goal setting, decision-making and problem-solving techniques. Career exploration is tailored to meet the needs of the participants. Limited needs-based child care and transportation assistance are available. Call (541) 917-4876 or (541) 917-4870 for details.

Training and Business Development Center— Business Development Center

Faculty:

Dennis Sargent, Martin Schulz
(541) 917-4923

The Business Development Center can provide assistance in all aspects of business, including start-up information, business plan preparation, management skills and preparation for financing. The center offers workshops on numerous topics, provides confidential business counseling, and can help business owners locate resources in the community.

Through its Small Business Management programs, the center offers intensive help including monthly meetings with instructors. The center also makes available a variety of reference materials.

The Business Development Center is co-sponsored by the Small Business Administration and Oregon Economic and Community Development Department.

Training and Business Development Center— Contracted Training and Professional Development

Director:

Joseph Bailey

Faculty:

Karin Magnuson, (541) 917-4923

With demands increasing to upgrade the skills of our workforce, the college responds by providing training whenever and wherever it is needed. *Contracted training* has the expertise and resources to develop and deliver training based on the needs of businesses and industry. Training offered covers topics such as computer applications, leadership and supervisory training, problem solving, interpersonal communication, on-the-job training skills and lean manufacturing.

The Training and Business Development Center offers quality, affordable and convenient *professional development* options for individuals and businesses. Many programs are available, including computer seminars, online courses, safety training, continuing education workshops, leadership and supervisory workshops.

Training and Business Development Center— Accelerated Term Training

Faculty:

Marcia Bollman, (541) 917-4934

Accelerated Trainings are less-than-one-year certificates, one-year certificates, and two-year certificate programs that focus on specific skills for specific jobs. The state-approved certificate programs are offered as needed, depending on current openings in the local job market and the number of interested students. A group of 16 to 25 students complete the certificate program together and attend class for approximately 30 to 40 hours each week.

The cost of these certificate programs varies. The advertised price for each program includes all tuition, fees, books and supplies. Last year the cost ranged from \$1,000 to \$6,800, depending on the length of the training and the topic. Program costs are subject to change. The following programs qualify for financial aid if the student is eligible to receive aid: Pharmacy Technician, Phlebotomy, Public Safety Dispatcher, Radiologic Technology and Veterinary Technology. See Workforce Training in the "Programs of Study" section of this catalog for more information.

Volunteer Program

Retired and Senior Volunteer Program (RSVP)

Director:

Beth Fox, (541) 753-9197 or (541) 917-4476

Benton County RSVP Volunteer Coordinator:

Cynthia Hylton, (541) 753-9197, FAX (541) 757-9537

Linn County RSVP Program Assistant :


Juanita Whiteis, (541) 917-4476, FAX (541) 917-4445

Publications Assistant:

Steve Lathrop

A program for individuals 55 years and older, RSVP places volunteers with more than 200 non-profit groups and agencies in Linn and Benton counties. More than 800 individuals participate in the program. In addition to placing and recognizing volunteers, RSVP has six separate human service projects, helping to fill the needs of the Linn-Benton community. RSVP is part of the Extended Learning and Library Services Division. For more information, check us out online at www.linnbenton.edu/rsvp or www.lbvision.org.

Our Programs



LINN-BENTON
Community College

LBCC DEGREES AND CERTIFICATES

LBCC offers the following degrees and certificates. (AS = Associate of Science, AAS = Associate of Applied Science)
In addition, the college offers the Associate of General Studies and Associate of Arts (Oregon Transfer) degrees.

Program	Degrees		Certificates		
	AS	AAS	Two Year	One Year	Short Term
Accounting Clerk				•	
Accounting Technology		•			
Administrative Assistant		•			
Administrative Medical Assistant		•			
Advanced Supervisory Management				•	
Agricultural Business Management	•				
Agriculture	•	•		•	
Animal Science	•				
Animal Technology		•			
Animal Technology/Dairy Management		•			
Animal Technology/Horse Management		•			
Apprenticeship (Crafts & Trades)		•			
Art	•				
Automotive Technology		•	•		
Basic Supervisory Management					•
Biological Sciences	•				
Business Administration	•				
Business & Supervisory Management		•			
Chemistry	•				
Child & Family Studies		•		•	•
Civil Engineering Technology				•	
CNC Machinist					•
Collision Repair Technology				•	
Computer Science	•				
Computer User Support		•			
Criminal Justice		•			
Culinary Arts—Chef Training		•			
Dental Assistant				•	
Digital Imaging/Prepress Technology				•	
Drafting & Engineering Graphics Tech.		•			
Economics	•				
Elementary Education	•				
Emergency Medical Technician				•	
Engineering	•				
English	•				
Exercise & Sport Science	•				
Foreign Language	•				
General Science	•				

Program	Degrees		Certificates		
	AS	AAS	Two Year	One Year	Short Term
Graphic Design		•			
Health Promotion & Education	•				
Health & Human Sciences	•				
Heavy Equipment/Diesel Technology		•	•	•	
Horticulture		•		•	
Instructional Assistant		•		•	
Journalism/Mass Communications	•				
Juvenile Corrections				•	
Legal Administrative Assistant		•			
Machine Tool Technology				•	
Mathematics	•				
Medical Assistant		•			
Medical Office Specialist				•	
Medical Transcriptionist				•	
Music	•				
Network & Systems Administration		•			
Nondestructive Testing				•	
Nursing		•			
Nursing Assistant					•
Occupational Skills Training				•	
Office Specialist				•	
Office Technology Skills					•
Pharmacy Technician					•
Phlebotomy					•
Physics	•				
Practical Nursing				•	
Pre-Restaurant Management	•				
Public Safety Dispatcher (911)				•	
Radiological Technology			•		
Refrigeration/Heating/Vent./Air Cond.				•	
Social Science	•				
Speech Communication	•				
Technical Communications	•				
Theater	•				
Veterinary Technology					•
Water/Wastewater Technology		•		•	
Welding Technology		•	•	•	
Wine & Food Dynamics		•			

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 professional technical (non-transfer) 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.

Associate of Science (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 transfer and/or non-transfer credit 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.

Certificates

The chart on the previous page lists the certificates that LBCC offers. Certificates are awarded to students who complete specific requirements within a professional 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.

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 \$25 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.

Other Learning Opportunities

Distance Education

Learning Resource Center 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, videotape, cable and broadcast television. These 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, visit the LBCC Web site at <http://cf.linnbenton.edu/disted>.

Distance learning students may become fully admitted to LBCC through our online admission procedures. Students may complete an application, take placement tests, complete orientation and advising, and register for classes online.

Admission forms are available at www.linnbenton.edu/admissions. Click on "Forms" and select "Application for Admission." Complete the application and mail it with the \$20 application fee.

Contact the Student Assessment Office at online@linnbenton.edu or call (541) 917-4781 to arrange for completing your placement tests online. The tests must be proctored, and advance notice will be required so arrangements can be made. The math, reading or writing placement test is required if you choose to take a math, reading or writing course as a part-time student. You may petition 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

CWE Coordinators:

Rich Horton, (541)917-4787; Sherry Rosen (541)917-4778; Takena Hall 101

Cooperative Work Experience 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 the suitability of 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 and provide learning experiences not available in the classroom.

All students in the Cooperative Work program are required to enroll in WE 202 CWE Seminar, which provides them with an opportunity to share work-related experiences and concerns and allows 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 and to allow ample time for locating a training site.

Service Learning

Coordinator:

Sherry Rosen, (541)917-4778; Career Center, Takena Hall T-101

Another way of earning credit for experience outside the classroom is called Service Learning. Like Cooperative Work Experience, Service Learning allows students to gain experience related to their major. The distinction is that Service Learning students choose to apply their skills working with community partners in addressing real community needs. In addition to identifying learning objectives, students 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.

For example, math students might tutor elementary students in math or collect and analyze data for an environmental group. Auto tech students might teach basic auto repair to high school women or provide free auto repair to low-income parents. Art students might paint murals in the community. Music students might perform in nursing homes.

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)917-4787; Takena Hall 101

In cooperation with Oregon State University, LBCC provides an opportunity for men and women to participate in a Reserve Officers Training Corps program while attending LBCC.

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.

Transfer Opportunities

Advanced Degree Programs

Director of Linn County Centers:

Gwenn Marchese, (541)917-4840

Linfield College

Linfield College offers you the opportunity to earn a Linfield degree by taking classes on the LBCC campus. Evening courses are offered that lead to a Bachelor of Arts or a Bachelor of Science degree in Accounting, Arts and Humanities, Business Information Systems, International Business, Management, and Social and Behavioral Sciences. Up to 108 LBCC credits may be transferred to Linfield College. You also may be able to receive up to 31 credits toward your degree through the Prior Learning Portfolio Program. For additional information, contact the Linfield academic advisor at (541)917-4846 or visit the Web site: www.linfield.edu/dce

University of Phoenix

The University of Phoenix offers undergraduate and graduate degree programs on the LBCC campus. Students attend class one night a week from 6–10 p.m. and complete one class every five to six weeks. Programs currently being offered are: Bachelor of Science in Business Management, Information Systems, Master of Business Administration and Master of Arts in Organizational Management. A course of study planned in the future is a Bachelor of Science in Human Services. Contact a University of Phoenix enrollment counselor at (541)917-4278, (877)867-4748 or (503)670-0590.

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 second week of the term in which you expect to graduate. 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 must be admitted to the college.
- You must graduate within one calendar year from the date you completed the requirements for the credential.
- The awarding of a credential becomes official only when graduation information has been posted to your transcript.
- You must use a graduation worksheet 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 must meet all graduation requirements of the credential program.

Degrees:

- You must earn a minimum of 24 LBCC credits of which at least 15 must be in your major field. (The second part of this requirement may be waived in some instances.) No credits granted for prior learning can be applied towards meeting this requirement.
- At least 24 of your last 35 credits must be earned at LBCC.
- You must have a 2.00 accumulative GPA.
- You must complete a minimum of 70 percent of all credits attempted. Grades of "F," "NP," "Y," "IN," "WP" and "W" are non-completion grades.
- To earn more than one degree or to major in more than one field, you must 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.

Two-Year Certificate:

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

Proficiencies for Entry into Programs (PREP)

PREP identifies the knowledge and skills that students should have if they are to successfully complete the program within its stipulated time. To view these proficiencies for the LBCC programs, see <http://www.odccwd.state.or.us/colleges/collegeprograms/prep/default.htm> or contact the Academic Affairs Office.

Requirements for the Associate of Applied Science Degree

1. Complete the general education 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.

General Education Requirements

Listed below are the general education requirements for the AAS degree. Where options exist, see a department advisor for assistance. Courses numbered with 0. (zero decimal point) do not apply toward this degree.

Writing/Composition. Take the following course:

- | | |
|--------|---|
| 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.) |

Writing/Composition Credits Required 3

Speech. Select one speech course from the following:

- | | |
|--------|--|
| SP 100 | Introduction to Speech Communication (3 credits) |
| SP 111 | Fundamentals of Speech (3 credits) |
| SP 112 | Introduction to Persuasion (3 credits) |
| SP 218 | Interpersonal Communication (3 credits) |

Speech Credits Required 3

Math. Take the following math course:

- | | |
|---------|--|
| MTH 061 | Survey of Math Fundamentals (3 credits) |
| | (You must have attained an appropriate score on the Placement Test to take MTH 061 or have received a "C" or better in MTH 060.) |

Also take one of the following math courses or a higher level math course:

- | | |
|----------|---|
| MTH 062 | Occupational Trigonometry (1 credit) |
| MTH 063 | Industrial Shop Math (1 credit) |
| MTH 064 | Business Applications of Math Fundamentals (1 credit) |
| OA 2.557 | Advanced Business Math Applications (1 credit) |

Math Credits Required 4

Health & Physical Education. Select three credits from the list below. (Only one activity course may be taken twice to meet general education requirements. No more than two activity courses per term 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 (3 credits) |
| HE 252 | First Aid (3 credits) |

HE 261	CPR (1 credit)
PE 180	Activity Courses (1 credit)
PE 185	Activity Courses (1 credit)
PE 190	Activity Courses (1 credit)
PE 231	Lifetime Health & Fitness (3 credits)

Health & Physical Education Credits Required 3

Science, Technology and Society Perspective. *The following courses have been approved by the Curricular Issues Committee to meet the Science, Technology and Society general education perspectives requirement for the Associate of Applied Science degree.*

GS 151	Energy in Society (3 credits)
GS 152	Science, Technology & Society (3 credits)
HST 150	Science & Culture in the Western Tradition (3 credits)
HSTS 151	History of Science (3 credits)
WW 6.190	Introduction to Environmental Science (6 credits)

Science, Technology & Society Credits Required .. 3**Cultural Diversity and Global Awareness Perspective.**

The following courses have been approved by the Curricular Issues Committee to meet the Cultural Diversity and Global Awareness general education perspectives requirement for the Associate of Applied Science degree. Choose one course:

ANTH 103	Introduction to Cultural Anthropology (3 credits)
ANTH 210	Comparative Cultures (3 credits)
ANTH 232	Native North Americans (3 credits)
ART 102	Understanding Art (3 credits)
ART 204	Survey of Art History (3 credits)
ART 205	Survey of Art History (3 credits)
ART 206	Survey of Art History (3 credits)
BA 224	Human Resource Management (3 credits)
BA 285	Business Relations in a Global Economy (4 credits)
EC 115	Outline of Economics (4 credits)
EC 201	Introduction to Microeconomics (4 credits)
EC 202	Introduction to Macroeconomics (4 credits)
EC 220	Contemporary U.S. Economic Issues (3 credits)
ENG 104	Literature: Fiction (3 credits)
ENG 105	Literature: Drama (3 credits)
ENG 107	Western World Literature: Classical (3 credits)
ENG 108	Western World Literature: Middle Ages Through Neoclassicism (3 credits)
ENG 109	Western World Literature: Modern (3 credits)
ENG 204	English Literature: Early (3 credits)
ENG 205	English Literature: Middle (3 credits)
ENG 206	English 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 211	Literature in Athletics (3 credits)
ENG 221	Children's Literature (3 credits)
ENG 240	Native American Literature (3 credits)
ENG 275	Bible as Literature (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 the Middle East & Africa (3 credits)
HST 158	History of Latin America (3 credits)
HST 159	History of Asia (3 credits)
HST 203	U.S. History: Rise to World Power (3 credits)
HST 240	War & the Modern World (3 credits)
HUM 101	Humanities: Prehistoric to Middle Ages (3 credits)
HUM 102	Humanities: Renaissance Through the Enlightenment (3 credits)
HUM 103	Humanities: The Romantic Era to Contemporary Society (3 credits)
MUS 105	Introduction to Rock Music (3 credits)
MUS 161	Music Appreciation (3 credits)

MUS 205	Introduction to Jazz (3 credits)
PHL 201	Introduction to Philosophy (3 credits)
PHL 202	Elementary Ethics (3 credits)
PS 104	Problems in American Politics (3 credits)
PS 205	Introduction to International Relations (3 credits)
PS 220	U.S. Foreign Policy (3 credits)
R 102	Religions of Western World (3 credits)
R 103	Religions of Eastern World (3 credits)
R 211	The Old Testament: Historical Background (3 credits)
R 212	The New Testament: Historical Background (3 credits)
SD 107	Business & Society (3 credits)
SPN 101	First-Year Spanish I (4 credits)
SPN 102	First-Year Spanish II (4 credits)
SPN 103	First-Year Spanish III (4 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)

Cultural Diversity/Global Awareness Credits**Required 3****Total General Education Credits Required 19***Choose additional courses for a total of 90 credits.***Total Credits Required: 90**

Requirements for the Associate of Arts (Oregon Transfer) Degree

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). 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.

Foreign Language. *Although foreign language is not required for an AAOT degree at LBCC, the OUS schools require two years of high school foreign language (same language) or two terms of college foreign language for all degrees. Furthermore, students planning to pursue a BA degree will be required to complete two years of foreign language study.*

General Education Requirements

Listed below are the general education requirements for the AAOT degree. (The required math, writing and speech courses must be completed with a grade of "C" or higher.)

Writing & Composition. *Take the following writing course:*

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.)

Also take two additional writing courses from the following list:

WR 122	English Composition: Argumentation (3 credits)
WR 123	English Composition: Research (3 credits)
WR 227	Technical Report Writing (3 credits)

Writing & Composition Credits Required 9

Speech. Select one speech course from the following:

- SP 111 Fundamentals of Speech (3 credits)
 SP 112 Introduction to Persuasion (3 credits)
 SP 218 Interpersonal Communication (3 credits)

Speech Credits Required 3**Math.** 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)

College Level Math Credits Required 4**Health & Physical Education.** Select three credits from the list below. (Only one activity course may be taken twice to meet general education requirements, and no more than two activity courses per term will count toward general education requirements.)

- HE 225 Social & Individual Health Determinants (3 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)

Health & Physical Education Credits Required 3**Total General Education Credits Required 19****Distribution Requirements**

Listed below are the distribution requirements for the AAOT degree. Additional courses may have been added since this catalog was published. Check with the Counseling Office.

Arts & Letters Courses. Select a minimum of 9 credits with the same prefix and a minimum of 3 credit hours with a different prefix.

- ART 102 Understanding Art (3 credits)
 ART 204 Survey of Art History (3 credits)
 ART 205 Survey of Art History (3 credits)
 ART 206 Survey of Art History (3 credits)
 ART 261 Introduction to Photography (3 credits)
 ART 264 Intermediate Black & White Photography (3 credits)
 ART 266 Photography: Art & Technique (3 credits)
 ENG 104 Literature: Fiction (3 credits)
 ENG 105 Literature: Drama (3 credits)
 ENG 106 Literature: Poetry (3 credits)
 ENG 107 Western World Literature: Classical (3 credits)
 ENG 108 Western World Literature: Middle Ages Through Neoclassicism (3 credits)
 ENG 109 Western World Literature: Modern (3 credits)
 ENG 110 Film Studies (3 credits)
 ENG 121 Mystery Fiction (3 credits)
 ENG 201 Shakespeare (3 credits)
 ENG 202 Shakespeare (3 credits)
 ENG 203 Shakespeare (3 credits)
 ENG 204 English Literature: Early (3 credits)
 ENG 205 English Literature: Middle (3 credits)
 ENG 206 English 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 211 Literature in Athletics (3 credits)
 ENG 220 Literature of American Minorities (3 credits)
 ENG 221 Children's Literature (3 credits)
 ENG 240 Native American Literature (3 credits)
 ENG 253 American Literature: Early (3 credits)
 ENG 254 American Literature: Middle (3 credits)
 ENG 255 American Literature: Modern (3 credits)
 ENG 260 Women Writers (3 credits)
 ENG 261 Science Fiction (3 credits)
 ENG 275 Bible as Literature (3 credits)
 HUM 101 Humanities: Prehistoric to Middle Ages (3 credits)

- HUM 102 Humanities: Renaissance Through the Enlightenment (3 credits)
 HUM 103 Humanities: The Romantic Era to Contemporary Society (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 161 Music Appreciation (3 credits)
 MUS 205 Introduction to Jazz (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)
 TA 106 Introduction to Theater (3 credits)
 TA 144 Improvisation (3 credits)
 TA 145 Improvisation (3 credits)
 TA 146 Improvisation (3 credits)
 WR 240 Personal Journal Writing (3 credits)
 WR 241 Creative Writing: Fiction (3 credits)
 WR 242 Creative Writing: Poetry (3 credits)

Arts & Letters Credits Required 12**Social Science Courses.** Select a minimum of 8 credits with the same prefix and a minimum of 3 credits with a different prefix, for a total of 15 credits:

- 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)
 HDFS 200 Human Sexuality (3 credits)
 HDFS 201 Individual & Family Development (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)
 HST 240 War & the Modern World (3 credits)
 PHL 201 Introduction to Philosophy (3 credits)
 PHL 202 Elementary Ethics (3 credits)
 PHL 215 History of Western Philosophy (3 credits)
 PS 104 Problems in American Politics (3 credits)
 PS 200 Introduction to Politics (3 credits)
 PS 201 Introduction to American Politics & Government (3 credits)

PS 203	State & Local Government in Oregon (3 credits)
PS 204	Introduction to Comparative Politics (3 credits)
PS 205	Introduction to International Relations (3 credits)
PS 211	Peace & Conflict (3 credits)
PS 220	U.S. Foreign Policy (3 credits)
PS 240	Introduction to Public Policy (3 credits)
PS 252	Constitutional Law (3 credits)
PSY 101	Psychology & Human Relations (3 credits)
PSY 201	General Psychology (3 credits)
PSY 202	General Psychology (3 credits)
PSY 203	General Psychology (3 credits)
PSY 215	Introduction to Developmental 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)
R 211	The Old Testament (3 credits)
R 212	The New Testament (3 credits)
SOC 204	General Sociology (3 credits)
SOC 205	General Sociology (3 credits)
SOC 206	General Sociology (3 credits)
SP 219	Small Group Communication (3 credits)
Social Science Credits Required 15	

Math/Science/Computer Science. Select a minimum of 15 credits, including at least 12 credits in biological or physical science courses that include laboratories. Laboratory classes are indicated below with an asterisk (*). Choose from at least two disciplines. The general education math may not be used to meet this requirement.

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 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* (4 credits)
BI 232	Human Anatomy & Physiology* (4 credits)
BI 233	Human Anatomy & Physiology* (4 credits)
BI 234	Microbiology* (4 credits)
CH 121	College Chemistry* (5 credits)
CH 122	College Chemistry* (5 credits)
CH 123	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 261	Data Structures (4 credits)
FW 251	Principles of Wildlife Conservation (3 credits)
FW 252	Wildlife Resources: Birds* (4 credits)
G 101	Introduction to Geology* (4 credits)
G 102	Introduction to Geology* (4 credits)
G 103	Introduction to 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)
GS 111	Forensic Science* (4 credits)
MTH 105	Introduction to Contemporary Math (4 credits)
MTH 111	College Algebra (5 credits)
MTH 112	Trigonometry (5 credits)
MTH 116	Calculus Preparation (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)
Science/Math/Computer Science Credits Required 15	

Total Distribution Credits Required: 42

Additional courses for a total of 90 credits. (Up to 12 professional technical credits may be included. Professional technical credits are professional technical courses that are required in state-approved professional technical programs.)

Total Credits Required: 90

Requirements for the Associate of Science Degree

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 University and Linn-Benton Community College to provide transfer of LBCC coursework to OSU. Students who complete this degree and are accepted to Oregon State University 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. For a list of accepted courses at OSU, refer to the LBCC web site. Go to <http://www.linnbenton.edu/dualenrollment>, then click on the "helpful links" button and look for the "Articulation Tables" links. (The Articulation Tables identify course equivalencies.)

Students pursuing the Associate of Science degree **must** meet additional program requirements in one of the following specific emphasis subject areas. If your area of interest is not listed as an AS degree in this catalog, check with an LBCC advisor or counselor to determine the one that is most appropriate for your career goal.

For students **not** transferring to Oregon State University, 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.

LBCC Associate of Science Degree	OSU Degree
Agricultural Business Management	Agricultural & Resource Economics (BS) Agricultural, Business Mgmt. Option (BS)
Agriculture, General	Crop & Soil Science (BS) General Agriculture (BS) Horticulture (BS) Rangeland Resources (BS)
Animal Science	Animal Sciences (BS)
Art	Applied Visual Arts (BFA) Art (BA or BS)
Biological Sciences	Biology (BS) Bioresource Research (BS) Botany (BS) Environmental Science (BS) Fisheries & Wildlife Science (BS) Food Science & Technology (BS) Forest Management (BS) Medical Technology (BS) Microbiology (BS) Zoology (BA)
Biological Sciences or Chemistry or Physics	Biochemistry & Biophysics (BS)
Biological Sciences or Physics	Radiation Health Physics (BS)
Business Administration	Business Administration (BA or BS)
Chemistry	Chemistry (BA or BS) Pre-Pharmacy (BS) Wood Science Technology (BS)
Computer Science	Computer Science (BA or BS)
Economics	Economics (BA or BS)
Education*	<u>Elementary</u> : Human Development & Family Studies or General Science or Liberal Studies <u>Secondary</u> : Academic subject major or Technology Education (BA or BS)
Engineering	Biological Engineering (BS) Chemical Engineering (BS) Civil Engineering (BA or BS) Civil Engineering - Forest Engineering (BS) Computer Engineering (BS) Construction Engineering Management (BA or BS) Electrical & Electronics Engineering (BS) Engineering Physics (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 or Technical Writing	English (BA)

LBCC Associate of Science Degree	OSU Degree
Exercise & Sport Science	Exercise & Sport Science (BS)
Foreign Language	French (BA) German (BA) Spanish (BA)
General Science	Environmental Health & Safety (BS) Forest Recreation Resources (BS) General Science (BS) Geology (BA or BS) Natural Resources (BS)
Health & Human Sciences (formerly Home Economics)	Apparel Design (BS) Housing Studies (BS) Human Development & Family Studies (BS) Interior Design (BS) Merchandising Management (BS) Nutrition & Food Management (BS)
Health Promotion & Education	Health Promotion & Education (BS)
Journalism/Mass Communications	** (BA or BS)
Mathematics	Mathematical Sciences (BS) Mathematics (BS)
Music	Music (BA or BS)
Physics	Physics (BA or BS) Computational Physics (BS)
Pre-Restaurant Management	Restaurant & Food Service Management Option (BS)
Social Science	American Studies (BA or BS) Anthropology (BA or BS) Ethnic Studies (BA or BS) History (BA or BS) Philosophy (BA or BS) Political Science (BA or BS) Psychology (BA or BS) Sociology (BA or BS)
Speech Communication	Speech Communication (BA or BS)
Theater	Speech Communication (BA or BS)

*Education: Students who are interested in elementary education should choose one of these subject areas: (1) Human Development and Family Studies; (2) Liberal Studies; or (3) General Science. Students who are interested in secondary education need an academic subject major and need to see an Education advisor.

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

Foreign Language: Although foreign language is not required for an AS degree at LBCC, OSU requires two years of high school foreign language (same language) or two terms of college foreign language for all degrees. Furthermore, students planning to pursue a BA degree at OSU will be required to complete two years of foreign language study.

General Education Requirements

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

Writing/Composition. Take the following course:

- 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.)

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 Grammar (3 credits)
WR 214 Business Communications (3 credits)
WR 227 Technical Report Writing (3 credits)
WR 228 Advanced Technical Writing (3 credits)
WR 241 Creative Writing: Fiction (3 credits)
WR 242 Creative Writing: Poetry (3 credits)

Writing/Composition Credits Required 6**Speech.** Select one speech course from the following:

- SP 111 Fundamentals of Speech (3 credits)
SP 112 Introduction to Persuasion (3 credits)
SP 218 Interpersonal Communication (3 credits)

Speech Credits Required 3**Math.** Select 4 math credits from the following:

- 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 212 Fundamentals of Elementary Mathematics II (4 credits)
MTH 213 Fundamentals of Elementary Mathematics III (4 credits)
MTH 231 Elements of Discrete Mathematics (4 credits)
MTH 232 Elements of Discrete Mathematics (4 credits)
MTH 241 Calculus for Biological/Management/Social Sciences (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)

Math Credits Required 4**Health & Physical Education.** Take the following class:

- PE 231 Lifetime Health & Fitness (3 credits)

Fitness Credits Required 3

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

Biology Perspectives. Select one of the following courses:

- ANS 121 Introduction to Animal Science (4 credits)
BI 101 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)
BI 234 Microbiology (4 credits)

Biological Science Credits Required 4**Physical Science Perspectives.** Select one of the following courses:

- 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)
G 101 Introduction to Geology (4 credits)
G 102 Introduction to Geology (4 credits)
G 103 Introduction to 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)
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)

Physical Science Credits Required 4

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

Physical/Biological Science Credits Required 4**Cultural Diversity Perspectives.** Select 3 credits from the following:

- ANTH 210 Comparative Cultures (3 credits)
ANTH 230 Time Travelers (3 credits)
ANTH 232 Native North Americans (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 240 Native American Literature (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)
R 101 Introduction to Religious Studies (3 credits)
R 102 Religions of Western World (3 credits)
R 103 Religions of Eastern World (3 credits)

Cultural Diversity Credits Required 3**Difference, Power & Discrimination Perspectives.** Select 3 credits from the following:

- EC 220 Contemporary U.S. Economic Issues (3 credits)
ENG 220 Literature of American Minorities (credits)
HDFS 201 Individual & Family Development (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)
PSY 215 Introduction to Developmental Psychology (3 credits)
SOC 206 General Sociology (3 credits)
SOC 222 Marriage Relationships (3 credits)

Difference/Power/Discrimination**Credits Required 3****Literature & the Arts Perspectives.** Select 3 credits from the following:

- ART 102 Understanding Art (3 credits)
ART 204 Survey of Art History (3 credits)
ART 205 Survey of Art History (3 credits)
ART 206 Survey of Art History (3 credits)
ENG 104 Literature: Fiction (3 credits)
ENG 105 Literature: Drama (3 credits)
ENG 106 Literature: Poetry (3 credits)
ENG 107 Western World Literature: Classical (3 credits)
ENG 108 Western World Literature: Middle Ages Through Neoclassicism (3 credits)
ENG 109 Western World Literature: Modern (3 credits)
ENG 110 Film Studies (3 credits)

ENG 121	Mystery Fiction (3 credits)
ENG 201	Shakespeare (3 credits)
ENG 202	Shakespeare (3 credits)
ENG 203	Shakespeare (3 credits)
ENG 204	English Literature: Early (3 credits)
ENG 205	English Literature: Middle (3 credits)
ENG 206	English 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 220	Literature of American Minorities (3 credits)
ENG 221	Children's Literature (3 credits)
ENG 253	American Literature: Early (3 credits)
ENG 254	American Literature: Middle (3 credits)
ENG 255	American Literature: Modern (3 credits)
ENG 260	Women Writers (3 credits)
ENG 261	Science Fiction (3 credits)
ENG 275	Bible as Literature (3 credits)
MUS 105	Introduction to Rock Music (3 credits)
MUS 161	Music Appreciation (3 credits)
MUS 205	Introduction to Jazz (3 credits)
TA 106	Introduction to Theater (3 credits)

Literature & the Arts Credits Required 3

Social Processes & Institutions Perspectives. Select 3 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	Individual & Family Development (3 credits)
HE 225	Social & Individual Health Determinants (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)
PHL 201	Introduction to Philosophy (3 credits)
PHL 202	Elementary Ethics (3 credits)
PS 104	Problems in American Politics (3 credits)
PS 200	Introduction to Politics (3 credits)
PS 201	Introduction to American Politics & Government (3 credits)
PS 205	Introduction to International Relations (3 credits)
PSY 201	General Psychology (3 credits)
PSY 202	General Psychology (3 credits)
PSY 203	General Psychology (3 credits)
PSY 215	Introduction to Developmental Psychology (3 credits)
PSY 231	Human Sexuality (3 credits)
SOC 204	General Sociology (3 credits)
SOC 205	General Sociology (3 credits)

Social Processes & Institutions

Credits Required 3

Western Culture Perspectives. Select 3 credits from the following:

ART 204	Survey of Art History (3 credits)
ART 205	Survey of Art History (3 credits)
ART 206	Survey of Art History (3 credits)
EC 215	Economic Development of the U.S. (4 credits)
ENG 105	Literature: Drama (3 credits)
ENG 107	Western World Literature: Classical (3 credits)
ENG 108	Western World Literature: Middle Ages Through Neoclassicism (3 credits)
ENG 109	Western World Literature: Modern (3 credits)
ENG 110	Introduction to Film Studies (3 credits)
ENG 201	Shakespeare (3 credits)
ENG 202	Shakespeare (3 credits)
ENG 203	Shakespeare (3 credits)
ENG 204	English Literature: Early (3 credits)
ENG 205	English Literature: Middle (3 credits)

ENG 206	English Literature: Modern (3 credits)
ENG 253	American Literature: Early (3 credits)
ENG 254	American Literature: Middle (3 credits)
ENG 255	American Literature: Modern (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 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	Humanities: Prehistoric to Middle Ages (3 credits)
HUM 102	Humanities: Renaissance—the Enlightenment (3 credits)
HUM 103	Humanities: The Romantic Era to Contemporary Society (3 credits)
PHL 201	Introduction to Philosophy (3 credits)
PHL 202	Elementary Ethics (3 credits)
PHL 215	History of Western Philosophy (3 credits)
R 211	The Old Testament: Historical Background (3 credits)
R 212	The New Testament: Historical Background (3 credits)

Western Culture Credits Required 3

Total General Education Credits Required 43

Program Emphasis Requirements 47

Complete at least 47 credits based on program emphasis requirements. See specific program information. (Up to 12 professional technical credits may be included. Professional technical credits are professional technical courses that are required in state-approved professional technical programs.)

Total Credits Required: 90

Liberal Arts Core Requirements for the Associate of Science Degree

Programs that have this requirement include: Art, Economics, English, Journalism and Mass Communication, Music, Social Science, Speech Communication, Technical Communications and Theater.

I. Select one course from the following:

ART	102, 115, 116, 131, 132, 133, 154, 181, 204, 205, 206, 234, 281
MP	115/215, 122/222, 141/241
MUS	105, 161, 205
TA	106, 121, 122, 144, 145, 146, 180/282, 185/285
WR	241, 242

Credits Required 3

II. Select one course from the following:

ENG	104, 105, 106, 107, 108, 109, 121, 201, 202, 203, 204, 205, 206, 207, 208, 209, 211, 253, 254, 255, 260, 261, 275
HST	101, 102, 103, 201, 202, 203
HUM	101, 102, 103
PHL	201, 202, 215
R	101, 102, 103, 211, 212

Credits Required 3

III. Select one course from the following:

ANTH	210, 232
ENG	207, 208, 209
HST	157, 158, 159
R	103

Credits Required 3

IV. Select one course from the following:

ANTH	103, 210, 230, 232
EC	115, 201, 202, 215, 216, 220
PS	104, 200, 201, 203, 204, 205, 220, 240, 252
PSY	101, 201, 202, 203, 215, 231
SOC	204, 205, 206, 222

Credits Required 3**V. Select one additional course from previous categories I – IV.****Credits Required 3****Total Liberal Arts Core Credits Required 15***No credit may be used for more than one requirement.*

Requirements for the Associate of General Studies Degree

1. Complete the general education requirements and 55 credits of electives.
2. Complete a minimum of 90 credits.
3. Complete a minimum of 24 credits at Linn-Benton Community College.
4. Maintain a minimum accumulative grade point average of 2.00.

General Education Requirements. Courses numbered 0.
(zero decimal) will not apply toward general education requirements.

Writing/Composition. 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.)
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Writing/Composition Credits Required 3**Speech.** Select one speech course:

SP 100	Introduction to Speech Communication (3 credits)
SP 111	Fundamentals of Speech (3 credits)
SP 112	Introduction to Persuasion (3 credits)
SP 218	Interpersonal Communication (3 credits)

Speech Credits Required 3**Math.** Take the following course or a higher level math course:

MTH 061	Survey of Math Fundamentals (3 credits)
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Also select one class from the following:

MTH 062	Occupational Trigonometry (1 credit)
MTH 063	Industrial Shop Math (1 credit)
MTH 064	Business Applications of Math Fundamentals (1 credit)
OA 2.557	Advanced Business Math Applications (1 credit)

Math Credits Required 4

Health & Physical Education. 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 (3 credits)
HE 252	First Aid (3 credits)
HE 261	CPR (1 credit)
PE 185	Activity Courses (1 credit)
PE 231	Lifetime Health & Fitness (3 credits)

Health & Physical Education Credits Required 4**General Electives.** Select 55 general elective courses.**General Electives Required 55**

Focused Electives. Also select 21 focused electives from either Option 1 or Option 2.

Option 1. 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, biology, botany, physical science, physics, zoology

Focused Elective Credits for Option 1 21

Option 2. Select 21 credits of professional technical courses that are required in one- or two-year programs.

Focused Elective Credits for Option 2 21**Total Credits Required: 90**

Requirements for Certificates and Diplomas

Refer to "Programs of Study" in this catalog.

Accounting Technology

Program Contacts:

Maynard Chambers, Michael Houser

Additional Faculty:

Sally Andrews, Myrna Gusdorf, Paul Jorgensen, Wendy Krislen, Ian Priestman

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 money taken in or spent, prepare bank deposits; summarize spending habits; and prepare 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 being responsible for accounts payable and receivable. More experienced accountants may be responsible for payroll, receivables, payables and the entire accounting cycle.

As offices computerize their financial records, more accountants are using accounting software on computers. Experienced workers may code documents and post transactions on the computer. They can review invoices and statements as well as check reports.

Accountants must ensure that their actions comply with federal and state laws and with company procedures. They need knowledge in economics and accounting; general office work such as filing and recording information; mathematics; the English language; computer hardware and software; laws, rules, and court procedures; providing customer services; and the political process.

Program Requirements

Two programs are available for 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. Both prepare students for entry-level positions in bookkeeping and accounting; however, graduates of the two-year program should be able to enter at a higher level and advance further.

Students entering the program should have a high interest in business operations, attention to detail, computer software, and working in a team environment. They also should have sufficient math and writing skills to enroll in MTH 065 Elementary Algebra and WR 121 English Composition.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Accounting Technology

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
BA 2.530	Practical Accounting I	4
BA 101	Introduction to Business	4
MTH 065	<i>Elementary Algebra</i>	4
OA 201	WordPerfect for Business (3 credits) or	
OA 202	MS Word for Business (3 credits)	3

Winter Term		
BA 2.531	Practical Accounting II	4
BA 2.518	Commercial Law (3 credits) or	
BA 230	Business Law (4 credits)	3-4
CIS 1250	Introduction to Windows	1
CIS 125S	Introduction to Spreadsheets	1
OA 2.515	Business Math with Calculators	2
WR 121	<i>English Composition</i>	3

Spring Term		
BA 2.532	Practical Accounting III	4
BA 2.535	Payroll Accounting	2
BA 2.684	Computerized Accounting	4
BA 224	<i>Human Resource Management (3 credits) or</i>	
BA 285	<i>Business Relations in a Global Economy (4 credits)</i>	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
SP 100	<i>Introduction to Speech Communication</i>	3

Fall Term - Second Year		
BA 2.127	Governmental Accounting	3
BA 2.595	Professional Accounting I	3
BA 206	Principles of Management	3
CIS 125D	Introduction to Databases	1
	<i>Science, Technology & Society</i>	3
	<i>Health or Activity Course</i>	1

Winter Term		
BA 2.534	Cost Accounting	3
BA 2.596	Professional Accounting II	3
BA 256	Income Tax Accounting	3
CIS 135S	Advanced Spreadsheets	3
	Business/Computer Elective or CWE	4

Spring Term		
BA 2.597	Professional Accounting III	3
BA 222	Financial Management	3
EC 115	Outline of Economics	4
	Business/Computer Elective or CWE	3
	<i>Health or Activity Course</i>	2

General Education Requirements: 19

Program Requirements: 71-73

Total Credits Required: 90-92

PROFESSIONAL TECHNICAL

One-Year Certificate in Accounting Clerk

Course No.	Course Title	Credits
Fall Term		
BA 2.530	Practical Accounting I	4
BA 101	Introduction to Business	4
MTH 065	Elementary Algebra	4
OA 201	WordPerfect for Business or	
OA 202	MS Word for Business	3
Winter Term		
BA 2.518	Commercial Law (3 credits) or	
BA 230	Business Law (4 credits)	3-4
BA 2.531	Practical Accounting II	4
CIS 1250	Introduction to Windows	1
CIS 125S	Introduction to Spreadsheets	1
OA 2.515	Business Math with Calculators	2
WR 121	<i>English Composition</i>	3

Spring Term

BA 2.532	Practical Accounting III	4
BA 2.535	Payroll Accounting	2
BA 2.684	Computerized Accounting	4
BA 224	Human Resource Management (3 credits) or	
BA 285	Business Relations in a Global Economy (4 credits) ..	3-4
CIS 125D	Introduction to Databases	1
SP 100	Introduction to Speech Communication	3

Total Credits Required: 46-48

Administrative Assistant

Program Contact:

Mary Ann Lammers

Additional Faculty:

Twila Lehman, Nancy Noe, Sally Stouder

Administrative assistants work in all types of organizations and firms, performing a variety of clerical and administrative duties. They spend some of their day answering the phone and giving information to callers. They schedule appointments, make travel arrangements, place orders, organize files, compose letters, produce documents, and compile lists or other data from various sources. In addition, they may conduct research on the Internet and write reports of their findings or manage projects using database management software.

Secretaries use a variety of office equipment to do their work. They use fax machines, copiers, and complex phone systems. They may use complex computer software to run spreadsheets or do desktop publishing. Because of these tools, managers and executives often perform much of their own word processing. Secretaries in these offices are freed to support several members of the professional staff, often working as part of a team.

The Administrative Assistant program offers new class formats and new teaching methodologies designed to attain proficiencies and outcomes formulated from local, as well as national, standards. The program emphasizes working in a high-performance environment, incorporating the new workplace standards of teamwork and collaborative projects. Students develop software, computer, and general office-related skills, with additional emphasis on accounting, law, and economics. They are part of a learning community that provides the opportunity to network, collaborate with other classmates in completing assigned projects, and develop high standards of quality and participation. The advanced skills and certification offered by this program will put the student a step above other applicants upon graduation.

Program Requirements

This two-year professional technical program is the first Tech Prep Associate degree (TPAD) option in the LBCC's Business Technology Department. Students in the Administrative Assistant (AA) TPAD develop new skills for new roles and responsibilities needed in today's fast-paced business settings. 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. If 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 Assistant program is designed to be completed in two years. This assumes, however, that the entering student knows how to type by touch and has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 065 Elementary Algebra. It is advisable to take the test as early as possible. If

developmental coursework is required, we recommend that it be taken the summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: OA 121 Keyboarding (2 credits), RD 080 Building College Reading or RD 090 Strategies for Effective Reading (3 credits), WR 090 The Write Course (required if writing score is less than 40th percentile) (4 credits), MTH 060 Introduction to Algebra (4 credits), WR 115 Introduction to Writing (3 credits).

Facilities

Skills classes are taught in self-paced office laboratory classrooms. New technology is introduced both through concept courses and hands-on experience with modern equipment.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Administrative Assistant

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 1250	Introduction to Windows	1
OA 2.500	Business Orientation	1
OA 2.515	Business Math with Calculators	2
OA 2.588	Editing Skills for Information Processing	3
OA 2.652	Filing	1
OA 122	Formatting	2
OA 123A	Typing Skillbuilding	2
OA 201	WordPerfect for Business	3
Winter Term		
BA 2.518	Commercial Law	3
CIS 125D	Introduction to Databases	1
CIS 125P	Introduction to Presentations	1
CIS 125S	Introduction to Spreadsheets	1
OA 2.527	Applied Document Processing	3
OA 2.683	Computerized Records Management	3
OA 202	MS Word for Business	3
Spring Term		
OA 2.551	Office Communications	4
OA 2.579	Integrated Software Applications	3
OA 2.616	Job Success Skills	1
OA 2.645	Administrative Procedures I	6
SP 218	<i>Interpersonal Communication</i>	3
Fall Term - Second Year		
BA 2.530	Practical Accounting I	4
BA 101	Introduction to Business	4
OA 203	Advanced Word Processing	3
PE 231	<i>Lifetime Health & Fitness²</i>	3
	<i>Science, Technology & Society</i>	3
Winter Term		
BA 2.531	Practical Accounting II	4
OA 2.613	CWE for Office Professionals	4
OA 2.646	Administrative Procedures II	4
OA 2.682	Desktop Publishing	3
OA 2.690	Preparation for IAAP Certifying Exam	1

2—Other classes may substitute. See advisor.

Spring Term

BA 224	<i>Human Resource Management (3 credits) or</i>	
EC 115	<i>Outline of Economics (4 credits)</i>	(3)1
(Three credits apply toward general education requirements; one credit applies toward program.)		
MTH 065	<i>Elementary Algebra</i>	4
OA 2.613	CWE for Office Professionals	4
WR 121	<i>English Composition</i>	3

General Education Requirements: 19**Program Requirements: 75-76****Total Credits Required: 94-95**

Administrative Medical Assistant

Program Contact:

Sally Stouder, Mary Ann Lammers

Additional Faculty:

Twila Lehman, Nancy Noe

The Administrative Medical Assistant program prepares students for front office work in physicians' offices, clinics or hospitals. Medical administrative assistants perform office duties that use their knowledge of medical terms and procedures. Duties may include scheduling and receiving patients; transcribing 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, coding diagnoses and procedures, office accounts, fees and collections. They can assist physicians with reports, speeches and journal articles. All of these tasks require medical administrative assistants to be experts with medical terms.

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, must enjoy detail work and must work well under stress, as he/she will be dealing with many different people each day—many of whom are ill.

During his/her second year, a student's work experience consists of 240 hours in a medical administrative assistant or front office position in a clinic or hospital. Students are trained to work independently with minimal supervision. This opportunity provides a bridge between classroom and career.

Program Requirements

The Administrative Medical Assistant program is designed to be completed in two years. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 060 Introduction to Algebra. It is advisable to take the test as early as possible. If development coursework is required, we recommend that it be taken the summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: OA 121 Keyboarding (2 credits), RD 080 Building College Reading or RD 090 Strategies for Effective Reading (3 credits), WR 090 The Write Course (4 credits), MTH 020 Basic Mathematics (4 credits), MTH 060 Introduction to Algebra (4 credits), WR 115 Introduction to Writing (3 credits).

PROFESSIONAL TECHNICAL

Associate of Applied Science in Administrative Medical Assistant*See graduation requirements for Associate of Applied Science degree.**Classes shown below in italic are general education classes.*

Course No.	Course Title	Credits
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Fall Term - First Year

CIS 1250	Introduction to Windows	1
MO 5.630	Medical Terminology I	3
OA 2.500C	Business Orientation: Medical	1
OA 2.515M	Business Math with Calculators: Medical	2
OA 2.588	Editing Skills for Information Processing	3
OA 123A	Typing Skillbuilding	2
OA 202	MS Word for Business	3

Winter Term

MO 5.414	Drug Classifications & Names	3
MO 5.631	Medical Terminology II	3
OA 2.544	Medical Insurance Procedures	3
OA 2.671	Medical Law & Ethics	2
OA 122	Formatting	2
OA 123B	Advanced Typing Skillbuilding (2 credits) or	
OA 124	Typing: Speed & Accuracy Development (3 credits) ...	2-3

Spring Term

HE 252	<i>First Aid</i>	3
MO 5.632	Medical Terminology III	3
MO 5.665	Documentation & Screening in the Medical Office ...	2
OA 2.527	Applied Document Processing	3
OA 2.616	Job Success Skills	1
OA 2.656M	Medical Information Processing	3
OA 2.672	Basic Coding	3

Fall Term - Second Year

CIS 125S	Introduction to Spreadsheets	1
MO 5.625	Basic Clinical Office Procedures	5
OA 2.551	Office Communications	4
OA 2.670	Medical Office Procedures	4
OA 2.680	Advanced Coding	3

Winter Term

BA 2.530	Practical Accounting I	4
BA 224	<i>Human Resource Management</i>	3
OA 2.524	Medical Transcription I	3
OA 2.613	CWE for Office Professionals	4
	<i>Science, Technology & Society</i>	3

Spring Term

MTH 065	<i>Elementary Algebra</i>	4
OA 2.525	Medical Transcription II	3
OA 2.613	CWE for Office Professionals	4
SP 218	<i>Interpersonal Communications</i>	3
WR 121	<i>English Composition</i>	3

General Education Requirements: 19**Program Requirements: 80-81****Total Credits Required: 99-100**

Agricultural Business Management

Program Contacts:

Rick Klampe

Additional Faculty:

Jenny Strooband, Clayton Weber

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 that precedes specialized course involvement. Agriculture Resource Economics interests also could be pursued. 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 College 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.

Program Requirements

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. 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.

TRANSFER

Associate of Science with an emphasis in Agriculture Business Management

See graduation requirements for Associate of Science degree. The math, writing, biological and physical science, and three of the perspectives credits are met by the listed program requirements.

General Education Requirements: 43

Course No.	Course Title	Credits
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Fall Term - First Year

AG 111	Computers in Agriculture	2
MTH 111	College Algebra	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

BI 101	General Biology or	
BI 102	General Biology or	
BI 103	General Biology	4

Winter Term

ARE 221	Marketing in Agriculture	3
MTH 241	Calculus for Biological/Management/Social Sciences	4
	Biological or Physical Science	4-5
WR 121	English Composition	3

Spring Term

WR 214	Business Communications	3
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General education requirements and/or elective courses in Animal Science, Crop Science, and Fish & Wildlife.

Fall Term - Second Year

ARE 211	Management in Agriculture	4
BA 211	Principles of Accounting: Financial	4
CH 121	College Chemistry	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

Winter Term

BA 213	Principles of Accounting: Managerial	4
EC 201	Introduction to Microeconomics	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
WR 227	Technical Report Writing	3

Spring Term

BA 230	Business Law	4
EC 202	Introduction to Macroeconomics	4
	Select additional elective courses in Animal Science, Crop Science, and Fish & Wildlife	14-17

Program Requirements: 47

Total Credits Required: 90

Agriculture

Program Contact:

Stefan Seiter

Additional Faculty:

Rick Klampe, Clayton Weber

The Agriculture and Horticulture curriculums prepare students for entry- to mid-level technical employment and are based on necessary competencies identified by the industry. Typical jobs for graduates of the agriculture program include crop production; plant protection, chemical supplies and services; grain, fertilizer, feed and seed supplies and services; inspection services; farm equipment operation, sales and services; and irrigation operation, sales and services. Employment opportunities for horticulture students exist in arboriculture, floriculture, greenhouse operation and management, landscape planting and maintenance, retail landscape and garden center sales, nursery operation and management, plant propagation, nursery sales, maintenance and management of golf courses and parks, and turf management. Some landscapers specialize in trimming and pruning trees. Some may work for residential customers, while others work on large properties such as office buildings and shopping malls. Landscapers may maintain lawns and shrubs; build retaining walls; create terraces for hillsides; or inspect and treat lawns for problems.

Groundskeepers, landscapers and nursery workers need knowledge about plants, animals, and living organisms and how they function; properties of substances and the changes that occur when they interact; using and repairing machines and tools.

Program Requirements

The Agriculture and Horticulture curricula lead to an Associate of Applied Science degree or a one-year certificate. Students take a variety of science-oriented courses and are expected to have basic mathematical skills. A four-credit algebra course is required for the AAS degree.

Most agriculture and horticulture classes are offered during the day. Part-time enrollment is common, but completing the AAS degree requires two full years, so students who attend part time or begin mid year must attend longer. Some courses are offered only in alternate years; schedules must be planned with this in mind.

Instructional facilities, including a greenhouse, labs, ornamental gardens and the campus grounds, are used for demonstrations, skill-building and evaluation.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Agriculture

See graduation requirements for Associate of Applied Science degree.
MTH 065 Elementary Algebra is a required general education class.

Course No.	Course Title	Credits
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Fall Term - First Year

AG 8.125	Soils I	3
AG 8.165	Plant Science	4
CSS 200	Principles of Crop Science	4

Winter Term

AG 8.126	Soils II	3
AG 8.138	Irrigation Systems	3
AG 111	Computers in Agriculture	2
HT 8.102	Career Exploration: Horticulture	1

Spring Term

CSS 105	Soils & Man	3
CSS 210	Forage Crops	3

Fall Term - Second Year

AG 8.131	Pest Management	3
ARE 211	Management in Agriculture	4
	Biological or Physical Science	4
SPN 101	First-Year Spanish I	3(1)

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

Winter Term

AG 8.130	Agricultural Chemicals	4
ARE 221	Marketing in Agriculture	3
	Biological or Physical Science	4

Spring Term

WE 202	CWE Seminar	1
WE 1.2801	CWE Agriculture	11

Select additional elective courses or approved CWE 10

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

PROFESSIONAL TECHNICAL

One-Year Certificate in Agriculture

Course No.	Course Title	Credits
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Fall Term

AG 8.125	Soils I	3
AG 8.131	Pest Management	3
AG 8.165	Plant Science	4
CSS 200	Principles of Crop Science	4

Winter Term

AG 8.126	Soils II	3
AG 8.130	Agricultural Chemicals	4
AG 8.138	Irrigation Systems	3
AG 111	Computers in Agriculture	2
HT 8.102	Career Exploration: Horticulture	1

Spring Term

CSS 105	Soils & Man	3
CSS 210	Forage Crops	3

Select 7 credits of math and writing courses at appropriate level based on College Placement Test scores 7

Total Credits Required: 40

Agriculture, General**Program Contacts:**

Rick Klampe

Additional Faculty:

Clayton Weber, Stefan Seiter

The Agriculture 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 agriculture, agriculture education, horticulture, crop science and range-land resources.

The 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 College 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 the student longer than two years to complete the program.

TRANSFER

Associate of Science with an emphasis in General Agriculture

See graduation requirements for the Associate of Science degree. Classes shown in *italic* are general education classes.

General Education Requirements: 43

Course No.	Course Title	Credits
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Fall Term - First Year

AG 111	Computers in Agriculture	2
BI 101	General Biology	4
SP 111	Fundamentals of Speech ⁷ or	
SP 112	Introduction to Persuasion ⁷	3
	Cultural Diversity Requirement ⁷	3

Winter Term

ARE 221	Marketing in Agriculture	3
BI 102	General Biology	4
	Literature and the Arts Requirement ⁷	3
WR 121	English Composition ⁷	3

Spring Term

BA 215	Survey of Accounting	4 credits
BI 103	General Biology	4
MTH 111	College Algebra ⁷	(4)1

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

WR 227	Technical Report Writing ⁷	3
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Fall Term - Second Year

ARE 211	Management in Agriculture	4
CH 121	College Chemistry	(4)1

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

PE 231	Lifetime Health & Fitness ⁷	3
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Winter Term

BA 230	Business Law	4
CH 122	College Chemistry	(4)1

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

	Western Culture Requirement ⁷	3
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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.

Spring Term

EC 201	Introduction to Microeconomics	(3)1
	(Three credits apply toward general education requirements; one credit applies toward program.)	
	Difference, Power, and Discrimination Requirement ⁷	3

Select from the electives below 18

ANS 121	Introduction to Animal Science (4 credits)
ANS 210	Feeds and Feed Processing (4 credits)
ANS 211	Applied Animal Nutrition (3 credits)
ANS 231	Livestock Evaluation (3 credits)
CH 123	College Chemistry (5 credits)
CH 241	Organic Chemistry (4 credits)
CH 242	Organic Chemistry (4 credits)
CH 243	Organic Chemistry (4 credits)
CSS 105	Soils and Man (3 credits)
CSS 200	Principles of Crop Science (4 credits)
HORT 228	Landscape Plant Materials (3 credits)
FW 251	Principles of Wildlife Conservation (3 credits)
MTH 112	Trigonometry (5 credits)
MTH 241	Calculus for Biological/Mgmt./Social Sciences (4 credits)
MTH 245	Math for Biological/Mgmt./Social Sciences (4 credits)

Program Requirements: 47

Total Credits Required: 90

Animal Science

Program Contacts:

Rick Klampe

Additional Faculty:

Jenny Strooband, Clayton Weber

LBCC offers all of the lower-division transfer courses that a potential transfer student in Animal Science or Agricultural Education needs. These courses provide the proper background for those wanting to further their educational goals. Valuable practical instruction assists students in meeting their objectives.

Curriculum completion is the first step toward meeting lower-division requirements for students interested in pursuing a career in teaching. Also available are lower-division transfer courses in a variety of agricultural areas that will provide practical background and experiences for anyone entering the field of education.

Program Requirements

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. A cross-section of lower-division agriculture electives are available, providing practical instructional experiences in animal science, economics and crop production.

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 graduation requirements for Associate of Science degree. Classes shown below in *italic* are general education classes.

General Education Requirements: 43

Course No.	Course Title	Credits
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Fall Term - First Year

AG 111	Computers in Agriculture	2
ANS 121	Introduction to Animal Science	4
CH 221	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 111	<i>College Algebra</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

Winter Term

ARE 221	Marketing in Agriculture	3
CH 222	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	

Spring Term

ANS 231	Livestock Evaluation	3
CH 223	General Chemistry	5

Fall Term - Second Year

ARE 211	Management in Agriculture	4
BI 211	<i>Principles of Biology</i>	4
CSS 200	Principles of Crop Science	4

Winter Term

ANS 210	Feeds & Feed Processing	4
BI 212	Principles of Biology	4
EC 201	<i>Introduction to Microeconomics</i>	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	

Spring Term

ANS 211	Applied Animal Nutrition	3
BI 213	Principles of Biology	4

Select from the electives below 5

ANS 207	Careers in Animal Agriculture (1 credit)
ANS 215	Applied Beef Production (4 credits)
ANS 216A	Applied Sheep Production (4 credits)
ANS 216B	Applied Swine Production (4 credits)
ANS 220	Introductory Horse Science (4 credits)
BA 215	Survey of Accounting (4 credits)

Program Requirements: 49

Total Credits Required: 92

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.

Animal Technology

Program Contacts:

Rick Klampe

Additional Faculty:

Jenny Strooband, Clayton Weber

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, in entering into livestock-related fields or in transferring to four-year institutions to continue their study.

Farm and ranch workers not only feed, water, groom, and care for livestock, they also examine animals for diseases and provide simple medical care. Occasionally, they help with birthing animals. In addition, they tag or brand animals so owners can identify their livestock. They also build or repair structures, such as fences, and keep barns, stables, pens and kennels clean.

Owners of large farms may hire farm managers, who may oversee most farm activities or focus on a single activity, such as harvesting. These managers supervise and direct other workers and many make managerial decisions. They may set goals for what the farm produces and find the best way to market and sell their products. They consider weather predictions, which animal diseases are in their area, the price of farm products, 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 a maximum of practical experience through hands-on laboratory sessions. Persons already employed in specific agricultural fields can upgrade their skills. Students in the program also have an opportunity to participate in competitive collegiate livestock judging.

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 College 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 chemistry or biology, plus other general education courses, such as English composition, speech and social science.

Students can take general education courses at night, but the technical classes are offered only 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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Animal Technology

See graduation requirements for Associate of Applied Science degree.

Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
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Production Option *Select two courses (8 credits) from below:*

ANS 215	Applied Beef Production (4 credits)	
ANS 216A	Applied Sheep Production (4 credits)	
ANS 216B	Applied Swine Production (4 credits)	
ANS 220	Introductory Horse Science (4 credits)	

Fall Term - First Year

AG 8.125	Soils I	3
AG 111	Computers in Agriculture	2
MTH 065	Elementary Algebra	4

Winter Term

AG 8.126	Soils II	3
ANS 207	Careers in Animal Agriculture	1
ANS 278	Genetic Improvement of Livestock	4

Spring Term

ANS 231	Livestock Evaluation	3
CSS 210	Forage Crops	3

Fall Term - Second Year

ARE 211	Management in Agriculture	4
BI 101	General Biology	4

Winter Term

ANS 210	Feeds & Feed Processing	4
ARE 221	Marketing in Agriculture	3
BI 102	General Biology	4

Spring Term

ANS 211	Applied Animal Nutrition	3
AT 156	Livestock Diseases & Parasites	3

Select additional elective courses or approved CWE 19

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

Animal Technology: Dairy Management

Program Contact:

Rick Klampe

Additional Faculty:

Jenny Strooband, Clayton Weber

Dairying is a progressive industry that utilizes science and technology. As dairy farms utilize more technology, dairy producers need skilled personnel to assist in daily operations. These individuals need to be self-motivated with a strong educational background that relates directly to the dairy industry's needs.

The Animal Science Department offers a two-year Associate of Applied Science degree in Animal Technology: Dairy Management. The program curriculum is based on the skills necessary to manage a modern, productive dairy. Students learn proficiency skills in milking management, herd health, genetics, artificial insemination, nutrition, business management and computers. They prepare for the workforce in hands-on classrooms and work-like laboratory situations.

Opportunities for graduates of the Animal Technology/Dairy Management program are varied, depending on the specific interest of the student. Typical jobs include livestock supplies field representative, artificial insemination technician, herdsman, and farm/feed manager.

Program Requirements

Students entering the Animal Technology: Dairy Management program should have a firm background in life and physical sciences and should be prepared to take courses in mathematics and biology. Program completion requires a minimum of 4 credits of math and 8 credits of biology, plus general education courses such as English composition, speech and social sciences.

The program is designed to be completed in two years providing the student has been placed in at least WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra following the College Placement Test. Students whose math and writing skills are below the minimum requirement may take developmental coursework; if so, completing the program may take them longer than two years. The program has an open door policy so students interested in any particular classes may enroll in any courses that are offered.

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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Animal Technology: Dairy Management

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italics* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
AG 8.125	Soils I	3
AG 111	Computers in Agriculture	2
ANS 121	Introduction to Animal Science	4
AT 181	Dairy Management Systems	2
MTH 065	<i>Elementary Algebra</i>	4
Winter Term		
AG 8.126	Soils II	3
ANS 207	Careers in Animal Agriculture	1
ANS 278	Genetic Improvement of Livestock	4
AT 183	Dairy Herd Health	2
SPN 101	<i>First-Year Spanish</i>	(3)1
	(Three credits apply toward general education requirements; one credit applies toward program.)	
WR 121	<i>English Composition</i>	3
Spring Term		
ANS 227	Artificial Insemination	4
CSS 105	Soils & Man	3
CSS 210	Forage Crops	3
	<i>Speech</i>	3
Fall Term - Second Year		
ARE 211	Management in Agriculture	4
AT 182	Milking Management	2
BI 101	General Biology: Agriculture & the Environment	4
WE 1.2801	CWE Agriculture	3
	Approved Electives	2

Winter Term

ANS 210	Feeds & Feed Processing	4
ARE 221	Marketing in Agriculture	3
BI 102	General Biology or	
BI 103	General Biology	4
HE 252	<i>First Aid (3 cr) or</i>	
HE 261	<i>CPR (1 cr) and</i>	
HE 112	<i>Emergency First Aid (1 cr) and</i>	
	<i>additional Health & PE (1 cr)</i>	3
WE 1.2801	CWE Agriculture	2

Spring Term

ANS 211	Applied Animal Nutrition	3
ANS 231	Livestock Evaluation	3
AT 156	Livestock Diseases & Parasites	3
AT 184	Dairy Feeding & Nutrition	2
	<i>Science, Technology & Society</i>	3

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

Animal Technology: Horse Management

Program Contact:

Jenny Strooband

Additional Faculty:

Rick Klampe, Clayton Weber

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 or in transferring to four-year institutions to continue study. 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.

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 College Placement Test: WR 115 Introduction to 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 general education 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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Animal Technology: Horse Management

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italic* are general education classes.

Course No. Course Title

Fall Term - First Year

AG 111	*Computers in Agriculture	2
ANS 121	Introduction to Animal Science	4
ANS 220	Introductory Horse Science	4

Winter Term

ANS 210	Feeds & Feed Processing	4
ANS 278	Genetic Improvement of Livestock	4
MTH 065	<i>Elementary Algebra</i>	4

Spring Term

AG 280B	CWE Animal Technology	2
ANS 211	Applied Animal Nutrition	3
ANS 221	Equine Industries	3
CSS 210	Forage Crops	3
WE 202	CWE Seminar	1

Fall Term - Second Year

ANS 222	Young Horse Training	2
AT 155	Equine Diseases & Parasites	3
BI 101	General Biology	4

Winter Term

ANS 223	Equine Marketing	2
AT 163	Schooling the Horse I	3
AT 277A	Horse Breeding Management	2
BI 102	General Biology	4

Spring Term

AT 154	Equine Business Management	3
AT 164	Schooling the Horse II	3
AT 277B	Horse Breeding Management Lab	2

Select additional elective courses 11

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

Anthropology

See Social Science.

Apprenticeship

Program Contact:

Holly Ploetz

The Apprenticeship Office in IA 202 serves as the information center for apprenticeship training on campus. This office provides training and specialized recordkeeping for apprentices employed in the various trade professions in the area. Classes offered at LBCC are for registered apprentices and people interested in becoming apprentices.

To become a registered apprentice, a person must be employed by an employer participating in the state apprenticeship program. Taking apprenticeship classes can give the student credentials for employment into the trades.

Classes currently offered on campus for crafts and trades include: millwright, welder, instrument repairer, machinist, plant electrician, limited and electrical technician, pipefitter and law enforcement. Classes can be attended by the general public but may not count toward attaining journey status without specific trade apprenticeship registration.

Once an apprentice has attained journey status, the journey card can count toward attaining an Associate of Applied Science degree in Crafts and Trades. A journey card or approved CWE credit is required for graduation. Of the required 90 credits, 19 must be general education courses.

Information on entrance procedures and requirements for apprenticeship-related training is available from the Apprenticeship Office, (541) 917-4636.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Crafts and Trades

The journey card or approved CWE credit may replace up to 22 of the program requirements.

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

Art

Program Contact:

Analee Fuentes

Additional Faculty:

Dori Litzer, Gary Westford, Jay Widmer

The art curriculum helps students understand visual art. As a process of that understanding, students develop skills that help them express ideas through art. Foundation studio classes provide experience in drawing, painting, compositional design, color design, photography and ceramics. Lecture courses in art history and understanding art embrace the realm of human experience presented through art. Historical and cultural perspective regarding visual expression is explored in all art courses.

The Art Department has well-equipped studios to support instruction in design, drawing, painting, photography and ceramics. In addition, the department has a gallery for the exhibit of both student and professional art work. Facilities are handicapped accessible.

The department offers coursework leading to an Associate of Science degree with an emphasis in Art. This degree is designed for students seeking to transfer to four-year institutions as art majors. In addition to the degree in art, an Associate of Science degree with an emphasis in Photography is available.

Program Requirements

Lecture classes and beginning studio classes are open to all students. Second-term studio classes carry prerequisites.

TRANSFER

Associate of Science with an emphasis in Art

See graduation requirements for Associate of Science degree. ART 204, 205, 206 History of Western Art required. Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

Course No.	Course Title	Credits
ART 115	Basic Design I: Composition	4
ART 116	Basic Design II: Color	4
ART 131	Drawing I	4
ART 132	Drawing II	4
ART 133	Drawing III	4
ART 234	Figure Drawing	4
Select 8 credits from the electives below		8
ART 154	Ceramics I (4 credits)	
ART 181	Introduction to Painting (4 credits)	
ART 254	Ceramics II (4 credits)	
ART 261	Introduction to Photography (3 credits)	
ART 263	Digital Photography (3 credits)	
ART 264	Intermediate Black & White Photography (3 credits)	
ART 266	Photography: Art & Technique (3 credits)	
ART 281	Painting II (4 credits)	

Program Requirements: 32

Total Credits Required: 90

Automotive Technology

Program Contact:

Phil Krolick

Additional Faculty:

R.J. Ehlers, Steve Pearson, Bryan Schiedler

The Automotive Technology program provides students with the facilities, equipment and instruction necessary to develop professional level skills and abilities in auto mechanical work. Upon completion of the two-year certificate or an Associate of Applied Science degree, students will be prepared to enter the field of automotive technology.

This program prepares students to diagnose, repair and maintain modern automobiles and light trucks including power train systems, steering, suspension and braking systems, electrical systems and electronic controls, automatic transmissions, engine overhaul, air-conditioning service and engine performance. All classes prepare students to pass the ASE certification tests.

An Associate of Science degree with a major emphasis in Automotive Technology is also available. This prepares students to pursue a Bachelor of Science degree (see program advisor for details).

Program Requirements

The curriculum is designed to allow student entry into the program at the beginning of each term. Placement into Reading 080 Building College Reading, Math 020 Basic Mathematics and meeting with a program advisor is required prior to registration for some courses. Students taking

prerequisite courses for Writing 121 English Composition and MTH 061 Survey of Math Fundamentals should plan on more than two years to complete the degree requirements. AU 3.307 and 3.308 Mechanical Processes I and II are required for all majors and should be taken during the first year of study. The course content may be challenged for full or partial credit.

In addition to the usual books and supplies, students must provide safety glasses, coveralls or lab coat, and a tool set outlined by the Automotive Department.

Facilities

The program is conducted in modern, well-equipped classrooms and laboratory/shops. The automotive technology shop contains equipment for rebuilding and testing components such as engines and transmissions; a four-wheel computerized alignment rack; tune-up and computer control diagnostic equipment; 10 vehicle hoists; a chassis dynamometer; engine analyzers and many specialized tools.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Automotive Technology

See graduation requirements for Associate of Applied Science degree.

Classes shown below in *italics* are general education classes. Classes offered during multiple terms may be taken as circumstances dictate.

Course No.	Course Title	Credits
Fall Term - First Year		
AU 3.295	Power Train Systems	10
AU 3.307	Mechanical Processes I ¹	2
AU 3.314	Applied Electrical Fundamentals ¹	2
WR 121	<i>English Composition</i>	3

Winter Term

AU 3.296	Steering/Suspension/Braking Systems	10
AU 3.308	Mechanical Processes II ¹	2
AU 3.301	Automotive Service & Repair Practices or CWE	1
MTH 061	Survey of Math Fundamentals	3

Spring Term

AU 3.297	Electrical & Electronic Systems	10
MTH 063	Industrial Shop Math	1
SP 100	<i>Introduction to Speech Communication</i>	3
	<i>Health & Physical Education</i>	3

Fall Term - Second Year

AU 3.300	Automatic Transmissions ¹	10
AU 3.301	Service & Repair Practices or CWE	1
AU 3.315	Advanced Electrical Fundamentals ¹	2
	<i>Science, Technology & Society</i>	3

Winter Term

AU 3.299	Automotive Engines ¹	10
AU 3.301	Automotive Service & Repair Practices or CWE	1
AU 3.303	Mobile A/C and Comfort Systems I ¹	3
	<i>Cultural Diversity & Global Awareness</i>	3

Spring Term

AU 3.298	Automotive Tune-up & Diagnosis ¹	11
AU 3.304	Mobile A/C and Comfort Systems II ¹	3
AU 3.321	Anti-Lock Brake Systems ¹	3

General Education Requirements: 19

Program Requirements 81

Total Credits Required 100

1— Courses offered that term only.

PROFESSIONAL TECHNICAL

Two-Year Certificate in Automotive Technology

Classes marked with an asterisk are offered that term only; all other class sequences may be taken as circumstances dictate.

Course No.	Course Title	Credits
Fall Term - First Year		
AU 3.295	Power Train Systems	10
AU 3.307	Mechanical Processes I ¹	2
AU 3.314	Applied Electrical Fundamentals ¹	2
WR 115	Introduction to College Writing	3
Winter Term		
AU 3.296	Steering/Suspension/Braking Systems	10
AU 3.308	Mechanical Processes II ¹	2
MTH 060	Introduction to Algebra	4
Spring Term		
AU 3.297	Electrical & Electronic Systems	10
SP 100	Introduction to Speech Communication	3
	Health & Physical Education	3
Fall Term - Second Year		
AU 3.300	Automatic Transmissions ¹	10
AU 3.315	Advanced Electrical Fundamentals ¹	2
AU 3.301	Automotive Service & Repair Practices or CWE	1
Winter Term		
AU 3.299	Automotive Engines ¹	10
AU 3.301	Automotive Service & Repair Practices or CWE	1
AU 3.303	Mobile A/C and Comfort Systems I ¹	3
Spring Term		
AU 3.298	Automotive Tune-up & Diagnosis ¹	11
AU 3.304	Mobile A/C and Comfort Systems II ¹	3
AU 3.321	Anti-Lock Brake Systems ¹	3
Total Credits Required:		93

TRANSFER

Associate of Science with an emphasis in Automotive Technology

The Automotive Technology Associate of Science degree is designed to allow successful transfer into a bachelor's degree program in automotive technology. A bachelor's degree qualifies a student for job placement in corporate and management positions. The Associate of Science degree is available through special agreements and models the Associate of Applied Science (outlined above) with the following exceptions: required speech, SP 111 Fundamentals of Speech; required math, MTH 111 College Algebra; required English, WR 121 English Composition and WR 122 English Composition: Argument. See program advisor for details.

Biological Sciences**Program Contact:**

Carolyn Lebsack

Additional Faculty:

Sharon Ketchum, Stephen Lebsack, Richard Liebaert, Steve Skarda

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 any four-year institution. The program is primarily designed, however, for students intending to transfer to 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.

Program Requirements

Students entering this program will progress at a faster rate if they have a firm background in biology and chemistry as well as math.

Facilities

Classes are conducted in modern, well-equipped classrooms and laboratories. Emphasis is placed on hands-on experience and independent inquiry. A full complement of modern lab equipment such as computers and microscopes is available for student use. Class size is limited providing an optimal student-teacher ratio.

TRANSFER

Associate of Science with an emphasis in Biological Sciences

See graduation requirements for Associate of Science degree. The mathematics, writing/composition, biological sciences and physical sciences requirements are met by the listed program requirements. Students in Pre-Vet, Pre-Med and Pre-Dental should take CH 221-223. Other areas may require the 200-level sequence. Students should talk with an advisor to determine which chemistry sequence is appropriate.

General Education Requirements: 43

Course No.	Course Title	Credits
Fall Term - First Year		
BI 211	Principles of Biology	4
CH 121	College Chemistry or	
CH 221	General Chemistry	5
MTH 251	Differential Calculus	5
Winter Term		
BI 212	Principles of Biology	4
CH 122	College Chemistry or	
CH 222	General Chemistry	5
MTH 252	Integral Calculus	5

1— Courses offered that term only.

Spring Term

BI 213	Principles of Biology	4
CH 123	College Chemistry or	
CH 223	General Chemistry	5
WR 121	English Composition	3

Fall Term - Second Year

CH 241	Organic Chemistry	4
PH 201	General Physics or	
PH 211	General Physics with Calculus	5
WR 227	Technical Report Writing	3

Winter Term

CH 242	Organic Chemistry	4
PH 202	General Physics or	
PH 212	General Physics with Calculus	5
WR 228	Advanced Technical Report Writing	3

Spring Term

CH 243	Organic Chemistry	4
PH 203	General Physics or	
PH 213	General Physics with Calculus	5

Program Requirements: 51**Total Credits Required: 94**

Business Administration

Program Contacts:

Sally Andrews, Paul Jorgensen, Wendy Krislen, Ian Priestman

Additional Faculty:

Maynard Chambers, Myrna Gusdorf, Michael Houser

LBCC offers two programs leading to associate degrees in business administration. Each program is designed to be completed in two years. 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 business administration. It is important that students check with the business transfer curriculum advisor before enrolling in these classes.

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.

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.

TRANSFER**Associate of Science with an emphasis in Business Administration***Classes shown below in italic are general education classes.***General Education Requirements: 43**

Course No.	Course Title	Credits
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Fall Term - First Year

BA 101	Introduction to Business	4
BI 101	<i>General Biology</i> ²	4
WR 121	<i>English Composition</i>	3
MTH 111	<i>College Algebra</i>	(4)1
(Four credits apply toward general education requirements; one credit applies toward program.)		

Winter Term

BI 102	<i>General Biology</i> ²	4
CIS 125	Introduction to Software Applications	3
ENG 104	<i>Literature: Fiction</i> ²	3
MTH 241	Calculus for Biological/Management/Social Sciences	4
PE 231	<i>Lifetime Health & Fitness</i>	3

Spring Term

GS 106	<i>Physical Science</i> ²	4
MTH 245	Math for Biological/Management/Social Sciences	4
SP 111	<i>Fundamentals of Speech</i>	3
WR 214	<i>Business Communications</i> ²	3

Fall Term - Second Year

BA 211	Principles of Accounting: Financial	4
BA 230	Business Law	4
BA 271	Information Technology in Business	3
EC 201	<i>Introduction to Microeconomics</i>	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		

Winter Term

BA 206	Principles of Management	3
BA 213	Principles of Accounting: Managerial	4
BA 275	Business Quantitative Methods	4
EC 202	Introduction to Macroeconomics	4
EC 220	<i>Contemporary U.S. Economic Issues: Discrimination</i> ^{2, 8}	3

Spring Term

BA 223	Principles of Marketing	3
EC 215	<i>Economic Development of the U.S.</i> ^{2, 8}	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		
	<i>Cultural Diversity</i>	3
	<i>Select additional elective courses</i>	6

Program Requirements 52-53**Total Credits Required: 95-96**

2— Other classes may substitute. See advisor.

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.

OREGON TRANSFER

Associate of Arts in Business Administration*Classes shown below in italic are general education classes.*

Course No.	Course Title	Credits
Fall Term - First Year		
BA 101	Introduction to Business	4
BI 101	<i>General Biology</i> ²	4
ENG 104	<i>Literature: Fiction</i> ²	3
MTH 111	<i>College Algebra</i>	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		

Winter Term

BI 102	<i>General Biology</i> ²	4
CIS 125	Introduction to Software Applications	3
ENG 105	<i>Literature: Drama</i> ²	3
MTH 241	Calculus for Biological/Management/Social Sciences	4
WR 121	<i>English Composition</i>	3

Spring Term

BA 271	Information Technology in Business	3
BI 103	<i>General Biology</i> ²	4
ENG 106	<i>Literature: Poetry</i> ²	3
MTH 245	<i>Math for Biological/Management/Social Sciences</i>	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		
WR 122	<i>English Composition: Argumentation</i>	3

Fall Term - Second Year

BA 211	Principles of Accounting: Financial	4
EC 201	<i>Introduction to Microeconomics</i>	4
HUM 101	<i>Humanities: Prehistory through the Middle Ages</i> ² ..	3
SP 111	<i>Fundamentals of Speech</i>	3
WR 227	<i>Technical Report Writing</i>	3

Winter Term

BA 213	Principles of Accounting: Managerial	4
BA 275	Business Quantitative Methods	4
EC 202	<i>Introduction to Macroeconomics</i>	4
PHL 202	<i>Elementary Ethics</i> ²	3

Spring Term

BA 206	Principles of Management	3
BA 223	Principles of Marketing	3
BA 230	Business Law	4
PE 231	<i>Lifetime Health & Fitness</i>	3
	<i>Social Science</i>	4

Total Credits Required: 99**Business Computer Systems***See Network and Systems Administration.***Business and Supervisory Management****Program Contacts:**

Sally Andrews, Myrna Gusdorf, Ian Priestman

Additional Faculty:

Maynard Chambers, Michael Houser, Paul Jorgensen, Wendy Krislen

This program is designed to meet the needs of individuals currently supervising or preparing to supervise personnel in a wide variety of busi-

ness or industry settings. Successful completion should afford the graduate an entry-level position leading to middle-management positions in both public and private firms.

Management and supervisory positions include those in retail business, wholesale firms, specialty buying and selling, public utilities, insurance companies, financial institutions, hotel/restaurant/tourism outlets, real estate agencies, transportation firms and manufacturing industries.

A certificate or degree in supervisory management may also prepare you for a career as an administrative services manager and for supervisory positions such as sales worker supervisors. Administrative services managers coordinate support services for businesses and organizations. Sales worker supervisors direct and manage salespeople, as well as keep track of merchandise and help customers.

Three curriculum options are available. Students may complete an 18-credit program in Basic Supervisory Management, a 45-credit program in Advanced Supervisory Management or the 90-credit program leading to the Associate of Applied Science Degree in Business and Supervisory Management. To accommodate the needs of working individuals, the program includes a number of classes offered during evening and weekend hours.

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.

Students should have sufficient math and writing skills to enroll in MTH 065 Elementary Algebra and WR 121 English Composition.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Business and Supervisory Management

See graduation requirements for Associate of Applied Science degree. Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
BA 101	Introduction to Business	4
BA 206	Principles of Management	3
BA 215	Survey of Accounting	4
BA 223	Principles of Marketing	3
BA 224	Human Resource Management	3
BA 230	Business Law (4 credits) or	
BA 2.518	Commercial Law (3 credits)	3-4
BA 271	Information Technology in Business	3
BA 285	<i>Business Relations: Global Economy (4 credits)</i> ...	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		
CIS 125	Introduction to Software Applications	3
EC 115	Outline of Economics	4
HE 125	<i>Occupational Safety & Health</i>	3
HST 150	<i>Science & Culture in the Western Tradition</i>	3
MTH 065	<i>Elementary Algebra</i>	4
PE 231	Lifetime Health & Fitness	3
SD 101	Supervision: Fundamentals	3
SD 102	Supervision: Effective Communication	3
SD 103	Issues in Supervision	3
SD 104	Supervision Skills	3
SD 107	Business & Society	3

2- Other classes may substitute. See advisor.

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.

SP111	Fundamentals of Speech	3
WR 121	English Composition	3
WR 214	Business Communications or	
WR 227	Technical Report Writing	3

Work with an advisor to select 18-19 elective or CWE credits 18-19

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

PROFESSIONAL TECHNICAL

Certificate in Basic Supervisory Management

Course No.	Course Title	Credits
CIS 125	Introduction to Software Applications	3
HE 125	Occupational Safety & Health	3
SD 101	Supervision: Fundamentals	3
SD 102	Supervision: Effective Communication	3
SD 103	Issues in Supervision	3
WR 121	English Composition	3

Total Credits Required: 18

PROFESSIONAL TECHNICAL

One-Year Certificate in Advanced Supervisory Management

Course No.	Course Title	Credits
BA 101	Introduction to Business	4
BA 206	Principles of Management	3
BA 224	Human Resource Management	3
BA 271	Information Technology in Business	3
CIS 125	Introduction to Software Applications	3
EC 115	Outline of Economics	4
HE 125	Occupational Safety & Health	3
MTH 065	Elementary Algebra	4
SD 101	Supervision: Fundamentals	3
SD 102	Supervision: Effective Communication	3
SD 103	Issues in Supervision	3
SD 104	Supervision Skills	3
SD 107	Business & Society	3
WR 121	English Composition	3

Total Credits Required: 45

Business Technology

See the individual listings for Administrative Assistant, Administrative Medical Assistant, Legal Administrative Assistant, Medical Transcriptionist, Medical Office Specialist, Office Specialist or Medical Assistant.

Chef Training

Program Contact:

Scott Anselm

Additional Faculty:

John Jarschke

Chef Training 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.

Chef Training/Restaurant and Catering Management 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 snack bar 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 program coordinator prior to registering.

Program Requirements

Students must be 18 years of age and have a high school diploma or a General Education 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. Chefs and dinner cooks must have a food handlers card issued by the health department of the county where they work.

In addition to regular college costs, students spend about \$500 to purchase uniforms, knives, shoes, books and other equipment. Students should wait until after the first day of class to purchase these items.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Culinary Arts with a Chef Training Option

See graduation requirements for Associate of Applied Science degree. Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CA 8.310	Culinary Arts Practicum I	7
CA 8.336	Food Service Safety & Sanitation	1
CA 8.337	Station, Tools & Culinary Techniques	3
CA 8.345	Service Techniques	1
CA 8.347	Beverage Server Training	1
CA 8.354	Banquet & Buffet Lab E (optional course)	1
Winter Term		
CA 8.311	Culinary Arts Practicum II	8
CA 8.350	Banquet & Buffet Lab A	1
CA 8.373	Costing	1
Spring Term		
CA 8.312	Culinary Arts Practicum III	8
CA 8.351	Banquet & Buffet Lab B	2
Fall Term - Second Year		
CA 8.321	Advanced Cooking Management I	7
CA 8.354	Banquet & Buffet Lab E (optional course)	1
CA 8.368	Creating the Menu	2
CA 8.409	Meats	3
CA 8.419	Nutrition & Special Diets	1
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 8.418	Beverage Operations	2
CA 8.421	International Cuisine	2

Spring Term

CA 8.309	Purchasing for Chefs	2
CA 8.301	Culinary Arts Career Planning	1
CA 8.323	Advanced Cooking Management III	7
CA 8.353	Banquet & Buffet Lab D	2
CA 8.355	Banquets & Buffet Planning	1
CA 8.414	Presentation/Garde Manger	2

Other required courses:

BA 101	Introduction to Business	4
SD 101	Supervision Fundamentals	3

General Education Requirements: 19**Program Requirements: 83-85****Total Credits Required: 102-104**

Chemistry

See Physical Sciences.

Child and Family Studies

Program Contacts:

Jennifer Knapp Beudert, Sue Doescher

The Child and Family Studies Program offers a Certificate in Childhood Care and Education, a one-year certificate and a two-year Associate of Applied Science degree (AAS) to prepare students to work with infants, toddlers and preschool children. An Associate of Science degree is offered for students who plan to transfer to Oregon State University to complete a baccalaureate degree.

To prepare graduates for employment in the field of early childhood, the program emphasizes concepts in growth and development, curriculum design, guidance and discipline, and provides opportunities to apply knowledge and skills. You will have practicum experiences with children ages 18 months to six years in the Family Resource Center (FRC), the program's on-campus lab school. You must have current inoculations and complete a criminal record check before students enrolling in a practicum.

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 Health and Human Sciences; parent education—see Parent Education.

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. 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 expe-

riences in music, science, art, math, and language arts. They also design indoor and outdoor environments, keep records and confer with parents. Graduates may also work as program and social service aides. With experience, they can become case managers and social service workers.

Students who complete the AAS in Child and Family Studies may elect to complete additional hours of general education courses and earn an Associate of Arts or Associate of Science transfer degree. This often can be accomplished by completing one additional term of coursework.

The Associate of AAS in Child and Family Studies is designed to be completed in two years. This assumes, however, that the entering student meets the prerequisite basic skills requirements as determined by the College Placement Test (CPT). Lower scores on the mathematics and writing CPT may require pre-college courses that will extend completion of the degree.

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 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.

Students entering the one-year certificate program may have completed child care provider trainings and professional technical courses offered through LBCC's Family Connections Department. Combinations of short trainings may be used to challenge courses required for the one-year certificate.

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.

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 15 credit hours of the 46-credit One-Year Certificate in Child and Family Studies.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Child and Family Studies

See graduation requirements for Associate of Applied Science degree. Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
ED 101	Observation & Guidance	3
CG 111	College Learning & Study Skills (3 credits) or	
SS 090	Study Skills	3
HDFS 225	Child Development (3 credits) or	
ED 7.730	Early Childhood Ages & Stages	3
HDFS 248	Learning Experiences for Children	3
WR 121	<i>English Composition</i>	3
Winter Term		
ED 7.710	Principles of Observation	3
ED 7.731	Positive Guidance for Young Children	3
ED 102	Education Practicum	3
ED 152	Creative Activities/Dramatic Play	3
HDFS 222	Partner & Family Relationships	3

Spring Term

ED 103	Extended Education Practicum	3
ED 179	Literature, Science & Math	3
HDFS 233	Professional Foundations in Early Childhood	3
SP 218	Interpersonal Communication	3
	Elective	3

Fall Term - Second Year

HDFS 249	Infant & Toddler Care	3
HE 252	First Aid (3 credits)	3
MTH 065	Elementary Algebra or higher (4 credits) or	
MTH 061	Survey of Math Fundamentals (3 credits) and	
MTH 064	Business Applications of Math	
	Fundamentals (1 credit)	4
	Electives	5

Winter Term

ENG 221	Children's Literature	3
HDFS 261	Working with Individuals & Families	3
	Science, Technology & Society	3
	Electives	6

Spring Term

ED 104	Advanced Practicum (12 credits) or	
	Electives (12 credits)	12
ED 282	Working with Children with Special Needs	3

General Education Requirements:**Program Requirements:****Total Credits Required:**

19

71

90

PROFESSIONAL TECHNICAL

One-Year Certificate in Child and Family Studies

Course No. Course Title

Fall Term

ED 101	Observation & Guidance	3
HDFS 225	Child Development (3 credits) or	
ED 7.730	Early Childhood Ages & Stages	3
HDFS 248	Learning Experiences for Children	3
SP 218	Interpersonal Communication	3
WR 095	College Writing Fundamentals (or higher)	3

Winter Term

ED 7.710	Principles of Observation	3
ED 7.731	Positive Guidance for Young Children	3
ED 102	Education Practicum	3
ED 152	Creative Activities/Dramatic Play	3
HDFS 222	Partner & Family Relationships	3

Spring Term

ED 103	Extended Education Practicum	3
ED 179	Literature, Science & Math	3
ED 282	Working with Children with Special Needs	3
HDFS 233	Professional Foundations in Early Childhood	3
MTH 020	Basic Mathematics (or higher)	4

Total Credits Required:

46

PROFESSIONAL TECHNICAL

Certificate in Childhood Care and Education

Course No. Course Title Credits

Fall Term

HDFS 248	Learning Experiences for Children (3 credits) or	
ED 152	Creative Activities/Dramatic Play	3
ED 7.730	Early Childhood Ages & Stages (3 credits) or	
HDFS 225	Child Development	3
ED 7.731	Positive Guidance for Young Children	3
ED 7.710	Principles of Observation	3
	Elective (see advisor for approved list)	3

Total Credits Required:

15

Civil Engineering Technology**Program Contact:**

David Kidd

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.

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. Students can either complete the Associate of Applied Science degree in Drafting and Engineering Graphics Technology at LBCC concurrently with the Civil Engineering Technology certificate or continue their education at Chemeketa Community College, where they can complete an Associate of Applied Science degree in Civil Engineering Technology.

Program Requirements

A student entering the program with a solid background in mathematics and computer usage can expect to complete the program in four terms. Many of the courses listed as fall term first-year courses have prerequisites, so entering students who are deficient in reading, mathematics or writing will need 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 work outdoors. Students who are well-prepared in math and computer usage can start at terms other than fall term and take some night classes, as well as daytime classes. Some students attend part time.

Facilities

Classes are held in well-equipped classrooms and laboratories. Computers are used extensively with current versions of AutoCAD®, Land Development Desktop®, and TDS® survey software. Modern survey instruments also are used, including automatic levels, total stations and GPS equipment.

PROFESSIONAL TECHNICAL

Certificate in Civil Engineering Technology

Course No.	Course Title	Credits
Fall Term		
EG 4.409	Drafting I	2
EG 4.411	CAD Basics	4
HE 112	Emergency First Aid	1
MTH 097	Practical Geometry	4
WR 121	English Composition	3
Winter Term		
EG 4.421	Drafting II: Applied CAD	4
EG 4.455	Structural Drafting	2
MTH 111	College Algebra	5
WW 6.235	Applied Hydraulics	3
Spring Term		
CIS 125S	Introduction to Spreadsheets	1
CEM 263	Plane Surveying	3
EG 4.456	Civil Drafting Lab	1
MTH 112	Trigonometry	5
WW 6.167	Water Distribution & Collection Lab	1
CWE 1.280R	Cooperative Work Experience	1
Fall Term		
CE 6.444	Civil Design Lab	1
CE 6.488	Advanced Surveying & Land Development	4
DRF 245	Civil Drafting & Design (Chemeketa)*	4
ME 4.122	Strength of Materials	3

Total Credits Required: 52

*Note: Offered fall term through Chemeketa College. This requirement can also be met by taking EG 4.465, Civil Drafting II, at LBCC winter term. See program advisor for details.

CNC Machinist

See Machine Tool Technology.

Collision Repair Technology**Program Contact:**

Tom Smithburg

Students in the Collision Repair program develop the skills and knowledge necessary for vehicle collision repair and refinishing. Individuals become well versed in welding and metal work, painting and refinishing procedures, techniques, products, equipment and safety.

Graduates of the Collision Repair Technology program will find that job opportunities include: auto collision repair technician, auto refinisher/painter's helper, auto collision estimator/insurance adjuster, parts and inventory specialist, equipment manufacturer representative, parts and supply delivery, motor home repairing/refinishing, shipyard painting, heavy equipment repairing/painting, industrial/house painter, boat repair technician and various safety occupations.

In small shops, repairers may do the painting as well as the bodywork. Auto body repairers who work in small shops may inspect damaged vehicles, they write up estimates of repair costs for customers and insurance companies, and do simple mechanical repairs. Repairers use computers to keep records, send bills and write estimates.

Because automotive parts, body materials and electronic systems change constantly, auto body repairers must continually update their skills and knowledge. They read technical manuals and attend classes to keep up to date on repair methods.

Many auto body repairers are also business owners who must keep track of income and expenses, as well as pay all the bills, purchase supplies, select advertising, and hire and fire employees.

Program Requirements

The department recommends that students enter the program in September (fall term). Admission is possible at the beginning of winter term, depending on available space at that time and/or the student's previous experience. In order to complete the program in one year, students should be ready to take WR 115 Introduction to College Writing and MTH 020 Basic Math.

Because of the variety of working conditions, a person generally should be in good physical condition and be able to stand, stoop, kneel and bend. Good eyesight, especially color perception, is necessary.

Personal qualities desirable in a collision repair craftsman include preciseness and creativity. As with most career fields, the ability to get along with others is a valuable asset. The program requires that students have the initiative to work on class projects independently.

The program provides variable credit, hands-on instruction in an industry-type environment. Block classes are held Monday through Thursday. Additional technical coursework is scheduled on Friday.

Previous collision repair experience may be accredited through a performance test and/or written test. Talk with a program advisor at (541) 917-4585 for more information.

LBCC policy in accordance with OSHA Personal Protective Equipment Code (OSHA 1910.132) and the Respirator Protection Code (OSHA 1910.134), REQUIRES students to complete and pass an occupational medical screening in order to wear a respirator, which is a required part of the collision repair program. The screening consists of a questionnaire that is evaluated by an OccMed provider. The approximate cost is \$30 or more. The instructor must receive confirmation that you have passed the screening by the end of the first week of class. Without the stated confirmation, you cannot participate in the collision repair and refinishing class.

Facilities

Instruction is provided in the classroom and in a modern, well-equipped laboratory/shop facility. The labs are completely equipped for auto collision repair and refinishing.

The labs include a student training office, fireproof paint mixing and storage room, truck-size factory-installed paint booth, and a paint preparation room. Equipment includes E-Z Liner frame rack, plasma cutter, fresh air respirator system for painting, double-size glass bead machine, electric portable hoist and four gas metal arc welders (GMAW).

In addition to the laboratory activities, lectures are supplemented by audio and video presentations, seminars and special workshops. Field trips and contract training sessions in cooperation with industry personnel are planned.

PROFESSIONAL TECHNICAL

One-Year Certificate in Collision Repair Technology

Course sequence required for students beginning fall term.

Course No.	Course Title	Credits
Fall Term		
CR 3.511	Collision Repair & Refinishing Basics	12
MTH 020	Basic Math	4
WD 4.158	Collision Welding I	2

Winter Term

CR 3.512	Collision Repair & Refinishing Procedures	12
WD 4.159	Collision Welding II	2
WR 115	Introduction to College Writing	3

Spring Term

CR 3.513	Shop Procedures	12
CR 3.515	Damage Analysis	2
WE 1.280X	CWE Auto Body Repair	1

Total Credits Required: 50

Computer Programming

See *Computer Science*.

Computer Science

Program Contacts:

David Becker, Dodi Coreson, Parker Swanson

Computer Science is the study of programming, data storage and retrieval, and 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 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 Associate of Science degree. For students choosing to go on to OSU, three options are listed that coordinate with the degree OSU offers: Computer Science – Information Systems (programming with a minor in business); Computer Science – Applied Computer Science (combination of computer science and a related field (i.e., multimedia); and Computer Science – Computer Systems (software developing).

Computer Science students need to decide where they will complete their four-year degree and should see an LBCC advisor for assistance in taking the courses required at the various four-year institutions.

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 111 College Algebra 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 IBM-compatible personal computers for completing assignments.

TRANSFER

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

See graduation requirements for Associate of Science degree. Classes shown below in *italic* are general education classes.

General Education Requirements: 43

Course No. Course Title Credits

Fall Term - First Year

	<i>Biological Science</i>	4
CS 160	Orientation to Computer Science	4
MTH 111	<i>College Algebra</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 121	<i>English Composition</i>	3

Winter Term

CS 161	Introduction to Computer Science (Java)	4
	<i>Literature & the Arts</i>	3
MTH 112	Trigonometry	5
WR 122	<i>English Composition: Argumentation or</i>	
WR 214	<i>Business Communication</i>	3

Spring Term

CS 162	Introduction to Computer Science II (Java)	4
	<i>Difference, Power & Discrimination</i>	3
MTH 241	Calculus for Biological/Management/Social Science	4
PE 231	<i>Lifetime Health & Fitness</i>	3
SP 111	<i>Fundamentals of Speech</i>	3

Fall Term - Second Year

CS 261	Data Structures (Java)	4
	<i>Biological or Physical Science</i>	4-5
	<i>Cultural Diversity</i>	3
MTH 245	Math for Biological/Management/Social Science	4

Winter Term

CS 275	Database Sys: SQL/Oracle	4
EC 201	<i>Introduction to Microeconomics</i> ²	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
MTH 231	Elements of Discrete Mathematics	4
	<i>Western Culture</i>	3

Spring Term

CS 271	Computer Architecture & Assembly Language	4
CS 133U	Programming in C++	4
MTH 232	Elements of Discrete Mathematics	4
	<i>Physical Science</i>	4

Program Requirements: 50-52

Total Credits Required: 93-95

²— Other classes may substitute. See advisor.

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

See graduation requirements for Associate of Science degree.
Classes shown below in *italic* are general education classes.

General Education Requirements:

Course No.	Course Title	Credits
Fall Term - First Year		
	<i>Biological Science</i>	4
CS 160	Orientation to Computer Science	4
MTH 251	<i>Differential Calculus</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 121	<i>English Composition</i>	3
Winter Term		
CS 161	Introduction to Computer Science (Java)	4
	<i>Cultural Diversity</i>	3
	<i>Literature & the Arts</i>	3
MTH 252	Integral Calculus	5
WR 227	<i>Technical Report Writing</i>	3
Spring Term		
CS 162	Introduction to Computer Science II (Java)	4
	<i>Difference, Power & Discrimination</i>	3
MTH 253	Calculus	4
PE 231	<i>Lifetime Health & Fitness</i>	3
SP 111	<i>Fundamentals of Speech</i>	3
Fall Term - Second Year		
CS 261	Data Structures (Java)	4
ENGR 201	Electrical Fundamentals	4
MTH 254	Calculus	4
PH 211	<i>General Physics with Calculus</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
Winter Term		
MTH 231	Elements of Discrete Mathematics	4
PH 212	<i>General Physics w/ Calculus</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	<i>Social Processes & Institutions</i>	3
	<i>Western Culture</i>	3
Spring Term		
CS 133U	Programming in C++	4
ENGR 271	Digital Logic Design	4
MTH 232	Elements of Discrete Mathematics	4
PH 213	General Physics with Calculus	5

Program Requirements: 57

Total Credits Required: 100

Computer User Support

Program Contact:

Linda Carroll

Additional Faculty:

David Becker, Dodi Coreson, Gail Dameworth, Parker Swanson

Computer User Support classes prepare students for entry-level positions that provide technical support, assistance, software support, Web support, network support, troubleshooting, training and documentation to end users. Common entry-level job titles include End-User Computer Support Specialist, Help Desk Assistant, Computer Lab

Assistant, Computer Services Representative, Network Support Assistant, Software Trainer and Documentation Specialist.

Computer support specialists determine a company's computer needs, then they locate computers or software that meet those needs.

They install software following manufacturers' guidelines. At larger companies, 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 the problems. They may read technical manuals to learn more about what to do. Once they have some ideas, specialists make repairs. This may mean reinstalling software or replacing hardware that is not working.

Some computer support specialists help customers who bought products from computer hardware and software vendors. Unlike computer support specialists who help their coworkers, these specialists do not have access to the computers that are not working. These specialists communicate with customers by telephone or e-mail and may teach customers how to use software or talk them through how to install software or replace hardware.

Because computer hardware and software are constantly changing, support specialists must be aware of developments in the field. They may attend conferences and trainings or read magazines to learn about changes.

Program Requirements

Students expecting to graduate in this program should have good people skills, as well as a strong interest in working with computers. Students completing the two-year curriculum will receive to an Associate of Applied Science degree in Computer User Support.

Facilities

Computer facilities are provided by the Forum Computer Lab and the Business and Computer Systems Division. The lab is well-equipped with modern hardware and software. Students have access to networked IBM-compatible personal computers for completing assignments.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Computer User Support

See graduation requirements for Associate of Applied Science degree.
Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 125	Introduction to Software Applications	3
CIS 151	Networking Essentials	4
	<i>Health or Activity Course</i>	1
MTH 095	<i>Intermediate Algebra (or higher)</i>	4
WR 121	<i>English Composition</i>	3
Winter Term		
BA 101	Introduction to Business	4
BA 271	Information Technology in Business	3
	<i>Health or Activity Course</i>	1
SP 100	<i>Introduction to Speech Communication</i>	3
WR 227	<i>Technical Report Writing</i>	3
Spring Term		
BA 215	Survey of Accounting or	
BA 2.530	Practical Accounting I	4
CIS 135S	Advanced Spreadsheets	3
CIS 145	Hardware/Software Selection & Support	3
CS 160	Orientation to Computer Science	4
OA 203	Advanced Word Processing	3

Fall Term - Second Year

BA 285	Business Relations in a Global Economy (4 credits)	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		
CS 133V	Visual Basic I	4
CS 227A	Systems Support: Applications	3
	Health or Activity Course	1
CS 279	Network Management	3

Winter Term

CS 180	Supervised Computer Practicum	2
CS 225	End User Computing Support	4
CS 227H	Systems Support: Hardware	3
CS 244	Systems Analysis & Project Management	4
CS 275	Database Systems: SQL & Oracle	4

Spring Term

CIS 195	Web Development I	4
CS 140U	Fundamentals of UNIX/Linux	4
CS 280	CWE Computer Systems	3
	Science, Technology & Society	3
SD 104	Supervision Skills	3

General Education Requirements: 19

Program Requirements: 75

Total Credits Required: 95

Crafts and Trades

See Apprenticeship program.

Criminal Justice

Program Contact:

Rodney Carter

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. 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, problem solve and construct quick, practical solutions;
- candidates who have excellent interpersonal, written and verbal communication skills;
- candidates who are nonjudgmental about the diverse populations of people;
- candidates who can pass stringent tests, background checks, and psychological assessments.

LBCC's Criminal Justice program can help prepare you to meet the stringent requirements for employment for the highly competitive field of law enforcement. 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. In addition, 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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Criminal Justice

See graduation requirements for Associate of Applied Science degree.

Course No.	Course Title	Credits
CJ 100	Survey of Criminal Justice Systems	3
CJ 101	Introduction to Criminology	3
CJ 110	Introduction to Law Enforcement or	
CJ 210	Introduction to Criminal Investigation	3
CJ 120	Introduction to Judicial Process	3
CJ 130	Introduction to Corrections	3
CJ 230	Juvenile Corrections	3
CJ 201	Juvenile Delinquency	3
CJ 202	Violence & Aggression	3
CJ 211	Ethical Issues in Law Enforcement	3
CJ 220	Substantive Law	3
CJ 222	Procedural Law	3
CJ 226	Constitutional Law or	
PS 252	Constitutional Law	3
WR 227	Technical Report Writing	3

Electives (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.) 32

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

PROFESSIONAL TECHNICAL

One-Year Certificate in Juvenile Corrections

Course No.	Course Title	Credits
CJ 101	Introduction to Criminology	3
CJ 201	Juvenile Delinquency	3
CJ 203	Crisis Intervention	1
CJ 230	Introduction to Juvenile Corrections	3
CJ 232	Introduction to Corrections Counseling & Casework ..	3
CJ 280A	Cooperative Work Experience	5
HS 205	Youth Addiction	3
MTH 065	Elementary Algebra	4
PSY 201	General Psychology	3
PSY 202	General Psychology	3
PSY 203	General Psychology	3
PSY 215	Introduction to Developmental Psychology	3
PSY 219	Introduction to Abnormal Psychology	3
SOC 206	General Sociology	3
WR 121	English Composition	3

Total Credits Required: 46

OREGON TRANSFER

Associate of Arts with an emphasis in Criminal Justice

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 Criminal Justice transfer student. These courses are suggested to assist the criminal justice major in acquiring the skills necessary to be successful in the field of corrections, law enforcement and juvenile corrections. Please contact your advisor for assistance when scheduling your classes.

See the graduation requirements for the Associate of Arts degree.
Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CJ 100	Survey of Criminal Justice Systems	3
MTH 105	<i>Introduction to Contemporary Mathematics</i>	4
OA 202	MSWord for Business	3
PE 231	<i>Lifetime Health & Fitness</i>	3
WR 121	<i>English Composition</i>	3
Winter Term		
BI 102	<i>General Biology</i>	4
CJ 101	Introduction to Criminology	3
ENG 104	<i>Literature: Fiction</i>	3
SP 218	<i>Interpersonal Communication</i>	3
WR 122	<i>English Composition</i>	3
Spring Term		
CJ 110	Introduction to Law Enforcement	3
ENG 105	<i>Literature: Drama</i>	3
HS 205	Youth Addiction	3
PE 194K	Defensive Tactics	2
WR 227	<i>Technical Report Writing</i>	3
	<i>Math/Science/Computer Science</i>	3
Fall Term - Second Year		
CJ 130	Introduction to Corrections	3
ENG 106	<i>Literature: Poetry</i>	3
GS 106	<i>Physical Science: Principles of Earth Sciences</i>	4
PSY 201	<i>General Psychology</i>	3
SOC 204	<i>General Sociology</i>	3
Winter Term		
CJ 201	Juvenile Delinquency	3
CJ 226	Constitutional Law	3
GS 104	<i>Physical Science: Principles of Physics</i>	4
PS 252	Constitutional Law or	
PSY 202	<i>General Psychology</i>	3
SOC 205	<i>General Sociology</i>	3
Spring Term		
CJ 110	Introduction to Law Enforcement	3
CJ 120	Introduction to Judicial Process	3
JN 134	<i>Introduction to Photojournalism</i>	3
PSY 203	<i>General Psychology</i>	3
SOC 206	<i>General Sociology</i>	3
	Work with your faculty advisor to choose elective transfer credits in psychology, political science, sociology or anthropology	6
Total Credits Required:		102

Culinary Arts

See individual program listings under Chef Training, Pre-Restaurant Management, and Wine and Food Dynamics.

Data Processing

See Computer Science, Business and Computer Systems and Computer User Support.

Dental Assistant

Program Contact:

Sharon Billetter

Additional Faculty:

Linda Kihs

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 Examination. Successful graduates receive a Dental Assisting Certificate, Oregon Expanded Function and Radiological Proficiency Certificates.

Facilities

Clinical and expanded function experience is gained utilizing individual stations with anatomical mannequins. Three fully equipped radiology rooms and dark room processing 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.

PROFESSIONAL TECHNICAL

One-Year Certificate in Dental Assistant

Course No.	Course Title	Credits
Fall Term		
BI 103	General Biology: Human Body	4
DA 5.461	Dental Radiology	3
DA 5.484	Dental Materials I	3
DA 5.494	Introduction to Dentistry	3
DA 5.497	Dental Health Education	1
DA 5.500	Dental Anatomy/Histology	2
DA 5.501	Dental Infection Control & Sterilization	2
Winter Term		
DA 5.462	Dental Radiology II	3
DA 5.485	Dental Materials II	3
DA 5.488	Expanded Duties I	2
DA 5.495	Clinical Practice	4
DA 5.498	Dental Health/Nutrition	1
DA 5.525	Intermediate Dental Assisting	1

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	2
DA 5.492	Dental Office Emergencies	2
DA 5.496	Dental Specialties	3
DA 5.550	Human Relations in Dentistry	3

Summer Term

DA 5.510	Office Practicum	8
DA 5.515	Office Practicum Seminar	2

Total Credits Required: 59**Pre-Professional Dental Hygiene Program**

Linn-Benton Community College offers a pre-professional program in dental hygiene in preparation for transfer to the Oregon Institute of Technology Hygiene program. Students should take the following courses to prepare for either OIT's associate or bachelor degree program:

Course No.	Course Title	Credits
Fall Term		
BI 231	Human Anatomy & Physiology	4
BI 232	Human Anatomy & Physiology	4
BI 233	Human Anatomy & Physiology	4
BI 234	Microbiology	4
CH 121	College Chemistry	5
CH 122	College Chemistry	5
CH 123	College Chemistry	5
PSY 201	General Psychology	3
WR 121	English Composition	3
WR 122	English Composition: Argumentation	3
	Introductory Computer Science Course (see advisor)	

Fall Term — Omit Speech and take ART 131 Drawing I.
 Winter Term — Omit WR 121 English Composition and take ART 132 Drawing II.
 Spring Term — Omit MTH 065 Elementary Algebra and take ART 133 Drawing III.

Facilities

The graphics facilities include two graphic design and digital imaging laboratories with both Macintosh and PC computers and other equipment similar to that in the offices of printers, designers, illustrators, and the print media throughout the country. The facilities also include graphic design and fine art studios and display galleries for presenting student work and the work of other artists and designers. Facilities are handicapped accessible.

One-Year Certificate in Digital Imaging/Prepress

Successful completion or challenge of 9.049 Introduction to Digital Imaging (Desktop Publishing night class, 0 credit) is required during the first two weeks of Fall Term.

Fall Term

ART 115	Basic Design I: Composition	4
GA 3.153	Digital Illustration I	3
GA 3.156	Digital Page Layout I	3
GA 3.157	Digital Image Manipulation I	3
SP 111	Fundamentals of Speech or	
SP 112	Introduction to Persuasion or	
SP 218	Interpersonal Communication or	
SP 100	Introduction to Speech Communication	3

Winter Term

AA 224	Typographical Design I	4
GA 3.154	Digital Illustration II	3
GA 3.160	Digital Page Layout II	3
GA 3.161	Digital Image Manipulation II	3
WR 121	English Composition	3

Spring Term

ART 116	Basic Design II: Color	4
GA 3.155	Digital Illustration III	3
GA 3.168	Digital Page Layout III	3
GA 3.169	Digital Image Manipulation III	3
MTH 065	Elementary Algebra	4

Total Credits Required: 49**Digital Imaging and Prepress Technology****Program Contact:**

John Aikman

The Digital Imaging and Prepress Technology Certificate program is dedicated to training students for entry-level positions in the printing and publishing fields.

The curriculum provides learning experiences consistent with the needs of potential employers utilizing the latest industry-standard imaging software applications in both Macintosh and PC platforms. Projects provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Graduates will assemble an extensive portfolio. Employment opportunities are found in a wide range of settings; print shops, service bureaus, as a member of a support team in advertising, graphic design or in-house design groups.

Program Requirements

Courses are highly sequential. Only students who follow the recommended sequences for the certificate may be assured of completing the program in one year. Students in the program should anticipate expenses of \$500 per term.

For students who plan to enter the Graphic Design Program after Digital Imaging and Prepress Technology, the following changes are recommended:

Drafting and Engineering Graphics Technology**Program Contact:**

Perry Carmichael

Additional Faculty:

David Kidd

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, electronic, 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 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.

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 MTH 097 Practical Geometry. Students are required to complete MTH 111 College Algebra and several engineering courses that require math skills, and they are expected to achieve at least a "C" in each required course. The corequisite of CIS 1250 Introduction to Windows to EG 4.411 CAD Basics may be waived by passing a computer competency test administered by Drafting and Engineering Graphics. Testing is typically done during advising.

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 general education 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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Drafting and Engineering Graphics Technology

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
EG 4.409	Drafting I	2
EG 4.411	CAD Basics	4
MA 3.431	Basic Blueprint Reading for Metals	2
MTH 097	<i>Practical Geometry</i>	4
WW 6.156	Industrial Electricity	3
Winter Term		
EG 4.421	Drafting II: Applied CAD	4
EG 4.423	Architectural Design ¹	4
EG 4.455	Structural Drafting	2
MTH 111	College Algebra	5

Spring Term

EG 4.431	Drafting III: 3-D CAD	4
EG 4.445	Plane Surveying	3
EG 4.456	Civil Drafting Lab	1
EG 4.457	Workplace Survey	1
IN 3.443	Introduction to Manufacturing Processes	2
SP111	<i>Fundamentals of Speech or</i>	
SP112	<i>Introduction to Persuasion</i>	3
WR 121	<i>English Composition</i>	3

Fall Term - Second Year

EG 4.451	Solids I	4
EG 4.443	Schematics	4
ME 4.122	Strength of Materials	3
WR 227	Technical Report Writing	3
	<i>Cultural Diversity & Global Awareness</i>	3

Winter Term

CIS 125S	Introduction to Spreadsheets	1
EG 4.452	Solids II	4
EG 4.453	Customizing CAD Systems	4
EG 4.465	Civil Drafting II	3
HE 112	Emergency First Aid	1
	<i>Science, Technology & Society</i>	3

Spring Term

CWE 1.280R	Cooperative Work Experience	3
EG 4.461	Rendering	3
EG 4.463	Architectural Design II	4
EG 4.470	Geometric Dimensioning & Tolerancing	3
HE 261	CPR	1
	Activity Class	1

General Education Requirements 19

Program Requirements: 76

Total Credits Required: 95

Economics

Program Contacts:

Paul Jorgensen, Wendy Krislen

Additional Faculty:

Sally Andrews, Maynard Chambers, Myrna Gusdorf, Michael Houser, Ian Priestman

LBCC offers two programs leading to associate degrees in economics. Each program is designed to be completed in two years. 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.

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.

¹— Courses offered that term only.

Program Requirements

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

TRANSFER

Associate of Science with an emphasis in Economics

All general education requirement classes are shown in *italic*. See the graduation requirements for the Associate of Science degree. Note: No credits may be used for more than one requirement.

General Education Requirements: 43

Course No.	Course Title	Credits
Fall Term - First Year		
BI 101	General Biology ²	4
MTH 111	College Algebra	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		
SP 111	Fundamentals of Speech	3
WR 121	English Composition	3
Winter Term		
BI 102	General Biology ²	4
CIS 125	Introduction to Software Applications	3
HST 101	History of Western Civilization ²	3
MTH 241	Calculus for Biological/Management/Social Science	4
WR 227	Technical Report Writing ²	3
Spring Term		
BA 271	Information Technology in Business	3
GS 106	Physical Science: Principles of Earth Science ²	4
HST 201	U.S. History: Colonial & Revolutionary Literature/Arts	3
MTH 245	Math for Biological/Management/Social Science	3
Fall Term - Second Year		
EC 201	Introduction to Microeconomics	4
EC 215	Economic Development in the U.S.	4
MUS 161	Music Appreciation ²	3
Liberal Arts Core—Section III		
(For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.)		
Winter Term		
ANTH 103	Introduction to Cultural Anthropology ²	3
EC 202	Introduction to Macroeconomics	4
PE 231	Lifetime Health & Fitness	3
PSY 201	General Psychology or	3
PSY 202	General Psychology	
Spring Term		
ART 204	Survey of Art History ²	3
BA 275	Business Quantitative Methods	4
EC 220	Contemporary U.S. Economic Issues	3
SOC 204	General Sociology ²	3
	Cultural Diversity	3

Program Requirements: 49

Total Credits Required: 92

OREGON TRANSFER

Associate of Arts with an emphasis in Economics

See the graduation requirements for the Associate of Arts degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 125	Introduction to Software Applications	3
ENG 104	<i>Literature: Fiction</i> ²	3
MTH 111	<i>College Algebra</i>	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		
PE 231	<i>Lifetime Health & Fitness</i> ²	3
WR 121	<i>English Composition</i>	3
Winter Term		
BA 271	Information Technology in Business	3
ENG 105	<i>Literature: Drama</i> ²	3
MTH 241	Calculus for Biological/Management/Social Science	4
WR 122	<i>English Composition</i>	3
	Electives	3
Spring Term		
EC 115	Outline of Economics (If high school economics was taken, this will be waived.)	4
ENG 106	<i>Literature: Poetry</i> ²	3
HUM 101	<i>Humanities: Prehistory—Middle Ages</i> ²	3
MTH 245	Math for Biological/Management/Social Science	4
WR 227	<i>Technical Report Writing</i>	3
Fall Term - Second Year		
BI 101	<i>General Biology</i> ²	4
EC 201	<i>Introduction to Microeconomics</i>	4
SP 111	<i>Fundamentals of Speech</i>	3
	Electives	3
Winter Term		
BA 275	Business Quantitative Methods	4
BI 102	<i>General Biology</i> ²	4
EC 202	<i>Introduction to Macroeconomics</i>	4
PSY 201	General Psychology or	3
PSY 202	General Psychology	
Spring Term		
BI 103	<i>General Biology</i> ²	4
EC 215	Economic Development of the U.S.	4
EC 220	Contemporary U.S. Economic Issues	3
PHL 202	<i>Elementary Ethics</i> ²	3
Total Credits Required:		93

Education

Program Contacts:

Sue Doescher, Liz Pearce-Smith, Christy Stevens

The Education/Child and Family Studies Department offers programs for students who want to become 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.

2—Other classes may substitute. See advisor.

Students who want to become teachers can take their first two years of coursework at LBCC, then transfer to a four-year college and work towards their teaching credential. It is important for you to determine your preferred level and/or subject area of teaching as soon as possible. Additionally, you should select the college you will transfer to. These decisions will help you determine which degree and program you should pursue and who your advisor(s) will be.

Programs that lead to teacher certification are available at many public and private higher education institutions in Oregon. (Ask your advisor for a list of approved institutions.) If you are planning to attend OSU, you are advised to pursue the Associate of Science degree. 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.

If you are planning to attend a university other than OSU, you should pursue the Associate of Arts (Oregon Transfer) degree (AAOT).

Program Requirements

Both the Associate of Science 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 College 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, ED 102A Education Practicum and ED 103A Extended 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 practicum 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. Get more details from your advisor.

OREGON TRANSFER

Associate of Arts with an emphasis in Elementary Education

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 education students than others. Select your electives carefully to insure that you take the prerequisites to upper-division courses while you are at LBCC. A sample AAOT two-year plan of study is outlined below. Your specific course selections may vary depending upon which term you begin your studies and whether you transfer any courses from another institution. Check with your advisor each term to be sure you are on track for the degree.

See the graduation requirements for the Associate of Arts degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
	<i>Arts & Letters</i>	3
CG 111	College Learning & Study Skills	3
HDFS 225	<i>Child Development</i>	3
	<i>Social Science</i>	3
WR 121	<i>English Composition</i>	3
Winter Term		
	<i>Arts & Letters</i>	3
ED 216	Purpose, Structure & Function of Education in a Democracy	3
HDFS 229	<i>School Age & Adolescent Development</i>	3
	<i>Science with lab</i>	4
WR 123	<i>English Composition: Research</i>	3
Spring Term		
	<i>Science with lab</i>	4
	<i>Social Science</i>	3
SP 218	<i>Interpersonal Communication</i>	3
WR 122	<i>English Composition: Argumentation</i>	3
	<i>Health & Physical Education</i>	3
Fall Term - Second Year		
ED 219	Multicultural Issues in Educational Settings	2
MTH 211	<i>Fundamentals of Math I</i>	4
	<i>Science with lab</i>	4
	<i>Social Science</i>	3
Winter Term		
	<i>Arts & Letters</i>	3
ED 101A	Observation & Guidance	3
ED 253	Learning Across the Lifespan	3
HDFS 248	Learning Experiences for Children	3
MTH 212	<i>Fundamentals of Math II</i>	3(1)
(Three credits apply toward general education requirements; one credit applies toward program.)		
Spring Term		
	<i>Arts & Letters</i>	3
ED 209A	Theory & Practicum	3
MTH 213	Fundamentals of Math III	4
	Electives (subject area for teaching certificate)	4
Total Credits Required:		90

TRANSFER

Associate of Science with an emphasis in Elementary Education

To earn a K-8 teaching credential at Oregon State University, students must earn a bachelor's degree with an undergraduate major. Students are encouraged to complete one of the following three subject areas (in addition to the general education and perspective courses listed below, students must also take selected program requirements):

• Human Development & Family Sciences Option

Human Development and Family Sciences is designed for students who prefer to teach children in grades K-3. Most courses focus on child development, working with young children, and family studies. Students may take up to 48 program requirement credits at LBCC.

Course No.	Course Title	Credits
WR 121	English Composition	3
WR 227	Technical Report Writing	3

Speech

SP 218 Interpersonal Communication 3

Mathematics

MTH 211 Fundamentals of Elementary Mathematics I 4

Health & Physical Education

PE 231 Lifetime Health & Fitness 3

Perspectives

Biological Science choice 4

Cultural Diversity choice 3

Difference, Power & Discrimination—HDFS 201 3

Literature & the Arts—ENG 221 3

Physical Science choice 4

Physical/Biological Science choice 4

Social Processes & Institutions—PSY 201, PSY 202, or SOC 204 3

Western Culture HST 203 3

General Education Requirements: 43

Program Requirements (See Education advisor for list): 47

Total Credits Required: 90

• Liberal Studies Option

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. Students may take up to 48 program requirement credits at LBCC.

Course No.	Course Title	Credits
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Writing/Composition

WR 121	English Composition	3
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	Writing choice	3
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Speech

	Speech choice	3
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Mathematics

MTH 211	Fundamentals of Elementary Mathematics I	4
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Health & Physical Education

PE 231	Lifetime Health & Fitness	3
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Perspectives

	Physical Science choice	4
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	Biological Science—BI 101, BI 102 or BI 103	4
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	Physical/Biological Science choice	4
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	Cultural Diversity choice	3
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	Difference, Power & Discrimination—HST 201, HST 202 or HST 203	3
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	Literature & the Arts—ENG 106	3
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	Social Processes & Institutions—HDFS 201	3
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	Western Culture—HST 201, HST 202 or HST 203	3
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General Education Requirements: 43

Program Requirements (See Education advisor for list): 47

Total Credits Required: 90

• General Science Option

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. Students may take up to 64 program requirement credits at LBCC.

Course No.	Course Title	Credits
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Writing/Composition

WR 121	English Composition	3
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	Writing choice	3
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Speech

	Speech choice	3
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Mathematics

MTH 111	College Algebra	4(1)
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(Four credits apply toward general education requirements; one credit applies toward program.)

Health & Physical Education

PE 231	Lifetime Health & Fitness	3
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Perspectives

	Biological Science—BI 101 or BI 211	4
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	Cultural Diversity choice	3
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	Difference, Power & Discrimination—HST 203	3
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	Literature & the Arts—ENG 106	3
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	Physical Science—CH 121 or CH 221	4(1)
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(Four credits apply toward general education requirements; one credit applies toward program.)

Physical Science—PH 201 or one of the following:

	G 101, G 102, GS 104, GS 106, GS 108	4
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	Social Processes & Institutions—HDFS 201	3
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	Western Culture—HST 201, HST 202	3
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General Education Requirements: 43

Program Requirements (See Education advisor for list): 47

Total Credits Required: 90

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 the correct check-sheet for your subject area and for referral to a subject area advisor.

PROFESSIONAL TECHNICAL**Associate of Applied Science in Instructional Assistant; One-Year Certificate in Instructional Assistant**

Students may pursue a one-year Instructional Assistant Certificate or the Associate of Applied Science in Instructional Assistant. See the Instructional Assistant program requirements in this catalog.

Emergency Medical Technician**Program Contact:**

Faye Melius

The Emergency Medical Technician (EMT) certificate program provides opportunities for both the rural volunteer and the career emergency medical technician. There are three levels of EMT certification; LBCC provides training that leads to certification in Oregon as two: the EMT Basic and the EMT Intermediate.

Emergency medical technicians (EMTs) provide immediate care for ill or injured people. They drive to the scene of an emergency, determine the nature and extent of the injury or illness, and give emergency care, which may require use of equipment such as an electrocardiograph. If victims are trapped in cars or buildings, EMTs may have to free them.

If a patient needs additional care, the EMTs lift them onto stretchers and transport them to medical facilities. After transferring a patient to the emergency room, the EMTs record the treatment on the patient's chart, then replace supplies, check equipment, and clean the ambulance.

Although LBCC does not provide paramedic training, we do provide a path for the career EMT who wants to become certified at the paramedic level. All first-year courses required for the associate degree in emer-

gency medical services are offered at LBCC, although they are not offered every term. (Check with the program coordinator for the schedule of classes.) Upon completion, the student is eligible for a one-year certificate in EMT. Students planning to continue to the paramedic level can transfer to another paramedic training institution to receive the associate degree in EMS.

The EMT certificate program is accredited by the Oregon Health Division's EMS and Trauma Systems Section and the Oregon Department of Education. The curricula utilized are the National Department of Transportation (USDOT) National Standard Curriculum and the Oregon EMT Intermediate Curriculum. The program utilizes qualified paramedic instructors for its course content.

Students interested in training for a career in Fire Science should contact the department chair at 917-4923.

PROFESSIONAL TECHNICAL

One-Year Certificate in Emergency Medical Technician

Course No.	Course Title	Credits
Fall Term		
BI 231	Human Anatomy & Physiology	4
EM 5.801	Introduction to EMS	3
EM 5.810	EMT Basic: Part A	3
EM 5.811	EMT Basic: Part B	3
MTH 065	Elementary Algebra	4
Winter Term		
BI 232	Human Anatomy & Physiology	4
EM 5.812	EMT Basic: Part C	4
EM 5.820	Emergency Communication & Patient Transportation	3
MO 5.630	Medical Terminology I	3
WR 121	English Composition	3
Spring Term		
BI 233	Human Anatomy & Physiology	4
EM 5.825	EMT Rescue	3
EM 5.830	Crisis Intervention	3
PSY 101	Psychology & Human Relations	3
WE 1.280	CWE EMT	2
Total Credits Required:		49

Engineering Transfer

Program Contacts:

David Kidd, John Sweet

The LBCC Engineering Transfer 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 curriculum meets the requirements for admission to most of the engineering programs at Oregon State University and at other engineering bachelor's degree programs.

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.

Many students start at terms other than fall term and take night classes as well as day classes. Some students attend part time. Students should be prepared to purchase a scientific-type electronic calculator.

TRANSFER

Associate of Science with an emphasis in Engineering Transfer

See graduation requirements for Associate of Science degree. Classes shown below in italic are general education classes. Construction Engineering Management majors should refer to the list of substitutions that follows the program requirements. Note: CH 150 Preparatory Chemistry is a prerequisite for CH 201 and CH 221 General Chemistry. Other classes can be used to meet this prerequisite. See the course description in this catalog for details. Students majoring in Chemical Engineering, Environmental Engineering, and Bioengineering should take CH 221, CH 222 and CH 223. Students majoring in Construction Engineering Management should take CH 201; all other students should take CH 201 and CH 202.

General Education Requirements: 43

Course No.	Course Title	Credits
Fall Term - First Year		
ENGR 111	Engineering Orientation I	4
CH 150	Preparatory Chemistry	3
MTH 251	Differential Calculus	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		
WR 121	English Composition	3
	Cultural Diversity	3
Winter Term		
ENGR 112	Engineering Orientation II	4
CH 201	General Chemistry for Engineers	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		
MTH 252	Integral Calculus	5
SP 111	Fundamentals of Speech or	
SP 112	Introduction to Persuasion	3
	Literature & the Arts	3
Spring Term		
CH 202	General Chemistry for Engineers	4(1)
(Four credits apply toward general education requirements; one credit applies toward program.)		
MTH 253	Calculus	4
PE 231	Lifetime Health & Fitness	3
	Biological Science	4
WR 227	Technical Report Writing	3
Fall Term - Second Year		
ENGR 201	Electrical Fundamentals: DC Circuits	4
ENGR 211	Statics	4
MTH 254	Calculus	4
PH 211	General Physics with Calculus	5
Winter Term		
ENGR 212	Dynamics	4
PH 212	General Physics with Calculus	5
	Western Culture	3
	Engineering Elective	4
	Social Processes & Institutions	3

Spring Term

MTH 256	Applied Differential Equations	4
PH 213	General Physics with Calculus	5
	<i>Difference, Power & Discrimination</i>	3
	(Students intending to major in Chemical or Environmental Engineering at OSU should substitute CH 223 for PH 213.)	
	Engineering Elective	4

Program Requirements: 66**Total Credits Required: 109**

From the following list of approved electives, select courses that are required for your major at the institution you plan to attend. Oregon State University will accept a maximum of 108 transfer credit hours.

CH 223	General Chemistry	5
CH 241	Organic Chemistry	4
CH 242	Organic Chemistry	4
CH 243	Organic Chemistry	4
CS 133V	Visual Basic I	4
CS 161	Introduction to Computer Science I (Java)	4
CS 162	Introduction to Computer Science II (Java)	4
EC 201	Introduction to Microeconomics	4
EC 202	Introduction to Macroeconomics	4
ENGR 202	Electrical Fundamentals: AC Circuits	4
ENGR 203	Electrical Fundamentals: Signals & Controls	4
ENGR 213	Strength of Materials	4
ENGR 245	Engineering Graphics & Design	4
ENGR 271	Digital Logic Design	4
MTH 255	Vector Calculus	4
MTH 265	Statistics for Scientists & Engineers	4

The following course substitutions will be made for students intending to major in Construction Engineering Management at OSU:

BA 211	for MTH 253
BA 213	for ENGR 212
BA 230	for MTH 254
BA 275	for MTH 256
CEM 263	for ENGR 201
ENGR 245	for CH 222
PH 201, 202, 203	for PH 211, 212, 213

English

Program Contact:

Linda Spain

Additional Faculty:

Beth Camp, Natalie Daley, Paul Hagood, Robin Havenick, Peter Jensen, Terrance Lane Millet

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. A student working toward a bachelor's degree can choose between two associate degree programs at LBCC: the Associate of Science or the Associate of Arts (Oregon Transfer). We recommend that English majors planning to transfer to Oregon State University complete the AS because this degree has been designed to mirror requirements at OSU; it allows you to transfer to OSU as an English major, a liberal studies major, a writing minor, or as a student in the Interdisciplinary Multimedia program. If you plan to transfer to the University of Oregon, you should consider completing the AAOT degree.

Students interested in earning an AS with an emphasis in English may choose either a Literature or a Creative Writing option. Students interested in professional writing may earn an AS with a major emphasis in Technical Communications, which will prepare them to enter the workforce or transfer to a four-year college or university. The Technical Communications pro-

gram addresses business and industry requirements by providing specialized classes in technical writing, graphic design for publication, and the choice of a broad variety of business and speech classes. Students develop a solid foundation in grammar, style and particular forms of technical communication, including reports, proposals and manuals, as well as the presentation of their projects using the most current methods and software.

Students interested in creative writing and graphic arts may take a literary publications class and/or work with faculty advisors from the English, Art and Graphic Arts departments to produce LBCC's annual literary publication, *The Eloquent Umbrella*.

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 attend as a full-time student and you will need to meet prerequisite skills in math and writing as measured by LBCC's Placement Test. Test scores that require you to take pre-college courses in math and writing will extend this two-year estimate.

Currently, creative writing classes (WR 241, WR 242, and WR 247) have no prerequisite; however, other writing classes numbered above WR 121 require successful completion of WR 121 as a prerequisite, and writing classes in the technical writing sequence require successful completion of WR 227.

TRANSFER

Associate of Science with an emphasis in English

See graduation requirements for Associate of Science degree.

Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

Select either the Literature or the Creative Writing option. Sequentially numbered courses need not be taken in sequence, but it is recommended.

Course No.	Course Title	Credits
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Literature Option (Select 18 credits.)

ENG 107	Western World Literature: Classical	3
ENG 108	Western World Literature: Middle Ages to Neoclassicism	3
ENG 109	Western World Literature: Modern	3
ENG 204	English Literature: Early	3
ENG 205	English Literature: Middle	3
ENG 206	English Literature: Modern	3
ENG 253	American Literature: Early	3
ENG 254	American Literature: Middle	3
ENG 255	American Literature: Modern	3

Select three credits from the following English courses:

ENG 201	Shakespeare	3
ENG 202	Shakespeare	3
ENG 203	Shakespeare	3

Select 12 other literature credits with the ENG prefix 12

Creative Writing Option (WR 240, 241 & 242 may be repeated.)

WR 240	Personal Journal Writing	6
WR 241	Creative Writing: Fiction	6
WR 242	Creative Writing: Poetry	6
WR 247	Literary Publication	3

Select 12 credits from the following. Sequentially numbered courses need not be taken in sequence, but it is recommended.

ENG 107	Western World Literature: Classical	3
ENG 108	Western World Literature: Middle Ages & Neoclassicism	3
ENG 109	Western World Literature: Modern	3
ENG 204	English Literature: Early	3
ENG 205	English Literature: Middle	3
ENG 206	English Literature: Modern	3
ENG 253	American Literature: Early	3
ENG 254	American Literature: Middle	3
ENG 255	American Literature: Modern	3

Program Requirements: 33

Total Credits Required: 91

TRANSFER

Associate of Science with an emphasis in Technical Communications

See graduation requirements for Associate of Science degree. Classes shown below in *italics* are general education classes. Note: No credits may be used for more than one requirement. Students are encouraged to include the following general education courses:

Course No.	Course Title	Credits
SP 111	<i>Fundamentals of Speech or</i>	
SP 218	<i>Interpersonal Communications</i>	3
MTH 105	<i>Introduction to Contemporary Math (4 credits) or</i>	
MTH 111	<i>College Algebra (5 credits)</i>	4-5
WR 121	<i>English Composition</i>	3
WR 227	<i>Technical Report Writing</i>	3

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

For Technical Communications Emphasis

BA 101	Introduction to Business	4
CIS 125	Introduction to Software Applications	3
WE 202	CWE Seminar	1
WR 185	Understanding Grammar	3
WR 228	Advanced Technical Report Writing	3
WR 246	Publishing & Editing: Graphic Arts for Writers	3
WR 280	CWE English/Writing	2

Select 15 elective credits from the following courses or see your advisor for additional electives in your specific field of interest 15

BA 215	Survey of Accounting (4 credits)
BA 223	Principles of Marketing (3 credits)
BA 230	Business Law (4 credits)
JN 134	Introduction to Photojournalism (3 credits)
SP 112	Introduction to Persuasion (3 credits)
SP 219	Small Group Communication (3 credits)
WR 214	Business Communications (3 credits)
WR 241	Creative Writing: Fiction (3 credits)
WR 242	Creative Writing: Poetry (3 credits)

Program Requirements: 34

Total Credits Required: 92

Exercise and Sport Science

Program Contact:

Brad Carman

Additional Faculty:

Cindy Falk, Randy Falk, Jayme Frazier, Richard Gibbs, Greg Hawk, Linn Stordahl

The Health and Human Performance Department offers an Associate of Science Degree for students planning to transfer to a four-year program to earn a baccalaureate degree in the area of physical education or exercise and sport science. Career options include physical education, fitness program management, physical education for the disabled, pre-therapy, sports leadership, coaching, athletic training, or applied exercise and sports science.

The Health and Human Performance Department provides a comprehensive program for students who want to gain knowledge about the value of preventive and corrective health practices and who want to participate in physical activities to enhance overall wellbeing.

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 condition; and team sport courses, which provide a high level of conditioning and competition. Intercollegiate athletics are offered in men's and women's basketball, men's baseball, and women's volleyball.

All students interested in this major should see an advisor regarding electives. The selection of electives is a critical piece to transferring as a junior to OSU or any other four-year school.

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 and complete shower facilities. Outside are a baseball and softball diamond, a complete track facility, tennis courts and four sand volleyball courts. The department also utilizes non-college facilities for activities such as bowling.

TRANSFER

Associate of Science with an emphasis in Exercise and Sport Science

See graduation requirements for Associate of Science degree. WR 122 English Composition is required.

General Education Requirements: 43

Course No.	Course Title	Credits
HE 225	Social & Individual Health Determinants	3
HE 252	First Aid	3
NFM 225	Nutrition	4
PE 131	Introduction to Health & Physical Education	3

Select 34 credits from the following courses as electives 34

BI 231	Human Anatomy & Physiology (4 credits)
BI 232	Human Anatomy & Physiology (4 credits)
BI 233	Human Anatomy & Physiology (4 credits)
BI 234	Microbiology (4 credits)
HE 125	Occupational Safety & Health (3 credits)
HE 151	Drugs in Society (3 credits)
HE 204	Exercise & Weight Management (3 credits)
HE 205	Diet & Nutrition (3 credits)
HE 207	Stress Management (3 credits)
HE 220	Introduction to Epidemiology & Health Data (3 credits)
HE 253	AIDS & Sexually Transmitted Diseases (3 credits)

HE 263	Psychosocial Dimensions of Health (3 credits)
HE 266	Nutrition for Fitness & Sports (3 credits)
HE 270	History, Philosophy & Ethics of Health (3 credits)
PE 280	CWE (3+ credits)
PSY 201	General Psychology (3 credits)
SOC 204	General Sociology (3 credits)

Program Requirements: 47

Total Credits Required: 90

Foreign Language

Program Contact:

Margarita Casas

Currently the only foreign language degree offered through LBCC is Spanish. Students who wish to participate in the LBCC/OSU Dual Enrollment Program and use a different language may, with the approval of the Foreign Language advisor, substitute courses for those listed in this brochure. Transfer credit Foreign Language classes are offered each term to help students build proficiency in a foreign language. These classes earn four transfer credits and emphasize speaking, reading and writing.

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 Extended Learning centers in Albany and Corvallis. They include: beginning conversation classes in Arabic, Chinese, German, Japanese, Latin, and Russian; beginning, intermediate, and advanced conversation classes in French and Spanish; and beginning and intermediate classes in American Sign Language.

TRANSFER

Associate of Science with an emphasis in Foreign Language

See graduation requirements for Associate of Science degree.

Please consult with your department advisor when selecting courses.

Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

Currently the only foreign language degree offered through LBCC is Spanish. Students who wish to participate in the LBCC/OSU Dual Enrollment Program and use a different language may, with the approval of the Foreign Language advisor, substitute courses for those listed below.

Course No.	Course Title	Credits
SPN 101, 102, 103	First-Year Spanish I, II, III	12
SPN 201, 202, 203	Second-Year Spanish I, II, III	12
HST 158	History of Latin America	3
	Elective	6

Program Requirements: 33

Total Credits Required: 91

Graphic Design

Program Contact:

John Aikman

The Graphic Design program is dedicated to training students for entry-level positions in the fields of design, illustration, printing and desktop publishing. The graphic design curriculum leads to an Associate of Applied Science degree.

Graphic designers create designs using typography, photography and illustration. Designers create brochures, logos, packaging and advertisements to promote products, services or businesses. Some work on design and layout for magazines or other publications, and others work in television or film. Skills essential to individuals pursuing careers in these fields include: design and composition, computer technology, communications, media, and mastery of the English language.

The Associate of Applied Science degree in Graphic Design helps refine an individual's visual communication, problem-solving and organizational skills. Emphasis is placed on professionalism and freshness of approach. Emphasizing an integrated approach in which the Art, Digital Imaging and Graphic Arts faculty work together, the program immerses students in both the creative and the technical demands involved in producing a finished product. Students receive learning experiences consistent with the needs of potential employers in the industry. Projects in design and imaging provide opportunities for students to deal with clients and to accept responsibility for deadlines and quality control. Graduates carry with them an extensive professional portfolio. Cooperative Work Experience (CWE) may offer students on-the-job learning experiences.

Program Requirements

Potential graphics majors make application to the Graphic Design Program upon successfully completing the Digital Imaging One-Year Certificate (or equivalent) in June. Portfolio expectations are available upon request. Twenty individuals are then selected to begin the two-year Graphic Design program.

Courses are highly sequential. Only students who follow the recommended sequences for the degree may be assured of completing the program in two years. Students entering at times other than fall term may need more than six terms to complete the degree requirements.

Students in the program should anticipate expenses of \$500 per term during the first year and \$700 each term during the second year for books, tools, supplies and materials.

Facilities

The graphics facilities include two graphic design and digital imaging laboratories with both Macintosh and PC computers and other equipment similar to that in the offices of printers, designers, illustrators, and the print media throughout the country. The facilities also include graphic design and fine art studios and display galleries for presenting student work and the work of other artists and designers. Facilities are handicapped accessible.

Associate of Applied Science degree with an emphasis in Graphic Design

See graduation requirements for Associate of Science degree. Prerequisite: completion of three-term digital imaging sequence (or equivalent). ART 131 Drawing I, ART 132 Drawing II and ART 133 Drawing III are program requirements for Graphic Design and can be taken as part of the Digital Imaging Prepress Technology Certificate.

Course No.	Course Title	Credits
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Fall Term - First Year

AA 237	Illustration I	4
ART 204	History of Western Art	3
ART 234	Figure Drawing	4

Winter Term

AA 238	Illustration II	4
ART 205	History of Western Art	3

Spring Term

AA 239	Illustration III	4
ART 206	History of Western Art	3

Fall Term - Second Year

AA 221	Graphic Design I	4
AA 226	Typographical Design II	4
GA 3.162	Multimedia I	3

Winter Term

AA 222	Graphic Design II	4
AA 225	Packaging & 3-D Design	4
GA 3.163	Multimedia II	3

Spring Term

AA 223	Graphic Design III	4
AA 228	Portfolio Preparation	4

Select additional elective courses 6

Approved Electives

ART 263	Digital Photography (3 credits)
WR 075	Spelling (3 credits)
WR 227	Technical Report Writing (3 credits)
WR 246	Publishing & Editing: Graphic Arts for Writers (3 credits)
WR 247	Literary Publication (3 credits)
BA 101	Introduction to Business (4 credits)
BA 2.530	Practical Accounting (4 credits)
BA 223	Principles of Marketing (3 credits)

Other than required for general education

SP 100	Introduction to Speech Communication (3 credits)
SP 111	Fundamentals of Speech (3 credits)
SP 112	Introduction to Persuasion (3 credits)
SP 218	Interpersonal Communication (3 credits)
SP 219	Small Group Communication (3 credits)

General Education Requirements: 19

Program Requirements: 73

Total Credits Required: 92

Health and Human Sciences

Program Contact:

Sue Doescher

Health and Human scientists work to improve the quality of family life through the practical application of science and technology. They learn to use skills from a wide variety of disciplines, from art to science to communications. They may choose to specialize in such diverse careers as textile design, early childhood education, human services or restaurant food service management. Throughout this multi-disciplinary field runs a common thread: a real concern for the family as it faces the challenges of a changing world.

Associate of Science with an emphasis in Health and Human Services

The Associate of Science degree is designed for students who plan to pursue a major in health and human services at Oregon State University. A large number of career options exist in this field. At OSU, these are offered under more than one area of study. Degree requirements vary according to the option chosen. A checklist of program requirements for each of the options is available from the program contact.

- *Design and Human Environment*—Students may choose an area of study from the following options: apparel design, housing studies, interior design and merchandising management. Courses

prepare students for positions in retailing of apparel and home furnishings, housing design and policy, apparel production, and promotional work for manufacturers.

- *Human Development and Family Sciences*—Human development and family sciences students may choose an area of study from the following options: early childhood development and education, family and consumer sciences, gerontology and human services. HDFS programs prepare students for work in human services and agencies, early childhood education, senior services, extension, and teaching high school courses in family and consumer science. Students interested in Early Childhood/Elementary Education should refer to the Education section of this catalog.
- *Nutrition and Food Management*—Students may choose an area of study from the following options: dietetics, restaurant food service management, and nutrition science. Graduates find employment as dietitians, sales representatives for food service or health products, food service and restaurant management, and food product development.

Health Promotion and Education

Program Contacts:

Brad Carman

Additional Faculty:

Cindy Falk, Jayme Frazier, Richard Gibbs, Linn Stordahl

This two-year program is for students who plan on transferring to a four-year institution to complete a non-clinical degree in public health or health education. Professional careers in this field include: health promotion, health education, environmental health, occupational safety, child and adolescent health, addiction studies, community health and gerontology.

The Health and Human Performance Department has articulation agreements with Oregon State University in Corvallis and Western Oregon University in Monmouth. The agreements allow LBCC students who complete the Associate of Science requirements in Health Promotion and Education at LBCC to enroll and transfer, with junior standing, to either of these universities, providing the student also meets the transfer and admission requirements established by OSU and WOU.

If you intend to transfer to a four-year institution other than OSU or WOU after completing your work at LBCC, academic advisors can help you plan a smooth transition to the school you choose. It is wise, therefore, to schedule your LBCC classes to meet transfer requirements either through a two-year degree or two years of appropriate classes.

Students should see an advisor regarding electives. The selection of electives is a critical piece to transferring as a junior to OSU or any other four-year school.

TRANSFER

Associate of Science with an emphasis in Health Promotion and Education

See graduation requirements for Associate of Science degree. Classes shown below in italics are general education classes.

General Education Requirements: 43

Course No.	Course Title	Credits
BI 234	Microbiology	4
HE 220	Introduction to Epidemiology & Health Data	3
HE 225	Social & Individual Health Determinants	3
HE 252	First Aid	3

HE 263	Psychosocial Dimensions of Health	3
NFM 225	Nutrition	4
PE 131	Introduction to Health & Physical Education	3
PSY 201	General Psychology	3
<i>Select 23 credits from the following courses as electives</i>		<i>23</i>
BI 231	Human Anatomy & Physiology (4 credits)	
BI 232	Human Anatomy & Physiology (4 credits)	
BI 233	Human Anatomy & Physiology (4 credits)	
HE 125	Occupational Safety & Health (3 credits)	
HE 151	Drugs in Society (3 credits)	
HE 204	Exercise & Weight Management (3 credits)	
HE 205	Diet & Nutrition (3 credits)	
HE 207	Stress Management (3 credits)	
HE 253	AIDS & Sexually Transmitted Diseases (3 credits)	
HE 266	Nutrition for Fitness & Sports (3 credits)	
HE 270	History, Philosophy & Ethics of Health (3 credits)	
HE 280	CWE (3+ credits)	
SOC 204	General Sociology (3 credits)	

Program Requirements: 49

Total Credits Required: 92

Heavy Equipment/Diesel Technology

Program Contact:

Steve Pearson, John Alvin Jr.

Additional Faculty:

R.J. Ehlers, Phil Krolick

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 will also maintain and repair power train, electrical and hydraulic systems used in construction equipment, farm equipment and trucks. Some technicians work for companies that maintain their own vehicles; in these jobs, technicians spend most of their time doing tasks that will help prevent future problems.

To become a diesel technician, a student 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.

Certification is optional and may be obtained in one or more areas including brakes, gasoline engines, diesel engines, drive trains, electrical systems, and suspension and steering. For certification, a mechanic must pass a written exam and have at least two years of experience (completion of an automotive technician program may be substituted for up to one year).

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 autos, trucks and farm and construction equipment. Bus lines, railways, and truck and marine industries also employ diesel technicians. Electric power plants, local industries, and both state and federal government have a need for trained technicians. Students who complete the one-year certificate will be prepared to be heavy equipment vehicle inspectors as well as tune-up specialists for heavy equipment and diesel trucks.

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 \$750 for a personal set of diesel mechanic hand tools.

The Heavy Equipment/Diesel Technology curricula lead to an Associate of Applied Science degree, a two-year certificate or a one-year certificate.

Program Requirements

The Associate of Applied Science degree requires completion of English composition (WR 121), speech and math, usually in the first year, to acquire the degree in two years. Only students beginning their program during the fall term can be assured of completing the program in two years. Students enrolling at other times may need more than six terms to complete degree requirements.

Mechanical Processes is required for all Heavy Equipment/Diesel majors and must be taken concurrently with their major field of study. Course content may be challenged for full or partial credit. Students also can improve their skills through laboratory experience in HV 3.131 Service and Repair Practices.

Skills Upgrading

An individual who has prior work experience in the field may be admitted to advanced standing in the program upon confirmation of appropriate education or experience, which is evaluated through transcripts, work history and competence examination. Permission of the division director is required.

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, buses, crawler tractors, farm equipment and tractor/trailers.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Heavy Equipment/Diesel Technology

See graduation requirements for Associate of Applied Science degree.

Classes shown below in italic are general education classes. All other class sequences may be taken as circumstances dictate. Note: Only a total of 4 credits are required for CWE or Heavy Equipment Service & Repair.

Course No.	Course Title	Credits
Fall Term - First Year		
HV 3.295	Power Train Systems	10
HV 3.303	Mobile Air Conditioning & Comfort Systems I ¹	3
HV 3.307	Mechanical Processes I ¹	2
WD 4.151	Welding I	2
Winter Term		
HV 3.296	Steering, Suspension & Braking Systems	10
HV 3.308	Mechanical Processes II ¹	2
MTH 061	<i>Survey of Math Fundamentals</i>	3
MTH 063	<i>Industrial Shop Math</i>	1
WD 4.152	Welding II	2
Spring Term		
HV 3.297	Electrical & Electronic Systems	10
MA 3.422B	Basic Lathe/Mill Processes	2
WR 121	<i>English Composition</i>	3

1— Courses offered that term only.

Fall Term - Second Year

	<i>Cultural Diversity/Global Awareness</i>	3
HV 3.131	Heavy Equipment Service & Repair or CWE	1
HV 3.143	Heavy Duty Electrical Applications	5
HV 3.146	Pneumatic Brakes & Controls	5

Winter Term

HV 3.129	Heavy Equipment/Diesel Engines ¹	5
HV 3.131	Heavy Equipment Service & Repair or CWE	2
HV 3.134	Basic Hydraulics	3
	<i>Science, Technology & Society</i>	3
HV 3.140	Industrial Diesel Engine Fuel Systems	5

Spring Term

HV 3.130	Heavy Equipment/Diesel Tune-Up ¹	10
HV 3.132	Advanced Mobile Hydraulics	3
	<i>Health & Physical Education</i>	3
SP 100	<i>Introduction to Speech Communication</i>	3
HV 3.131	Heavy Equipment Service & Repair or CWE	1

General Education Requirements:**Program Requirements:****Total Credits Required:**

PROFESSIONAL TECHNICAL

Two-Year Certificate in Heavy Equipment/Diesel Technology

Note: Only a total of 4 credits are required for CWE or Heavy Equipment Service & Repair.

Course No.	Course Title	Credits
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Fall Term - First Year

HV 3.295	Power Train Systems	10
HV 3.303	Mobile Air Conditioning & Comfort Systems I ¹	3
HV 3.307	Mechanical Processes I ¹	2

WD 4.151	Welding I	2
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Winter Term

HV 3.296	Steering, Suspension & Braking Systems	10
HV 3.308	Mechanical Processes II	2
MTH 060	Introduction to Algebra	4
WD 4.151	Welding II	2

Spring Term

HV 3.297	Electrical & Electronic Systems	10
MA 3.422B	Basic Lathe/Mill Processes	2
WR 115	Introduction to Writing	3

Fall Term - Second Year

	Health & Physical Education	3
HV 3.146	Pneumatic Brakes & Controls	5
HV 3.131	Heavy Equipment Service & Repair or CWE	1
HV 3.143	Heavy Duty Electrical Applications	5

Winter Term

HV 3.129	Heavy Equipment/Diesel Engines	5
HV 3.131	Heavy Equipment Service & Repair or CWE	2
HV 3.134	Basic Hydraulics	3
HV 3.140	Industrial Diesel Engine Fuel Systems	5

Spring Term

HV 3.130	Heavy Equipment/Diesel Tune-up	10
HV 3.131	Heavy Equipment Service & Repair or CWE	1
HV 3.132	Advanced Mobile Hydraulics	3
SP 100	Introduction to Speech Communication	3

Total Credits Required:

96

One-Year Certificate in Heavy Equipment/Diesel Technology

Course No.	Course Title	Credits
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Fall Term

HV 3.295	Power Train Systems	10
HV 3.307	Mechanical Processes ¹	2
HV 3.314	Applied Electrical Fundamentals I	2

Winter Term

HV 3.129	Heavy Equipment/Diesel Engines ¹	5
HV 3.134	Basic Hydraulics ¹	3
HV 3.308	Mechanical Processes II ¹	2
HV 3.140	Industrial Diesel Engine Fuel Systems	5
SP 100	Introduction to Speech Communication	3

Spring Term

HV 3.130	Heavy Equipment/Diesel Tune-up ¹	10
HV 3.132	Advanced Mobile Hydraulics ¹	3

Other required courses:

<i>Math course (based on Placement Test score)</i>	4
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<i>Writing course (based on Placement Test score)</i>	3
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Total Credits Required:

52

TRANSFER

Associate of Science in Heavy Equipment/Diesel Technology

The heavy equipment/diesel technology Associate of Science degree is designed to allow successful transfer of a student into a bachelor's degree program in Heavy Equipment/Diesel Technology. A bachelor's degree qualifies a student for job placement in corporate and management positions. The Associate of Science degree is available through special agreements and models the AAS with the following exceptions: Speech required: SP 111; Math required: MTH 111; English required: WR 121 and WR 122 See program advisor. See graduation requirements for the Associate of Science degree.

History*See Social Science.***Home Economics***See Health and Human Sciences.*

Horticulture

Program Contact:

Stefan Seiter

The program provides instructional services for students in three areas:

- occupational training,
- supplemental technical training, and
- avocational interests.

The horticulture curricula are based on necessary competencies identified by industry and reviewed by advisory committees. Students learn facts and skills that are necessary for entry- to mid-level technical employment.

Opportunities exist for horticulture students in arboriculture, floriculture, greenhouse operation and management, landscape planting and maintenance, retail landscape and garden center sales, nursery operation and management, plant propagation, nursery sales, golf course and parks maintenance and management, and turf management.

Neither the certificate nor the Associate of Applied Science degree programs has official prerequisites. Students do take a variety of science-oriented courses, however, and are expected to have basic mathematical skills. To graduate with an AAS degree, each student needs to complete a four-credit algebra course.

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, but two full years are required to complete the AAS degree. If students attend part time, they will need to attend longer to complete the program. Although not every course listed in the Horticulture program must be taken in the order shown in the curriculum, some courses are offered only once every other year. Consequently, students need to take those particular courses in the order they are offered.

Instructional facilities, including a greenhouse, labs, ornamental gardens and the campus grounds, are used for demonstrations, skill building and evaluation.

The horticulture curricula lead to an Associate of Applied Science degree or a one-year certificate.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Horticulture

See graduation requirements for Associate of Applied Science degree. MTH 065 Elementary Algebra is required.

Course No.	Course Title	Credits
Fall Term - First Year		
AG 8.125	Soils I	3
AG 8.165	Plant Science	4
AG 111	Computers in Agriculture	2
HT 8.140	Landscape Maintenance	3
Winter Term		
AG 8.126	Soils II	3
AG 8.138	Irrigation Systems	3
HT 8.102	Career Exploration: Horticulture	1
HT 8.135	Turf Management I	3
Spring Term		
CSS 105	Soils & Man	3
HORT 228	Landscape Plant Materials	3
HT 8.136	Turf Management II	3

Fall Term - Second Year		
AG 8.131	Pest Management	3
HT 8.169	Tree Identification	3
SPN 101	First-Year Spanish I	(3)1
(Three credits apply toward general education requirements; one credit applies toward program.)		
	Biological or Physical Science	4
Winter Term		
AG 8.130	Agricultural Chemicals	4
HT 8.132	Arboriculture I	3
HT 8.141	Landscape Planning	3
	Biological or Physical Science	4
Spring Term		
AG 280C	CWE Horticulture	3
HT 8.133	Arboriculture II	3
HT 8.137	Plant Propagation	4
Work with your advisor to select 6 credits of approved electives		6
General Education Requirements:		19
Program Requirements:		72
Total Credits Required:		91

PROFESSIONAL TECHNICAL

One-Year Certificate in Horticulture

Course No.	Course Title	Credits
Fall Term		
AG 8.125	Soils I	3
AG 8.165	Plant Science	4
AG 111	Computers in Agriculture	2
HT 8.140	Landscape Maintenance (offered alternate years) or	
HT 8.169	Tree Identification (offered alternate years)	3
Winter Term		
AG 8.126	Soils II	3
AG 8.138	Irrigation Systems	3
HT 8.102	Career Exploration: Horticulture	1
HT 8.132	Arboriculture I (offered alternate years) or	
HT 8.135	Turf Management I (offered alternate years)	3
Spring Term		
CSS 105	Soils & Man	3
HORT 228	Landscape Plant Materials	3
HT 8.133	Arboriculture II (offered alternate years) or	
HT 8.136	Turf Management II (offered alternate years)	3
HT 8.137	Plant Propagation	4
Select 7 credits of math and writing courses at appropriate level (based on Placement Test scores).		
	Math/writing courses	7
Total Credits Required:		42

Instructional Assistant

Program Contacts:

Liz Pearce-Smith, Christy Stevens

The Education/Child and Family Studies Department offers a one-year certificate and a two-year Associate of Applied Science degree to prepare individuals to work in a classroom as instructional assistants. Instructional assistants (IAs) help teachers maximize classroom learning for all students. Instructional assistants typically implement daily

1— Courses offered that term only.

educational programs planned with teachers; maintain the environment, supplies, and equipment; maintain records; and participate in staff and team meetings. Many instructional assistants grade homework and tests. Under the direction and guidance of teachers, they may prepare lesson plans and instruct children. IAs assist and supervise students in lunchrooms, on school grounds and on field trips. They help with student behavior problems and report suspected cases of child abuse or neglect. In high schools, teacher aides supervise study halls, libraries, and computer labs. Graduates of the program are prepared to work with students in grades K-12 and with students who have learning disabilities and other special needs.

Instructional assistants need knowledge in teaching and the methods involved in learning and instruction. IAs who work with children are usually required to take courses or training to keep their skills up-to-date. Instructional Assistants who work in Title I programs are required to complete two years of college or the equivalent.

The one-year certificate can be applied toward the AAS in Instructional Assistant or toward the Associate of Arts Oregon Transfer or the Associate of Science with an emphasis in Elementary Education.

Program Requirements

Full-time students can complete the Instructional Assistant Certificate in one-year and the Associate of Applied Science in Instructional Assistant in two years if they meet prerequisite basic skill requirements as determined by the College Placement Test (CPT). Individuals who currently are employed instructional assistants and are upgrading their skills can complete the program by taking courses in the evening and summer. Mathematics and writing scores on the CPT may require pre-college courses that will extend the completion date. The course requirements do not include pre-college level courses.

The course requirements are designed to be directly relevant to employment practices. Program requirements include six hours of practicum. Practicum experiences give students direct contact with students, teachers, and classroom settings to maximize the understanding of job requirements. Full-time students who currently are not employed as IAs need to make arrangements with a program faculty member to participate in a local school practicum. Practicum placements must be identified and secured before the quarter in which they will occur.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Instructional Assistant

See graduation requirements for Associate of Applied Science degree.

Course No.	Course Title	Credits
ED 101A	Observation & Guidance	3
ED 102A	Education Practicum	3
ED 123	Reading Instruction	3
ED 124	Mathematics Instruction	3
ED 216	Purpose, Structure, Function of Education in a Democracy ..	3
ED 219	Multicultural Issues in Educational Settings	2
ED 252	Behavior Management	3
ED 282	Working with Children with Special Needs	3
ED 7.710	Principals of Observation	3
ED 7.725	Professional Issues in Instructional Assisting	1
ENG 211	Children's Literature	3
HDFS 229	School-Age & Adolescent Development	3
HDFS 248	Learning Experiences for Children	3
MTH 065	Elementary Algebra	4
SP 218	Interpersonal Communication	3

WR 121	English Composition	3
	Health & Physical Education	3
	Science, Technology & Society	3
	Select 38 additional elective credits	38

General Education Requirements: 19

Program Requirements: 71

Total Credits Required: 90

PROFESSIONAL TECHNICAL

One-Year Certificate in Instructional Assistant

Course No.	Course Title	Credits
ED 101A	Observation & Guidance	3
ED 102A	Education Practicum	3
ED 123	Reading Instruction	3
ED 124	Mathematics Instruction	3
ED 252	Behavior Management	3
ED 282	Working with Children with Special Needs	3
ED 7.725	Professional Issues in Instructional Assisting	1
ENG 221	Children's Literature	3
HDFS 229	School-Age & Adolescent Development	3
HDFS 248	Learning Experiences for Children	3
MTH 060	Introduction to Algebra	4
SP 218	Interpersonal Communication	3
WR 121	English Composition	3

Select 7 additional elective credits

Total Credits Required: 45

A third six-credit practicum (ED 103A) may be taken as elective credits. Electives also may be chosen from courses beginning with the prefixes HDFS, PSY, ED, HS or SPN. Selected courses with the CJ or OA prefix also may qualify but require approval from the program advisor. Students wanting to use other courses should also consult with the advisor.

Journalism and Mass Communications

Program Contact:

Rich Bergeman

The Journalism and Mass Communications program emphasizes writing for the print media and serves a twofold purpose: to prepare students for transfer to a four-year college or university and to provide entry-level skills to those who want to change careers. The journalism program maintains a co-curricular relationship with The Commuter, LBCC's award-winning student newspaper, providing first- and second-year students with hands-on training.

Students who intend to transfer to a four-year college or university can get a solid foundation in fundamental journalism skills at LBCC, from reporting and photography to writing and editing, which will prepare them to excel in a bachelor's degree program. At LBCC, they can choose between two associate degree programs: the Associate of Science (AS) or the Associate of Arts (Oregon Transfer). In all cases, they should consult with their LBCC advisor and make early contact with an advisor at the institution to which they plan to transfer.

Students who plan to transfer to the University of Oregon should pursue the Associate of Arts degree and should include journalism within their Arts and Letters requirements. (JN 201, JN 216, JN 217 and/or JN 134). For details, see the catalog for a complete listing of the graduation requirements for the Associate of Arts (Oregon Transfer) degree.

Students planning to transfer to Oregon State University (or to any other college without an accredited bachelor's program in journalism) should pursue the Associate of Science in Journalism and Mass Communications at LBCC. This transfer degree includes 25 lower-division journalism credits, as outlined below. Graduates can transfer to OSU and major in liberal studies with a concentration in mass communications or major in communications with a media minor.

Facilities

for the Journalism program include a modern computer-equipped newsroom and production lab overlooking the courtyard. Photography classes are supported by a series of fully equipped instructional dark-rooms and electronic imaging labs.

TRANSFER

Associate of Science with an emphasis in Journalism and Mass Communications

See graduation requirements for Associate of Science degree. General education requirement classes are shown in *italic*. Note: No credits may be used for more than one requirement.

Students are encouraged, but not required, to include the following courses in their general education and/or Liberal Arts core requirements:

Course No.	Course Title	Credits
CJ 120	<i>Introduction to the Judicial Processes</i>	3
HST 203	<i>U.S. History</i>	3
PS 203	<i>State & Local Government</i>	3

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

For Journalism and Mass Communication Emphasis

ART 261	Introduction to Photography	3
JN 134	Introduction to Photojournalism	3
JN 201	Media & Society	4
JN 215A	Journalism Lab	3
JN 215B	Design & Production Lab	6
JN 216	News Reporting & Writing	3
JN 217	Feature Writing	3
JN 280	Cooperative Work Experience	3

Select 4 elective credits: 4

Program Requirements: 32

Total Credits Required: 90

Legal Administrative Assistant

Program Contact:

Nancy Noe

Additional Faculty:

Mary Ann Lammers, Twila Lehman, Sally Stouder

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 for whom they work, 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 make photocopies of 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 they may organize and order new books for the law library.

Legal administrative assistants need knowledge in:

- general office work such as filing and recording information
- laws, rules, court procedures, and the political process
- the meaning, spelling, and use of the English language
- computer hardware and software

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 secretarial areas as well.

Program Requirements

The Legal Administrative Assistant program is designed to be completed in two years. This assumes that the entering student already knows how to type by touch and has been placed at or above the following levels on the Computerized Placement Test: WR 121 English Composition and MTH 065 Elementary Algebra. It is advisable to take the College Placement Test as early as possible. If developmental course work is required, we recommend that it be taken summer term prior to enrolling in the regular degree program. Pre-training might include: OA 121 *Keyboarding*, OA 123A *Typing Skillbuilding*, RD 080 *Building College Reading* or RD 090 *Strategies for Effective Reading*, WR 090 *The Write Course*, WR 115 *Introduction to College Writing*, MTH 020 *Basic Mathematics*, or MTH 060 *Introduction to Algebra*. Students should work with an advisor to interpret test scores and get help in planning their program.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Legal Administrative Assistant

See graduation requirements for Associate of Applied Science degree. Classes shown below in *italic* are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
CIS 1250	Introduction to Windows	1
CJ 120	Introduction to the Judicial Process	3
OA 2.500B	Business Orientation: Legal	1
OA 2.515	Business Math with Calculators	2
OA 122	Formatting	2
OA 124	Typing: Speed & Accuracy Development	3
OA 201	WordPerfect for Business	3

Winter Term

BA 2.518	Commercial Law (3 credits) or	
BA 230	Business Law (4 credits)	3-4
CIS 125S	Introduction to Spreadsheets	1
OA 2.505	Voice Recognition	2
OA 2.588	Editing Skills for Information Processing	3
OA 2.652	Filing	1
OA 2.675	Legal Practices, Procedures & Terminology I	3
OA 202	MS Word for Business	3

Spring Term

OA 2.527	Applied Document Processing	3
OA 2.551	Office Communications	4
OA 2.616	Job Success Skills: Legal	1
OA 2.645	Administrative Procedures I	6
OA 2.676	Legal Practices, Procedures & Terminology II	3

Fall Term - Second Year

BA 2.530	Practical Accounting I	4
OA 2.662	Legal Transcription	3
OA 203	Advanced Word Processing	3
PE 231	Lifetime Health & Fitness ²	3
SP 218	Interpersonal Communications	3

Winter Term

CJ 222	Procedural Law	3
OA 2.613	CWE for Office Professionals	4
OA 2.646	Administrative Procedures II	4
	Science, Technology & Society	3
	Approved electives	1-3

Spring Term

BA 224	Human Resource Management (3 credits) or	
BA 285	Business Relations/Global Economy (4 credits) or	
EC 115	Outline of Economics (4 credits)	(3)1
	(Three credits apply toward general education requirements; one credit applies toward program.)	
CJ 220	Introduction to Substantive Law	3
MTH 065	Elementary Algebra	4
OA 2.613	CWE for Office Professionals	4
WR 121	English Composition	3

Select a minimum of 1 credit from the courses listed below:

CIS 125P	Introduction to Presentations	1
CJ 100	Survey of Criminal Justice Systems	3
OA 2.682	Desktop Publishing	3
OA 2.683	Computerized Records Management	3

General Education Requirements: 19

Program Requirements: 77-81

Total Credits Required: 96-100

Machine Tool Technology

Program Contact:

John Niedermann

Additional Faculty:

Dick Carter

The Machine Tool Technology curriculum is designed to develop skills in a wide variety of machining processes, including operation of the drill press, engine lathe, vertical and horizontal milling machine, surface grinders, Computer Numerical Control Vertical Machining Center and Turning Center.

Students learn the basics of transforming raw material into finished parts. They study the principles of blueprint interpretation, material selection, operational sequence, machine operation, metal removal rates, deburring and final inspection.

Students work through a sequence of assignments ranging from simple exercises to complex assemblies. Hands-on experience, lecture and discussion, textbooks, manuals, audiovisual aids and field trips are employed throughout. The "people skills" in finding and keeping a job are emphasized continually. Safety is stressed throughout the curriculum.

The Machine Tool Technology program offers training in the following categories:

- Associate of General Studies degree
- Machine Tool Technology One-Year Certificate (day classes)
- CNC Machinist Certificate (evening classes)
- National Institute for Metal Working Skills (NIMS) Level I Certificate

Facilities

The lab facilities and machine selection are designed to allow comprehensive instruction in the tool of the machinist's trade. Care has been taken to allot enough time in actual machine operation for the student to become competent. Training is provided in ANSI/EIA NC code (G & M code) programming for the modern CNC turning center and CNC vertical machining center. Students need not have their own tools to enter the program, but are urged to buy tools before graduation and employment.

PROFESSIONAL TECHNICAL

Machine Tool Technology One-Year Certificate

Course No.	Course Title	Credits
Fall Term		
MA 3.396	Manufacturing Processes I	2
MA 3.422A	Basic Lathe/Mill Processes	4
MA 3.431	Basic Blueprint Reading: Metals	2
MA 3.405	Inspection I (1 credit) or	
MA 3.432	Introduction to Mastercam (3 credits)	1-3
MA 3.407	Math for NC Machinists	1
MA 3.409	Introduction to CNC	2
MTH 061	Survey of Math Fundamentals	3
Winter Term		
MA 3.397	Manufacturing Processes II	2
MTH 062	Occupational Trigonometry	1
MA 3.412	CAM I: Esprit	4
MA 3.420	CNC: Mill	4
MA 3.423	Intermediate Turning & Milling	4
WR 095	College Writing Fundamentals	3

Spring Term

MA 3.398	Manufacturing Processes III	2
MA 3.421	CNC: Lathe	4
MA 3.424	Advanced Machining Operations and Procedures	4
MA 3.406	Inspection II	2
MA 3.413	Lean Manufacturing & Productivity	1
MA 3.414	Tool Technology	1
	Approved elective	3

Total Credits Required: 50

Approved electives:

MA 3.416	CNC: Special Projects (1-3 credits)
MA 3.432	Introduction to Mastercam (3 credits)
MA 3.433	Mastercam II: Surfaces (3 credits)
MA 3.434	Mastercam III: Solids (3 credits)

PROFESSIONAL TECHNICAL

CNC Machinist Certificate

Course No.	Course Title	Credits
Fall Term		
MA 3.407	Math for CNC Machining	1
MA 3.420	CNC: Mill	4
MA 3.432	Introduction to Mastercam	3
Winter Term		
MA 3.421	CNC: Lathe	4
MA 3.433	Mastercam II: Surfaces (3 credits) or	
MA 3.412	CAM I: Esprit (4 credits)	3-4
Spring Term		
MA 3.416	CNC: Special Projects	3
MA 3.434	Mastercam III: Solids	3

Total Credits Required: 21-22

2- Other classes may substitute. See advisor.

Mathematics

Program Contact:

Rob Lewis

Additional Faculty:

Mary Campbell, Jeff Crabill, Hollis Duncan, Judy deSzoeko, Debbie Love, Cathy Lovingier, Roger Maurer, Bethany Pratt, Sharon Rodecap, Lynn Trimpe

The Mathematics Department provides courses for students in the college's technical and professional programs as well as a full complement of courses for transfer students. The department also offers developmental courses for students who have little mathematics in their background or who are returning to school.

The Mathematics Department offers a two-year Associate of Science degree with an emphasis in mathematics designed for students who plan to transfer to a four-year institution 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 it 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 a major emphasis in Mathematics at LBCC need an additional 55 hours of mathematics, computer science and statistics at Oregon State University, together with university core requirements, to earn the Bachelor of Science degree in mathematics.

Entry-level mathematicians need at least a bachelor's degree; most jobs require higher degrees. Math is used in many fields, including engineering and economics. The work of mathematicians falls into two categories: theoretical and applied. Theoretical mathematicians study and test new mathematical ideas or theories. Applied mathematicians use math theories to solve problems. Most people who work in applied math are not called mathematicians but have job titles such as statisticians, actuaries and operations research analysts.

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 who must take pre-calculus courses at LBCC should expect to spend more than two years in the program.

Facilities

The Mathematics Department operates a computer classroom/lab that provides support for a variety of courses in the Math and Science Division including engineering, physics, agricultural science, nutrition, and others, as well as general assistance to students. The department also participates in the operation of the Learning Center, which features individualized assistance for math students.

TRANSFER

Associate of Science with an emphasis in Mathematics

See graduation requirements for Associate of Science. The mathematics and physical science requirements are met by the listed major requirements.

General Education Requirements: 43

Course No.	Course Title	Credits
	Computer Science (a high-level programming course such as CS 133U or CS 133V)	4
MTH 231	Elements of Discrete Mathematics	4
MTH 251	Differential Calculus	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
PH 211	General Physics w/Calculus	5
Select 16 elective credits from the following courses		16
BA 211	Principles of Accounting (4 credits)	
BA 213	Principles of Accounting (4 credits)	
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 121	College Chemistry (5 credits)	
CH 122	College Chemistry (5 credits)	
CH 123	College Chemistry (5 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)	
EC 201	Introduction to Microeconomics (4 credits)	
EC 202	Introduction to Macroeconomics (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 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 232	Elements of Discrete Mathematics (4 credits)	
MTH 243	Introduction to Statistics (4 credits)	
MTH 245	Math for Biological/Management/Social Sciences (4 credits)	
MTH 265	Statistics for Scientists & Engineers (4 credits)	
PH 104	Descriptive Astronomy (4 credits)	
PH 212	General Physics with Calculus (5 credits)	
PH 213	General Physics with Calculus (5 credits)	

Program Requirements: 47

Total Credits Required: 90

Medical Assistant

Program Contact:

Sally Stouder

Additional Faculty:

Mary Ann Lammers, Twila Lehman, Nancy Noe

The Medical Assistant program is a two-year program that trains students in office administrative and medical skills. The ability to work well with people is the primary requisite for becoming a medical assistant. Medical assistants perform a limited number of basic medical duties that may include taking medical histories; recording patients' weight, pulse rate, blood pressure, and other vital signs; collecting and preparing laboratory specimens; preparing patients for X-rays; taking EKGs; changing bandages and removing stitches. In smaller offices, they also have clerical duties, which may include filling out insurance forms and scheduling appointments. Some assistants also handle billing and bookkeeping.

Typical working conditions require medical assistants to:

- lift/carry/push/pull and move heavy objects, patients, supplies and equipment (up to 50 lbs. or more);
- perform the full range of manual and finger 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 condition;
- not have color blindness.

New technology is introduced through concept courses and hands-on experience with modern equipment. Some classes may be held off campus in a medical facility. A supervised externship in a participating health care facility is required.

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.

Program Requirements

The Medical Assistant program is designed to be completed in two years. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the College Placement Test: WR 121 English Composition and MTH 060 Introduction to Algebra. It is advisable to take the Placement Test as early as possible. If developmental coursework is required, we recommend that it be taken the summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following courses: CIS 1250 Introduction to Windows, OA 121 Keyboarding (2 credits), RD 080 Building College Reading or RD 090 Strategies for Effective Reading (3 credits), WR 090 The Write Course (4 credits), MTH 020 Basic Mathematics (4 credits), MTH 060 Introduction to Algebra (4 credits). Students should work with an advisor to interpret test scores and plan their program.

Students must have completed the hepatitis B immunizations series prior to enrolling in the phlebotomy class. Prior to externships, all students must show proof of a physical examination and current immunization status for measles, tetanus and TB screening.

Licensing for medical assistants is not required, but optional certification is available. Graduates of the program are eligible to take the national certifying examination given through the American Association of Medical Assistants (AAMA); successful completion results in a Certified Medical Assistant credential. Although certification is not required by any state, some employers prefer workers who are certified or registered. Some states may require medical assistants to take a training program or an exam before doing procedures such as drawing blood, giving injections and taking X-rays.

Note: A student who has committed a felonious crime may be denied the right to take the national certification exam. Petitions may be sent to the American Association of Medical Assistants, 20 N. Wacker Dr. #1575, Chicago, IL 60606-2903.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Medical Assistant

See graduation requirements for Associate of Applied Science degree. Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
Fall Term - First Year		
MO 5.550	Human Relations in Health Care	3
MO 5.630	Medical Terminology I	3
OA 2.500C	Business Orientation/Medical	1
OA 2.544	Medical Insurance Procedures	3
OA 2.588	Editing Skills for Information Processing	3
OA 123A	Typing Skillbuilding	2
OA 202	MS Word for Business	3
Winter Term		
BI 103	General Biology: The Human Body	4
MO 5.414	Drug Classifications & Names	3
MO 5.631	Medical Terminology II	3
OA 2.656M	Medical Information Processing	3
OA 2.671	Medical Law & Ethics	2
Spring Term		
BA 2.530	Practical Accounting I	4
HE 252	<i>First Aid</i>	3
MO 5.632	Medical Terminology III	3
MO 5.665	Documentation & Screening in the Medical Office	2
OA 2.616	Job Success Skills	1
OA 2.672	Basic Coding	3
Fall Term - Second Year		
BA 224	<i>Human Resources Management (3 cr) or</i>	3(1)
SPN 101	<i>First-year Spanish I (4 cr)</i>	
(Three credits apply toward general education requirements; one credit applies toward program.)		
HE 216A	CPR for Health Care Providers	1
MO 5.625	Basic Clinical Office Procedures	5
OA 2.515M	Business Math with Calculators: Medical	2
OA 2.670	Medical Office Procedures	4
Winter Term		
MO 5.626	Clinical Office Procedures II	5
MO 5.640	Medical Assisting Externship I	3
MO 5.650	Basic Electrocardiogram Techniques	1
MO 5.655	Phlebotomy for Medical Assistants	2
MO 5.661	Physician's Office Lab Procedures	2
OA 2.691	Preparation for Certifying Exam (Administrative)	1
SP 218	<i>Interpersonal Communications</i>	3

Spring Term

MO 5.641	Medical Assisting Externship II	6
MO 5.662	Preparation for Certifying Exam (Clinical)	1
MTH 065	Elementary Algebra	4
WR 121	English Composition	3
	Science, Technology & Society	3

General Education Requirements: 19

Program Requirements: 78-79

Total Credits Required: 97-98

Medical Office Specialist

Program Contacts:

Sally Stouder

Additional Faculty:

Mary Ann Lammers, Twila Lehman, Nancy Noe

The Medical Office Specialist is a one-year program preparing people for entry-level positions as records clerks, ward clerks or receptionists in medical offices or hospitals. Students can choose between an emphasis in transcription or coding and billing skills. The required coursework lays the foundation for a two-year program for those students who want to continue their education to become an administrative medical assistant or medical assistant.

A person wanting to become a medical office specialist should have the ability to get along well with people and be comfortable working in a medical atmosphere. A successful medical office specialist must be reliable and enjoy detail work.

Program Requirements

This program is designed to be completed in one year, but this assumes that the entering student already knows how to type by touch and has been placed at or above the following levels on the 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, we recommend that it be taken the summer term prior to enrolling in the regular certificate program.

Pre-training might include some or all of the following courses: OA 121 Keyboarding (2 credits), RD 080 Building College Reading (3 credits), WR 090 The Write Course (4 credits), MTH 020 Basic Mathematics (4 credits). Students should work with an advisor to interpret the test scores and get help in planning their program.

Facilities

Skills classes are taught in office laboratory classrooms at your own pace. New technology is introduced both through concepts courses and through hands-on experience with microcomputers and word processing.

PROFESSIONAL TECHNICAL

One-Year Certificate in Medical Office Specialist

Course No.	Course Title	Credits
Fall Term		
CIS 1250	Introduction to Windows	1
MO 5.630	Medical Terminology I	3
OA 2.500C	Business Orientation: Medical	1
OA 2.544	Medical Insurance Procedures	3
OA 2.588	Editing Skills for Information Processing	3
OA 122	Formatting	2
OA 202	MS Word for Business	3

Winter Term

MO 5.631	Medical Terminology II	3
MO 5.665	Documentation & Screening in the Medical Office	2
OA 2.656M	Medical Information Processing	3
OA 2.671	Medical Law & Ethics	2
OA 123A	Typing Skillbuilding	2
	Approved Electives	3

Spring Term

MO 5.414	Drug Classifications & Names	3
MO 5.632	Medical Terminology III	3
OA 2.515M	Business Math with Calculators: Medical	2
OA 2.616	Job Success Skills	1
OA 2.670	Medical Office Procedures	4
	Approved Electives	3

Total Credits Required: 47

Approved Electives

OA 2.524	Medical Transcription I	3
OA 2.527	Applied Document Processing	3
OA 2.672	Basic Coding	3
OA 2.680	Advanced Coding	3

Medical Transcriptionist

Program Contact:

Twila Lehman, Sally Stouder

Additional Faculty:

Mary Ann Lammers, Nancy Noe

The one-year Medical Transcriptionist program prepares individuals for entry-level positions in transcribing medical records at hospitals and clinics. Emphasis is placed on medical terminology, English, transcription and word processing skills. Job opportunities are good, and pay is above average compared to other secretarial/clerical positions. Medical transcriptionists can easily work part time if they choose to do so.

Skills are taught in self-paced office laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

Program Requirements

In order to complete the program in one year, new students should have basic typing skills. A person wanting to become a medical transcriptionist should have an interest in working in a medical atmosphere and be comfortable with working at a job that entails almost exclusively the typing of medical reports from dictation equipment.

The Medical Transcriptionist program is designed to be completed in one year. This assumes, however, that the entering student already knows how to type by touch and has been placed at or above the following levels on the Placement Test: WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra. It is advisable to take the College Placement Test as early as possible. If developmental coursework is required, we recommend that it be taken the summer term prior to enrolling in the regular certificate program. Pre-training might include some or all of the following courses: OA 121 Keyboarding (2 credits), RD 080 Building College Reading or RD 090 Strategies for Effective Reading (3 credits), WR 075 Spelling (3 credits), WR 090 The Write Course (4 credits), MTH 020 Basic Mathematics (4 credits). Students should work with their advisors to interpret the test scores and get help planning their program.

Facilities

Students learn at their own pace in office laboratory classrooms. New technology is introduced both through concepts courses and through hands-on experience with modern equipment.

PROFESSIONAL TECHNICAL

One-Year Certificate in Medical Transcriptionist

Course No.	Course Title	Credits
Fall		
CIS 1250	Introduction to Windows	1
MO 5.630	Medical Terminology I	3
OA 2.500C	Business Orientation: Medical	1
OA 2.588	Editing Skills for Information Processing	3
OA 122	Formatting	2
OA 123A	Typing Skillbuilding	2
OA 123B	Advanced Typing Skillbuilding	2
OA 202	MS Word for Business	3
Winter		
MO 5.414	Drug Classifications & Names	3
MO 5.631	Medical Terminology II	3
OA 2.505	Voice Recognition	2
OA 2.515C	Electronic Calculator	1
OA 2.527	Applied Document Processing	3
OA 2.656M	Medical Information Processing	3
OA 2.671	Medical Law & Ethics	2
Spring		
MO 5.632	Medical Terminology III	3
OA 2.529	Applied Medical Transcription	5
OA 2.616	Job Success Skills	1
OA 2.670	Medical Office Procedures	4
OA 124	Typing: Speed & Accuracy Development	3
Total Credits Required:		50

Music

Program Contact:

Hal Eastburn

The Music Program at LBCC not only offers students academic opportunities in music, it also gives them a chance to participate in top-quality performing groups. 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. Individual lessons are available in voice and a wide variety of instruments. Music Appreciation (MUS 161) and Introduction to Jazz (MUS 205) support general education degree requirements in the arts.

Students also have the opportunity to perform in several groups. The LBCC Concert Choir, the Chamber Choir and the LBCC Community Chorale 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 groups; check with your faculty advisor.

The Performing Arts Department offers an Associate of Science degree in Music. A student finishing this degree will be prepared to enter OSU as a liberal studies or music student.

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 group from a choice of Concert Choir, Chamber Choir, Community Chorale, and instrumental groups in cooperation with the Music Department at Oregon State University. Auditions may be required. A limited number of tuition grants are available for students participating in a performance group.

TRANSFER

Associate of Science with an emphasis in Music

See graduation requirements for Associate of Science degree.

Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

For Music Emphasis

Course No.	Course Title	Credits
MUS 101	Music Fundamentals	3
MUS 161	Music Appreciation	3
MUS 205	Introduction to Jazz	3

Select at least three terms of performance classes from the list below:

MP 101/201	Symphonic Band (1 credit)	
MP 102/202	Concert Band (1 credit)	
MP 103/203	Marching Band (1 credit)	
MP 104/204	Pep Band (1 credit)	
MP 105/205	Jazz Band (1 credit)	
MP 115/215	Community Chorale (1 credit)	
MP 122/222	Concert Choir (2 credits)	
MP 131/231	Chamber Choir (2 credits)	
MP 141/241	Symphony Orchestra (1 credit)	
	Performance	3-6

Select elective credits to total not less than 90 credits. Select from MUS, MP, SP or TA prefixes. 17-20

Program Requirements: 32

Total Credits Required: 90

Network and Systems Administration

Program Contact:

Linda Carroll

Additional Faculty:

David Becker, Dodi Coreson, Gail Dameworth, Parker Swanson

This program was previously called Business Computer Systems. Students who began the program under that title should see an advisor for completion requirements.

The Network and Systems Administration program develops graduates who are able successfully to enter the job market as network technicians, junior network administrators, and junior system administrators. Graduates of this program will be able to design, install, administer, and maintain computer networks for hardware and software. 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 course 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.

Program Requirement:

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 six terms (not including Summer term). Although there is a small amount of flexibility in when 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 insure that coursework is on track.

Students who successfully complete the two-year curriculum are granted an Associate of Applied Science degree in Network and Systems Administration.

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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Network and Systems Administration

Course No. Course Title Credits

Fall Term - First Year

CIS 125	Introduction to Software Applications	3
CS 160	Orientation to Computer Science	4
CIS 151	Networking Essentials	4
WR 121	English Composition	3
	<i>Health or Activity Course</i>	1

Winter Term

BA 271	Information Technology in Business	3
CS 161	Introduction to Computer Science I (Java)	4
	<i>Health or Activity Course</i>	1
CIS 152	Network Router Configuration	4
CS 279	Network Management	3

Spring Term

CIS 195	Web Development I	4
CIS 153	LANs & Internetwork Design	4
CIS 154	WAN Design	4
CS 140U	Fundamentals of UNIX/Linux	4

Fall Term - Second Year

BA 285	<i>Business Relations in a Global Economy</i>	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
CS 240A	Microsoft & Windows® Server Administration I	3
MTH 111	<i>College Algebra</i>	(4)1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
	Science, Technology & Society	3

Winter Term

CS 244	Systems Analysis & Project Management	4
CS 240B	Microsoft & Windows® Server Administration II	3
CS 275	Database Systems: SQL & Oracle	4
	<i>Health or Activity Course</i>	1
CS 133J	Javascript	4

Spring Term

CS 240C	Microsoft & Windows® Server Administration III	3
SP 100	<i>Introduction to Speech Communication</i>	3
WR 227	Technical Report Writing	3
CS 280	CWE Computer Systems	3
CS 284	Introduction to Computer Security & Information Assurance	4

General Education Requirements: 19

Program Requirements: 74

Total Credits Required: 93

Nondestructive Testing Technology

Program Contact:

Fred Haynes

Nondestructive Testing is a one-year certificate program that prepares students for a variety of entry-level positions involving radiographic testing, ultrasonic testing, penetrant testing, magnetic particle testing and inspection of materials. Students have access to state-of-the-art equipment and instrumentation of all nondestructive disciplines mentioned.

Additionally, the program offers introductory coursework in metallurgy, metallography, strength of materials, writing specifications, and quality science principles with emphasis on ISO standards. The nondestructive testing courses are taught in accordance with the American Society of Nondestructive Testing TC-1A Standards meeting or exceeding the required classroom hours of instruction.

Students may need preparatory coursework comparable to high school in math, chemistry and writing in order to complete the required coursework in one year.

PROFESSIONAL TECHNICAL

One-Year Certificate in Nondestructive Testing

Course No.	Course Title	Credits
Fall Term		
ME 4.122	Strength of Materials ¹	3
ME 6.281	Magnetic Particle/Penetrant Testing: Level I & II ¹	3
ME 6.293	Introduction to Metallurgy ¹	5
WD 4.265	Basic Blueprint Reading: Metals	2
Winter Term		
ME 6.282	Ultrasonic/Electromagnetic Testing: Level I ¹	3
ME 6.283	Radiographic Testing: Level I ¹	3
ME 6.289	Introduction to Quality Science Principles ¹	4
ME 6.298	Metallography ¹	3
WR 115	Introduction to College Writing	3

¹— Courses offered that term only.

Spring Term

ME 4.120	Fundamentals of Specifications ¹	3
ME 6.284	Radiographic Testing: Level II ¹	4
ME 6.285	Ultrasonic/Electromagnetic Testing: Level II ¹	4
MTH 065	Elementary Algebra	4
SP 100	Introduction to Speech Communication	3

Total Credits Required: 48

Nursing

Program Contact:

Faye Melius

Additional Faculty:

Virginia Brittsan, Cindy Cameron, Jeanie Flood,
Doug McCready, Kathy Mix, Marcy Shanks, Julie Turner, Jen Wade

The associate degree Nursing program is approved by the Oregon State Board of Nursing and accredited by the National League for Nursing Accrediting Commission. Open to both men and women, this two-year program is designed to train highly skilled nurses. Clinical facilities are hospitals, nursing homes and health agencies in Linn and Benton counties.

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 program has a flexible career track, so a first-year student who desires to become a licensed practical nurse (LPN) may complete the first year of the two-year program, then take the LPN exams and enter the nursing profession at that time. Most students elect to complete the second year and become registered nurses (RNs).

Students who apply to the Nursing program should have a strong background that has prepared them for the educational challenges of first- and second-year coursework. Students are graded in all aspects of the program, including clinical practice. Evening clinicals may be required. The student is expected to participate on a daily basis; absence can be made up through agreement with the instructor.

In Oregon, registered nurses must be licensed. 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 and some felony convictions. Specific questions regarding these issues should be directed to Suite 465, 800 NE Oregon St. #25, Portland, OR 97232. (503) 731-4745.

Program Requirements

All nursing courses must be completed at LBCC unless special permission for 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 to 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.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Nursing

See graduation requirements for Associate of Applied Science degree. MTH 065 Elementary Algebra is required. One of the following speech classes is required: SP 111 Fundamentals of Speech; SP 112 Introduction to Persuasion; or SP 218 Interpersonal Communication.

Course No.	Course Title	Credits
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Fall Term - First Year

BI 231	Human Anatomy & Physiology ⁶	4
HDFS 201	Individual & Family Development or	
PSY 215	Introduction to Developmental Psychology	3
NUR 101	Nursing I	9
NUR 122	Contemporary Nursing I	1
NUR 268A	Drug Therapy/Nursing Implications	1

Winter Term

BI 232	Human Anatomy & Physiology ⁶	4
BI 234	Microbiology ⁶	4
NUR 102	Nursing II	9
NUR 268B	Drug Therapy/Nursing Implications	1

Spring Term

BI 233	Human Anatomy & Physiology ⁶	4
NFM 225	Nutrition	4
NUR 103	Nursing III	9
NUR 215A	Health & Physical Assessment	2

Fall Term - Second Year

NUR 201	Nursing IV	9
NUR 268C	Drug Therapy/Nursing Implications	1

Winter Term

NUR 202	Nursing V	9
NUR 222	Contemporary Nursing II	1
PSY 203	General Psychology	3

Spring Term

NUR 203	Nursing VI	7
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General Education Requirements: 19

Program Requirements: 85

Total Credits Required: 104

PROFESSIONAL TECHNICAL

One-Year Certificate in Practical Nursing

Course No.	Course Title	Credits
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Fall Term

BI 231	Human Anatomy & Physiology ⁶	4
HDFS 201	Individual & Family Development or	
PSY 215	Introduction to Developmental Psychology	3
NUR 101	Nursing I	9
NUR 122	Contemporary Nursing I	1
NUR 268A	Drug Therapy/Nursing Implications	1

1—Courses offered that term only.

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

Winter Term

BI 232	Human Anatomy & Physiology ⁶	4
BI 234	Microbiology ⁶	4
NUR 102	Nursing II	9
NUR 268B	Drug Therapy/Nursing Implications	1

Spring Term

BI 233	Human Anatomy & Physiology ⁶	4
NFM 225	Nutrition	4
NUR 103	Nursing III	9
NUR 5.570	PN Role Transitions	1

Total Credits Required: 54

Nursing Assistant

Program Contact:

917-4510

Nursing assistants work under the direction of nurses and doctors to give personal care to patients in hospitals and nursing homes. They set up and monitor equipment and record vital signs such as blood pressure, temperature, pulse and respiration. They move patients to examining or operating rooms, deliver meals, and help patients eat, dress, bathe and walk. They record the amount of food eaten and liquid output, they help patients with bedpans, and they clean rooms and change beds. Often they provide important observations of and communication with patients as directed by the supervising nurse or doctor.

LBCC's Nursing Assistant program is a 150-hour course fulfilling the Oregon State Board of Nursing requirements for nursing assistant training. Students will learn the knowledge and skills necessary to care for patients of all ages in health care facilities who are under the direct care of a licensed nurse.

The course has 75 hours of classroom and skills laboratory instruction and 75 hours of clinical experience. This course includes instruction in basic bedside nursing skills, basic restorative services, mental health and social service needs, personal care skills and patient rights. Following the completion of the program, the student is eligible for certification through the Oregon State Board of Nursing.

Interested students should contact the Health Occupations Office at (541)917-4510. Instructor permission is required to enroll. Students must pass a reading test and show proof of immunizations and TB screening. Students must be deemed "qualified" on a criminal history screen by the Seniors and People with Disabilities Agency to complete the clinical component of the course.

Program Requirements

A high school diploma or GED is recommended along with selected immunizations. It also is preferred that students be 16 years or older. You should be able to read English at the seventh grade level. You must be able to turn and lift patients; hear and see patients in need; engage in therapeutic communication; intervene in stressful interpersonal situations; make judgements under stress; and read and document medical information.

All students are advised to apply for admission to the program at a participating nursing facility. You will need to take the LBCC Reading Placement Test, have proof of freedom from tuberculosis and, if born after January 1, 1957, have proof of rubella immunizations. You will also need to be deemed "qualified" by the Seniors and People with Disabilities Agency to care for residents of nursing facilities.

The LBCC reading test and the medical screening tests must be completed prior to registering for the class. It is your responsibility to supply the instructor with documentation.

Accreditation

The Nursing Assistant program is approved by the Oregon State Board of Nursing and accredited by the Oregon Department of Education as a professional technical program.

Reading Tests

It is recommended that you complete the LBCC College Placement Test (CPT) reading test at the minimum 31st percentile rank or better to be able to read the course materials and exams. If you test below the 31st percentile, you may re-test.

If your reading placement score is below the 31st percentile, and between the 21st and 30th percentile, see your instructor for advice on the appropriate coursework to take. LBCC has reading improvement, reading tutoring, and adult basic education courses available.

To schedule a reading test, call the LBCC Testing Center 917-4781. You may take the reading test at the Extended Learning center nearest you. Please request and keep a copy of your test results to submit your application.

Medical Screening

For patient/worker safety, all persons having contact with residents must have a negative tuberculosis test within the last nine months and proof of two MMR (measles/mumps/rubella) immunizations, if born after January 1, 1957. Contact your personal physician or local health department for TB testing and MMR:

Linn County Health Dept. 967-3888

Benton County Health Dept. 766-6835

Application Forms

You will need to complete a criminal history authorization form, available at the nursing facilities. Please complete your portion, sign and return with your application materials to the nursing facility. Students who are deemed "disqualified" will not be assigned to clinical care and therefore will not be able to complete the course.

Course Completion

Upon successful completion of the course, you will be awarded an LBCC certificate of completion. You may become certified through the Oregon State Board of Nursing (OSBN) by successfully completing the Nurse Aide Competency Evaluation (NACE) and applying for certification with the OSBN.

PROFESSIONAL TECHNICAL**Nursing Assistant**

Prerequisites for this program include a reading test, measles immunization and a negative tuberculosis screen.

Course No.	Course Title	Credits
NU 5.406	Nursing Assistant	9
Total Credits Required:		9

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

Office Specialist

Program Contact:

Twila Lehman, Nancy Noe

Additional Faculty:

Mary Ann Lammers, Sally Stouder

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 clerk, file clerk, receptionist, typist, transcriptionist, data entry clerk and word processor.

LBCC offers two certificates for office specialists: a one-year Office Specialist Certificate and a one-term Office Technology Skills Certificate. The short-term program focuses on specific skills for entry-level office support jobs, and the one-year program provides the opportunity to acquire adequate skills for positions that require additional or more advanced skills.

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.

Program Requirements

The Office Specialist program is designed to be completed in one year, assuming that the entering student already knows how to type by touch and has placed at or above the following levels on the Placement Test: WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra. It is advisable to take the College Placement Test as early as possible; if developmental course work is required, it should be taken the summer term prior to enrolling in the regular degree program. Pre-training might include some or all of the following: OA 121 Keyboarding (2 credits), RD 080 Building College Reading or RD 090 Strategies for Effective Reading (3 credits), WR 090 The Write Course (4 credits), MTH 020 Basic Mathematics (4 credits). Students should work with an advisor to interpret the test scores and get help in planning their program.

The Office Technology Skills Certificate is a 15-credit 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. The required courses can all be applied towards the one-year Office Specialist Certificate and the two-year Associate of Applied Science Administrative Assistant degree. This certificate is designed to be completed in one to two terms. This assumes that students can type by touch at a minimum of 30 wpm and have been placed at or above WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra.

Facilities

- Skills classes are taught in self-paced office laboratory classrooms.
- New technology is introduced both through concepts courses and through hands-on experience with microcomputers and word processing.

PROFESSIONAL TECHNICAL

One-Year Certificate in Office Specialist

Course No.	Course Title	Credits
Fall Term		
CIS 1250	Introduction to Windows	1
OA 2.500	Business Orientation	1
OA 2.515	Business Math with Calculators	2
OA 2.588	Editing Skills for Information Processing	3
OA 2.652	Filing	1
OA 122	Formatting	2
OA 123A	Typing Skillbuilding	2
OA 123B	Advanced Typing Skillbuilding	2
Winter Term		
CIS 125D	Introduction to Databases	1
CIS 125P	Introduction to Presentations	1
CIS 125S	Introduction to Spreadsheets	1
OA 2.527	Applied Document Processing	3
OA 2.683	Computerized Records Management	3
OA 202	MS Word for Business	3
	Electives (Select from list below)	2-4
Spring Term		
OA 2.551	Office Communications	4
OA 2.579	Integrated Software Applications	3
OA 2.616	Job Success Skills	1
OA 2.645	Administrative Procedures I	6
OA 203	Advanced Word Processing	3
<i>Choose at least 2 elective credits from the following list:</i>		
BA 2.530	Practical Accounting I	4
BA 101	Introduction to Business	4
OA 2.505	Voice Recognition	2
OA 2.682	Desktop Publishing	3

Total Credits Required: 45-47

Office Technology Skills Certificate

Course No.	Course Title	Credits
CIS 1250	Introduction to Windows	1
CIS 125S	Introduction to Spreadsheets	1
OA 2.515	Business Math with Calculators	2
OA 2.588	Editing Skills for Information Processing	3
OA 2.652	Filing	1
OA 122	Formatting	2
OA 123A	Typing Skillbuilding	2
OA 202	MS Word for Business	3

Total Credits Required: 15

Office Technology

See Business Technology.

Parent Education

Family Resources and Education's Parent Education Department offers classes and workshops for parents interested in learning to help their children grow and develop, and for parent educators. For more information, see the Family Resources and Education section in the front of this catalog.

Philosophy

See Social Science.

Photography

Program Contact:

Rich Bergeman

The Photography program at LBCC offers a series of foundation courses for students interested in transferring to a four-year college or university with the Associate of Arts (Oregon Transfer) degree. It includes courses in the fundamentals of photography as well as lab classes in black and white printing, digital photography, documentary photography and alternative processes.

While LBCC no longer offers a photography major as a degree program, students can specialize in photography under the Associate of Arts (Oregon Transfer) degree by following the recommended course curriculum outlined below. It is designed to help students study photography as a medium of artistic expression rather than as a commercial enterprise. Students who plan to transfer to Oregon State University to pursue a photography degree in OSU's Department of Art are advised to take the Associate of Science degree with an emphasis in Art at LBCC. (See "Art.")

Program Requirements

The Photography program welcomes students of all skill levels to its introductory course (ART 261). However, space is limited in the subsequent lab classes and open only to students who have completed the introductory course with a grade of B or better. Qualifying students will be admitted to the lab classes on a first-come, first-served basis; consequently, students may have to wait until their sophomore year to gain admittance to some classes. Expenses for supplies will vary depending on the specific course, but can be up to \$100 per photo course.

Facilities

The department supports its photography classes with both traditional wet darkrooms and digital imaging studios. A limited number of cameras and other equipment are available for short-term checkout from the lab by students enrolled in photo classes; however, students who advance beyond the introductory course should expect to have their own 35 mm or medium-format camera. Because of limited staffing, access to the photo lab is restricted to currently enrolled photography and journalism students who have completed an orientation in lab procedures and safety.

OREGON TRANSFER

Associate of Arts with an emphasis in Photography

See graduation requirements for Associate of Arts (Oregon Transfer) degree for specific courses that meet the general education and distribution requirements.

General Education Requirements: 19

Students are advised to take the following courses to meet their Arts & Letters Distribution requirements:

ART 261	Introduction to Photography (3 credits)
ART 264	Intermediate Black & White Photography (3 credits)
ART 266	Photography: Art & Technique (3 credits)
JN 134	Introduction to Photojournalism (3 credits)

Total Distribution Credits Required: 42

Additional elective courses for a total of 90 credits. The following courses are recommended:

ART 263	Digital Photography (3 credits)
ART 280	Cooperative Work Experience (3 credits)
ART 204	History of Western Art (3 credits)
ART 206	History of Western Art (3 credits)
ART 115	Basic Design I: Composition (4 credits)
ART 116	Basic Design II: Color (4 credits)
JN 201	Media & Society (4 credits)

Total Credits Required: 90

Physical Sciences

Program Contact:

John Griffith

Additional Faculty:

Bridgid Backus, Raza Khan, Jim Hart, Greg Mulder

The Physical Sciences Department offers professional 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 several non-laboratory courses that fulfill the Science, Technology and Society requirement for the Associate of Applied Science degree.

Three degrees are offered—one with an emphasis in chemistry, one with an emphasis in physics, and one with an emphasis in general science. 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, physics or general science. The general science degree is appropriate for students interested in geology, oceanography, atmospheric sciences, pre-professional programs in the health sciences or pre-education. Students entering the chemistry or physics programs with a strong high school mathematics and science background can expect to complete either of these programs in two years. Students who must take pre-calculus mathematics courses should expect to spend more than two years completing the chemistry or physics programs.

TRANSFER

Associate of Science with an emphasis in Chemistry

See graduation requirements for Associate of Science degree.
Classes shown below in *italic* are general education classes.

General Education Requirements: 43**Fall Term - First Year**

CH 221	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 251	<i>Differential Calculus</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	<i>Lifetime Health & Fitness</i>	3
WR 121	<i>English Composition</i>	3

Winter Term

CH 222	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 252	<i>Integral Calculus</i>	5
WR 227	<i>Technical Report Writing</i>	3
	<i>Social Processes & Institutions</i> ⁷	3

Spring Term

CH 223	<i>General Chemistry</i>	5
	<i>Biological Science</i> ⁷	4
MTH 253	<i>Calculus</i>	4
SP 111	<i>Fundamentals of Speech or</i>	
SP 112	<i>Introduction to Persuasion</i> ⁷	3

Fall Term - Second Year

CH 241	<i>Organic Chemistry</i>	4
MTH 254	<i>Calculus</i>	4
PH 211	<i>General Physics with Calculus</i>	5
	<i>Literature & the Arts</i> ⁷	3

Winter Term

CH 242	<i>Organic Chemistry</i>	4
PH 212	<i>General Physics with Calculus</i>	5
	<i>Cultural Diversity</i> ⁷	3
	<i>Western Culture</i> ⁷	3

Spring Term

CH 243	<i>Organic Chemistry</i>	4
PH 213	<i>General Physics with Calculus</i>	5
	<i>Difference, Power & Discrimination</i>	3

Program Requirements: 48**Total Credits Required: 91**

TRANSFER

Associate of Science with an emphasis in Physics

See graduation requirements for Associate of Science degree.
Classes shown below in *italic* are general education classes.

General Education Requirements: 43**Fall Term - First Year**

CH 221	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 251	<i>Differential Calculus</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
PE 231	<i>Lifetime Health & Fitness</i>	3
WR 121	<i>English Composition</i>	3

Winter Term

CH 222	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 252	<i>Integral Calculus</i>	5
	<i>Social Processes & Institutions</i> ⁷	3
WR 227	<i>Technical Report Writing</i>	3

Spring Term

	<i>Biological Science</i> ⁷	4
CH 223	<i>General Chemistry</i>	5
MTH 253	<i>Calculus</i>	4
SP 111	<i>Fundamentals of Speech⁷ or</i>	
SP 112	<i>Introduction to Persuasion⁷</i>	3

Fall Term - Second Year

	<i>Literature & the Arts</i> ⁷	3
MTH 254	<i>Calculus</i>	4
PH 211	<i>General Physics with Calculus</i>	5
	<i>Western Culture</i> ⁷	3

Winter Term

	<i>Cultural Diversity</i> ⁷	3
	<i>Difference, Power & Discrimination</i> ⁷	3
MTH 255	<i>Vector Calculus</i>	4
PH 212	<i>General Physics with Calculus</i>	5

Spring Term

MTH 256	<i>Applied Differential Equations</i>	4
PH 213	<i>General Physics with Calculus</i>	5
PH 265	<i>Scientific Computing</i>	3

Program Requirements: 47**Total Credits Required: 90**

TRANSFER

Associate of Science with an emphasis in General Science

See graduation requirements for Associate of Science degree.
Classes shown below in *italic* are general education classes.

General Education Requirements: 43**Fall Term - First Year**

BI 101	<i>General Biology or</i>	
BI 211	<i>Principles of Biology</i>	4
CH 121	<i>College Chemistry or</i>	
CH 221	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 111	<i>College Algebra</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
WR 121	<i>English Composition</i> ⁷	3

Winter Term

BI 102	<i>General Biology or</i>	
BI 212	<i>Principles of Biology</i>	4
CH 122	<i>College Chemistry or</i>	
CH 222	<i>General Chemistry</i>	4(1)
	(Four credits apply toward general education requirements; one credit applies toward program.)	
MTH 112	<i>Trigonometry (5 credits) or</i>	
MTH 241	<i>Calculus for Biological/Management/Social Science (4 credits)</i>	4-5
PE 231	<i>Lifetime Health & Fitness</i> ⁷	3

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.

Spring Term

BI 103	General Biology or	
BI 213	Principles of Biology	4
CH 123	College Chemistry or	
CH 223	General Chemistry	5
MTH 251	Differential Calculus (5 credits) or	
MTH 245	Math for Biological/Management/Social Science (4 credits)	4-5
SP 111	<i>Fundamentals of Speech⁷ or</i>	
SP 112	<i>Introduction to Persuasion⁷</i>	3

Fall Term - Second Year

G 101	Introduction to Geology	4
PH 201	General Physics	5
WR 227	<i>Technical Report Writing⁷</i>	3
	<i>Literature & the Arts Requirement⁷</i>	3

Winter Term

G 102	Introduction to Geology	4
PH 202	General Physics	5
	<i>Social Processes & Institutions Requirement⁷</i>	3
	<i>Western Culture Requirement⁷</i>	3

Spring Term

G 103	Introduction to Geology	4
PH 203	General Physics	5
	<i>Cultural Diversity Requirement⁷</i>	3
	<i>Difference, Power & Discrimination Requirement⁷ ..</i>	3

Program Requirements: 51**Total Credits Required 94**

Physics

See Physical Sciences.

Pre-Restaurant Management

Program Contact:

Scott Anselm

Additional Faculty:

John Jarschke

The Pre-Restaurant Management degree is offered in cooperation with Oregon State University and is tailored to the individual seeking a baccalaureate degree in Restaurant and Food Service Management 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.

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.

TRANSFER**Associate of Science with an emphasis in Pre-Restaurant Management***Classes shown below in italic are general education classes.***General Education Requirements: 43**

Course No.	Course Title	Credits
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Fall Term - First Year

CA 8.310T	Culinary Arts Practicum I	7
CA 8.336T	Food Service Safety & Sanitation	1
CA 8.337T	Station, Tools & Culinary Techniques	3
CA 8.345T	Service Techniques	1
WR 121	<i>English Composition</i>	3

Winter Term

CA 8.311T	Culinary Arts Practicum II	8
BI 234	<i>Microbiology (4 credits, LBCC) or</i>	
MB 230	<i>Introductory Microbiology (4 credits, OSU) or</i>	
MB 302 & 303	<i>General Microbiology & Lab (5 credits, OSU)</i>	(4) 1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
NFM 225	Nutrition	4

Spring Term

CA 8.312T	Culinary Arts Practicum III	8
SP 111	<i>Fundamentals of Speech or</i>	
SP 218	<i>Interpersonal Communication</i>	3
PSY 202	<i>General Psychology</i>	3
	<i>Writing/Composition</i>	3

Fall Term - Second Year

BA 211	Principles of Accounting: Financial	4
BA 213	Principles of Accounting: Managerial	4
EC 201	Introduction to Microeconomics	4
MTH 243	<i>Introduction to Statistics (4 credits, LBCC) or</i>	
	<i>Math Course approved for bac. core (4 credits) and</i>	
ST 201	Principles of Statistics (3 credits, OSU) or	
ST 351	Introduction to Statistical Methods (4 credits, OSU) ..	(4) 3/4
	<i>Physical/Biological Science</i>	4

Winter Term

CH 121	<i>College Chemistry</i>	(4) 1
	(Four credits apply toward general education requirements; one credit applies toward program.)	
EC 202	Introduction to Macroeconomics	4
PE 231	<i>Lifetime Health & Fitness</i>	3
	<i>Cultural Diversity</i>	3
	<i>Literature and the Arts</i>	3

Spring Term

BA 230	Business Law	4
CA 8.301T	Culinary Arts Career Planning (LBCC) or	
FST 251	Wine, Beer & Spirits (OSU)	3
NFM 104	Orientation (OSU)	1
NFM 219	Promoting Food & Nutrition (OSU)	2
	<i>Difference, Power & Discrimination</i>	3
	<i>Western Culture</i>	3

Program Requirements: 59-64**Total Credits Required: 102-107**

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.

Political Science

See Social Science.

Psychology

See Social Science.

Refrigeration, Heating, Ventilation and Air Conditioning

Program Contact:

Denis Green

The Refrigeration, Heating, Ventilating, and Air Conditioning program offers a one-year certificate that prepares graduates for a wide range of RHVAC occupations. RHVAC technicians install, maintain, and troubleshoot climate control systems and production-related heating, ventilation and cooling systems. They work in residential service and repair, office and facilities maintenance and repair, and in industrial or production plants.

Students in the program learn the most important RHVAC troubleshooting, maintenance and repair skills. The course is demanding but, with these skills, students can find work in a wide variety of RHVAC occupations. The program is competency based, with the largest portion of students' grades being determined through hands-on tests.

Individuals working in this occupation should have good mechanical skills and a willingness to continue learning after graduation. Personal qualities include patience, customer service skills, and good interpersonal communication skills. Successful RHVAC technicians are also self-starters. A "can do" attitude is essential because this type of work requires working both as an individual and as part of a team. Because of a variety of working conditions, students generally should be able to stand, stoop, kneel, bend and lift moderate weights.

The RHVAC faculty at LBCC work to help you succeed, both in school and on the job. You will learn useful skills, and you will learn them quickly.

Program Requirements

The program is competency-based with an emphasis on hands-on, skills-based labs that use real-world equipment. RHVAC technicians must be able to read and follow manufacturers' specifications and keep records of the repairs and replacements they make.

Individuals who choose this career will need good reading skills and good customer skills. Students completing the program may, with help from the RHVAC instructor, design a series of courses that can lead to an Associate of General Studies Degree, a two-year degree. Most classes are scheduled in the morning, although night courses and other part-time courses are offered also. Students can enter the program fall term and winter term. Experienced people might enter spring term. Students must purchase tools and specialized equipment in addition to textbooks, for a total cost of about \$850.

Facilities

Heating and cooling system technicians use a variety of tools, including hand and power tools, pipe cutters and benders, and torches, as well as digital multimeters, pressure gauges, and other testing devices. Tools, materials and equipment used in the trade are available in the campus RHVAC lab, which was completely renovated in 2001-2002. Hands-on trainers are available, and more are being developed.

PROFESSIONAL TECHNICAL

One-Year Certificate in Refrigeration, Heating, Ventilation and Air Conditioning

Course No.	Course Title	Credits
Fall Term		
RH 3.580	RHVAC Brazing & Fitting	2
RH 3.581	Recovery & Charging	2
RH 3.584	Refrigeration Troubleshooting	4
RH 3.585	Heating Systems	2
RH 3.595	Licensing	2
Winter Term		
RH 3.552	Electrical Systems Troubleshooting	2
RH 3.553	Electrical Problems	4
RH 3.587	Troubleshooting Motors	2
RH 3.588	Motor Control Troubleshooting	2
RH 3.590	Control Circuit Troubleshooting	2
Spring Term		
RH 3.586	Sheet Metal	2
RH 3.596	Mechanical Systems	2
RH 3.602	HVAC System Controls	4
RH 3.597	PM & Troubleshooting Mechanical Systems	2
RH 3.618	RHVAC Systems Review	2
Other required courses:		
Math	Choose course based on Placement Test score and meeting with advisor	4
Writing	Choose course based on Placement Test score and meeting with advisor	3
Computer	Choose computer course with help from advisor	2
Total Credits Required		45

Religion

See Social Science.

Restaurant and Catering Management

Students interested in beginning a program in Restaurant and Catering Management should see the Pre-Restaurant Management program. Students who have already begun the Associate of Applied Science in Culinary Arts with a Restaurant and Catering Management Option will have the opportunity to complete the requirements of the program to earn the degree before June 2004. Please contact the department for more information.

Skills Training

Program Contact:

LBCC offers two skills training certificates: Employment Skills Training and Occupational Skills Training. Both certificates provide the opportunity for students to receive instruction in a specific occupational area. The programs are 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 programs utilize community employers to train students for new careers when appropriate.

Program Requirements

The Employment Skills Training program consists of 12–14 credits, depending on the student's skill set, prior work experience and employment needs. This program is designed for students who need classroom instruction and may need hands-on, work-based training to upgrade current skills. In addition to classroom instruction, each student has the choice to participate in a supervised and structured work-based training.

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. Qualified students are eligible to receive federal financial aid. While participating in the structured work-based training, students will maintain weekly activity logs, quarterly evaluations and quarterly curriculum reviews.

Before beginning the Employment Skills Training Certificate or the Occupational Skills Training Certificate, students must receive written approval from a faculty advisor.

PROFESSIONAL TECHNICAL

Occupational Skills Training Certificate

A minimum of 45 credits is required for this certificate. Contact your advisor for course selection assistance.

Course No.	Course Title	Credits
MTH 060	Introduction to Algebra	4
OST 280	Occupational Skills Training	20-26
SP 100	Introduction to Speech Communication	3
WR 115	Introduction to College Writing	3
	Occupational Specific Courses	9-15
Total Credits Required:		45

PROFESSIONAL TECHNICAL

Employment Skills Training Certificate

Requirements in math, reading and writing are not included in the 12–14 required credits for this certificate. Students will be required to take math, reading and writing courses or demonstrate competency by College Placement Test scores. Contact your advisor for course selection assistance.

Course No.	Course Title	Credits
MTH 020	Basic Mathematics	4
RD 080	Building College Reading	3
WR 090	The Write Course	4
	Occupational Specific Courses	12-44
Total Credits Required:		12-44

Social Science

Program Contact:

Arfa Aflatooni (*Sociology*)

Additional Faculty:

Doug Clark (*History/Political Science*); Darci Dance (*Psychology*);

Michael Weiss (*History*)

Social science deals with all aspects of the individual and group life of men and women. The social sciences include a variety of specialized ways of looking at the world: anthropologists study the evolution of human beings and their ways of life; historians seek to understand the present by analyzing the complexities of the past; political scientists explore the nature of government and the uses of power; psychologists are concerned with individual behavior and development; philosophers

probe issues of truth, goodness and beauty; religionists examine how faith has expressed itself among groups and individuals; while sociologists consider group behavior and the structure of society.

Social science provides a valuable background for people interested in social and civil services, law, education, journalism, government and business and for those pursuing undergraduate and graduate degrees in the humanities and the specialized fields of the social sciences.

Because all aspects of human culture are related and interdependent, the Social Science curriculum provides students with a broad, integrated picture of the nature of human society and the major forces operating within it. The Social Science Department supports the Associate of Science degree with an emphasis in social science. If you are thinking of majoring in one of the social sciences when you transfer, select one of these options:

- **Behavioral Studies Option**—Transfer students planning to major in psychology, sociology, political science or philosophy/religion should consider this option. Behavioral studies deal chiefly with the mind and personality of the individual, the relationship between men's and women's biological traits and their socially acquired characteristics, and the social interaction of individuals with one another and with groups.
- **American Studies Option**—Transfer students planning to major in anthropology, history, political science, pre-law or sociology should consider this option. American studies deal with the culture, the development and the character of the United States and the Western Hemisphere, as well as contemporary social, economic and political problems and possibilities.
- **International/Intercultural Studies Option**—Transfer students planning to major in anthropology, history, philosophy/religion, or political science should consider this option. International/intercultural studies deal chiefly with the study of ourselves as part of a larger world consisting of a variety of culture and social systems that profoundly shape the nature of cooperation and conflict on the planet.

Peace Studies

The Social Science 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. On even-numbered years, 8–10 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 Doug Clark at (541) 917-4557.

TRANSFER

Associate of Science with an emphasis in Social Science

See graduation requirements for Associate of Science degree.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

Complete a minimum of six classes from one of the following options, including at least three classes with the same prefix. Also complete two

classes from each of the other two options. Additional classes from any option to total 90 credits. Note: No credits may be used for more than one requirement.

Course No. Course Title

Behavioral Studies Option

Course No.	Course Title	Credits
PHL 201	Introduction to Philosophy	3
PS 104	Problems in American Politics	3
PS 200	Introduction to Politics	3
PSY 101	Psychology & Human Relations	3
PSY 201	General Psychology	3
PSY 202	General Psychology	3
PSY 203	General Psychology	3
PSY 215	Introduction to Developmental Psychology	3
PSY 219	Abnormal Psychology	3
PSY 231	Human Sexuality	3
SOC 204	General Sociology	3
SOC 205	General Sociology	3
SOC 206	General Sociology	3
SOC 211	Sociology of Deviance & Social Control	3
SOC 222	Marriage Relations	3

American Studies Option

ANTH 232	Native North Americans	3
HST 201	United States History: Colonial & Revolutionary	3
HST 202	United States History: Civil War & Reconstruction	3
HST 203	United States History: Rise to World Power	3
PS 104	Problems in American Politics	3
PS 201	Introduction to American Politics & Government	3
PS 203	State & Local Government	3
PS 220	U.S. Foreign Policy	3
PS 240	Introduction to Public Policy	3
PS 252	Constitutional Law	3
SOC 206	General Sociology	3

International/Intercultural Studies Option

ANTH 103	Introduction to Cultural Anthropology	3
ANTH 210	Comparative Cultures	3
ANTH 230	Time Travelers	3
HST 101	History of Western Civilization	3
HST 102	History of Western Civilization	3
HST 103	History of Western Civilization	3
HST 157	History of the Middle East & Africa	3
HST 158	History of Latin America	3
HST 159	History of Asia	3
HST 240	War & the Modern World	3
PHL 201	Introduction to Philosophy	3
PHL 202	Elementary Ethics	3
PHL 215	History of Western Philosophy	3
PS 200	Introduction to Politics	3
PS 204	Introduction to Comparative Politics	3
PS 205	International Relations	3
PS 211	Peace & Conflict	3
PS 220	U.S. Foreign Policy	3
R 102	Religions of the Western World	3
R 103	Religions of the Eastern World	3

Program Requirements: 32

Total Credits Required: 90

Sociology

See Social Science.

Spanish

Program Contact:

Margarita Casas

The Foreign Language Department offers courses in Spanish that encourage students to speak, listen, write and read in Spanish. These transfer courses are proficiency oriented, and they emphasize cultural and social aspects of the target language. See "Foreign Language" for Associate of Science degree program requirements.

Speech Communication

Program Contacts:

Jane Donovan, Mike Houghlum

Additional Faculty:

George Lauris

The Performing Arts Department offers a broad perspective background that supports institutional general education degree requirements in communication as well as offering opportunities for students interested in pursuing fields of study in communication, media and public relations. The department offers the Associate of Science degree with an emphasis in Speech Communication.

Program Requirements

Students planning to transfer as communication majors to a four-year institution are encouraged to take all the speech courses LBCC offers, as well as elective credits in complementary, career-related courses. Students should consult with their faculty advisors on course selection.

TRANSFER

Associate of Science with an emphasis in Speech Communication

See graduation requirements for Associate of Science degree.

Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

For Speech Communication Emphasis

Course No.	Course Title	Credits
SP 111	Fundamentals of Speech	
SP 112	Introduction to Persuasion or	
SP 218	Interpersonal Communication	6
	(Cannot use the same course that is used to fulfill the general education requirement.)	
JN 201	Media & Society	4
PS 201	Introduction to American Politics & Government or	
PS 203	State & Local Government or	
PS 205	Introduction to International Relations	3
SP 219	Small Group Communication	3
TA 121	Acting I or	
TA 144/145/146	Improvisation	3
	Work with your faculty advisor to choose 13 elective credits of career-related courses	13

Program Requirements: 32

Total Credits Required: 90

Technical Communications

See English.

Theater

Program Contacts:

Jane Donovan, George Lauris, Bruce Peterson

The Theater program at LBCC offers a variety of academic and performance opportunities, including the Associate of Science degree with an emphasis in Theater. Introduction to Theater (TA 106) satisfies general education requirements in the arts; performance courses in acting and improvisation are intended for students seeking performance and communication skills. A specialized drama course, Creative Drama for Teachers (TA 240), helps prepare students who are entering teacher training programs in elementary education.

Through the Dual Enrollment program with Oregon State University, LBCC's theater program is building closer ties with OSU's drama department. As this innovative program grows, theater students from both schools will have more performance and technical theater opportunities with greater access to a variety of performance venues and theater faculty.

Program Requirements

Theater classes are open to all students and require no prior experience. The plays produced each year are also open to all students through an audition process and students are encouraged to become involved either as performers or technicians. Academic credit can be offered for participation. A limited number of half-tuition grants are available for students who participate in the main stage productions.

Facilities

The theater program produces its plays in a fully equipped, proscenium theater in the Russell Tripp Performance Center on the main campus.

TRANSFER

Associate of Science with an emphasis in Theater

See graduation requirements for Associate of Science degree.

Note: No credits may be used for more than one requirement.

General Education Requirements: 43

For a list of Liberal Arts Core Requirements, please refer to the "Graduation Requirements" section of this catalog.

Liberal Arts Core Requirements: 15

For Theater Emphasis

Course No.	Course Title	Credits
TA 121	Acting I	3
TA 144	Improvisation	3
TA 145	Improvisation	3
TA 185	Production Workshop	3
In addition, choose 6 credits from:		
TA 146	Improvisation (3 credits)	6
TA 180/282	Rehearsal & Performance (3 credits)	
TA 285	Production Workshop (3 credits)	

Also select 14 elective credits from course offerings with SP, TA, MUS or MP prefixes 14

Program Requirements: 32

Total Credits Required: 90

Water/Wastewater Technology

Program Contact:

Ron Sharman

Additional Faculty:

David Kidd, Kevin Krefft, Holly Ploetz

Water treatment facilities treat water to make it safe for the public to drink. Water treatment plant operators have the responsibility for operation and maintenance of the water treatment plant and water distribution system. Wastewater treatment facilities remove pollutants from wastewater to make it safe to discharge into the environment. Wastewater treatment plant operators have the responsibility for operation and maintenance of the wastewater treatment plant and the wastewater collections system.

Water and wastewater treatment plant operators control both biological and chemical plant operations, monitor and maintain equipment, perform laboratory tests and prepare reports for regulatory agencies. Treatment plant operators must have a working knowledge of plant operations, treatment equipment, chemistry, microbiology, mathematics and computer applications.

LBCC's Water and Wastewater Technology offers two programs: a one-year certificate program in Water/Wastewater Plant Operations and a two-year Associate of Applied Science degree in Water/Wastewater Technology. Both programs cover all phases of water sources and treatment, water distribution, wastewater collection, wastewater treatment, and industrial applications, and both prepare graduates for employment as water or wastewater treatment plant operators.

Students with one-year certificates can find good jobs as entry-level water and wastewater treatment plant operators. The two-year program, which is more in depth, qualifies graduates for jobs as engineering technicians, representatives for equipment manufacturers, and as operators for industrial treatment systems, giving them more advancement potential and greater mobility.

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.

The two-year (seven-term) Associate of Applied Science in Water/Wastewater Technology prepares its graduates to work at the technician level in water, wastewater and industrial treatment fields. Graduates of the program are qualified to be plant operators, engineering technicians, and technical representatives for various manufacturing concerns. A firm foundation in chemistry, microbiology, computer applications, hydraulics, communication skills, maintenance skills and advanced operations is provided. Associate degree students are required to complete MTH 095 Intermediate Algebra.

The one-year (four-term) certificate program in Water/Wastewater Plant Operations prepares students for entry-level employment as water and wastewater treatment plant operators. A firm background in chemical and microbiological laboratory procedures, maintenance and treatment plant operations is provided. One-year certificate students are required to complete MTH 060 Introduction to Algebra. The one-year

certificate curriculum requires enrollment for four consecutive terms. Students completing the one-year program may choose to transfer credits to the two-year Associate of Applied Science degree program.

Students in both the one-year certificate program and the two-year degree program must complete an in-plant practicum during the summer term. Participation in the summer practicum may require relocation of the student for one term. There is no guarantee of funding for students during this period.

Facilities

Classes are held in modern, well-equipped classrooms and laboratories. The Water and Wastewater Technology program offers completely equipped laboratories for chemistry and microbiology, mechanical and electrical maintenance applications, and a special water treatment classroom equipped with a fully functional water treatment plant. Computer applications are a part of many classroom activities and laboratory applications.

PROFESSIONAL TECHNICAL

Associate of Applied Science in Water/Wastewater Technology

Classes shown below in italic are general education classes.

Course No.	Course Title	Credits
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Fall Term - First Year

WW 6.190	<i>Introduction to Environmental Science</i>	(3)3
	(Three credits apply toward general education requirements; three credits apply toward program.)	
WW 6.193	Introduction to Aquatic Chemistry & Microbiology	4
WW 6.199	Introduction to Hydraulics	2

Winter Term

HE 112	<i>First Aid</i>	1
WR 121	<i>English Composition</i>	3
WW 6.192	Wastewater Systems	7
WW 6.194	Basic Aquatic Chemistry & Microbiology	4

Spring Term

MTH 095	<i>Intermediate Algebra</i>	4
WW 6.181	W/WW Mechanics	3
WW 6.191	Water Systems Operation	7
WW 6.195	Intermediate Aquatic Chemistry & Microbiology	4

Summer

WW 6.168	In-Plant Practicum	12
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Fall Term - Second Year

	<i>Activity Course</i>	1
WW 6.154	Process Control I	4
WW 6.164	Water Sources	3
WW 6.166	Water Purification Systems	4
WR 227	Technical Report Writing	3

Winter Term

	<i>Cultural Diversity</i>	3
WW 6.155	Process Control II	3
WW 6.156	Industrial Electricity	3
WW 6.235	Applied Hydraulics	3
WW 6.171	Industrial Water/Waste Treatment	3

Spring Term

	<i>Activity Course</i>	1
	<i>Speech</i>	3
WW 6.165	Water Distribution & Collection Systems	2
WW 6.167	Water Distribution & Collection Lab	1
WW 6.197	Solids Handling	3
WW 6.198	Instrumentation	4

General Education Requirements: 19

Program Requirements: 82

Total Credits Required: 101

PROFESSIONAL TECHNICAL

One-Year Certificate in Water/Wastewater Plant Operations

Course No.	Course Title	Credits
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Fall Term

MTH 060	Introduction to Algebra	4
WW 6.190	Introduction to Environmental Science	6
WW 6.193	Introduction to Aquatic Chemistry & Microbiology	4
WW 6.199	Introduction to Hydraulics	2

Winter Term

HE 112	Emergency First Aid	1
WR 115	Introduction to College Writing	3
WW 6.192	Wastewater Systems	7
WW 6.194	Basic Aquatic Chemistry & Microbiology	4

Select 2-3 credits from the computer skills courses below 2-3

BA 2.569	First Course in Computers (2 credits)
CIS 1250	Introduction to Windows (1 credit)
CIS 125S	Introduction to Spreadsheets (1 credit)
ME 3.450	Computer Applications (3 credits)
OA 202A	Introduction to MS Word (2 credits)

Spring Term

WW 6.181	W/WW Mechanics	3
WW 6.191	Water Systems Operation	7
WW 6.195	Intermediate Aquatic Chemistry & Microbiology	4

Summer Term

WW 6.168	In-Plant Practicum	12
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Total Credits Required: 59-60

Welding Technology

Program Contact

David Ketler

Additional Faculty

Dean Dowless, David Schmitke

Welding 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 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 include mechanical ability, preciseness and creativity. A welder 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 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 Department. Welding I, Welding II, Welding III, and Preparation for Certification classes offer students limited 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, although admission is possible at other times, depending on space availability and/or the student's previous experience.

The Welding Technology program supports student participation in Skills USA-VICA and the student membership program with the American Welding Society (AWS).

Program Requirements

The Welding 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, 23 manual stick electrode stations, 36 MIG and 18 TIG stations. Other equipment includes plasma arc, Computer/Numerical Controlled flame cutting, template cutting, shearing, bending, drilling and rigging equipment. Classrooms are conveniently located next to the shop and audiovisual materials are available.

PROFESSIONAL TECHNICAL

Associate of Applied Science Degree in Welding Technology

Classes shown below in italic are general education classes and are included in the curriculum.

Course No.	Course Title	Credits
Fall Term - First Year		
MTH 061	<i>Survey of Math Fundamentals</i>	3
WD 4.151	Welding I	2
WD 4.240	Basic Arc Welding (SMAW) ¹	6
WD 4.242	Fabrication & Repair Practices I ¹	4
WD 4.258	Basic Blueprint Reading ¹	3
Winter Term		
IN 1.197	Introduction to Industrial Computers	1
WD 4.241	Intermediate Arc Welding (GMAW & GTAW) ¹	6
WD 4.243	Fabrication & Repair Practices II ¹	4
WD 4.247	Interpreting Metal Fabrication Drawings ¹	3
WR 121	<i>English Composition</i>	3
Spring Term		
ME 3.444	Welding Metallurgy I ¹	2
MTH 063	<i>Industrial Shop Math</i> ¹	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		
	<i>Health & Physical Education</i>	2
WD 4.256	Basic Pipe Welding Skills	4
WW 6.156	Industrial Electricity ¹	3
	Electives or CWE	6

Winter Term

	<i>Science, Technology & Society</i>	3
SP 100	<i>Introduction to Speech Communication</i>	3
WD 4.255	Fabrication of Structural Systems	4
	Electives or CWE	5

Spring Term

	<i>Cultural Diversity & Global Awareness</i>	3
HE 112	<i>Emergency First Aid</i>	1
WD 4.156	Machinery Operation & Maintenance ¹	3
WD 4.257	Fab & Repair: Applied Problem Solving ¹	4
	Electives or CWE	4

Select 7 credits from the following list of electives:

EG 4.407	Introduction to CAD (4 credits)
HV 3.132	Advanced Mobile Hydraulics (2 credits)
HV 3.134	Basic Hydraulics ¹ (3 credits)
MA 3.422B	Basic Lathe/Mill Processes (2 credits)
MA 3.423	Intermediate Turning & Milling (2 credits)
ME 6.282	UT & ET Testing Level I (3 credits)
WD 4.154	Welding Seminar (1-4 credits)
WD 4.280	Aluminum Welding GTAW & GMAW (2 credits)

Other courses with advisor's approval

General Education Requirements: 19

Program Requirements: 77

Total Credits Required: 96

PROFESSIONAL TECHNICAL

Two-Year Certificate in Welding Technology

Course No.	Course Title	Credits
Fall Term - First Year		
MTH 060	Introduction to Algebra	4
WD 4.151	Welding I	2
WD 4.240	Basic Arc Welding (SMAW) ¹	6
WD 4.242	Fabrication & Repair Practices I ¹	4
WD 4.258	Basic Blueprint Reading ¹	3
Winter Term		
IN 1.197	Introduction to Industrial Computers	1
WD 4.241	Intermediate Arc Welding (GMAW & GTAW) ¹	6
WD 4.243	Fabrication & Repair Practices II ¹	4
WD 4.247	Interpreting Metal Fabrication Drawings ¹	3
Spring Term		
ME 3.444	Welding Metallurgy I ¹	2
MTH 063	Industrial Shop Math ¹	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		
	Health & Physical Education	2
WD 4.256	Basic Pipe Welding Skills	4
WW 6.156	Industrial Electricity ¹	3
	Elective or CWE	5
Winter Term		
SP 100	Introduction to Speech Communication	3
WD 4.255	Fabrication of Structural Systems ¹	4
WR 095	College Writing Fundamentals	3
	Electives or CWE	4
Spring Term		
HE 112	Emergency First Aid	1
WD 4.156	Machinery Operation & Maintenance ¹	3
WD 4.257	Fabrication & Repair: Applied Problem Solving ¹	4
	Electives or CWE	6

1— Courses offered that term only.

Select 10 credits from the following list of electives:

EG 4.407	Introduction to CAD (4 credits)
HV 3.132	Advanced Mobile Hydraulics (2 credits)
MA 3.422B	Basic Lathe/Mill Processes (2 credits)
ME 6.282	UT & ET Testing Level I (3 credits)
WD 4.154	Welding Seminar (1-4 credits)
WD 4.251	Fundamentals of Welding Inspection (3 credits)
WD 4.280	Aluminum Welding GTAW & GMAW (2 credits)

Other courses with advisor's approval

Total Credits Required: 91

PROFESSIONAL TECHNICAL

One-Year Certificate in Welding Technology

Course No.	Course Title	Credits
Fall Term		
MTH 060	Introduction to Algebra	4
WD 4.151	Welding I	2
WD 4.240	Basic Arc Welding (SMAW) ¹	6
WD 4.242	Fabrication & Repair Practices I ¹	4
WD 4.258	Basic Blueprint Reading ¹	3
Winter Term		
IN 1.197	Introduction to Industrial Computers	1
WD 4.241	Intermediate Arc Welding (GMAW & GTAW) ¹	6
WD 4.243	Fabrication & Repair Practices II ¹	4
WD 4.247	Interpreting Metal Fabrication Drawings ¹	3
	Select one writing course at appropriate level (based on Placement Test score)	3
Spring Term		
ME 3.444	Welding Metallurgy I ¹	2
MTH 063	Industrial Shop Math I	1
WD 4.245	Layout Procedures for Welding ¹	3
WD 4.246	Advanced Arc Welding (SMAW & FCAW) ¹	6
WD 4.250	Fabrication & Repair Practices III ¹	4
Total Credits Required:		52

Wine and Food Dynamics

Program Contacts:

Scott Anselm

Additional Faculty:

John Jarschke

This program focuses on the relationship of food and wine and how to pair wine with food for the enhancement of both. Principles of viticulture, wine making, food and sauce preparation, and tasting and analyzing techniques are explored. The Wine and Food Dynamics program is for individuals who want to be or are currently involved in the marketing of wine and food, or for any individuals who want to enhance their understanding of wine and food.

Since the Wine and Food Dynamics program features extensive use and tasting of wine, students must be 21 years of age. Students should possess a strong understanding of business math, good communication skills, and have a desire to work directly with customers and staff and be able to work under pressure.

For this program, LBCC is teaming up with Chemeketa Community College and Oregon State University, which already offer several courses in viticulture, wine making and wine appreciation. Some classes will be taken at each of these institutions.

Program Requirements

Since the Food and Wine Dynamics program features extensive use and tasting of wine, students must be 21 years of age. Students should possess a strong understanding of business math, good communication skills, and have a desire to work directly with customers and staff. Students should be able to work under pressure and should demonstrate manual dexterity, physical stamina, concentration, good memory, and have a cheerful, friendly, outgoing personality.

In addition to regular college costs, students spend about \$500 to purchase books, uniforms, knives, shoes and other equipment. Students should wait until after the first day of class to purchase these items.

Facilities

This program is offered through cooperation between Linn-Benton Community College, Chemeketa Community College and Oregon State University. All these institutions and the local industry partners have a wide variety of modern equipment and state-of-the-art culinary lab facilities.

PROFESSIONAL TECHNICAL

Associate of Applied Science Degree in Wine and Food Dynamics

See graduation requirements for Associate of Applied Science degree.

Course No.	Course Title	Credits
Fall Term - First Year		
CA 8.346	Cooking Fundamentals (for non-culinary students) (LBCC)	3
CA 8.347	Beverage Server Training (LBCC)	1
EC 115	Outline of Economics (LBCC)	3(1)
	(Three credits apply toward general education requirements; one credit applies toward program.)	
VMW 101	General Viticulture (Chemeketa)	3
VMW 131	Wine Appreciation (Chemeketa)	3
Winter Term		
CA 8.348	Wine Analysis & Theory (LBCC) or	
FST 251	Introduction to Wine, Beer & Spirits (OSU)	3
PE 231	Lifetime Health & Fitness (LBCC)	3
VMW 121	Wine Production I (Chemeketa)	3
	Electives	4
	Cooperative Work Experience	2
Spring Term		
MTH 061	Survey of Math Fundamentals	3
MTH 064	Business Applications of Math Fundamentals	1
SD 101	Supervision Fundamentals (LBCC)	3
VMW 133	Cool-Climate Wines (Chemeketa)	3
	Cooperative Work Experience	3
WR 121	English Composition (LBCC)	3
Fall Term - Second Year		
BA 223	Principles of Marketing (LBCC)	3
BI 234	Microbiology (LBCC)	4
CA 8.361	Food & Wine Pairing (LBCC)	4
HTM 101	Hospitality & Tourism Management (Chemeketa)	3
	Electives	3
Winter Term		
BA 285	Business Relations in a Global Economy (LBCC)	4
CA 8.349	Cooking with Wine (Sauces) (LBCC)	3
SP 100	Introduction to Speech Communication (LBCC) or ..	
CA 8.301	Culinary Arts Career Planning (LBCC) and	
SP 111	Fundamentals of Speech (LBCC)	3-4
VMW 132	Wines of the World (Chemeketa)	3
	Electives	4

1—Courses offered that term only.

Spring Term

CA 8.360	Cooking with Wine (Entrees) (LBCC)	3
CA 8.364	Banquets & Buffet Sommelier Lab (LBCC)	2
	<i>Science, Technology & Society</i>	3
SP 112	Introduction to Persuasion (LBCC)	3
VMW 232	Sensory Evaluation of Wine (Chemeketa) or	
FST 335	Sensory Properties of Wine & Beer (OSU)	3

General Education Requirements: 19**Program Requirements: 75****Total Credits Required: 93-94**

Workforce Training

Accelerated Cost-Recovery Training Programs

Accelerated Cost-Recovery Training programs and courses prepare students for entry level employment in a variety of fields that have a career ladder for advancement. The state approved certificate programs are offered as needed, depending on the current openings in the local job market and the number of interested students.

The format for these programs and courses is intense and condensed. A group of students completes all the courses in a certificate program together, and attends class for approximately 30 to 40 hours each week. The programs and courses include workplace and job search skills.

The cost of these programs and courses varies. Last year the cost ranged from \$1,000 to \$8,300, depending on the length of the training and the topic. The advertised price for each program or course includes all tuition, fees, books, and supplies. Cost of the programs is subject to change.

Cost recovery pricing structures allow the college to continue to grow and meet the changing needs of students and local businesses. The price of cost recovery programs is compared to tuition based programs by determining a cost per hour of classroom instruction. 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 following Accelerated Cost-Recovery Training programs qualify for financial aid if the student is eligible to receive aid: Pharmacy Technician, Veterinary Technology, Phlebotomy, Radiological Technology, Public Safety Dispatcher (911).

For more information about Accelerated Cost-Recovery Training programs, contact the Training and Business Development Center at LBCC, 917-4923.

Pharmacy Technician Training⁹

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 to pass 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, Technical Mathematics, Pharmacy Practicum and computer concepts are incorporated. In these courses, students develop communi-

cation, computer literacy and interpersonal relations skills, as well as teamwork, responsibility and initiative.

A group of students completes the training together and attend class for approximately 30 hours a week.

Admission Requirements

Special admissions requirements include attendance at a program orientation, completion of WR 095 College Writing Fundamentals and MTH 060 Introduction to Algebra or equivalent score on College Placement Test, and a completed LBCC admissions application form. The cost of this program varies.

Course No.	Course Title	Credits
BA 2.108	Customer Service	2
MO 5.414	Drug Classifications & Names	3
OA 2.616	Job Success Skills	1
OA 2.925	Basic Microsoft Office Skills	1
PH 5.901	Pharmacy Technician	3
PH 5.905	Pharmacy Laws & Ethics	3
PH 5.910	Pharmacy Math	4
PH 5.915	Pharmacology for Pharmacy Technicians	2
PH 5.920	Pharmacy Operations at Retail & Institutional	2
WE 1.2803	Cooperative Work Experience	5
Total Credits:		26

Phlebotomy Training Program⁹

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, arterial specimen collection, capillary skin punctures, butterfly needles, blood cultures and specimen collection on adults, children and infants.

A group of students moves through this training as a cohort. Classes are tailored specifically to these students, who attend class for approximately 35 hours a week. The first 11 weeks of the training are in the classroom. The last four weeks are in a clinic, hospital or physician's office.

Admission Requirements

Special admissions requirements include attendance at a program orientation, completion of WR 095 College Writing Fundamentals and MTH 020 Basic Mathematics or equivalent score on College Placement Test, current immunizations and a completed LBCC admissions application form. The cost of this program varies.

Course No.	Course Title	Credits
MO 5.532	Medical Terminology/Pharmacology	2
OA 2.616	Job Success Skills	1
OA 2.671	Medical Law & Ethics	2
OA 2.679	Basic Billing & Coding	1
OA 2.925	Basic Microsoft Office Skills	1
PH 5.301	Health Care Delivery System	1
PH 5.310	Phlebotomy	8
PH 5.320	Anatomy & Physiology for Phlebotomists	2
PH 5.330	Communication/Customer Service for Phlebotomists	2
WE 1.2804	Cooperative Work Experience	5
Total Credits:		25

⁹—A cost-recovery program. See "Workforce Training" section on page 95 for details.

Public Safety Dispatcher (911) Program⁹

The Emergency Dispatcher Program is designed to provide students with a basic working knowledge of all aspects relative to emergency communications. The curriculum includes skills, knowledge and abilities identified as critical for a career in public safety dispatching by Linn, Benton and Lane dispatching centers, the LBCC Emergency Dispatcher Advisory Committee and APCO (Association of Public Safety Communications Officials International).

The design and curriculum for this program were developed cooperatively with the help of 911 dispatch centers in the Linn, Benton and Lane County areas. Courses will be taught by professionals in the field of emergency services and public safety communications. As part of a cooperative work experience component, students observe working dispatchers. Students also perform dispatching tasks and will be evaluated in a 911 center as part of their CWE. A group of students will move through this training as a cohort. Classes are tailored specifically to the students in this training.

Admission Requirements

Special admission requirements include completion of MTH 020 Basic Math or an equivalent math score on the College Placement Test, completion of WR 115 Introduction to College Writing or an equivalent writing score on the College Placement Test, attendance at a program orientation, completed LBCC admission application form and a signed statement of understanding.

Course No.	Course Title	Credits
CJ 220	Introduction to Substantive Law	3
CJ 280A	Cooperative Work Experience	5
EM 5.830	Crisis Intervention	3
HD 190	Assertiveness Training	1
HD 206	Coping Skills for Stress	2
OA 2.616	Job Success Skills	1
PD 5.100	Introduction of Emergency Services	3
PD 5.105	Transcription for Telecommunicators	1
PD 5.110	Introduction to Public Safety for Emergency Telecommunications	3
PD 5.115	Public Safety Emergency Telecommunications (Police)	3
PD 5.116	Emergency Telecommunications (Fire and Medical)	3
PD 5.120	Emergency Medical Service: First Responder	6
PD 5.125	Communication Center Operations	5
PD 5.130	Tactical Fire Dispatch	3
PSY 101	Psychology and Human Relations	3
SP 218	Interpersonal Communication	3
Total Credits:		48

Radiologic Technology⁹

Radiologic Technology is an 18-month intensive program. Students receive a two-year certificate and an Associate of General Studies Degree. The Radiologic Technology program prepares students through a progressive, outcomes-based educational format. Content matter is categorized into specific modules that serve as tools for measuring student progress in every element of the program. Modules of study include Radiation Protection, Radiographic Procedures, Image Production and Evaluation, Equipment Maintenance and Operation, Patient Care and Management, and Clinical Radiography.

The purpose of this program is to prepare students to practice as proficient, multi-skilled professionals in culturally diverse health care settings; to demonstrate outcomes required by the American Registry of Radiologic Technologists (ARRT) and program guidelines; and to apply for and successfully complete ARRT certification examinations.

A group of 25 students move through this training as a cohort. Classes are tailored specifically to these students, who attend class for approximately 40 hours a week. It does not follow the traditional college terms.

Admission Requirements

Special admission requirements include completion of Math 111 College Algebra, within the last five years, or an equivalent math course from a regionally accredited institution with a "C" or better, or have taken the College Placement Test with a percentile ranking of 81–99 percent in algebra and 89–95 percent in college math; Writing 121 English Composition or an equivalent course from a regionally accredited institution with a "C" or better; 3 credits of speech (SP 100, 111, 112, or 218), or an equivalent course through an accredited institution with a "C" or better; CH 121 College Chemistry or equivalent course through an accredited institution with a "C" or better; MO 5.630 Medical Terminology or equivalent course from an accredited institution with a "C" or better or pass the LBCC Challenge Exam; and 4 credits of HE/PE (HE 112, 125, 225, 252, 261, and PE 185 or 231), or an equivalent course through an accredited institution with a "C" or better; and possess a current First Aid/CPR card. Students are required to have current vaccinations. Eligible applicants are admitted based on total points awarded on the points worksheet in the Admission Bulletin. 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.

Course No.	Course Title	Credits
RT 5.750	Introduction to Radiology	2
RT 5.755	Radiographic Positioning & Lab I	3
RT 5.756	Radiographic Positioning & Lab II	3
RT 5.757	Radiographic Positioning & Lab III	3
RT 5.758	Radiographic Positioning & Lab IV	3
RT 5.759	Radiographic Positioning & Lab V	3
RT 5.765	Clinical Radiography I	8
RT 5.766	Clinical Radiography II	9
RT 5.767	Clinical Radiography III	9
RT 5.768	Clinical Radiography IV	9
RT 5.769	Clinical Radiography V	9
RT 5.771	Principals of Exposure	3
RT 5.775	Patient Care & Management	3
RT 5.777	Radiation Biology	3
RT 5.779	Radiation Protection	3
RT 5.783	Radiographic Equipment & Maintenance	3
RT 5.786	Radiographic Pathology	3
RT 5.791	Radiation Physics	3
RT 5.796	Pharmacology	3
B1 231	Human Anatomy & Physiology	4
B1 232	Human Anatomy & Physiology	4
B1 233	Human Anatomy & Physiology	4
OA 2.616	Job Success Skills	1
Total Credits		98

Tractor Trailer Operator⁹

Class A Advanced Tractor Trailer Operator Course

This course (TD 4.601) prepares students to meet the requirements of the National Commercial Driver's License Examination. The course is an active experience consisting of classroom time and field training. Students spend at least 44 hours driving on highways, in cities and under heavy traffic conditions. Emphasis is placed on developing a thorough knowledge of Federal Department of Transportation (DOT) rules and regulations. A student who completes this course and successfully passes the Commercial Driver's License Examination has the qualifications necessary to enter the trucking industry as an entry-level diesel tractor/trailer driver.

⁹—A cost-recovery program. See "Workforce Training" section on page 95 for details.

Veterinary Technology⁹

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.

The structure of the program is integrative, with each week focusing on one or more related topics and weekly 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 to prepare students for the national board exam.

Some classes are held at Oregon State University in the junior surgery labs in Magruder Hall. The cooperative work experience will take place in an area veterinary clinic or hospital. A group of students complete the training together and attend class for approximately 35 hours a week. Eight hours each week is spent working and observing in a local veterinary clinic or hospital.

Admission Requirements

Special admissions requirements include a completed job observation checklist, attendance at a program orientation, completion of WR 115 Introduction to College Writing and MTH 060 Introduction to Algebra or equivalent score on the College Placement Test, and a completed LBCC admissions application form. The cost of this program varies.

Course No.	Course Title	Credits
BA 2.108	Customer Service	2
OA 2.616	Job Success Skills	1
OA 2.925	Basic Microsoft Office Skills	1
VT 8.601	Foundation Sciences	2
VT 8.605	Veterinary Medicine	7
VT 8.610	Standard Hospital Practices	1
VT 8.615	Clinical Sciences	2
VT 8.620	Surgery & Anesthesia	2
VT 8.625	Radiology	2
VT 8.630	Pharmacology	2
WE 1.280	Cooperative Work Experience	5


Total Credits: 27

Writing

See English.

⁹—A cost-recovery program. See "Workforce Training" section on page 95 for details.

Course Descriptions



LINN-BENTON
Community College

Course Information

- Professional Technical courses have alphabetical prefixes and are generally numbered 2.000 through 8.999.
- Courses with 100 and 200 numbers are usually transferable to four-year institutions.
- 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: ART (GRAPHIC DESIGN)

Courses with the AA prefix are professional technical courses that have a primary purpose of meeting requirements for the Associate of Applied Science degree. Four-year institutions may or may not accept them for transfer credit.

AA 198 Independent Studies

(2–6 class hrs/wk, 1–3 cr) F/W/Sp

Individual instruction in advanced problems relevant to the student's interests and needs. Prerequisite: Instructor's approval.

AA 221 Graphic Design I

(6 class hrs/wk, 4 cr) F

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. Prerequisites: ART 115 Basic Design: Composition; ART 116 Basic Design: Color; AA 224 Typographical Design; GA 3.169 Digital Image Manipulation III; GA 3.155 Digital Illustration III; GA 3.168 Digital Page Layout III.

AA 222 Graphic Design II

(6 class hrs/wk, 4 cr) W

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. Prerequisite: AA 221 Graphic Design I.

AA 223 Graphic Design III

(6 class hrs/wk, 4 cr) Sp

Studies publication design. Includes examination of formula vs. format, direct mail, poster, magazine and book design. Environmental implications are discussed. Teamwork and interaction are stressed. Prerequisite: AA 222 Graphic Design II.

AA 224 Typographical Design I

(6 class hrs/wk, 4 cr) W

Introduction to letterforms. Develops a fundamental awareness of type and typographic design. Studies the evolution, art and vocabulary of typography; handbuilt letterforms; and designing with type. Emphasizes typography as a working tool. Prerequisites: GA 3.153 Digital Illustration I; GA 3.156 Digital Page Layout I; GA 3.157 Digital Image Manipulation I.

AA 225 Packaging and 3-D Design

(6 class hrs/wk, 4 cr) W

Introduction to design, display and merchandising of three-dimensional marketing solutions. Stresses suitability of concept, design and color as applied to various products. Materials and methods of printing, cutting, folding and assembly are explored for tactile and visual effect. Environmental issues are discussed. Good client/designer relationships are stressed. Prerequisites: AA 224 Typographical Design; AA 237 Illustration I; GA 3.155 Digital Illustration III; GA 3.168 Digital Page Layout III; GA 3.169 Digital Image Manipulation III.

AA 226 Typographical Design II

(6 class hrs/wk, 4 cr) F

Continues the study, use and design of letterforms. Emphasizes creating original type variations and form manipulation. Prerequisites: AA 224 Typographical Design I; GA 3.155 Digital Illustration III; GA 3.168 Digital Page Layout III; GA 3.169 Digital Image Manipulation III.

AA 228 Portfolio Preparation: Professional Practices

(6 class hrs/wk, 4 cr) Sp

Emphasizes reevaluation of previously produced projects; organization and production of the business card, business stationery, résumé, envelope, self-promotional and comprehensive portfolio. Covers current job opportunities; methods in merchandising job talents; action before, during and after the interview; business practices and ethics are covered. Intended for second-year graphic design students. Students present their professional portfolios to public at Portfolio Presentations and in a more personal setting at the reception that follows. Prerequisites: AA 222 Graphic Design II; AA 226 Typographical Design II. Corequisite: AA 223 Graphic Design III.

AA 237 Illustration I

(6 class hrs/wk, 4 cr) F

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 115 Basic Design I: Composition; ART 116 Basic Design II: Color; ART 133 Drawing III or ART 234 Figure Drawing.

AA 238 Illustration II

(6 class hrs/wk, 4 cr) W

Explores rendering with markers. Moves from an exercise, process and technique orientation to product rendering and ad development. Prerequisite: AA 237 Illustration I.

AA 239 Illustration III

(6 class hrs/wk, 4 cr) Sp

Explores further possibilities in illustration using soft pastel and colored pencil. Stresses conceptual development of illustration dealing with written material. Prerequisite: AA 238 Illustration II.

AA 280 CWE Graphics

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

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: GA 3.157 Digital Image Manipulation I, GA 3.158 Digital Prepress I, and CWE coordinator approval.

AG: AGRICULTURE

AG 111 Computers in Agriculture

(3 class hrs/wk, 2 cr) F/W/Sp

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 Internet applications.

AG 280A CWE Agriculture

(6-42 class hrs/wk, 2-14 cr) As needed

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 Technology

(6-42 class hrs/wk, 2-14 cr) As needed

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

(6-42 class hrs/wk, 2-14 cr) As needed

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 8.120 Seed Science and Technology

(4 class hrs/wk, 3 cr) W

An agriculture class that trains potential seed analysts, seed dealers, seed warehouse persons, and seed regulator agents in the technology areas of seed science.

AG 8.125 Soils I

(4 class hrs/wk, 3 cr) F

Provides necessary soil science background for work with fertilizers, irrigation, drainage and other management practices. Physical, chemical and biological properties of the soil are discussed in relation to plant growth.

AG 8.126 Soils II

(4 class hrs/wk, 3 cr) W

Covers second phase of soils instruction, dealing with plant nutrition and the proper use of fertilizer and other soil amendments. Diagnosing plant problems, soil testing, fertilizer recommendations, methods of application, storage and handling, personal and public safety are emphasized.

AG 8.130 Agricultural Chemicals

(5 class hrs/wk, 4 cr) W

Covers background information in use and chemistry of herbicides, insecticides, fungicides and nematocides. Types of materials, safety in handling, land storage and method of application are emphasized. Students develop ability to interpret and explain to customers the directions and precautions to be observed with agriculture chemicals. Attention also is given to keeping current with new product development.

AG 8.131 Pest Management

(4 class hrs/wk, 3 cr) F

Includes the classification, anatomy, growth, life history, recognition and control principles of selected weeds, diseases and insect pests. Introduces integrated pest management (IPM) and plant health care (PHC) programs. Environmental protection and public safety are considered.

AG 8.138 Irrigation Systems

(4 class hrs/wk, 3 cr) W

Introduces principles and practices of irrigation, including soil, water and plant relations; water sources; quality; methods of distribution; and measurement. System design and selection also are emphasized, including surface and subsurface drainage systems. Includes water conservation, public safety and legal issues.

AG 8.165 Plant Science

(6 class hrs/wk, 4 cr) F

A study of the structure and function of flowering plants, with emphasis on crop and ornamental plants.

AH: ALLIED HEALTH / HOSEC

AH 5.409 Career Counseling for Pre-Nursing

(5 class hrs/wk, 1 cr) F/W/Sp

Provides pre-nursing applicants with an assessment of their own personal characteristics as they examine the career of nursing. Guidance in choosing a nursing career. Note: Two-week class.

ANS: ANIMAL SCIENCE

ANS 121 Introduction to Animal Science

● (5 class hrs/wk, 4 cr) F/Sp

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 class hr/wk 1 cr) W

Explores career opportunities in animal science. Includes guest lecturers from various fields of animal agriculture as well as an emphasis on résumé writing and job interviewing.

ANS 210 Feeds and Feed Processing

(5 class hrs/wk, 4 cr) W

Covers basic animal nutrition, including protein, vitamins, minerals, fat, carbohydrates, feed additives and the utilization of nutrients by livestock. 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

(4 class hrs/wk, 3 cr) Sp

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 and Feed Processing.

ANS 215 Applied Beef Production

(5 class hrs/wk, 4 cr) F

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*(5 class hrs/wk, 4 cr) W*

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 2006.

ANS 216B Applied Swine Production*(5 class hrs/wk, 4 cr) W*

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 2005.

ANS 220 Introductory Horse Science*(5 class hrs/wk, 4 cr) F*

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 Industries*(5 class hrs/wk, 3 cr) Sp*

Teaches students practical skills in three specific areas of horse science: anatomy, foot and leg care, fitting and showing, and horse conformation judging. Recognizing common unsoundnesses and blemishes also is covered. In addition, students learn proper techniques for preparing horses for show competition in halter, and are exposed to Western and English pleasure, reining, cutting dressage, show jumping and the saddle seat industries.

ANS 222 Young Horse Training*(6 class hrs/wk, 2 cr) F*

Provides hands-on training. The student is assigned a young horse to train for the term. (Students may use their own horse, or a horse will be provided.) The training consists of halter breaking, leading, sacking, longeing, trailer loading and handling the feet. Saddling, biting, ground driving and early stages of riding are taught, as well as grooming, safety and use of equipment.

ANS 223 Equine Marketing*(2 class hrs/wk, 2 cr) W*

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 résumé, students learn to "market themselves."

ANS 227 Artificial Insemination*(5 class hrs/wk, 4 cr) Sp*

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*(5 class hrs/wk, 3 cr) Sp*

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 of Livestock*(5 class hrs/wk, 4 cr) W*

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. Prerequisite or corequisite: MTH 065 Elementary Algebra.

ANTH: ANTHROPOLOGY**ANTH 103 Introduction to Cultural Anthropology***■ (3 class hrs/wk, 3 cr) F/W/Sp*

Introduces students to the cross-cultural perspectives necessary to examine the diversity of human cultures. Topics include cross-cultural perspectives of marriage and kinship; religious, economic, political and social systems; and language.

ANTH 198 Research Topics*(1 class hr/wk, 1 cr)*

Offers topics of study in anthropology with individual research and/or field study. Prerequisite: WR 121 English Composition.

ANTH 210 Comparative Cultures*■ (3 class hrs/wk, 3 cr) As needed*

Introduction to world cultures (past and present). Reviews culture heritage, values and perspectives of Western and non-Western societies. Investigates the scientific Revolution/Industry/Technology of Europe and impacts on the developing world.

ANTH 230 Time Travelers*■ (3 class hrs/wk, 3 cr) F/W*

Introduction to how the past is studied by archaeologists. The history of archaeology, archaeological theories, and archaeological methods will be discussed and explored using hands-on activities.

ANTH 232 Native North Americans*■ (3 class hrs/wk, 3 cr) F/Sp*

Studies the earliest inhabitants of North America, including discussion of archaeological evidence of these first Americans, customs before white contact, westernization and contemporary issues.

ANTH 280 CWE Anthropology/Archaeology*(6-42 class hrs/wk, 2-14 cr)*

Gives students practical experience in supervised employment related to anthropology/archaeology. 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.

ARE: AGRICULTURE AND RESOURCE ECONOMICS**ARE 211 Management in Agriculture***(4 class hrs/wk, 4 cr) F/W*

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.

ARE 221 Marketing in Agriculture*(3 class hrs/wk, 3 cr) F/W*

Covers all aspects of sales and marketing of agricultural products, including crops, milk and dairy products, commercial and purebred livestock, and grass seed. The commodities futures market and other specialized outlets also are included.

ART: ART AND PHOTOGRAPHY**ART 102 Understanding Art***> (3 class hrs/wk, 3 cr) F/W/Sp*

Surveys the principal concerns of art and artists through the study of visual art forms and aesthetics. Western art is emphasized. Global perspective is encouraged.

ART 115 Basic Design I: Composition*> (6 class hrs/wk, 4 cr) F/W*

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 expression. Field trips may be taken to illustrate elements of design as they relate across disciplines. 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*> (6 class hrs/wk, 4 cr) W/Sp*

Explores 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 contexts of color usage, and discuss color as a means of visual communication. Prerequisite: ART 115 Basic Design I: Composition.

ART 131 Drawing I*> (6 class hrs/wk, 4 cr) F/Sp*

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 drawing.

ART 132 Drawing II*> (6 class hrs/wk, 4 cr) W/Sp*

Continues to emphasize the development of composition, and perceptual and technical skills needed to describe 3-D illusion on 2-D surfaces. Exposes students to conceptual and technical art references and encourages students to think critically about art and expression as their concepts regarding drawing are broadened. May be repeated for credit. Prerequisite: ART 131 Drawing I or instructor's approval.

ART 133 Drawing III*> (6 class hrs/wk, 4 cr) Sp*

Advanced study of observed and invented form with an introduction to mixed media techniques. May be repeated for credit. Prerequisite: ART 132 Drawing II or instructor's approval.

ART 154 Ceramics I*> (6 class hrs/wk, 4 cr) F/W/Sp*

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 181 Introduction to Painting*> (6 class hrs/wk, 4 cr) F/W/Sp*

Explores visual expression on a two-dimensional surface. Uses oil or acrylic paints for spatial development of color, shape and surface. Drawing and design experience recommended. Prerequisite: ART 131 Drawing I or instructor's approval.

ART 198 Independent Studies*(3-6 class hrs/wk, 1-4 cr) F/W/Sp*

A special studies class tailored to explore individually arranged projects within a discipline. May include fine arts portfolio preparation and other professional concerns. Prerequisite: Previous studio experience in the chosen area or instructor's approval.

ART 204 History of Western Art*> (3 class hrs/wk, 3 cr) F*

Studies the history of Western visual art prehistory up to Middle Ages and its significance and relationship to mankind. (Recommended, but not required, that courses be taken in sequence.)

ART 205 History of Western Art*> (3 class hrs/wk, 3 cr) W*

Studies the history of Western visual art of the Middle Ages, Renaissance and Baroque and its significance and relationship to mankind. (Recommended, but not required, that courses be taken in sequence.)

ART 206 History of Western Art*> (3 class hrs/wk, 3 cr) Sp*

Studies the history of Western visual art of the 17th, 18th, 19th and 20th centuries and its significance and relationship to mankind. (Recommended, but not required, that courses be taken in sequence.)

ART 234 Figure Drawing*> (6 class hrs/wk, 4 cr) F/Sp*

An introductory course in drawing the nude figure. Emphasis is placed on basic anatomical structures, surface topography, foreshortening, composition and form. Students are exposed to art historical references as they relate to representation of the human form, as well as being encouraged to write and think critically about art and expression. Models are provided and field trips may be taken to include studies of the figure in motion, or in-depth anatomical studies when possible (dance or exercise classes, anatomy labs). Attention will be given to providing a sound foundational introduction to the traditional aspects of figure studies as presented in academic settings. May be repeated for credit. Prerequisite ART 131 Drawing I or instructor's approval.

ART 254 Ceramics II*> (6 class hrs/wk, 4 cr) F/W/Sp*

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 or instructor's approval.

ART 261 Introduction to Photography*(3 class hrs/wk, 3 cr) F/W*

Introduces principles of photography, including exposure, camera handling, lighting, composition, color and black-and-white film and digital cameras. Also covers the history of photography, study of major artists and their work, and critical analysis of composition and content.

ART 263 Digital Photography*(4 class hrs/wk, 3 cr) W*

Introduces digital imaging as an expressive medium. Covers the capture, editing and printing of photographic images in the digital environment, including negative and print scanning, image manipulation software, and photo quality output. Emphasis on technique, composition and creative expression. Computer lab work included. Prerequisite: ART 261 Introduction to Photography with grade "B" or better or instructor's approval.

ART 264 Intermediate Black-and-White Photography*(4 class hrs/wk, 3 cr) Sp*

Studies advanced black-and-white darkroom techniques, including archival processing, fine print controls, and the Zone System. Continues the study of the history of photography and its connections to art and social issues of the times, including the Pictorialist, Modernist and West Coast periods. Considerable attention is paid to the critique and understanding of images. Lab work included. Prerequisite: ART 261 Introduction to Photography with a grade "B" or better or instructor's approval.

ART 266 Photography: Art and Technique*(4 class hrs/wk, 3 cr) F*

Designed to bridge the gap between traditional photography and the newer techniques of electronic imaging. The student will explore hand-constructed imagery based on the photograph. Includes study of the relationships between hand-applied techniques and processes and contemporary images produced on the computer. This class is intended for the non-photographer as well as the photographer. Prerequisite: ART 261 Introduction to Photography with grade "B" or better or instructor's approval.

ART 280 CWE Fine Arts*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

An instructional program to give students experience in supervised employment related to fine arts. 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.

ART 281 Painting II*► (6 class hrs/wk, 4 cr) F/W/Sp*

Continues the study of visual expression on 2-D surfaces of selected subjects using oil or acrylic medium. Prerequisite: ART 181 Introduction to Painting. May be repeated for credit.

AS: AEROSPACE STUDIES**AS 111 The Air Force Today***(1 class hr/wk, 1 cr) F*

Provides an overview of the Air Force Reserve Officer Training Program and the Air Force. Topics include officership, professional appearance, military customs and courtesies, Air Force Core Values, basic communication concepts, and identification and understanding of military chain-of-command. Leadership Lab (AS 120) is also a required course for all cadets and complements this course with followership experience.

AS 112 The Air Force Today*(1 class hr/wk, 1 cr) W*

Provides an overview of the Air Force Reserve Officer Training Program and the Air Force. Topics include officership, professional appearance, military customs and courtesies, Air Force Core Values, basic communication concepts, and identification and understanding of military chain-of-command. Leadership Lab (AS 120) is also a required course for all cadets and complements this course with followership experience.

AS 113 The Air Force Today*(1 class hr/wk, 1 cr) Sp*

Provides an overview of the Air Force Reserve Officer Training Program and the Air Force. Topics include officership, professional appearance, military customs and courtesies, Air Force Core Values, basic communication concepts, and identification and understanding of military chain-of-command. Leadership Lab (AS 120) is also a required course for all cadets and complements this course with followership experience.

AS 120 Aerospace Studies Leadership Laboratory*(2 class hrs/wk, 1 cr)*

Includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands. Also studies the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers.

AS 211 Development of Air Power*(1 class hrs/wk, 1 cr)*

Surveys the development of air power as well as introducing leadership and ethics. It is not a content course, but an introduction. The history of powered flight is still young and rich in excitement, glamour and mystery. The development of aviation is a multi-faceted tale of technological breakthrough, politics, controversy and achievement. AS 211 examines the origins of military aviation and its development through World War II.

AS 212 Development of Air Power*(1 class hrs/wk, 1 cr)*

Surveys the development of air power as well as introducing leadership and ethics. It is not a content course but an introduction. The theory of powered flight is still young and rich in excitement, glamour and mystery. The development of aviation is a multi-faceted tale of technological breakthrough, politics, controversy and achievement. AS 212 examines the development of military aviation from the end of World War II through the Vietnam War.

AS 213 Development of Air Power*(1 class hrs/wk, 1 cr)*

Examines the general aspects of air and space power through a historical perspective. Covers a time period from the first balloons and dirigibles to the space-age global positioning systems of the Persian Gulf War. Historical examples are provided to extrapolate the development of Air Force capabilities (competencies), and missions (functions) to demonstrate the evolution of what has become today's USAF air and space power. Furthermore, the course examines several fundamental truths associated with war in the third dimension: e.g. Principles of War and Tenets of Air and Space Power. As a whole, this course provides cadets with a knowledge level understanding for the general element and employment of air and space power, from an institutional, doctrinal and historical perspective. In addition, students will continue to discuss the importance of the Air Force Core Values, through the use of operational examples and historical Air Force Leaders, and will continue to develop their communication skills.

AS 220 Aerospace Studies Leadership Lab*(2 class hrs/wk, 1 cr)*

Includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands. Also studies the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers.

AT: ANIMAL TECHNOLOGY

Courses with the AT prefix are professional technical courses that have a primary purpose of meeting requirements for the Associate of Applied Science degree. Four-year institutions may or may not accept them for transfer credit.

AT 147 Livestock Selection Techniques

(6 class hrs/wk, 4 cr) F

Concentrates on techniques, selection and comparative judging of beef, sheep and swine and intensive work on developing oral reasons and terminology. Designed for first-year students interested in livestock judging.

AT 149 Livestock Judging

(4 class hrs/wk, 4 cr) W

Provides an in-depth application of principles necessary for the successful comprehensive analysis of beef, sheep and swine. Prerequisite: Instructor approval.

AT 152 Livestock Fitting and Showing

(4 class hrs/wk, 2 cr) W

Provides students with practical, hands-on experience in modern fitting and showing techniques. Current showmanship styles and showing etiquette also are covered.

AT 153 Livestock Events Practicum

(4 class hrs/wk, 2 cr) Sp

Offers students the opportunity to help organize and participate in diverse activities such as the LBCC Steer and Heifer Show, FFA Livestock Judging Contest, Agricultural Sciences Awards Banquet, and showing at various jackpot shows.

AT 154 Equine Business Management

(3 class hrs/wk, 3 cr) Sp

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/Parasites

(3 class hrs/wk, 3 cr) F

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 Diseases and Parasites

(4 class hrs/wk, 3 cr) Sp

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 2005.

AT 163 Schooling the Horse I

(7 class hrs/wk, 3 cr) W

Provides hands-on horse training experience. The student learns the fundamentals of horse training, including longeing, working in the round pen, driving, biting, riding, rein aids and backing. Equipment, safety and horse "psychology" also are taught. Prerequisite: ANS 222 Young Horse Training or instructor's approval.

AT 164 Schooling the Horse II

(7 class hrs/wk, 3 cr) Sp

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 or instructor's approval.

AT 181 Dairy Management Systems

(3.5 class hrs/wk, 2 cr) W

An introduction into the management practices necessary to operate a profitable dairy. Covers the history and future of the industry, breeds and breeding systems, animal housing, and waste management.

AT 182 Milking Management

(3.5 class hrs/wk, 2 cr) W

Covers the principles of milk production and letdown, anatomy and physiology of the udder, proper milking practices, prevention and treatment of udder infections. Provides students hands-on experience in a modern dairy parlor and milk processing facility.

AT 183 Dairy Herd Health

(3.5 class hrs/wk, 2 cr) Sp

An introduction to the maintenance of herd health and preventative management practices. Biosecurity, vaccination programs, environmental and nutritional diseases are discussed.

AT 184 Dairy Feeding and Nutrition

(3.5 class hrs/wk, 2 cr) Sp

Topics include feeding for maximum production; the use and evaluation of feedstuffs, harvesting techniques, fertilizer requirements, and feed storage. Rumen development and the prevention of metabolic disorders also are discussed.

AT 248 Advanced Livestock Selection

(6 class hrs/wk, 4 cr) F

Advanced course in developing judging skills and techniques. Emphasizes oral reasons, market and breed type and characteristics, and performance data. Prerequisite: AT 147 Livestock Selection Techniques.

AT 263 Schooling the Horse III

(7 class hrs/wk, 3 cr) W

Advanced training techniques for horses are emphasized. Introduces reining, dressage and jumping. Prerequisite: AT 164 Schooling the Horse II or instructor's approval.

AT 264 Schooling the Horse IV

(7 class hrs/wk, 3 cr) Sp

Advanced training techniques for horses are emphasized. Introduces reining, dressage and jumping. Prerequisite: AT 263 Schooling the Horse III.

AT 277A Horse Breeding Management

(2 class hrs/wk, 2 cr) W

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 or instructor's approval.

AT 277B Horse Breeding Management Lab

(4.5 class hrs/wk, 2 cr) Sp

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.

AU: AUTOMOTIVE TECHNOLOGY

AU 3.295 Power Train Systems

(20 class hrs/wk, 1–10 cr) F, Sp

Studies the complete power train system, with emphasis on the theory, application and servicing of clutch systems, manual transmissions, transfer cases, drive lines, universal joints and differential assemblies. Prerequisites: Placement Test scores for Reading Level I and MTH 020 Basic Mathematics or equivalent.

AU 3.296 Steering, Suspension and Braking Systems

(20 class hrs/wk, 1–10 cr) F/W

Covers the theory of operation and repair for steering, suspension, alignment and braking systems. Diagnosis and service techniques are taught with the use of components and vehicles. Learning strategies include: multimedia presentations, discussion, research and lab practice. Prerequisites: Placement Test scores for RD 080 Building College Reading and MTH 020 Basic Mathematics or equivalent.

AU 3.297 Electrical and Electronic Systems

(20 class hrs/wk, 1–10 cr) W/Sp

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 Test scores for RD 090 Strategies for Effective Reading and MTH 020 Basic Mathematics or equivalent.

AU 3.298 Auto Tune-up and Diagnosis

(22 class hrs/wk, 1–11 cr) Sp

Problem-solving course designed to develop knowledge and skills in auto tune-up. Emphasizes selection and use of equipment — including electrical test equipment, scan tools, the oscilloscope, emission test equipment and the dynamometer — to find malfunctions and make necessary repairs for optimum engine performance. Prerequisite: AU 3.297 Electrical/Electronic Systems or instructor's approval.

AU 3.299 Automotive Engines

(20 class hrs/wk, 1–10 cr) W

Surveys operating principles, maintenance, repair and overhaul of the internal combustion engine. Includes study of the various engine types, their component parts and related accessories. In conjunction with training in correct engine machining skills, an engine is rebuilt, returned to manufacturer's specifications and tested for performance. To include 10 hours of driveability. Prerequisite: Major in automotive technology with sophomore standing or instructor's approval.

AU 3.300 Automatic Transmissions

(20 class hrs/wk, 1–10 cr) F

Covers operating principles, testing and repair procedures of the automatic transmission. Directed toward developing ability to accurately analyze the performance factors or diagnose the malfunctions of these systems through the use of live units. To include 10 hours of driveability. Prerequisite: Major in automotive technology with sophomore standing or instructor's approval.

AU 3.301 Automotive Service and Repair Practices

(7 class hrs/wk, 1–3 cr) F/W/Sp

Provides continuing instruction in the practice of diagnosing, servicing, and repairing automotive problems; summarizes all the learning units in the automotive technology two-year program. Emphasizes attitudes, procedures, and philosophy of automotive employees. Experiences are provided to simulate the work of an auto technician. Prerequisite: Major in automotive technology or instructor's approval.

AU 3.303 Mobile Air Conditioning and Comfort Systems I

(5 class hrs/wk, 3 cr) W

Theoretic principles of mobile heating and air conditioning systems with emphasis on design, function, adjustment, service and testing of components. Prerequisite: AU 3.297 Electrical/Electronic Systems or instructor's approval.

AU 3.304 Mobile Air Conditioning and Comfort Systems II

(5 class hrs/wk, 3 cr) Sp

Presents theory and service practice in maintenance and repair of automotive comfort systems. Covers inspection, testing, repair and/or replacement of control units and computer control systems. Includes computer control systems. Prerequisites: AU 3.303 Mobile Air Conditioning and Comfort Systems I and AU 3.297 Electrical/Electronic Systems or instructor's approval.

AU 3.307 Mechanical Processes I

(3 class hrs/wk, 2 cr) F

Covers the fundamental skills needed to succeed in the first-year automotive curriculum. Focus is on safety, information retrieval, precision measurement, tool usage, and appropriate application of fasteners.

AU 3.308 Mechanical Processes II

(3 class hrs/wk, 2 cr) Sp

Covers fundamental skills needed for success in the first-year Automotive Technology curriculum. Focus is on bearings, lubrication, pulling and pushing devices, and basic welding techniques.

AU 3.314 Applied Electrical Fundamentals I

(2 hrs/wk, 2 cr) F

Covers basic electrical and electronics. The major emphasis is on the test equipment and usage.

AU 3.315 Advanced Electrical Fundamentals II

(2 hrs/wk, 2 cr) F

Students utilize a systematic strategy to diagnose computer-controlled vehicle electrical systems. The use of lab scopes for diagnosis is emphasized. Strategies for staying current with advancing technology are discussed. Prerequisite: AU 3.297 Electrical and Electronic Systems or work experience.

AU 3.321 Anti Lock Brakes Systems (ABS)

(5 class hrs/wk, 3 cr) F

Covers the theory of operation and repair for advanced brakes and ABS. Diagnosis and service techniques are taught with the use of components and vehicles. Learning strategies include: multimedia presentations, discussion, research and lab practice. Prerequisites: Placement test scores for RD 080 Building College Reading and MTH 020 Basic Mathematics or equivalent; AU 3.296 Steering, Suspension and Braking Systems or instructor's approval.

BA: BUSINESS

BA 101 Introduction to Business

(4 class hrs/wk, 4 cr) F/W/Sp/Su

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 minimum "C" grade.

BA 206 Principles of Management

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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 minimum "C" grade.

BA 211 Principles of Accounting: Financial

(4 class hrs/wk, 4 cr) F/W/Su

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. Strongly recommend CIS 125 Introduction to Software Applications.

BA 213 Principles of Accounting: Managerial

(4 class hrs/wk, 4 cr) W/Sp/Su

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.

BA 215 Survey of Accounting

(4 class hrs/wk, 4 cr) W/Sp

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. Prerequisite: MTH 065 Elementary Algebra.

BA 222 Financial Management

(3 class hrs/wk, 3 cr) Sp

Covers topics dealing with financing a business, emphasizing the tax environment, analysis of financial statements, working capital management, short- and long-term financial planning, budgeting and control. Prerequisite: BA 2.531 Practical Accounting II or BA 211 Principles of Accounting: Financial.

BA 223 Principles of Marketing

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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 minimum "C" grade.

BA 224 Human Resource Management

(3 class hrs/wk, 3 cr) F/W/Sp

Explores the basics of human resource management within a culturally diverse workplace. Covers origins of cultural difference and how discrimination issues impact the workplace. Also covers current H.R. issues, such as workplace violence and drug abuse, equitable processes for selection and hiring, performance appraisal, compensation, staff planning, and job analysis.

BA 230 Business Law

(4 class hrs/wk, 4 cr) F/W/Sp/Su

Introduces the framework of the law as it affects a business person, how the law operates, how it is enforced and how it is used in business. Includes the origins of law, the relations of business to society and the law, evolution of business within the framework of the law, and the historical development and present-day applications of the law of contracts.

BA 256 Income Tax Accounting

(3 class hrs/wk, 3 cr) W

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 2.532 Practical Accounting III.

BA 271 Information Technology in Business

(4 class hrs/wk, 3 cr) F/W/Sp/Su

Uses information technology as a personal productivity tool within a business environment. Covers the integration of various software packages, such as word processors, database management systems, spreadsheets, presentation graphics and online services. Team process is stressed throughout the course. Prerequisite: CIS 125 Introduction to Software Applications with a minimum "C" grade.

BA 275 Business Quantitative Methods

(4 class hrs/wk, 4 cr) F/W/Sp/Su

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 and MTH 245 Math for Biological/Management/Social Science.

BA 280B CWE Business Management

(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su

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. Prerequisite: CWE coordinator approval.

BA 285 Business Relations in a Global Economy

(4 class hrs/wk, 4 cr) F/W/Sp/Su

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 2.108 Customer Service

(3 class hrs/wk, 2 cr) As needed

Designed to help students develop the customer interaction skills needed in many work settings.

BA 2.127 Governmental Accounting

(3 class hrs/wk, 3 cr) F

Covers accounting theory and procedures for governmental and not-for-profit entities, including budgetary and expenditure control. Prerequisite: BA 2.531 Practical Accounting II or BA 211 Principles of Accounting: Financial.

BA 2.518 Commercial Law*(3 class hrs/wk, 3 cr) W*

Introduces the study of law and business, legal reasoning and the evolutionary process of law, the legal environment of business and principles of contract law. Emphasizes the study of business agreements and their information, operation, performance and discharge.

BA 2.530 Practical Accounting I*(4 class hrs/wk, 4 cr) F/W/Sp/Su*

Covers the fundamental principles of double-entry accounting, general journals and ledgers, business forms, simple financial statements and the completion of the accounting cycle. Emphasizes cash receipts and payments, payroll accounting, purchases and sales.

BA 2.531 Practical Accounting II*(4 class hrs/wk, 4 cr) F/W/Sp/Su*

Continues BA 2.530 Practical Accounting I, with an explanation of the accounting cycle. Covers special journals, ledgers and business forms, including the voucher system. Emphasizes accounting for a partnership. Prerequisite: BA 2.530 Practical Accounting I.

BA 2.532 Practical Accounting III*(4 class hrs/wk, 4 cr) F/W/Sp/Su*

This third course in the Practical Accounting sequence includes entries requiring analysis and interpretation, unearned and accrued items, depreciation of assets, manufacturing accounting and other managerial accounting procedures. Emphasizes accounting for a corporation. Prerequisite: BA 2.531 Practical Accounting II.

BA 2.534 Cost Accounting*(3 class hrs/wk, 3 cr) W*

Relates theory to practical problems in analysis and control of material, labor and overhead costs in manufacturing. Emphasizes the job cost system. Prerequisite: BA 2.531 Practical Accounting II or BA 211 Principles of Accounting: Financial.

BA 2.535 Payroll Accounting*(3 class hrs/wk, 2 cr) W/Sp*

Designed to reinforce and supplement payroll skills in both manual formats and computerized formats. Prerequisite: BA 2.530 Practical Accounting I, BA 211 Principles of Accounting: Financial, or instructor's permission.

BA 2.569 First Course in Computers*(3 class hrs/wk, 2 cr) F/W/Sp/Su*

Designed to help a beginning computer user feel comfortable operating a personal computer and its peripherals.

BA 2.595 Professional Accounting I*(3 class hrs/wk, 3 cr) F*

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. Prerequisite: BA 2.532 Practical Accounting III; BA 213 Principles of Accounting: Managerial; or instructor's permission.

BA 2.596 Professional Accounting II*(3 class hrs/wk, 3 cr) W*

Continues the Professional Accounting sequence. Covers concepts and procedures of valuation for various types of assets and liabilities, including special problems related to investments; plant, property and equipment; consolidations; and corporate accounting. Prerequisite: BA 2.595 Professional Accounting I.

BA 2.597 Professional Accounting III*(3 class hrs/wk, 3 cr) Sp*

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 emphasized also. Prerequisite: BA 2.596 Professional Accounting II.

BA 2.684 Computerized Accounting*(5 class hrs/wk, 4 cr) W/Sp*

Provides hands-on computer experience in accounting applications, including general ledger, accounts receivable, accounts payable, payroll and financial statements. Emphasizes payroll accounting. Prerequisite: BA 2.530 Practical Accounting I or BA 211 Principles of Accounting: Financial.

BI: BIOLOGY**BI 4.210 Preparation for Anatomy and Physiology***(1 class hr/wk, 1 cr)*

This course will combine instruction in study skills with basic biological content to prepare students for the three-term Anatomy and Physiology sequence. The course is appropriate for students planning to take the Anatomy and Physiology sequence in the near future.

BI 101 General Biology*● (5 class hrs/wk, 4 cr) F/W/Sp/Su*

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. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include: Environmental Issues, Birds of Oregon, Oregon Ecology, Marine Biology, Marine Biology for Education Majors or Principles of 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. Prerequisite: MTH 060 Introduction to Algebra.

BI 102 General Biology*● (5 class hrs/wk, 4 cr) F/W/Sp/Su*

An introductory lab science course intended for majors in disciplines other than the biological sciences. Topics presented include cellular biology, genetics and inheritance, and evolutionary processes. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include: the History of Life, Reproductive Strategies, Organisms by Design, and Principles of 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. Prerequisite: MTH 060 Introduction to Algebra.

BI 103 General Biology*● (5 class hrs/wk, 4 cr) F/W/Sp/Su*

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. Different sections of this course may emphasize different themes as indicated by the subtitles. Examples include: Epidemics, Nutrition and Health, Human Body, Plant and Animal Systems, and Principles of 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. Prerequisite: MTH 060 Introduction to Algebra.

BI 112 Cell Biology for Health Occupations*(4 class hrs/wk, 4 cr)*

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 BI 231, BI 232 and BI 233 Human Anatomy and Physiology.

BI 211 Principles of Biology*● (6 class hrs/wk, 4 cr) F*

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 classification, and their evolutionary relationships. Biology 211, 212 and 213 need not be taken in numerical order. Corequisite or prerequisite: CH 121 College Chemistry or CH 221 General Chemistry.

BI 212 Principles of Biology*● (6 class hrs/wk, 4 cr) W*

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. Prerequisite: CH 121 College Chemistry or CH 221 General Chemistry.

BI 213 Principles of Biology*● (6 class hrs/wk, 4 cr) Sp*

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, ecology and behavior. Biology 211, 212 and 213 need not be taken in numerical order. Prerequisite: CH 121 College Chemistry or CH 221 General Chemistry.

BI 231 Human Anatomy and Physiology*● (6 class hrs/wk, 4 cr) F/W*

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, muscles, and neurons.

Prerequisites: MTH 065 Elementary Algebra; BI 112 Cell Biology for Health Occupations or BI 212 Principles of Biology; CH 112 Chemistry for Health Occupations or CH 121 College Chemistry or CH 221 General Chemistry or the equivalent. Note: Beginning Spring Term 2005, CH 112, CH 121 and CH 221 or equivalent will no longer be accepted as a prerequisite for BI 231.

BI 232 Human Anatomy and Physiology*● (6 class hrs/wk, 4 cr) W/Sp*

The second 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 nervous system, endocrine system, and cardiovascular system. Prerequisite: BI 231 Human Anatomy and Physiology.

BI 233 Human Anatomy and Physiology*● (6 class hrs/wk, 4 cr) Sp/F*

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.

BI 234 Microbiology*● (7 class hrs/wk, 4 cr) F/W/Sp/Su*

An introductory lecture/laboratory course covering all microbial life, with emphasis on bacterial forms. We will focus on examining bacterial cell structure, metabolism, microbial genetics and 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.

BI 280 CWE Biology*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to biology. 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.

CA: CULINARY ARTS**CA 8.301 Culinary Arts Career Planning***(2 class hrs/wk, 1 cr)*

Prepares the student for entering the culinary work force. Students create a résumé 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 8.309 Purchasing for Chefs*(2 class hrs/wk, 2 cr) W*

Through lecture, role-playing, research and written assignments, students learn the function of writing specifications and dealing with purveyors, as well as standard storeroom procedures.

CA 8.310 Culinary Arts Practicum I*(24 class hrs/wk, 7–8 cr) F*

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. Corequisites: CA 8.337 Stations and Tools; CA 8.336 Food Service Safety and Sanitation.

CA 8.311 Culinary Arts Practicum II*(24 class hrs/wk, 7–8 cr) W*

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. Corequisites: CA 8.337 Stations and Tools; CA 8.336 Food Service Safety and Sanitation.

CA 8.312 Culinary Arts Practicum III*(24 class hrs/wk, 7–8 cr) Sp*

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. Corequisites: CA 8.337 Stations and Tools; CA 8.336 Food Service Safety and Sanitation.

CA 8.321 Advanced Cooking Management I*(20 class hrs/wk, 7 cr) F*

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: "C" or higher grade in CA 8.310, 8.311 and CA 8.312.

CA 8.322 Advanced Cooking Management II*(20 class hrs/wk, 7 cr) W*

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: "C" or higher grade in CA 8.310, 8.311 and CA 8.312.

CA 8.323 Advanced Cooking Management III*(20 class hrs/wk, 7 cr) Sp*

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: "C" or higher grade in CA 8.310, 8.311 and CA 8.312.

CA 8.336 Food Service Safety and Sanitation*(10 class hrs/wk, 1 cr) F*

Helps students gain an awareness of the hazards of poor sanitation and safety practices and how to properly address those issues. Through lecture, assigned reading and case study, students learn the essentials of food handling, proper personal hygiene, equipment handling and facilities management as they relate to the food service industry.

CA 8.337 Stations, Tools and Culinary Techniques*(20 class hrs/wk, 3 cr) F*

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.

Note: Two-week class.

CA 8.341 Soups and Sauces*(10 class hrs/wk, 3 cr) W*

Students study and practice the art of classical and modern sauce and soup making from varied national and ethnic cuisines. Hands-on lab activities stress both large scale and a la carte production techniques.

CA 8.345 Service Techniques*(10 class hrs/wk, 1 cr) F*

Teaches the skills of dining room service by a combination of lecture, demonstrations and role playing. In addition, students learn the fundamentals of building customer relations.

CA 8.346 Culinary Fundamentals*(3 class hrs/wk, 3 cr) F*

Students learn the fundamentals of classical culinary techniques, sanitation and safety through lectures, demonstrations and hands-on projects. Proper use of tools, equipment, flavoring ingredients and garnish will be covered.

CA 8.347 Beverage Server Training*(1 class hour/wk 1 cr)*

Provides the student with an understanding of alcohol as a drug and its effects on the body, behavior and, in particular, on the driving skills of those who consume alcohol. Also helps equip students with skills and strategies for dealing with the day-to-day challenges of serving alcohol in a commercial establishment.

CA 8.348 Wine Analysis and Theory*(3 class hrs/wk, 3 cr) W*

Students learn the skills of tasting and analyzing wine. Traditional terminology, tasting techniques and methods are used. Components of wine, production techniques, wine regions, and grape varieties are covered with emphasis on local wines and wine industry. Must be 21 years of age.

CA 8.349 Cooking with Wine (Sauces)*(3 class hrs/wk, 3 cr) W*

Explore the use of wine in the preparation of sauces. Learn technology skills by preparing a spreadsheet containing an inventory of tasting notes and preparing a paper using a word processing program. Includes experimentation and tasting in a hands-on environment. Also learn to identify the character of sauces and match them with complementary wines. Must be 21 years of age. Prerequisite: CA 8.346 Culinary Fundamentals.

CA 8.350 Banquets and Buffet Lab A*(3 class hrs/wk, 1-2 cr) F/W/Sp*

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 and Buffet Lab B*(3 class hrs/wk, 1-2 cr) F/W/Sp*

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 and Buffet Lab C*(3 class hrs/wk, 1-2 cr) F/W/Sp*

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 8.353 Banquets and Buffet Lab D*(3 class hrs/wk, 1-2 cr) F/W/Sp*

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. Corequisites: CA 8.354 Banquets and Buffet Lab E and CA 8.355 Banquet/Buffer Planning.

CA 8.354 Banquets and Buffet Lab E*(3 class hrs/wk, 1 cr) F*

Enables students (especially those interested in catering) to acquire banquet experience in addition to the required A, B, C and D classes. Corequisites: CA 8.353 Banquets and Buffet Lab D and CA 8.355 Banquet/Buffer Planning.

CA 8.355 Banquet/Buffer Planning*(2 class hrs/wk, 1 cr) Sp*

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. Corequisites: CA 8.353 Banquets and Buffet Lab D and CA 8.354 Banquets and Buffet Lab E.

CA 8.360 Cooking with Wine (Entree)*(3 class hrs/wk, 3 cr) Sp*

Students explore the use of wine in the preparation of main entrees. Students learn through experimentation and tasting in a hands-on environment. Emphasis placed on identifying the distinguishing characteristics of foods and dishes and matching them with complementary wines. Must be 21 years of age.

CA 8.361 Food and Wine Pairing*(4 class hrs/wk, 4 cr) F*

Students apply their knowledge of food and wine characteristics to the pairing of food and wine in a series of tastings. Generally accepted standards for pairing food and wine are presented. Students learn how to pair wines with new food trends. Particular emphasis is placed on varietal wines. Must be 21 years of age.

CA 8.364 Banquet and Buffet Sommelier Lab*(2 cr) Sp*

Provides students the opportunity to participate in actual banquet and buffet functions. Students choose wines to complement the banquet menu and then present and serve the wine(s) at the actual banquet. Emphasizes how to describe, open and pour wine. Must be 21 years of age.

CA 8.368 Creating the Menu*(2.5 class hrs/wk, 2 cr) F*

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.

CA 8.373 Costing*(2.5 class hrs/wk, 1 cr) W*

Teaches theory and practice of determining food cost for restaurant and institutional cooking.

CA 8.409 Meats*(6 class hrs/wk, 3 cr) F*

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.

CA 8.414 Presentation/Garde Manger*(4 class hrs/wk, 2 cr) Sp*

Traditional and contemporary presentation techniques are presented and practiced as part of this hands-on class. Charcuterie, hors d'oeuvres, appetizers and patés are explored.

CA 8.418 Beverage Operations and Services*(4 class hrs/wk, 1 cr) F*

Covers the art and science of beverage production, classifications, standards of identity, taste and characteristics, service and merchandising, costing and controls, standard glassware, sanitation, and federal and state ordinances.

CA 8.419 Nutrition and Special Diets*(2 class hrs/wk, 1 cr) F*

Practical use of food and menus to assure a proper balance of both macronutrients (carbohydrates, fats, and proteins) and micronutrients. Meeting nutritional needs through the use of "new" and varied products is stressed. Main emphasis is placed on hands-on activities to expand students' ability to identify and use a variety of ingredients.

CA 8.421 International Cuisine*(4 class hrs/wk, 2 cr) Sp*

Through lecture, projects, research and demonstration, students learn about the styles and flavoring components of a variety of national and regional cuisines.

CE: CIVIL ENGINEERING TECHNOLOGY**CE 6.422 Introduction to GIS***(3 class hrs/wk, 2 cr) Sp*

An introductory course in geographic information systems (GIS). Uses ArcGIS software to display and work with spatial data, work with attributes, query databases, and present data. Prerequisite: Knowledge of computer and Windows operation.

CE 6.444 Civil Design Lab*(2 class hrs/wk, 1 cr) F*

A course in civil engineering design. Emphasizes the design of roads, waterlines, sanitary sewer lines and storm drains. Prerequisites: EG 4.456 Civil Drafting Lab; WW 6.167 Water Distribution and Collections Lab.

CE 6.488 Advanced Surveying and Civil Design*(6 class hrs/wk, 4 cr) F*

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; CEM 263 Plane Surveying.

CEM: CIVIL ENGINEERING**CEM 263 Plane Surveying***(4 class hrs/wk, 3 cr) Sp*

Basic course in surveying techniques. Includes distance measuring, leveling, cross sectioning, traversing, topographic surveying, use of surveying instruments and office procedures. Practical application of procedures and instruments is provided through appropriate field problems. Prerequisite: MTH 111 College Algebra.

CG: COLLEGE SKILLS**CG 111 College Learning and Study Skills***(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Assists students in developing the academic strategies necessary for being successful 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: Appropriate reading competence as indicated by the College Placement Test.

CH: CHEMISTRY**CH 112 Chemistry for Health Occupations***● (6 class hrs/wk, 5 cr)*

Introductory topics in inorganic, organic and biological chemistry selected to prepare students entering Nursing, Emergency Medical Technician and related Health Occupations programs. Prerequisite: High school algebra or equivalent, or MTH 060 Introduction to Algebra. Note: After Spring 2005, CH 112 will no longer be accepted as a prerequisite for BI 231 Human Anatomy and Physiology.

CH 121 College Chemistry*● (7 class hrs/wk, 5 cr) F/W*

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 in CH 121, 122 and 123 include: measurement; chemical calculations; chemical formulas and equations; chemical reactions; atomic structure; periodicity; ionic and covalent bonding; molecular geometry; properties of solids, liquids and gases; solutions; chemical equilibrium; acids and bases; solubility; thermodynamics; electrochemistry; nuclear chemistry and

organic chemistry; thermochemistry; and rates of reactions. Prerequisites: MTH 065 Elementary Algebra or equivalent; high school physical science or equivalent. All prerequisites must be completed with a "C" or better.

CH 122 College Chemistry

● (7 class hrs/wk, 5 cr) W/Sp

The second 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 in CH 121, 122 and 123 include: measurement; chemical calculations; chemical formulas and equations; chemical reactions; atomic structure; periodicity; ionic and covalent bonding; molecular geometry; properties of solids, liquids and gases; solutions; chemical equilibrium; acids and bases; solubility; thermodynamics; electrochemistry; nuclear chemistry and organic chemistry; thermochemistry; and rates of reactions. Prerequisites: MTH 095 Intermediate Algebra and CH 121 College Chemistry. All prerequisites must be completed with a "C" or better.

CH 123 College Chemistry

● (7 class hrs/wk, 5 cr) Sp

The third 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 in CH 121, 122 and 123 include: measurement; chemical calculations; chemical formulas and equations; chemical reactions; atomic structure; periodicity; ionic and covalent bonding; molecular geometry; properties of solids, liquids and gases; solutions; chemical equilibrium; acids and bases; solubility; thermodynamics; electrochemistry; nuclear chemistry and organic chemistry; thermochemistry; and rates of reactions. Prerequisite: CH 122 College Chemistry with a grade of "C" or better.

CH 150 Preparatory Chemistry

(3 class hrs/wk, 3 cr) 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. Corequisite: MTH 095 Intermediate Algebra.

CH 199 Special Studies

● (2–6 class hrs/wk, 1–3 cr) As needed

Allows a student to investigate, with supervision from a faculty member, a topic of his/her interest at an individualized pace. Credits and projects are determined by the instructor and student.

CH 201 Chemistry for Engineering Majors I

● (7 class hrs/wk, 5 cr) W

The first of a two-term sequence 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: CH 150 Preparatory Chemistry or CH 112 Chemistry for Health Occupations, or CH 121 College Chemistry or high school chemistry; MTH 095 Intermediate Algebra. Pre- or corequisite: MTH 111 College Algebra.

CH 202 Chemistry for Engineering Majors II

● (7 class hrs/wk, 5 cr) Sp

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.

CH 221 General Chemistry

● (7 class hrs/wk, 5 cr) F/W

The first of a three-term sequence for students in science, engineering and the professional health programs. Topics include measurement, chemical calculations, chemical formulas and equations, chemical reactions, gas laws and thermochemistry. Prerequisite: Completion of high school chemistry with a grade of "C" or better, or CH 150 Preparatory Chemistry with a grade of "C" or better, or CH 112 Chemistry for Health Occupations with a grade of "C" or better, or CH 121 College Chemistry with a grade of "C" or better; MTH 095 Intermediate Algebra. Corequisite: MTH 111 College Algebra.

CH 222 General Chemistry

● (7 class hrs/wk, 5 cr) W/Sp

The second term of a three-term sequence for students in science, engineering and the professional health programs. Topics include quantum theory and atomic structure, molecular geometry, states of matter (solids, liquids and gases), solutions and organic compounds. Prerequisites: CH 221: General Chemistry with a grade of "C" or better; MTH 111 College Algebra with a grade of "C" or better.

CH 223 General Chemistry

● (7 class hrs/wk, 5 cr) Sp/Su

The third term of a three-term sequence for students in science, engineering and the professional health programs. Topics include rates of reactions, chemical equilibrium, acids and bases, solubility and complex ion formation, thermodynamics, electrochemistry, and an introduction to organic chemistry. Prerequisite: CH 222 General Chemistry with a grade of "C" or better; MTH 111 College Algebra with a grade of "C" or better.

CH 241 Organic Chemistry

● (6 class hrs/wk, 4 cr) F

The first term of a three-term sequence for students in the sciences and professional health programs. Topics include nomenclature, structural bonding, stereochemistry, reactivity and synthesis of alkanes, alkenes and alkynes. Prerequisite: CH 121, 122 and 123 College Chemistry or CH 221, 222 and 223 General Chemistry with grades of "C" or better.

CH 242 Organic Chemistry

● (6 class hrs/wk, 4 cr) W

The second of a three-term sequence for students in the sciences and professional health programs. Topics include nucleophilic substitution and elimination reactions, spectroscopy and aromaticity. Prerequisite: CH 241 Organic Chemistry with a grade of "C" or better.

CH 243 Organic Chemistry

● (6 class hrs/wk, 4 cr) F/W/Sp

The third term of a three-term sequence for students in the sciences and professional health programs. Topics include properties and reactions of phenols, aryl halides, aldehydes, ketones, carboxylic acids, and amines, and oxidation and reduction in organic chemistry. Prerequisite: CH 242 Organic Chemistry with a grade of "C" or better. Note: When the Organic Chemistry courses CH 241, 242, 243 are transferred to OSU, the student normally receives lower-division credit. To receive upper-division credit (300 level), the student must perform at an adequate level on the ACS organic chemistry exam.

CH 280 CWE Chemistry

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

Designed to give students practical experience through supervised employment related to chemistry. 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.

CH 299 Special Studies

(2–6 class hrs/wk, 1–3 cr) As needed

Allows a student to investigate, with supervision from a faculty member, a topic of his or her interest at an individualized pace. Credits and projects are determined by the instructor and student.

CIS: COMPUTER INFORMATION SYSTEMS

Courses with the CIS prefix are professional technical courses that have a primary purpose of meeting requirements for the Associate of Applied Science degree. Four-year institutions may or may not accept them for transfer credit.

CIS 125 Introduction to Software Applications

(4 class hrs/wk, 3 cr) F/W/Sp/Su

Use operating system and application software programs — primarily Windows, word processing, and spreadsheet software, including Internet and e-mail — as communications tools. Also introduces basic DOS commands. Prerequisites: OA 121 Keyboarding or touch-typing skills at 25 wpm minimum and MTH 060 Introduction to Algebra.

CIS 125D Introduction to Databases

(3 class hrs/wk, 1 cr) F/W/Sp

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 the sort and filters and queries available in the software. Note: Five-week course. Prerequisite: Completion of CIS 1250 Introduction to Windows with a minimum "C" grade or equivalent computer experience as determined by a Computer Systems Department advisor.

CIS 1250 Introduction to Windows

(3 class hrs/wk, 1 cr) F/W/Sp/Su

Provides an introduction to the Windows operating system. Covers basic concepts for using menus, dialog boxes, and the help system; working with applications and documents; and managing files and folders. Discusses ways to customize the Windows environment and describes a few "built in" accessories, basic DOS commands, basic Internet, e-mail and other special topics. Note: Five-week course. Prerequisite: OA 121 Keyboarding or touch-typing skills at 25 wpm minimum.

CIS 125P Introduction to Presentations

(3 class hrs/wk, 1 cr) F/W/Sp

Learn to make and give effective electronic slide show presentations using PowerPoint. Emphasizes designing effective presentation slides using the tools available through this program. Students prepare a slide show and present to the class. Note: Five-week course. Prerequisite: CIS 1250 Introduction to Windows with a minimum "C" grade or equivalent computer experience as determined by a Computer Systems Department advisor.

CIS 125S Introduction to Spreadsheets

(3 class hrs/wk, 1 cr) F/W/Sp

Introduces spreadsheet software and how it is utilized in business and personal applications. Covers basic worksheet concepts, such as formatting, formulas and charts. Note: Five-week course. Prerequisite: CIS 1250 Introduction to Windows with a minimum "C" grade; MTH 060 Introduction to Algebra or OA 2.515 Business Math with Calculators.

CIS 135S Advanced Spreadsheets

(4 class hrs/wk, 3 cr) W/Sp

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 125S Introduction to Spreadsheets with a minimum "C" grade or CIS 125 Introduction to Software Applications with a minimum "C" grade.

CIS 151 Networking Essentials

(7 class hrs/wk, 4 cr) F

The first course of a four-part sequence in a Cisco curriculum directed toward the Cisco Certified Network Associate certification (CCNA). Provides students with classroom and laboratory experience in current networking technology, and includes network terminology, protocols, network standards, LANs, WANs, OSI model, cabling, cabling tools, safety, network topology, and IP addressing. Corequisites: CIS 125 Introduction to Software Applications and MTH 095 Intermediate Algebra.

CIS 152 Network Router Configurations

(7 class hrs/wk, 4 cr) W

The second course of a four-part sequence in a Cisco curriculum directed toward the Cisco Certified Network Associate certification (CCNA). Emphasizes experience in current networking technology, and includes network terminology and protocols. Topics include LANs network topology, IP addressing, routers, router programming, and application of routing and router protocols. Prerequisite: CIS 151 Networking Essentials with a minimum "C" grade.

CIS 153 LANs and Internetwork Design

(7 class hrs/wk, 4 cr) Sp

The third course of a four-part sequence in a Cisco curriculum directed toward the Cisco Certified Network Associate certification (CCNA). Emphasizes experience in current networking technology that includes LAN segmentation, using bridges, routers, and switches to control network traffic. Includes advanced router configuration, LAN switching theory, and VLANs. Note: Five-week course. Prerequisite: CIS 152 Network Router Configurations with a minimum "C" grade.

CIS 154 WAN Design

(7 class hrs/wk, 4 cr) Sp

The fourth course of a four-part sequence in a Cisco curriculum directed toward the Cisco Certified Network Associate certification (CCNA). Introduces WAN services. Covers ISDN, ATM, frame relay, and dial-up services. Note: Five-week course. Prerequisite: CIS 153 LANs and Internetwork Design with a minimum "C" grade.

CIS 195 Web Development I

(5 class hrs/wk, 4 cr) W/Sp

Uses Web design technology to create a Web site. Includes animated GIF creation, frames, tables, CSS, DHTML, and introduction to XML and JavaScript. Use various software packages, such as Web page browsers and editors, HTML editors, image and graphic software, and FTP software. Prerequisite: BA 271 Information Technology in Business with a minimum "C" grade or equivalent Web publishing experience as determined by a Computer Systems Department advisor.

CJ: CRIMINAL JUSTICE

CJ 100 Survey of Criminal Justice Systems

■ *(3 class hrs/wk, 3 cr) F/Sp/Su*

Introduction to how the criminal justice system operates. Explores how someone enters the criminal justice system and how the various subcomponents of this system operate together.

CJ 101 Introduction to Criminology

■ (3 class hrs/wk, 3 cr) F/W/Sp

Introduces major types of criminal behavior, role careers of offenders, factors that contribute to the production of criminality or delinquency, changes of the law in crime control and treatment processes.

CJ 110 Introduction to Law Enforcement

■ (3 class hrs/wk, 3 cr) F/Sp

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 also are examined so students will know the hazards of the profession, yet gain a broader perspective of the professional requirements in their chosen field.

CJ 120 Introduction to the Judicial Process

■ (3 class hrs/wk, 3 cr) F/Sp

Surveys the process of justice from arrest to returning the offender to society; the jurisdiction of city, county, state and federal police agencies; and the constitutional rights of individuals in America.

CJ 130 Introduction to Corrections

■ (3 class hrs/wk, 3 cr) F/W

Examines the total correctional process from law enforcement through administration of justice, probation, prisons and correctional institutions, and parole. History and philosophy oriented.

CJ 132 Introduction to Parole and Probation

(3 class hrs/wk, 3 cr) W

Introduces the use of parole and probation as a means of controlling development. Covers contemporary functioning of parole and probation agencies.

CJ 198 Research Topics

(1 class hr/wk, 1 cr) F/W/Sp/Su

Students examine in depth a selected criminal justice topic. Develops skills in independent research. Corequisite: WR 123 English Composition: Research Paper.

CJ 201 Juvenile Delinquency

■ (3 class hrs/wk, 3 cr) F/Sp/Su

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 Social Problems: Violence and Aggression

■ (3 class hrs/wk, 3 cr) F/W/Sp/Su

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 203 Crisis Intervention Seminar

(1 class hrs/wk, 1 cr) F/W/Sp

An overview of the techniques and approaches to crisis intervention for entry-level criminal justice professions. Covers initial intervention, defusing and assessment, resolution and/or referral, with emphasis on safety. Includes personal effectiveness, recognition of threat levels, voluntary compliance, verbal and nonverbal communication, active listening and mediation.

CJ 210 Introduction to Criminal Investigation

(3 class hrs/wk, 3 cr) W/Sp

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 in Law Enforcement

(3 class hrs/wk, 3 cr)

The law enforcement community has an established code of ethics embedded in all actions they take. This course provides an overview of ethics theory for the criminal justice professional. This course also focuses on the use of practical solutions to common ethical problems officers can face while working in the criminal justice field.

CJ 220 Introduction to Substantive Law

■ (3 class hrs/wk, 3 cr) F/W/Sp

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 class hrs/wk, 3 cr) W/Sp/Su

Reviews the development of English common law and U.S. case law; the constitutional and statutory provisions relating to arrest, search and seizure; and the rights and responsibilities of citizens and criminal justice personnel agencies.

CJ 226 Constitutional Law

(3 class hrs/wk, 3 cr) F/W/Sp

Provides an overview of U.S. constitutional law; the Supreme Court from 1789–2001, origins of judicial power, issue of federalism, the Commerce Clause, substantive and procedural law, judicial formalism, incorporation doctrine, freedom of expression versus social order, defendant's rights vs. crime control, privacy.

CJ 230 Introduction to Juvenile Corrections

(3 class hrs/wk, 3 cr) F/Sp

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 Introduction to Corrections/Counseling/Casework

(3 class hrs/wk, 3 cr) F/Sp

Reviews the corrections system today combined with an overview of basic counseling techniques.

CJ 233 Community-Based Corrections

(3 class hrs/wk, 3 cr)

Explores philosophy and programs of juvenile and adult probation supervision, after-case parole, halfway homes, work- and educational-release furlough, as well as executive clemency and interstate compact practices. Examines the dilemma of surveillance — custody/control factors vs. supervision/treatment.

CJ 280A CWE Corrections

(6–42 class hrs/wk, 2–15 cr) F/W/Sp/Su

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*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

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.

CR: COLLISION REPAIR**CR 3.511 Collision Repair and Refinishing Basics***(20 class hrs/wk, 1-12 cr) F*

Introduces repairing of minor collision damage, basic collision repair tools, refinishing materials, refinishing equipment and vehicle surface preparation. Also included are environmental hazards and safety procedures. Safety procedures include accident and injury prevention and personal safety and health protection from workplace hazards.

CR 3.512 Collision Repair and Refinishing Procedures*(20 class hrs/wk, 1-12 cr) W*

Reviews environmental hazards and safety procedures. Students learn bolt-on panel replacement and adjustment, auto glass replacement theory, and how to identify interior trim. Course also teaches plastic panel repair and refinishing procedures. Students also learn how to look up a paint code using a computer, print out a paint formula, and mix and apply automobile refinishing materials. Students work together as teams on project vehicles, review work orders and communicate with customers. Prerequisite: CR 3.511 Collision Repair and Refinishing Basics or instructor's approval.

CR 3.513 Shop Procedures*(20 class hrs/wk, 1-12 cr) Sp*

Reviews environmental hazards and safety procedures. Covers paint problems and final detailing. Also covers power tools, welded panel replacement and restoring corrosion protection. Prepares students for job search, interviews and writing a résumé. Students continue team learning, reviewing work orders and customer relations. Prerequisite: CR 3.512 Collision Repair and Refinishing Procedures or instructor's approval.

CR 3.515 Damage Analysis*(4 class hrs/wk, 2 cr) Sp*

Damage Analysis is an introduction to analyzing various types of automobile damage, reading an estimate and writing an estimate manually. Students will be able to locate and explain information in a collision estimating guide. Students also will learn vehicle parts identification and the difference between structural and non-structural parts. Note: Five-week class. Prerequisite: CR 3.512 Collision Repair and Refinishing Procedures or instructor's approval.

CS: COMPUTER SCIENCE**CS 133J JavaScript***(5 class hrs/wk, 4 cr) W*

For the Web developer who knows how to create Web pages but would like to learn JavaScript to add event procedures. Prerequisite: BA 271 Information Technology in Business with a minimum "C" grade or equivalent HTML experience as determined by a Computer Systems Department advisor and CS 160 Orientation to Computer Science.

CS 133U Programming in C++*(5 class hrs/wk, 4 cr) F/Sp*

Introduces problem analysis and programming to solve computation problems. Introduces C++ for those with previous programming experience. Prerequisites: CS 160 Orientation to Computer Science with a minimum "C" grade or equivalent experience as determined by a Computer Systems Department advisor; MTH 095 Intermediate Algebra or higher.

CS 133V Visual Basic I*(5 class hrs/wk, 4 cr) F/W/Sp*

Introduces the design and implementation of programs for Microsoft Windows® using the Rapid Application Development (RAD) environment of Visual Basic.Net®. Prerequisites: CS 125 Introduction to Software Applications with a minimum "C" grade or equivalent as determined by a Computer Systems Department advisor; MTH 095 Intermediate Algebra.

CS 140U Fundamentals of UNIX/Linux*(5 class hrs/wk, 4 cr) Sp*

A laboratory-intensive course which provides new UNIX users with an introduction to the Linux® and potentially the Sun Solaris® operating systems. You will learn command-line features including file system navigation, file permissions, the vi and emacs text editors, Korn and Bash shell features, and basic network use. Graphical Users Interfaces (GUIs) presented may include GNOME and KDE. The course provides partial preparation for the Linux+® exam. Prerequisite: MTH 065 with a minimum "C" grade.

CS 145 Hardware/Software Selection and Support*(3 class hrs/wk, 3 cr) F/Sp*

Systematically presents evaluation criteria for selection of microcomputer hardware, software, service and support, including assessment of needs, compatibility of hardware and software, and reliability of dealership support. Extends knowledge of DOS concepts. Prerequisite: CIS 125 Introduction to Software Applications with a minimum "C" grade or equivalent experience as determined by a Computer Systems Department advisor.

CS 160 Orientation to Computer Science*(5 class hrs/wk, 4 cr) F/W/Sp*

Introduces the field of computer science and programming. Covers binary encoding of data, digital logic, computer organization, operating systems, programming languages, algorithms, software engineering, data and file organization. Intended for students who wish to investigate a career in computer science. Prerequisite: MTH 095 Intermediate Algebra or higher. Corequisite: CIS 125 Introduction to Software Applications.

CS 161 Introduction to Computer Science I (Java)*(5 class hrs/wk, 4 cr) F/W/Sp*

Introduces the principles of computer programming using an object-oriented language. Includes problem-solving concepts, verification and validation, representation of numbers, sources of errors, debugging techniques and algorithm development. The Java programming language is used. Prerequisites: CS 160 Orientation to Computer Science with a minimum "C" grade and MTH 111 College Algebra or higher.

CS 162 Introduction to Computer Science II (Java)*(5 class hrs/wk, 4 cr) W/Sp*

Covers software engineering principles, abstract data types and graphics. Introduces analysis of algorithms, sorting and searching. Also introduces object-oriented topics of inheritance and event-driven programming. The Java programming language is used. Prerequisites: CS 161 Introduction to Computer Science I (Java) with a minimum "C" grade and MTH 112 Trigonometry or higher.

CS 180 Supervised Computer Practicum*(4 class hrs/wk, 2 cr) W*

Provides an opportunity to gain experience consulting with end-users in a setting such as a campus computer lab. Complete before the off-campus CWE experience. Consulting experiences include troubleshooting and problem-solving skills similar to those used in many business and software environments. Designed for Computer User Support majors in their second year of coursework. Prerequisite: Instructor's approval.

CS 225 End-User Computing Support*(4 class hrs/wk, 4 cr) W*

Prepares the student for training and supporting end-users in a variety of organizational settings. Includes the end-user support function in an organization, techniques for developing and delivering training modules, and techniques for providing ongoing technical support to end-users. Emphasizes solving problems with debugging and troubleshooting, and interactions with users. Prerequisite: CS 145 Hardware/Software Selection and Support with a minimum "C" grade.

CS 227S Systems Support: Software*(4 class hrs/wk, 3 cr) F*

A workbench course that provides experience with common computer application software problems. Emphasizes troubleshooting, problem solving and building skills in computer user support. Includes registry patches, tech support Web site, and installations such as printer sharing and voice recognition. Prerequisite: BA 271 Information Technology in Business with a minimum "C" grade.

CS 227H Systems Support: Hardware*(4 class hrs/wk, 3 cr) W*

A workbench course that provides experience with common computer hardware problems. Emphasizes troubleshooting, problem solving, and building skills in hardware support. Prerequisite: CS 227S Systems Support: Software, with a minimum "C" grade.

CS 227N Systems Support: Network and Operating Systems*(4 class hrs/wk, 3 cr) Sp*

A workbench course that provides experience with common network and operating system problems. Emphasizes troubleshooting, problem-solving and building skills in client/server operating system installation, maintenance and support. Provides experience with server operating systems, including Linux and Microsoft Windows. Prerequisites: CS 279 Network Management with a minimum "C" grade and CS 227H Systems Support: Hardware with a minimum "C" grade or instructor's approval.

CS 240A Microsoft Windows® Server Administration I*(4 class hrs/wk, 3 cr)*

The first in a sequence of three courses in the administration of Microsoft Windows® client/server networked operating systems. The courses CS240A, B, C are laboratory-intensive courses which provide hands-on experience in the planning, installation, and administration of Microsoft Windows® client/server networks. The sequence of courses provides partial preparation for the MCSA® and, eventually, MCSE® exams. Prerequisites: CS279 or CS140U, or equivalent, with a minimum "C" grade. CIS151 or equivalent, with a minimum "C" grade.

CS 240B Microsoft Windows® Server Administration II*(4 class hrs/wk, 3 cr)*

The second in a sequence of three courses in the administration of Microsoft Windows® client/server networked operating systems. The courses CS240A,B,C are laboratory-intensive courses which provide hands-on experience in the planning, installation, and administration of Microsoft Windows® client/server networks. The sequence of courses provides partial preparation for the MCSA® and, eventually, MCSE® exams. Prerequisite: CS240A, with a minimum "C" grade.

CS 240C Microsoft Windows® Server Administration III*(4 class hrs/wk, 3 cr) W*

The third in a sequence of three courses in the administration of Microsoft Windows® client/server networked operating systems. The courses CS240A,B,C are laboratory-intensive courses which provide hands-on experience in the planning, installation, and administration of Microsoft Windows® client/server networks. The sequence of courses provides partial preparation for the MCSA® and, eventually, MCSE® exams. Prerequisite: CS240B, with a minimum "C" grade.

CS 244 Systems Analysis and Project Management*(5 class hrs/wk, 4 cr) W*

A practice-oriented course with examples, applications and proven techniques that demonstrate systems analysis and design. Actual organization and business settings are used to show how systems concepts can apply to many different types of enterprises. Prerequisite: BA 271 Information Technology in Business with a minimum "C" grade and CS 145 Hardware/Software Selection and Support with a minimum "C" grade or instructor's approval.

CS 261 Data Structures (Java)*(5 class hrs/wk, 4 cr) F*

Covers basic data structure and abstract data types, including arrays, stacks, queues, and linked lists. Also includes complexity analysis, sorting, trees, binary search trees, hashing and storage management. Prerequisite: CS 162 Introduction to Computer Science II with a minimum "C" grade.

CS 271 Computer Architecture and Assembly Language*(4 class hrs/wk, 4 cr) Sp*

Introduces functional organization and operation of digital computers. Coverage of assembly language: addressing, stacks, argument passing, arithmetic operations, decisions, macros, modularization, linkers and debuggers. Prerequisites: CS 160 Orientation to Computer Science with a minimum "C" grade.

CS 275 Database Systems: SQL and Oracle*(5 class hrs/wk, 4 cr) W/Sp*

Introduces the design, purpose and maintenance of a database system. Covers the entity-relationship model, relational systems, data definition, data manipulation, query language (SQL) and the Oracle and Access database management environments. Prerequisites: CS 160 Orientation to Computer Science with a minimum "C" grade and BA 271 Information Technology in Business with a minimum "C" grade or CIS 125D Introduction to Databases with a minimum "C" grade and at least one programming class.

CS 279 Network Management*(3 class hrs/wk, 3 cr) F/W*

Through the use of lectures, reading and access with supervisor privileges to a Local Area Network system, students learn to maintain a network. Covers creating leaf and organization objects, as well as assigning rights to the file system and objects. Prerequisite: CIS 125 Introduction to Software Applications with a minimum "C" grade.

CS 280 CWE Computer Systems*(6–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to computer systems. Students find non-LBCC employment in an area related to their specialty. Working with their employer and the CWE coordinator, the students identify job performance objectives. The students 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: Student must have a declared major or minor in the CWE career area. Student must have taken or must currently be taking appropriate course or courses in their major field of study. CWE must be

approved by the appropriate faculty coordinator. Eligibility to enroll in CS courses is based on demonstrated skill level through completing the appropriate prerequisite(s) with a minimum "C" grade.

CS 284 Introduction to Computer Security and Information Assurance

(5 class hrs/wk, 4 cr)

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 065 with a minimum "C" grade. CS160 or (CS145 with Instructor Approval) with a minimum "C" grade.

CS 2.589 Reading and Conference: Computer Systems

(1-20 class hrs/wk, 1-10 cr)

Individualized course covering subject areas of particular interest to the student or areas where additional work is needed. Note: Number of credits is determined by amount of time spent.

CSS: CROP SCIENCE

CSS 105 Soils and Man

(3 class hrs/wk, 3 cr) Sp

Explores soil resources in relation to environmental planning and sound ecological principles of land use. Includes examples and case studies involving soil problems and limitations in land use, pollution control and ecological aspects of production. One field trip. Student teams make presentation regarding land-use issues based on soil survey data.

CSS 200 Principles of Crop Science

(5 class hrs/wk, 4 cr) F

Includes the fundamental principles, concepts and illustrative facts concerning seedbed preparation, planting, fertilizing, irrigation, harvesting, storage, processing and marketing of cultivated crops. It also includes pest management, crop rotations, quality control and crop improvement. The lecture is designed to provide the student with background knowledge of common agricultural crops. The lab experience gives students practical applications in plant structure and growth; crop, weed, insect and disease identification; and the various cultural practices.

CSS 210 Forage Crops

(4 class hrs/wk, 3 cr) Sp

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.

DA: DENTAL ASSISTANT

DA 5.453 Dental Pathology/Pharmacology

(2 class hrs/wk, 2 cr) Sp

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. Prerequisites: DA 5.500 Dental Anatomy/Histology and BI 103 General Biology: Human Body.

DA 5.461 Dental Radiology I

(4 class hrs/wk, 3 cr) F

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. Prerequisite: Admission to the Dental Assistant Program.

DA 5.462 Dental Radiology II

(4 class hrs/wk, 3 cr) W

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. Prerequisites: DA 5.461 Dental Radiology I.

DA 5.463 Dental Radiology III

(4 class hrs/wk, 3 cr) Sp

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. Prerequisite: DA 5.462 Dental Radiology II.

DA 5.484 Dental Materials I

(4 class hrs/wk, 3 cr) F

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). Prerequisite: Admission to the Dental Assistant Program.

DA 5.485 Dental Materials II

(4 class hrs/wk, 3 cr) W

An introduction to the diverse materials used in the dental office. The physical and chemical properties of bases, adhesives, cements, anticariogenic 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). Prerequisites: DA 5.500 Dental Anatomy/Histology, DA 5.494 Introduction to Dentistry, DA 5.484 Dental Materials I.

DA 5.488 Expanded Duties I

(3 class hrs/wk, 2 cr) W

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. Prerequisites: DA 5.494 Introduction to Dentistry, DA 5.500 Dental Anatomy/Histology.

DA 5.489 Expanded Duties II

(3 class hrs/wk, 2 cr) Sp

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. Prerequisite: DA 5.488 Expanded Duties I.

DA 5.491 Dental Office Records*(2 class hrs/wk, 2 cr) Sp*

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. Prerequisite: Third-term status.

DA 5.492 Dental Office Emergencies*(2 class hrs/wk, 2 cr) Sp*

Provides familiarization with various emergency situations that may occur in a dental office and the primary first aid choice. The signs and symptoms of a medical emergency, the equipment, treatments, and drugs are discussed. Emphasis is placed on the responsibility of the dental health team to be prepared for an emergency. CPR recertification will be included within the course if needed. Prerequisite: Third-term status.

DA 5.494 Introduction to Dentistry*(4 class hrs/wk, 3 cr) F*

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, asepsis 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. Prerequisite: Admission to Dental Assisting Program.

DA 5.495 Clinical Practice*(6 class hrs/wk, 4 cr) W*

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. Prerequisite: DA 5.494 Introduction to Dentistry.

DA 5.496 Dental Specialties*(4 class hrs/wk, 3 cr) Sp*

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 student will participate in two separate specialty practices during this term.

DA 5.497 Dental Health Education*(1 class hr/wk, 1 cr) F*

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. Student community projects stress the principles of communication and preventative dentistry. Prerequisite: Admission to the Dental Assisting program.

DA 5.498 Dental Health/Nutrition*(1 class hr/wk, 1 cr) W*

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. Prerequisite: DA 5.497 Dental Health Education.

DA 5.500 Dental Anatomy and Histology*(2 class hrs/wk, 2 cr) F*

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. Prerequisite: Admission to the Dental Assistant Program.

DA 5.501 Dental Infection Control and Sterilization

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. Prerequisite: Admission to the Dental Assistant Program.

DA 5.510 Office Practicum*(32 class hrs/wk, 8 cr) Su*

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. Prerequisite: Completion of all required Dental Assistant Program courses with a high level of competency, as set by the Dental Assistant Department.

DA 5.515 Office Practicum Seminar*(2.5 class hrs/wk, 2 cr) Su*

A series of weekly seminars in which students share work related experiences with the instructor and peers. Information regarding employment, skills improvement, job applications, résumé formats and interviewing techniques are covered as well as preliminary reviewing and testing for the national certification examination. Prerequisite: Fourth-term status.

DA 5.525 Intermediate Dental Assisting*(2 class hrs/wk, 1 cr) W*

A study of dental assisting chairside procedures beyond basic skills. This intermediate course will include techniques to acquire skills for placing and removing rubber dams, taking alginate impressions, and taking bite registrations for study model articulation. Emphasis is on patient care and postoperative instructions. Prerequisites: DA 5.494 Introduction to Dentistry and Winter-Term status.

DA 5.550 Human Relations in Dentistry*(3 class hrs/wk, 3 cr) Sp*

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. Prerequisite: Third-term status in program.

EC: ECONOMICS

EC 115 Outline of Economics

■ (4 class hrs/wk, 4 cr) F/Sp/Su

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 class hrs/wk, 4 cr) F/W/Sp/Su

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.

EC 202 Introduction to Macroeconomics

■ (4 class hrs/wk, 4 cr) W/Sp/Su

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.

EC 215 Economic Development of the U.S.

■ (4 class hrs/wk, 4 cr) F/Sp

Provides historical study of U.S. economic institutions, including industry, agriculture, commerce, transportation, labor, finance and the economic program of the United States.

EC 220 Contemporary U.S. Economic Issues: Discrimination

■ (3 class hrs/wk, 3 cr) W

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

(7 class hrs/wk, 3 cr) F/W/Sp/Su

An active participation class focusing on methods of interacting with young children in a classroom setting. Students work with children individually and in small groups. Prerequisite or corequisite: HDFS 225 Child Development or HDFS 226 Child Development: Stepping Stones, ED 7.710 Principles of Observation.

ED 101A Observation and Guidance

(7 class hrs/wk, 3 cr) F/W/Sp

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. Recommended: ED 216 Purpose, Structure and Function of Education in a Democracy or HDFS 225 Child Development before taking this class.

ED 102 Education Practicum

(7 class hrs/wk, 3 cr) F/W/Sp/Su

Experience is gained by working with preschool children in a supervised educational setting. Students increase their knowledge of child development and learning environments, begin planning and implementing curricula, and develop skills in guidance and discipline. The preschool practicum, under the guidance of a faculty member, includes planned interactions with parents. Prerequisite: ED 101 Observation and Guidance or equivalent.

ED 102A Education Practicum

(7 class hrs/wk, 3 cr) F/W/Sp

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. It is recommended that students take ED 200 Introduction to Education before taking this class. Prerequisite: Experience working with children in a structured teaching setting. Recommended: ED 216 Purpose, Structure and Function of Education in a Democracy, or HDFS 225 Child Development.

ED 103 Extended Education Practicum

(7 class hrs/wk, 3 cr) F/W/Sp/Su

Field experience in a preschool classroom setting that closely parallels duties regularly assigned to assistant teachers on a school team. Allows students to apply in-depth knowledge, methods and skills gained from education courses. Includes one full-day work experience each week and planned interaction with parents. Prerequisite: ED 102 Education Practicum.

ED 103A Extended Education Practicum

(14 class hrs/wk, 6 cr) F/W/Sp

Students spend 12 hours each week in an elementary or secondary classroom assisting a teacher. Knowledge of content, teaching methods, and management skills are gained through this field experience. Students will be involved in planning with the teacher, implementing lesson plans and delivering at least two lesson plans to a group of students. Must be arranged one term in advance. It is recommended that students take ED 200 Introduction to Education before taking this class. Prerequisite: Experience working with children in a structured teaching setting. Recommended: ED 216 Purpose, Structure and Function of Education in a Democracy, or HDFS 225 Child Development.

ED 104 Advanced Practicum

(34 class hrs/wk, 12 cr) F/W/Sp/Su

Pre-professional internship in a toddler or preschool classroom setting that closely resembles the duties of a teacher on a team. Provides comprehensive application of coursework in the program. Includes full-day work throughout the week and curriculum planning and implementation. Prerequisite: ED 103 Extended Education Practicum.

ED 123 Reading Instruction

(3 class hrs/wk, 3 cr) W, Alternate years

Introduces the essential skills needed to read and the primary approaches to teaching reading. Presents a systematic approach to teaching reading with instruction in informal assessment, readiness indicators, vocabulary skills, and comprehension, as well as motivation to learn to read. Students learn techniques for implementing reading lessons, practice assessment techniques, and research a reading instruction topic of their choice. Also, students examine current area reading adoptions and learn benchmarks for reading performance.

ED 124 Mathematics Instruction

(3 class hrs/wk, 3 cr) Alternate years

Course focuses on mathematics for Instructional Assistants. Covers a variety of instructional techniques that can be used with individual students or groups, how to cope with a variety of learning styles and special needs students, and the use of technology in the classroom. Learning will include the Oregon Mathematics Teaching and Learning Standards, Benchmarks, and Essential Learning Skills for grades 3, 5 and 8, Scoring Guides for Mathematics Problem Solving, and student portfolios. Students examine currently adopted math programs. There is an emphasis on becoming more comfortable with mathematics throughout the entire course. Prerequisite: MTH 060 Introduction to Algebra.

ED 152 Creative Activities/Dramatic Play*(3 class hrs/wk, 3 cr) W*

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, and creative play.

ED 179 Literature, Science and Math*(3 class hrs/wk, 3 cr) Sp*

Focuses on understanding and creating quality curricula in literature, science and math. Includes experience with planning, implementing, and evaluating materials and activities.

ED 207 Beginning Leadership*(3 class hrs/wk, 3 cr)*

Overviews leadership theory, styles and skills. Provides skill-building exercises, professional networking techniques, group process and teamwork methods, basic communication techniques, prioritizing, goal setting and other basic information necessary for those anticipating leadership roles.

ED 209A Theory and Practicum*(4.5 class hrs/wk, 3 cr)*

Designed for students interested in teaching grades K-3 to gain experience by working with preschool-aged children in a supervised laboratory setting. Students increase their knowledge of child development, curriculum planning, learning environments, and guidance and discipline. Skill development also includes observing children and planning developmentally appropriate activities. Prerequisites: HDFS 225 Child Development and HDFS 248 Learning Experiences for Children.

ED 216 Purpose, Structure & Function of Education in a Democracy*(3 class hrs/wk, 3 cr) F/W/Sp*

Investigation of the purpose, structure and function of education in schools, communities and workplaces in Oregon, the United States and other countries, including: analyses of the historical, philosophical, social and political foundations of education; current issues and trends; factors affecting schooling, individual attainment, and reflection on one's own education.

ED 219 Multicultural Issues in Educational Settings*(2 class hrs/wk, 2 cr) F/W/Sp*

Examination of the context of working with students' schools, communities and workplaces; the diversity of learners, learning cultures (e.g. urban, suburban, rural) and the diversity among learners within those different cultures; and the influence of culture on one's learning.

ED 252 Behavior Management*(3 class hrs/wk, 3 cr) F*

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 class hrs/wk, 3 cr) W/Sp*

Explore how learning occurs at all ages from early childhood through adulthood, major and emerging learning theories, individual learning styles including one's own learning styles, reflection on implications of how learning occurs, and the impact of these issues on the development and delivery of instruction.

ED 280 CWE: Education*(3-42 class hrs/wk, 1-14 cr) F/W/Sp/Su*

Structured field experience in a teaching and learning setting. Working with a master teacher, students learn current educational strategies and techniques. 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.

ED 280S Service Learning Education*(3-42 class hrs/wk, 1-14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their service learning approved by the appropriate faculty coordinator.

ED 282 Working with Children with Special Needs*(3 class hrs/wk, 3 cr) Sp*

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 class hrs/wk, 3 cr) W*

Observe children, teachers and classroom environment using a variety of techniques. Focuses on methods of interacting with toddlers and young children in a classroom setting.

ED 7.725 Professional Issues in Instructional Assisting*(1 class hr/wk, 1 cr) Alternate years*

Students address the following professional issues: interpersonal relations, school culture, job roles, policies and procedures, job opportunities and search, and career ladders in this field. Students organize information and materials for a successful job search and receive instruction in the safety elements of this job.

ED 7.730 Early Childhood Ages and Stages*(3 class hrs/wk, 3 cr) F*

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 for Young Children*(3 class hrs/wk, 3 cr) W*

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 health development of young children.

ED 7.740 Introduction to School Libraries*(5 class hrs/wk, 3 cr) F*

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.

ED 7.741 Circulation of Library Materials*(5 class hrs/wk, 3 cr) F*

Principles and practices of library circulation, print and electronic circulation systems, shelving, overdues, and interlibrary loan issues.

ED 7.742 Reference Materials and Services*(5 class hrs/wk, 3 cr) Sp*

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.

ED 7.743 Collection Development*(5 class hrs/wk, 3 cr) W*

Presents an overview of the principles and practices of building and maintaining the school library collection, including identifying the needs of the user community and the elements and importance of a collection development policy in managing the collection. Students will be given tools for dealing with selection and de-selection; budget and acquisitions, censorship and copyright issues, conservation and preservation, and format issues such as print v. electronic and access v. ownership.

ED 7.744 Organization of Library Materials*(5 class hrs/wk, 3 cr) Sp*

Introduction to classification and cataloging practices including the Dewey Decimal System, subject headings, filing rules, MARC records, and print and electronic systems.

ED 7.745 Online Information Literacy for Librarians*(5 class hrs/wk, 3 cr)*

An introduction to using electronic resources in searching for information. Includes information literacy approaches to locating information for students and library patrons. Prior library experience helpful.

ED 7.746 Children's Literature and Reading Promotion*(5 class hrs/wk, 3 cr) W*

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.

ED 7.747 Multicultural Literature K-12*(5 class hrs/wk, 3 cr)*

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 library and classroom. Prior library experience helpful.

ED 7.748 Library Skill Curriculum*(5 class hrs/wk, 3 cr)*

An overview of the educational mission of K-12 instruction, library skills instruction and strategies to support classroom educational activities. Prior library experience helpful.

ED 7.749 Global Literature K-12*(5 class hrs/wk, 3 cr)*

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. Prior library experience helpful.

ED 7.750 Infant/Toddler Development for Family Service Workers*(3 class hrs/wk, 3 cr)*

This 10-week distance learning class emphasizes active learning through Web projects, online discussion and assignments. The goal of the class is to provide staff in early childhood settings with knowledge of infant-toddler development and skills in parent education so participants can promote parenting behaviors that nurture, guide and motivate healthy development in young children. The target audience for this class is staff who work directly with children ages birth to three and their parents.

EG: ENGINEERING GRAPHICS**EG 4.407 Introduction to CAD***(6 class hrs/wk, 4 cr) F/Sp*

A course for drafters, technicians and engineers in the application and functions of computer-aided drafting. Emphasizes hands-on operation of CAD systems. Prerequisites: Working knowledge of Windows, drafting experience and instructor's approval.

EG 4.409 Drafting I*(3 class hrs/wk, 2 cr) F*

Presents fundamentals of technical drawing. Emphasizes line language, geometric construction, sketching and layout procedures. Includes multiview drawings, pictorials and section views.

EG 4.411 CAD Basics*(6 class hrs/wk, 4 cr) F*

An introduction to the application and functions of computer aided drafting. Emphasizes hands-on operation of CAD systems. Prerequisite: MTH 065 Elementary Algebra. Corequisite: CIS 1250 Introduction to Windows or demonstrated working knowledge through competency test.

EG 4.416 Intermediate CAD*(6 class hrs/wk, 4 cr) W*

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 or instructor permission.

EG 4.421 Drafting II: Applied CAD*(6 class hrs/wk, 4 cr) W*

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 Basics and EG 4.409 Drafting I.

EG 4.423 Architectural Design I*(6 class hrs/wk, 4 cr) W*

Introduces basic architectural drafting techniques and methods. Covers the principles of architectural design, layout and industry conventions. Includes architectural symbols and construction methods used in residential and light commercial buildings. Prerequisites: EG 4.411 CAD Basics and EG 4.409 Drafting I.

EG 4.431 Drafting III: 3-D CAD*(6 class hrs/wk, 4 cr) Sp*

Develops skills to create mechanical drawings. Includes principles of tool design, geometric dimensioning and tolerancing, surface finish specifications and CAD/CAM requirements. Prerequisite: EG 4.421 Drafting II: Applied CAD.

EG 4.443 Schematics*(6 class hrs/wk, 4 cr) F*

Covers methods for drawing electrical, mechanical and plumbing schematic diagrams and pictorial layouts. Includes logic diagrams, electronic component symbols, printed circuit boards and schematics. Power distribution, piping, plumbing and HVAC drawing standards and practices also are studied. Prerequisite: EG 4.421 Drafting II: Applied CAD.

EG 4.445 Plane Surveying*(4 class hrs/wk, 3 cr) Sp*

A basic course in surveying. Includes distance measuring, leveling, cross sectioning, traversing, topographic surveying, use of survey instruments, and office procedures. Prerequisites: MTH 097 Practical Geometry; EG 4.421 Drafting II: Applied CAD; and a working knowledge of right angle trigonometry.

EG 4.451 Solids I*(6 class hrs/wk, 4 cr) F*

Covers mechanical design considerations for producing technical drawings for manufactured parts. Students learn Boolean operations and their use in the creation of composite solid models. CIM data exchange files and formats also are explored. Prerequisite: EG 4.431 Drafting III: 3-D CAD.

EG 4.452 Solids II*(6 class hrs/wk, 4 cr) W*

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. Prerequisite: EG 4.451 Solids I.

EG 4.453 Customizing CAD Systems*(6 class hrs/wk, 4 cr) W*

Customizing CAD systems for productivity. Autolisp, menu customization, icon and toolbar editing and macros are covered. Students learn to customize a CAD program for productivity, regardless of the technical discipline. Prerequisite: EG 4.451 Solids I.

EG 4.455 Structural Drafting*(3 class hrs/wk, 2 cr) W*

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 Basics and EG 4.409 Drafting I.

EG 4.456 Civil Drafting Lab*(2 class hrs/wk, 1 cr) Sp*

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. Prerequisite: EG 4.421 Drafting II: Applied CAD.

EG 4.457 Workplace Survey*(3 class hrs/wk, 1 cr) Sp*

Introduction to actual workplace environments. Students experience workplace environments and end use of drawing efforts.

EG 4.461 Rendering*(4 class hrs/wk, 3 cr) Sp*

Explores use of the computer as a technical illustrating tool. Uses CAD shading, rendering and animation tools to produce realistic images used in presentations, conceptual design and technical illustration. Prerequisite: EG 4.451 Solids I.

EG 4.463 Architectural Design II*(6 class hrs/wk, 4 cr) Sp*

Presents the elements, principles and aesthetics of architectural design. Covers planning and creation of working drawings. Emphasizes construction plans, including energy efficiency, handicapped accessibility and ergonomic considerations. Prerequisite: EG 4.423 Architectural Design I.

EG 4.465 Civil Drafting II*(6 class hrs/wk, 3 cr) W*

Covers advanced topics in surveying and civil engineering drafting/design. Prerequisites: Basic AutoCAD proficiency (EG 4.411 Cad Basics or equivalent) and Surveying (CEM 263 Plane Surveying or equivalent).

EG 4.467 Technical Project*(2-6 class hrs/wk, 1-3 cr)*

Advanced study in an area of student interest in the drafting trades. Develops skills in gathering, sorting and finding solutions to real life problems and procedures used in drafting.

EG 4.470 Geometric Dimensioning and Tolerancing*(4 class hrs/wk, 3 cr) Sp*

This intermediate-level course for drafters, technicians, and engineers covers the application and use of modern geometric dimensioning and tolerancing (GD&T). Utilizes the updated and expanded practices of the latest ANSI Y14.5M-1994 on dimensioning and tolerancing. Prerequisites: EG 4.411 CAD Basics; EG 4.421 Drafting II: Applied CAD; EG 4.431 Drafting III: 3-D CAD; EG 4.451 Solids; or equivalent or instructor's approval.

EM: EMERGENCY MEDICAL TECHNICIAN**EM 5.801 Introduction to Emergency Medical Services***(3 class hrs/wk, 3 cr) As needed*

This course will cover topics including, but not limited to: The role and responsibilities of the EMT; Job Search; Job Skills; Career Planning; Scope of Practice; Moral and Ethical Issues of the EMT; Public vs Private Ambulance Service; Emergency Funding; Medical Systems; Medical-Legal Issues; Multiple Casualty Incidents; Hazardous Material Awareness and Stress Management; Leadership; and Training.

EM 5.810 EMT Basic Part A*(10 class hrs/wk, 3 cr) F/W*

Designed to be presented within a five-week portion of one term. This first part of the 15-week course develops, through theory and practice, the procedural responsibilities delegated to the EMT Basic. The course incorporates discussion, demonstration, and practical application of the following: roles and responsibilities, personal safety, patient assessment, oxygen administration, artificial ventilation, use of airway adjuncts, and current field protocols. Offered twice a year. Note: Five-week course.

EM 5.811 EMT Basic Part B*(10 class hrs/wk, 3 cr) W*

Designed to be presented within a five-week portion of one term. This second part of the 15-week course develops, through theory and practice, the procedural responsibilities delegated to the EMT Basic. The course incorporates discussion, demonstration, and practical application of the following: pharmacology, cardiovascular emergencies, diabetic emergencies, altered mental status, allergic reactions, anaphylaxis, environmental emergencies, obstetrical and gynecologic emergencies, and vascular emergencies. Offered twice a year. Note: Five-week course. Prerequisite: EM 5.810 EMT Basic Part A.

EM 5.812 EMT Basic Part C*(12 class hrs/wk, 4 cr) W/Sp*

Designed to be presented within a five-week portion of one term. This third part of the 15-week course develops, through theory and practice, the procedural responsibilities delegated to the EMT Basic. The course incorporates discussion, demonstration, and practical application of the following: recognition and treatment of shock, MAST trousers, recognition and treatment of fractures, recognition and treatment of various emergency medical illnesses, use of the automatic and semiautomatic defibrillators and current field protocols. Successful completion of the EMT Basic Parts A, B and C courses will allow a student eligibility to sit for state certifying examinations. Offered twice a year. Note: Five-week course. Prerequisite: EM 5.811 EMT Basic Part B.

EM 5.815 EMT Intermediate Part A*(8 class hrs/wk, 3 cr) As needed*

EMT Intermediate Part A is the first part of a 15-week course. It is designed to permit rural communities to benefit from the advanced emergency medical care procedures that would not be available to them otherwise. This course covers theory and practice of procedural responsibilities delegated to the EMT-Intermediate as set forth by the Oregon Health Division. It incorporates discussion, demonstration and practical application of the following: roles and responsibilities, patient assessment, oxygen ventilation, airway management and field protocols. Note: Five-week course. Prerequisite: Successful completion of the EMT-Intermediate course will allow the student eligibility to sit for state certifying exams.

EM 5.816 EMT Intermediate Part B*(8 class hrs/wk, 4 cr) As needed*

The second part of a 15-week or two-term course that covers theory and practice of procedural responsibilities delegated to the EMT-Intermediate. Incorporates discussion, demonstration and practical application of the following: oxygen and ventilation, airway adjuncts, intravenous and intraosseous therapy, pharmacology and current field protocols. Completion of the intermediate courses will allow a student to be eligible to sit for the state certifying examinations. Note: Five-week course. Prerequisite: EM 5.815 Intermediate Part A.

EM 5.817 EMT Intermediate Part C*(8 class hrs/wk, 3 cr) As needed*

The third part of a two-term course that covers theory and practice of procedural responsibilities delegated to the EMT-Intermediate. Incorporates discussion, demonstration and practical application of the following: oxygen and ventilation, airway adjuncts, intravenous and intraosseous therapy, pharmacology and current field protocols. Completion of the intermediate courses will allow a student to be eligible to sit for state certifying examinations. Note: Five-week course. Prerequisites: EM 5.815 Intermediate Part A and EM 5.816 Intermediate Part B.

EM 5.820 Emergency Communication and Patient Transportation*(4 class hrs/wk, 3 cr) As needed*

Covers ambulance operation, rules and regulations regarding ambulance licensing, inventory, maintenance and safety. Includes emergency response driving and route planning, MAP book orientation, communication systems, radio types, HEAR system and dispatch systems.

EM 5.825 EMT Rescue*(4 class hrs/wk, 3 cr) As needed*

Covers basic methodology and equipment used for emergency rescue. Topics covered include auto extrication, rapid extrication techniques, traffic safety, with a focus on traffic accidents.

EM 5.830 Crisis Intervention*(3 class hrs/wk, 3 cr) As needed*

Covers methods of recognizing and managing symptoms of crisis. How to manage death in the field; the dying patient; stress response of friends, family and the emergency worker. Critical incident stress debriefing included.

ENG: ENGLISH**ENG 104 Literature: Fiction***► (3 class hrs/wk, 3 cr) F/W/Sp*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 105 Literature: Drama*► (3 class hrs/wk, 3 cr) F/W/Sp*

Introduces Western drama from its origin in ancient Greece to today's theater, stressing conventions of drama as both a literary and performing art. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 106 Literature: Poetry*► (3 class hrs/wk, 3 cr) F/W/Sp*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 107 Western World Literature: Classical*► (3 class hrs/wk, 3 cr) F/Alternate years*

Surveys the literature of three cultures of the ancient western world from 3000 BC to 100 AD. Students explore the themes, stories and ideas that concern our literary ancestors, in particular the Greeks, Romans and Hebrews. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 108 Western World Literature: Middle Ages through Neoclassicism*► (3 class hrs/wk, 3 cr) W/Alternate years*

Surveys European literature from the Middle Ages, Renaissance, and Neoclassical periods. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 109 Western World Literature: Modern*► (3 class hrs/wk, 3 cr) Sp/Alternate years*

Surveys European literature from NeoClassic, Romantic, Realist, Modern and Post-Modern writers. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 110 Film Studies*► (3 class hrs/wk, 3 cr) As needed*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 121 Mystery Fiction

► (3 class hrs/wk, 3 cr) *As needed*

Explores the range and development of mystery fiction from pre-Poe to the present. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 201 Shakespeare

► (3 class hrs/wk, 3 cr) *F/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 202 Shakespeare

► (3 class hrs/wk, 3 cr) *W/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 203 Shakespeare

► (3 class hrs/wk, 3 cr) *Sp/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 204 English Literature: Early

► (3 class hrs/wk, 3 cr) *F/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 205 English Literature: Middle

► (3 class hrs/wk, 3 cr) *W/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 206 English Literature: Modern

► (3 class hrs/wk, 3 cr) *Sp/Alternate years*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 207 Non-Western World Literature: Asia

► (3 class hrs/wk, 3 cr) *F/Alternate years*

Literature of Asia, representative works of poetry, prose and drama. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 208 Non-Western World Literature: Africa

► (3 class hrs/wk, 3 cr) *W/Alternate years*

Literature of Africa. Literary works of both tribal and colonial origin. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 209 Non-Western World Literature: The Americas

► (3 class hrs/wk, 3 cr) *Sp/Alternate years*

Literature of the Americas (excluding the United States and Canada). Includes works of Hispanic, Native American and Afro-American origin predating the Spanish Conquest through contemporary writers. Note: Need not be taken in sequence. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 220 Literature of American Minorities

► (3 class hrs/wk, 3 cr) *F/W/Sp*

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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 221 Children's Literature

► (3 class hrs/wk, 3 cr) *F/W/Sp*

Surveys selected children's literature including stories, legends, poems and rhymes. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 240 Native American Literature

► (3 class hrs/wk, 3 cr) *As needed*

This course features a selection of works by writers from native North American cultures within the United States and Canada. The works of these cultures have traditionally not been well-represented in literature courses, and the views from these tribal cultures are often in contrast to the more familiar representations of mainstream culture. These works reflect historical and cultural incidents of discrimination, warfare, and differences across the society. This course will explore how humans have dealt with survival after defeat in war, relocation, and discrimination and how these cultures enrich the patterns of the North American experience. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 253 American Literature: Early

► (3 class hrs/wk, 3 cr) *F Alternate years*

Presents intensive readings of significant U.S. authors representing major literary periods. ENG 253, ENG 254 and ENG 255 provide an understanding of and appreciation for American culture as expressed in literature. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 254 American Literature: Middle

► (3 class hrs/wk, 3 cr) *W Alternate years*

Presents intensive readings of significant U.S. authors representing major literary periods. ENG 253, ENG 254 and ENG 255 provide an understanding of and appreciation for American culture as expressed in literature. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 255 American Literature: Modern

► (3 class hrs/wk, 3 cr) *Sp Alternate years*

Presents intensive readings of significant U.S. authors representing major literary periods. ENG 253, ENG 254 and ENG 255 provide an understanding of and appreciation for American culture as expressed in literature. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 260 Women Writers

► (3 class hrs/wk, 3 cr) *As needed*

Introduces major works of literature by women authors, exploring women's literary history through poetry, short stories, essays, plays, novels and letters. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 261 Science Fiction

► (3 class hrs/wk, 3 cr) *As needed*

Explores science fiction, fantasy and speculative futures through popular fiction. Discusses content, styles, techniques and conventions of the genre. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

ENG 280S Service-Learning English/Writing

(3-42 class hrs/wk, 1-14 cr) *F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their service-learning approved by the appropriate faculty coordinator.

ENGR: ENGINEERING**ENGR 111 Engineering Orientation I**

(4 class hrs/wk, 4 cr) *F/W*

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. Corequisite MTH 111 College Algebra.

ENGR 112 Engineering Orientation II

(6 class hrs/wk, 4 cr) *W/Sp*

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.

ENGR 201 Electrical Fundamentals: DC Circuits

(6 class hrs/wk, 4 cr) *F*

Covers fundamentals of circuit analysis, including node and mesh analysis, superposition, and Thevenin and Norton's Theorem. Introduces op-amps, capacitors and inductors. Covers AC circuit analysis techniques. Prerequisite: MTH 251 Differential Calculus.

ENGR 202 Electrical Fundamentals: AC Circuits

(6 class hrs/wk, 4 cr) *W*

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: MTH 252 Integral Calculus; ENGR 201 Electrical Fundamentals.

ENGR 203 Electrical Fundamentals: Signals and Controls

(6 class hrs/wk, 4 cr) *Sp*

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: MTH 253 Calculus; ENGR 202 Electrical Fundamentals.

ENGR 211 Statics

(5 class hrs/wk, 4 cr) *F*

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. Prerequisite: Working knowledge of spreadsheets. Corequisites: MTH 252 Integral Calculus; PH 211 General Physics with Calculus or PH 201 General Physics.

ENGR 212 Dynamics

(5 class hrs/wk, 4 cr) *W*

Includes particle and rigid body kinematics and kinetics, Newton's laws, work energy and impulse momentum. Prerequisites: ENGR 211 Statics; MTH 252 Integral Calculus; PH 211 General Physics with Calculus or PH 201 General Physics; and a working knowledge of spreadsheets.

ENGR 213 Strength of Materials

(5 class hrs/wk, 4 cr) *Sp*

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. Prerequisites: ENGR 211 Statics; MTH 252 Integral Calculus; and a working knowledge of spreadsheets.

ENGR 245 Engineering Graphics and Design

(6 class hrs/wk, 4 cr) *Sp*

Includes two-dimensional and three-dimensional graphics, sketching, multiview projection, dimensioning, descriptive geometry, engineering design and an introduction to AutoCad®. Prerequisite: Working knowledge of Windows. Corequisite: MTH 111 College Algebra.

ENGR 271 Digital Logic Design

(6 class hrs/wk, 4 cr) *Sp*

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.

FW: FISH AND WILDLIFE**FW 251 Principles of Wildlife Conservation**

(3 class hrs/wk, 3 cr) *W*

Introduces the interrelationships 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.

FW 252 Wildlife Resources: Birds

(5 class hrs/wk, 4 cr) *Sp*

Introduces the biology of birds, with specific emphasis on the ecological and physiological adaptations of birds, flight, migration, bird behavior and identification, and natural history of the common birds of Oregon.

G: GEOLOGY**G 101 Introduction to Geology**

● (5 class hrs/wk, 4 cr) *F*

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.

G 102 Introduction to Geology

● (5 class hrs/wk, 4 cr) W

Introduces geology and the processes that shape the landscape. Includes weathering and erosion processes, river dynamics and morphology, ground water, glaciers, landslides, coastal processes, and an overview of environmental geology and geologic hazards. Field trips highlight topics discussed.

G 103 Introduction to Geology

● (5 class hrs/wk, 4 cr) Sp

Introduces geology and the processes that have shaped Oregon's landscape. The course will provide an overview of the geologic processes that formed Oregon, including volcanoes and volcanic activity, plate tectonics, erosion and deposition by rivers, glaciers and oceans. The course includes a survey of the geology and geologic features of eight major physiographic provinces of Oregon. Field trips and hands-on labs involving Oregon rocks, minerals and maps are an important part of the instruction. Prerequisite: G 101 Introduction to Geology or G 102 Introduction to Geology.

G 120 Regional Geology

(3 class hrs/wk, 3 cr) Sp

Introduces geology and the processes that have shaped Oregon's landscape. Includes volcanic activity, plate tectonics, erosion and deposition by rivers, glaciers and oceans. Field trip included to either the Cascades or the Coast.

GA: GRAPHIC ARTS

Note: Specific courses may be under revision. Please check with an advisor for the latest information.

GA 3.153 Digital Illustration I

(3 class hrs/wk, 3 cr) F

Introduction to vector illustration applications. MacroMedia FreeHand is used to introduce shapes, paths, points, fills and gradients. Introduces the creation of printable files and color matching standards used in printing. Prerequisite: 9.049 Desktop Publishing or successful challenge test. Corequisite: GA 3.156 Digital Page Layout I and GA 3.157 Digital Image Manipulation I.

GA 3.154 Digital Illustration II

(3 class hrs/wk, 3 cr) W

Continues to expand understanding of vector graphics for print or the Web. Introduces Adobe Illustrator for creating graphics. The goal is to become more proficient at editing paths, modifying paths, placing objects, modifying text and manipulating layers. Prerequisites: GA 3.153 Digital Illustration I. Corequisites: GA 3.160 Digital Page Layout II; GA 3.161 Digital Image Manipulation II.

GA 3.155 Digital Illustration III

(3 class hrs/wk, 3 cr) Sp

Combines the use of both applications for creating original vector graphics. Students will gain a better understanding of vector illustration software and will learn to smoothly switch applications depending on current needs. Introduces the basic concepts of 3-D illustration using modeling applications. Discusses career opportunities. Coursework will include preparation of a portfolio. Prerequisite: GA 3.154 Digital Illustration II. Corequisites: GA 3.168 Digital Page Layout III, GA 3.169 Digital Image Manipulation III.

GA 3.156 Digital Page Layout I

(3 class hrs/wk, 3 cr) F

Studies the preparation of mechanical art for printing. Stresses graphic arts terminology, tools and page layout techniques. Preparation of mechanicals using traditional and current technology. Introduces the use of Adobe Pagemaker as a layout tool. Prerequisite: 9.049 Desktop Publishing or successful challenge test. Corequisites: GA 3.153 Digital Illustration I and GA 3.157 Digital Image Manipulation I.

GA 3.157 Digital Image Manipulation I

(3 class hrs/wk, 3 cr) F

Introduces Adobe Photoshop for image manipulation. Includes an introduction to many of the tools used in Photoshop. Investigates simple scanning techniques for different image types. Coursework on manipulation controls of contrast and color is included. File formats and file size management is emphasized. Prerequisite: 9.049 Desktop Publishing or successful challenge test. Corequisites: GA 3.153 Digital Illustration I and GA 3.156 Digital Page Layout I.

GA 3.160 Digital Page Layout II

(3 class hrs/wk, 3 cr) W

Explores the use of Adobe InDesign for digital page assembly. Emphasizes production of digital mechanical files prepared to industry standard. Introduces the concept of preflighting documents. Fonts management and the use of Adobe Acrobat in the production of printable PDFs. Prerequisites: GA 3.156 Digital Page Layout I. Corequisites: GA 3.154 Digital Illustration II; GA 3.161 Digital Image Manipulation II, GA 3.163 Multimedia II.

GA 3.161 Digital Image Manipulation II

(3 class hrs/wk, 3 cr) W

Advances understanding of Adobe PhotoShop controls and tools. Learn to use clipping paths, adjustment, effects and layers to create high-end images. Class work includes filters and styles. Prerequisites: GA 3.157 Digital Image Manipulation I. Corequisites: GA 3.154 Digital Illustration II and GA 3.160 Digital Page Layout II.

GA 3.162 Multimedia I

(3 class hrs/wk, 3 cr) F

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. Prerequisites: GA 3.155 Digital Illustration III; GA 3.168 Digital Page Layout III; GA 3.169 Digital Image Manipulation III; or instructor's approval.

GA 3.163 Multimedia II

(3 class hrs/wk, 3 cr) W

Continued discussion of Web design moving towards more complex and interactive software. Adding more powerful and dynamic elements to Web sites with animation and interactive software. An introduction to the development of interactive projects such as games, software and kiosks. Prerequisites: GA 3.162 Multimedia I or instructor's approval.

GA 3.168 Digital Page Layout III

(3 class hrs/wk, 3 cr) Sp

A comprehensive exploration of QuarkXPress for advanced page assembly to industry standard. Investigates methods to produce digital color proofs, film and laminate proofs. Expands concepts concerning preflighting of documents and PDFs. There will be coursework about job opportunities in the industry as well as resumes/portfolios. Prerequisite: GA 3.160 Digital Page Layout II. Corequisites: GA 3.155 Digital Illustration III, GA 3.169 Digital Image Manipulation III.

GA 3.169 Digital Image Manipulation III*(3 class hrs/wk, 3 cr) Sp*

Culmination of image manipulation sequence. Master the tools of Adobe Photoshop for creating color correct, printable images. Introduction of Adobe ImageReady for web optimization. Students will use channels for color correction and spot color exporting to page layout applications. Creates an understanding of the true strengths and weaknesses of both digital and traditional photographic images. Students will have some creative freedom during the course. Prerequisite: GA 3.161 Image Manipulation II. Corequisites: GA 3.155 Digital Illustration III, GA 3.168 Digital Page Layout III.

GA 3.181 Special Projects*(2–10 class hrs/wk, 1–6 cr) F/W/Sp*

In coordination with the instructor, the student selects projects that provide practical experience within the major field. Note: May be taken for a maximum of six credits. Prerequisite: Instructor approval.

GS: GENERAL SCIENCE**GS 104 Physical Science: Principles of Physics***● (5 class hrs/wk, 4 cr) W/Sp*

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.

GS 105 Physical Science: Principles of Chemistry*● (5 class hrs/wk, 4 cr) W/Sp*

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.

GS 106 Physical Science: Principles of Earth Science*● (5 class hrs/wk, 4 cr) F*

Survey course providing non-science majors a broad background in physical science. No previous science background required. Topics include atomic science, geology, atmospheric science and astronomy. Field trips highlight the topics discussed. There is no restriction on the order in which the courses are taken.

GS 108 Oceanography*● (5 class hrs/wk, 4 cr) F/W*

Introductory lab science course in oceanography 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.

GS 111 Forensic Science*(5 class hrs/wk, 4 cr) Sp*

Provides non-science majors an introduction to scientific methods and the limitations of scientific methods used in criminal investigations. Additionally the course is designed to help students discover the applications of science to the field of forensics, as well as provide elements of critical thinking. No previous science background is required. This course will demonstrate the interrelationships of chemistry, physics and biological sciences in the gathering of scientific information. This course will provide a means of illustrating, demonstrating, and analyzing natural phenomena and systems in both lecture and laboratory settings. Prerequisites: MTH 065 Elementary Algebra or equivalent, and pre/corequisite of CJ 101 or instructor's approval.

GS 151 Energy in Society*● (3 class hrs/wk, 3 cr) Sp*

Surveys the nature, history and use of energy. Analyzes traditional and alternative energy sources and their scientific, technical, environmental and economic aspects.

GS 152 Science, Technology and Society*● (3 class hrs/wk, 3 cr) F/W/Sp*

Investigates the nature of scientific endeavors and analyzes specific science and technology issues that affect societies in the United States and globally.

GS 170 Field Ecology*● (1–12 class hrs/wk, 1–3 cr)*

A variety of courses on the biology and ecology of the Northwest. Emphasizes field study of plants, animals, land, water and climate. Includes courses such as Alvord Desert Ecology, Cascade and Crater Lake Ecology, Coastal Ecology and Oregon Old Growth. Note: Most courses involve a weekend trip with pre- and post-trip evening meetings. May be taken as electives by transfer students, but also generally valuable for learning more about the environment.

GS 199 General Science: Special Studies*(1–12 class hrs/wk, 1–4 cr) As needed*

Allows a student to investigate, with supervision from a faculty member, a topic of his/her interest at an individualized pace. Credit and projects are determined by the instructor and student.

GS 280B CWE Physical Science*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Designed to give students practical experience in supervised employment related to physical science. 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.

HD: HUMAN DEVELOPMENT**HD 100 College Success***(4 class hrs/wk, 3 cr)*

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 100A College Success*(10 class hrs, 1 cr)*

Focuses on the qualities, traits and behaviors that create success in school and in life.

HD 100B College Success*(10 class hrs, 1 cr)*

Development of personal skills and awareness that lead to success and college.

HD 110A Career Planning I*(1 class hr/wk, 1 cr)*

Presents all aspects of becoming a college student and relates this information to the student's chosen career area. Students learn about the physical, emotional and intellectual requirements of being a college student at LBCC. The goal is to provide students with information that will facilitate informed decision making as they negotiate the first quarter of college life. Instructor approval required.

HD 110B Career Planning II*(1 class hrs/wk, 1 cr)*

This course gives students an opportunity to examine in some detail their chosen field of study and its demands. In addition, they will receive information about the work opportunities, wages, etc., that result from this field of study. These pieces of information will be paired with individual student interest and aptitude inventory data to help students make an informed decision to continue in this major. Instructor approval required.

HD 114 Life Planning*(2 class hrs/wk, 2 cr)*

Presents skills in self-awareness, role alternatives, goal setting, plan implementation and development of resources. Includes theory, self-assessment and practical application.

HD 116 Human Potential*(2 class hrs/wk, 2 cr)*

Focuses on developing skills to become more self-determining, self-affirming and empathic towards others. Personal strengths, motivation and goals are an integral part of this process.

HD 190 Assertiveness Training*(1 class hrs/wk, 1 cr) F/W/Sp*

Facilitates the learning of communication skills based on a foundation of respect for self, respect for others and respect from others.

HD 204 Eliminating Self-Defeating Behavior*(3 class hrs/wk, 3 cr)*

Covers making choices that enhance quality of life, becoming aware of our self-defeating behavior, deciding whether to continue the behavior or change it, and discovering reasons and benefits for choosing this way.

HD 206 Coping Skills for Stress*(2 class hrs/wk, 2 cr) F/W/Sp*

Provides information about causes and cures of stress from the point of view of self-talk and the power of our minds to reduce the impact of stress. The class is support oriented and is conducted as part lecture and part group process.

HD 208 Career/Life Planning*(3 class hrs/wk, 3 cr) F/W/Sp*

Explores values, interests and skills helpful to individuals desiring directions or change in professional, personal and/or educational goals. This class is grounded in theory and includes experiential exercises, career assessment and information resources.

HD 208A Career Planning*(10 class hrs, 1 cr)*

Students investigate personal career paths using career assessment tools and techniques and create a career plan.

HD 280S Service Learning*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify work-related learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisite: Approval by the appropriate faculty coordinator.

HDFS: HUMAN DEVELOPMENT AND FAMILY STUDIES**HDFS 200 Human Sexuality***■ (3 class hrs/wk, 3 cr) W/Sp*

Studies the anatomical, physiological, psychological and sociological aspects of human sexuality throughout the life cycle. Topics include contraception, sexually transmitted diseases, pregnancy, childbirth, sexual response patterns, sexual expression, sexual attitudes, and sexual myths and fallacies. Information on contemporary issues is presented.

HDFS 201 Individual and Family Development*■ (3 class hrs/wk, 3 cr) F/W/Sp*

Studies individual and family development, dynamics and relationships across the lifespan. Emphasizes nature/nurture, continuity/discontinuity, and the interaction of the family with other systems.

HDFS 209 Practicum: Community Agencies*(7 class hrs/wk, 3 cr) 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 and Family Relationships*(3 class hrs/wk, 3 cr) W*

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 Child Development*■ (3 class hrs/wk, 3 cr) F/W/Sp*

Describes basic issues, theories, and current research on child growth and development within a family context. Studies the stages of development from conception through early childhood (age 8).

HDFS 226 Child Development: Stepping Stones*(3 class hrs/wk, 3 cr)*

A telecourse that explores how and why children grow and develop the way they do. Covers the interplay of biological factors, individual personality, the family and other environmental factors that shape the growing child. Topics include prenatal through adolescent development.

HDFS 229 School Age and Adolescent Development*■ (3 class hrs/wk, 3 cr) F/W/Sp*

Focuses on the development of 5–18 year old children. All domains of development are covered: cognitive, emotional, language, moral, physical, social, spiritual and volitional. Includes topics for those interested in working with children in this age range, e.g. curriculum design, school age care, building relationships and effective guidance.

HDFS 233 Professional Foundations in Early Childhood*(3 class hrs/wk, 3 cr) F/Sp*

Focuses on current issues in working with children and families, e.g. developmentally appropriate practice, ethical issues, service delivery models and assessment practices. Includes the role of professional organizations and resources, family support and philosophical approaches in early childhood programs.

HDFS 242 Balancing School, Work and Family*(1 class hrs/wk, 1 cr) Sp*

Presents information on balancing the demands of school, work and family. Covers work and family, handling stress, communication skills, goal setting and self-esteem.

Non-Certificate/Non-Degree Courses Offered by the Family Resources and Education Division

9.930 Professional Issues in Child and Family Studies

(1 class hrs/wk, 1 cr)

Includes legal and ethical issues in working with children and families, e.g. health and safety standards, licensing, adult:child ratios and child abuse reporting. Emphasizes being family focused. Includes professional organizations, advocacy training and accreditation preparation.

9.931 Oregon Child-Care Basics

(1 class hrs/wk, 0 cr)

Provides basic information on health and safety issues, social/emotional development of young children. Designed for practicing child care providers.

9.932 Child Development

(1 class hrs/wk, 1 cr)

Information on child development for practicing child care providers. Focuses on the development of children ages birth through 13 years and the implications for practice in a child care setting.

9.934 Organization and Administration

(1 class hrs/wk, 1 cr)

Information on enhancing child care as a business. Develop skills in professional planning, marketing, tax reporting, contracts and basic record keeping.

9.936 Curriculum Development

(1 class hrs/wk, 1 cr)

Child care providers learn components of high-quality programming for children. Enhances the provider's ability to plan appropriate activities, equip the environment and obtain resources to meet the needs of children birth to 13 years.

9.938 Infant and Toddler Care

(1-3 class hrs/wk, 1-3 cr)

Family and center providers learn the elements of quality care for infants and toddlers. Emphasizes all areas of development: physical, social, emotional, cognitive and language. Includes group-care techniques, family/provider relationships and cultural diversity.

9.939 School Age Care

(1 class hrs/wk, 1 cr)

Overview of care and education for those caring for school-age children. Focuses on child and adolescent development, curriculum design, business practices, marketing and staff development.

HDFS 248 Learning Experiences for Children

(3 class hrs/wk, 3 cr) F/W

Focuses on understanding how children learn and develop and on creating quality, age-appropriate curricula. Includes experiences with planning, implementing and evaluating materials and activities that promote language, cognitive, motor and social/emotional development in a variety of core knowledge areas. Emphasizes how to integrate subject matter and access Internet sites for curriculum development.

HDFS 249 Infant and Toddler Care

(3 class hrs/wk, 3 cr) Alternate years

Teaches the elements of quality care for infants and toddlers, including physical, social, emotional, cognitive, and language development, group care techniques and family/provider relationships.

HDFS 261 Working with Individuals and Families

(3 class hrs/wk, 3 cr) Alternate years

Develops professional skills and strategies to use when working with individuals and families in a variety of settings. The course focuses on skill building in several areas (written and verbal communication with clients and coworkers, workplace professionalism, identifying and accessing community resources) and explores issues relevant to student success in career goal achievement.

HDFS 280 CWE Child Development

(5-42 class hrs/wk, 2-14 cr) F/W/Sp/Su

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 110 First Aid and CPR

(9 class hrs/wk, 1 cr)

The course covers basic First Aid and CPR information for the student to recognize an emergency and initiate the chain of survival. Also covered are techniques to provide immediate care to an injured or suddenly ill person.

HE 112 Emergency First Aid

(8 class hrs/wk, 1 cr)

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 class hrs/wk, 3 cr)

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 class hrs/wk, 3 cr)

Addresses the pharmacology of some popular drugs in Western society. Discusses contemporary issues involving the effects of drugs on the individual and society in general.

HE 204 Exercise and Weight Management*(3 class hrs/wk, 3 cr)*

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, emotional support, stress management and exercise. Students will explore social and cultural attitudes toward weight, obesity, eating and food disorders, food production and food marketing. Since exercise is one of the most critical 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 and Nutrition: Active Lifestyle*(3 class hrs/wk, 3 cr)*

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.

HE 207 Stress Management*(3 class hrs/wk, 3 cr)*

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 220 Introduction to Epidemiology and Health Data Analysis*(3 class hrs/wk, 3 cr)*

Introductory course in epidemiology and the use of elementary statistics for students in health-related studies. Designed to provide preparatory background for taking subsequent courses in epidemiology and health data analysis offered by the Department of Public Health. Introduces measure of disease frequency, analytical epidemiology, study designs, experimental design, and basic elements of descriptive statistics and inferential statistics.

HE 225 Social and Individual Health Determinants*(3 class hrs/wk, 3 cr)*

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 252 First Aid*(3 class hrs/wk, 3 cr)*

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 class hrs/wk, 3 cr) F/W/Sp*

Provides a fundamental understanding of HIV/AIDS and sexually transmitted disease from a global perspective. The history, etiology, epidemiology and prevention strategies of HIV/AIDS and STDs will be studied. Assists students in developing an understanding of diverse cultures, customs, attitudes, values and beliefs in the context of disease transmission.

HE 261 Cardiopulmonary Resuscitation (CPR)*(8 class hrs/wk, 1 cr)*

Provides students with current principles and practical techniques for basic life support in accordance with guidelines specified by the American Heart Association. Addresses needs of adult, child and infant victims while providing optional instruction in special techniques and skills required by lay rescuer. Note: Health Care Provider course available upon request.

HE 261A CPR for Health Care Providers*(8 hrs/wk, 1 cr)*

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 263 Psychosocial Dimensions of Health*(3 class hrs/wk, 3 cr) W*

Provides an overview of the mind/body relationship and its effects on health and illness. Examines the social, psychological, cultural, attitudinal, behavioral and environmental factors that influence individual and public health.

HE 270 History, Philosophy and Ethics of Health*(3 class hrs/wk, 3 cr) As needed*

Considers the historical, philosophical and ethical foundations of health issues. Students explore contemporary values, issues and controversies surrounding current bioethical issues as they relate to individual and societal health. Topics include treatment decisions, euthanasia, organ transplants, research on human subjects, genetic engineering, patients' rights, environment and distribution of resources.

HE 280 CWE Health*(6-42 class hrs/wk, 2-14 cr)*

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

See HT.

HS: HUMAN SERVICES**HS 205 Youth Addiction***(3 class hrs/wk, 3 cr)*

Designed to assist students in working with youth who are chemically dependent. Includes prevention, intervention, assessment, individual, group and continuing recovery techniques.

HST: HISTORY**HST 101 History of Western Civilization***■ (3 class hrs/wk, 3 cr) F*

Surveys the origins and development of western civilization from its beginning through the High Middle Ages. Includes the civilizations of Mesopotamia, Egypt, Greece, and Rome, and the emergence of Europe during the early Middle Ages.

HST 102 History of Western Civilization*■ (3 class hrs/wk, 3 cr) W*

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.

HST 103 History of Western Civilization

■ (3 class hrs/wk, 3 cr) Sp

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.

HST 150 Science and Culture in Western Tradition

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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 History of the Middle East and Africa

■ (3 class hrs/wk, 3 cr) As needed

Surveys the cultural, social, economic and political development in the Middle East and Africa.

HST 158 History of Latin America

■ (3 class hrs/wk, 3 cr) W

Surveys the cultural, social, economic and political development of Latin America.

HST 159 History of Asia

■ (3 class hrs/wk, 3 cr) As needed

Surveys the cultural, social, economic and political development of Asia. Emphasizes 20th century issues.

HST 198 Research Topics

(1 class hr/wk 1 cr) F/W/Sp

Examines in-depth history topics for independent research. Corequisite: WR 123 English Composition.

HST 201 U.S. History: Colonial and Revolutionary

■ (3 class hrs/wk, 3 cr) F

Provides an overview of the United States from pre-Columbian European and North American antecedents to colonization, colonial America, Revolutionary America; development of U.S. government, economy and society to 1830.

HST 202 U.S. History: Civil War and Reconstruction

■ (3 class hrs/wk, 3 cr) W

Provides an overview of the history of the United States from 1830-1900. Includes national expansion, sectionalism, the Civil War and Reconstruction. Concludes with the second Industrial Revolution and its effects.

HST 203 U.S. History: Rise to World Power

■ (3 class hrs/wk, 3 cr) Sp

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.

HST 240 War and the Modern World

■ (3 class hrs/wk, 3 cr) As needed

The evolution of the conduct of war in the 19th and 20th centuries as a reflection of social, political and technological developments. Basic course offering for the Peace Studies Program.

HST 280 CWE History

(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to history. 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.

HST 280S Service-Learning History

(3-42 class hrs/wk, 1-14 cr) F/W/Sp/Su

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their Service-Learning approved by the appropriate faculty coordinator.

HSTS: HISTORY OF SCIENCE**HSTS 151 History of Science**

(3 class hrs/wk, 3 cr) W

Introduces the history of science from earliest civilizations to the present. Emphasizes the evolution of scientific concepts, with particular attention given to Galileo, Newton, Darwin and other prominent figures. Critical thinking skills are utilized and developed as students address the conflicts between previously accepted scientific concepts and theories and current understanding. Also addressed are the interactions between scientific knowledge and the effects of this knowledge upon the technological, religious, economic, and social aspects of civilization.

HT and HORT: HORTICULTURE**HORT 199 Horticulture: Special Studies**

(1-9 class hrs/wk, 1-3 cr) F/W/Sp

Allows a student to investigate, with supervision from a faculty member, a topic of his/her interest at an individualized pace. Credits and projects will be determined jointly by the instructor and the student.

HORT 228 Horticulture: Landscape Plant Materials

(4 class hrs/wk, 3 cr) Sp

Includes identification of trees, shrubs, vines and ground covers used in landscape horticulture and their use in plant composition.

HT 8.102 Career Exploration: Horticulture

(1 class hrs/wk, 1 cr) W

Surveys career opportunities in horticulture. A report on a specific career position is required. Includes résumé writing and job search skills.

HT 8.115 Greenhouse Management

(4 class hrs/wk, 3 cr)

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. Includes an interview with a greenhouse operator.

HT 8.132 Arboriculture I

(4 class hrs/wk, 3 cr) W/Alternate Years

Introduces ornamental horticulture, including how to plant, train, prune, protect and repair trees.

HT 8.133 Arboriculture II

(4 class hrs/wk, 3 cr) Sp/Alternate Years

An advanced course of study for students and practitioners of ornamental horticulture who need to know how to select, plant, train, protect, fertilize, and provide ongoing care for trees in the landscape. Classes are taught by a Certified Arborist and provide excellent preparation for the ISA Certified Arborist and Tree Worker certification exams. Students must sign an LBCC Liability Waiver before participating in the lab. Lab activities include actual tree care practices on campus.

HT 8.135 Turf Management I*(4 class hrs/wk, 3 cr) W/Alternate Years*

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 8.136 Turf Management II*(4 class hrs/wk, 3 cr) Sp/Alternate Years*

Provides opportunity to adapt and apply principles and theories taught in HT 8.135 Turf Management I. Includes business practices and procedures and field trips to observe common practices, maintenance and management of turf areas.

HT 8.137 Plant Propagation*(6 class hrs/wk, 4 cr) Sp*

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*(6 class hrs/wk, 4 cr) Sp*

Gives practical field experience in climbing and tree work. Taught by certified arborists, emphasizing safety and skill. Note: Limited enrollment. Requires personal protective equipment. Prerequisites: Instructor's approval, HE 252 First Aid.

HT 8.140 Landscape Maintenance*(5 class hrs/wk, 3 cr) F/Alternate Years*

Introduces principles, methods, techniques and use of equipment for maintenance of landscape and turf areas. Course offered alternate years only. Offered Fall 2005.

HT 8.141 Landscape Planning*(5 class hrs/wk, 3 cr) W*

Surveys basic layout and design, site utilization and orientation of landscape facilities. Includes landscape contours, grading, trees, shrubs, plant selection and utilization. Prerequisite: HORT 228 Landscape Plant Materials or instructor approval.

HT 8.169 Tree Identification*(5 class hrs/wk, 3 cr) F/Alternate Years*

Introduces trees and large woody shrubs used for landscaping purposes. Students learn to recognize each tree by its seasonal characteristics: leaves, fruits, flowers and stems. The form, habit, spread, soil requirements and horticultural usefulness are studied. Course offered alternate years only. Offered Fall 2004.

HUM: HUMANITIES**HUM 101 Humanities: Prehistory Through the Middle Ages***► (3 class hrs/wk, 3 cr) F*

Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures from prehistory through the Middle Ages. Emphasizes arts and ideas as both 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. Prerequisite: College level writing and reading skills (WR 121) are strongly recommended for success in this course.

HUM 102 Humanities: Renaissance Through the Enlightenment*► (3 class hrs/wk, 3 cr) W*

Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures from the Renaissance through the Enlightenment. Emphasizes arts and ideas as both 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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

HUM 103 Humanities: Romantic Era to Contemporary Society*► (3 class hrs/wk, 3 cr) Sp*

Examines the connections among arts, ideas and human experiences through study and experience of selected works from Western and non-Western cultures from the Romantic Era to Contemporary Society. 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. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course.

HV: HEAVY EQUIPMENT/DIESEL**HV 3.129 Heavy Equipment/Diesel Engines***(10 class hrs/wk, 1–5 cr) W*

Covers 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 manufacturers' specifications as they pertain to correct engine operation, performance and emissions.

HV 3.130 Heavy Equipment/Diesel Tune-Up*(20 class hrs/wk, 1–10 cr) Sp*

Studies diesel tune-up and techniques for optimum engine performance, including diagnostic troubleshooting, load testing and engine break-in procedure through use of the dynamometer. Prerequisite: Instructor approval required.

HV 3.131 Heavy Equipment Service and Repair*(5 class hrs/wk, 1–2 cr) F/W/Sp*

Provides continuing instruction in the practice of diagnosing, servicing, and repairing heavy equipment/diesel problems; summarizes all the learning units in the heavy equipment/diesel technology two-year program. Emphasizes attitudes, procedures, and philosophy of heavy equipment/diesel employees. Experiences are provided to simulate the work of a heavy equipment/diesel technician. Prerequisite: Heavy equipment/diesel technology major or instructor's approval.

HV 3.132 Advanced Mobile Hydraulics*(5 class hrs/wk, 3 cr) Sp*

Covers advanced hydraulic theory along with service and repair of valves, pumps, motors and connectors. Systems design and modification are included.

HV 3.134 Basic Hydraulics*(5 class hrs/wk, 3 cr) W*

Covers hydraulic theory along with pump, actuator application, and valve design and theory.

HV 3.140 Industrial Diesel Engine Fuel Systems*(10 class hrs/wk, 1-5 cr) W*

Covers the theory, repair, testing and calibration of diesel fuel injection pumps, governors and injector assemblies. The class will be taught giving as much time for hands on as possible. Prerequisite: HV 3.307 Mechanical Processes I or instructor's approval.

HV 3.143 Heavy Duty Electrical Applications*(10 class hrs/wk, 1-5 cr) F*

The purpose of this class is to extend the student's learning into the specifics of heavy equipment electrical systems. The student will examine the differing parameters of heavy equipment electrical systems; such as voltages, transformer charging systems, and semiconductor based power conversion. The student will review electrical concepts and look forward to basic multi-phase power generation, multiplexing and modular power distribution on late model trucks. Prerequisite: Placement test at RD 080 Building College Reading, MTH 20 Basic Mathematics; instructor signature required.

HV 3.146 Pneumatic Brakes and Controls*(10 class hrs/wk, 1-5 cr) F*

Covers the theory and application of pneumatic braking systems. The student will learn to service, diagnosis and repair brake and accessory air systems. Prerequisite: HV3.307 Mechanical Processes I or instructor's approval.

HV 3.295 Power Train Systems*(20 class hrs/wk, 1-10 cr) F/Sp*

Studies the complete power train system, with emphasis on the theory, application and servicing of clutch systems, manual transmissions, transfer cases, drive lines, universal joints and differential assemblies.

HV 3.296 Steering, Suspension and Braking*(20 class hrs/wk, 10 cr) F/W*

Covers fundamental principles of automotive suspension systems, with emphasis on frames, steering systems, alignment, and wheel balancing. A comprehensive study of disc and drum braking systems and their components is included. Prerequisite: Placement test scores for RD 080 Building College Reading and MTH 020 Basic Mathematics or equivalent.

HV 3.297 Electrical and Electronic Systems*(20 class hrs/wk, 1-10 cr) F/W*

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. Prerequisite: Placement test scores for RD 080 Building College Reading and MTH 020 Basic Mathematics or equivalent.

HV 3.303 Mobile Air Conditioning and Comfort Systems I*(5 class hrs/wk, 3 cr) F*

Theoretic principles of mobile heating and air conditioning systems with emphasis on design, function, adjustment, service and testing of components.

HV 3.307 Mechanical Processes I*(3 class hrs/wk, 2 cr) F*

Required for automotive and heavy equipment/diesel majors. Covers competencies and skills required for the first year. Covers safety, hand tools, power tools, precision measurement, metric measurement, fasteners, torque, and service manual usage.

HV 3.308 Mechanical Processes II*(3 class hrs/wk, 2 cr) Sp*

Covers fundamental skills needed for success in the first-year Heavy Equipment/Diesel Technology curriculum. Focus will be on bearings, lubrication, pushing and pulling devices and basic welding skills. Required for automotive and heavy equipment/diesel students.

HV 3.314 Applied Electrical Fundamentals I*(2 class hrs/wk, 2 cr) F*

A required course for automotive technician students. Covers basic electrical and electronics. The major emphasis is on the test equipment and usage.

IN: INDUSTRIAL TECHNICAL**IN 1.197 Introduction to Industrial Computers***(2 class hrs/wk, 1 cr) W*

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 3.443 Introduction to Manufacturing Process*(4 class hrs/wk, 2 cr) Sp*

Gives non-shop students exposure to shop safety, machine shop practices, gas and electric welding overview, and microstructure and testing procedures of metals and plastics.

JN: JOURNALISM**JN 134 Introduction to Photojournalism***(4 class hrs/wk, 3 cr) Sp*

Introduces photojournalism techniques such as digital imaging, films, equipment, light and reproduction. Covers conventional and electronic darkroom techniques and issues. Students study the history of documentary photography and analyze the effect of image content on audiences. Includes lab work. Prerequisite: ART 261 Introduction to Photography with a grade of "B" or better or instructor's approval.

JN 201 Media and Society*(4 class hrs/wk, 4 cr) F/Sp*

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*(2 class hrs/wk, 1 cr) F/W/Sp*

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 and Production Lab*(4 class hrs/wk, 2 cr) F/W/Sp*

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 and Writing*(3 class hrs/wk, 3 cr) F/W*

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 class hrs/wk, 3 cr) Sp*

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 journalism history, literature, ethics and law. Special attention to the literary journalism form. Prerequisite: College level reading and writing skills (WR 121) are strongly recommended for success in this course. Corequisite: JN 215A Journalism Lab.

JN 280 CWE Journalism*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

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.

MA: MACHINE TOOL**MA 3.396 Manufacturing Processes I***(2 class hrs/wk, 2 cr) F*

Through lecture, demonstration reading assignments and media presentations, introduces the student to the basic knowledge needed for the machinist's trade. Covers layout, operations planning, and the basic processes possible with the drill press, saws, mills and lathe. Safe and efficient operation is strongly emphasized.

MA 3.397 Manufacturing Processes II*(2 class hrs/wk, 2 cr) W*

Provides training in skills necessary to pursue a career in the machinist's trade. Instruction will be given in offhand and precision grinding, broaching, sawing and cut-off machines, lathe, and milling machine operations.

MA 3.398 Manufacturing Processes III*(2 class hrs/wk, 2 cr) Sp*

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.

MA 3.405 Inspection I*(1 class hr/wk, 1 cr) F*

Provides training in dimensional metrology and quality control.

MA 3.406 Inspection II*(2 class hrs/wk, 2 cr) Sp*

Provides training in dimensional metrology, quality control and geometric dimensioning and tolerancing. Prerequisite: MA 3.405 Inspection I.

MA 3.407 Mathematics for NC Machinists*(1 class hr/wk, 1 cr) F*

Provides mathematics training for NC machinists and programmers.

MA 3.409 Introduction to CNC*(2 class hrs/wk, 2 cr) F*

Introduces students to computer numerical control.

MA 3.412 Cam 1: Esprit*(4 class hrs/wk, 4 cr) W*

Introduces students to Esprit Cad/Cam software and Esprit solid modeling as it relates to Cad/Cam/CNC technology.

MA 3.413 Lean Manufacturing and Productivity*(1 class hr/wk, 1 cr) Sp*

Provides training in lean manufacturing strategies and proven techniques for increasing output while reducing manufacturing costs.

MA 3.414 Tool Technology*(1 class hr/wk, 1 cr) Sp*

Helps meet the need in industry for machinists that are trained in carbide insert identification and applications.

MA 3.416 CNC: Special Projects*(2-6 class hrs/wk, 1-3 variable credit) Sp*

Provides advanced computer numerical contron (CNC) training. Students will have some design responsibilities as well as design for manufacturing responsibilities as they complete projects. Careful planning, good machining practices, economic/business concerns, documentation and safety will be emphasized. Prerequisite: MA 3.420 CNC: Mill, MA 3.421 CNC: Lathe, equivalent experience or instructor approval.

MA 3.420 CNC: Mill*(6 class hrs/wk, 4 cr) W*

Introduces students to the CNC vertical milling machine operation and part programming using industry standard ISO/EIA machine code. Students gain experience reading, writing, and editing part programs for the three axis CNC mill. They learn how to generate machine code using Master CAM. Safety procedures are emphasized. Prerequisite: MA 3.422 Manufacturing Lab I or instructor approval.

MA 3.421 CNC: Lathe*(6 class hrs/wk, 4 cr) Sp*

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. Mastery of the two axis lathe coordinate plane prepares students for three axis milling work covered in CNC: Mill. Prerequisite: MA 3.422A or B Basic Lathe/Mill Processes or instructor approval.

MA 3.422A Basic Lathe/Mill Processes*(12 class hrs/wk, 4 cr) F*

Students complete a series of skill projects that emphasize safe operation of machine tools in metal cutting. Students set up and use several machines.

MA 3.422B Basic Lathe/Mill Processes*(3 class hrs/wk, 2 cr)*

Students complete a series of skill projects that emphasize safe operation of machine tools in metal cutting. Students use and set up several machines.

MA 3.423 Intermediate Turning and Milling*(12 class hrs/wk, 1-4 cr) W*

Provides machine tool technology training at the intermediate level. Students complete projects using lathes, mills, drill presses and other machine tools. Prerequisite: MA3.422A Basic Lathe/Mill Processes.

MA 3.424 Advanced Machining Operations and Procedures*(12 class hrs/wk, 4 cr) Sp*

Provides machine tool technology training at an advanced level. Students complete projects using lathes, mills, drill presses and other machine tools. Prerequisite: MA3.423 Intermediate Turning and Milling.

MA 3.431 Basic Blueprint Reading: Metals*(2 class hrs/wk, 2 cr) F*

Provides training in interpreting blueprints.

MA 3.432 Introduction to Mastercam*(3 class hrs/wk, 3 cr) F*

Introduction to Mastercam provides training on the use of Mastercam Version 9 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. Prerequisite: MA 3.422A or MA 3.422B Basic Lathe/Mill Processes or instructor permission.

MA 3.433 Mastercam II: Surfaces*(3 class hrs/wk, 3 cr) W*

Second course in the three-course Mastercam series. Students complete a series of exercises that include building more advanced surface toolpaths. Prerequisite: MA 3.432 Introduction to Mastercam or instructor approval.

MA 3.434 Mastercam III: Solids*(3 class hrs/wk, 3 cr) Sp*

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. Prerequisite: MA 3.433 Mastercam II: Surfaces.

ME: NONDESTRUCTIVE TESTING**ME 3.444 Welding Metallurgy I***(3 class hrs/wk, 2 cr) Sp*

An introduction to the physical and mechanical properties of weld metal and how the application of soldering, brazing, and fusion processes affect the structural and service requirements of metal joints. Investigations will be made to determine operator responsibility in regard to completing joints in welded metals that are capable of matching or exceeding the strength and reliability of the base metals. Students are instructed on the use of Material Safety Data Sheets as they relate to their assignments and the disposal of hazardous materials used in the course of their activities. During the term, students will work in groups of two and three to a team for the purpose of delegation of responsibilities towards the completion of assigned tasks.

ME 4.120 Fundamentals of Specifications*(3 class hrs/wk 3 cr) Sp*

Gives the student basic skills in writing and interpretation of specifications. Students begin with examples of misinterpreted specifications followed by discussion. Assignments help them understand proper formatting and styles of procedural and material specifications. Students are required to submit specifications for evaluation to two independent industries using available multimedia capabilities as their capstone experience.

ME 4.122 Strength of Materials*(3 class hrs/wk, 3 cr) F*

An introduction to the mechanics dealing with forces as they relate to tension, compression, torsion and shear. Three major factors are involved, including metals, time and force. Mechanical properties of metal are examined as these properties relate to service performance.

ME 6.272 Introduction to ISO 9000 Standards*(3 class hrs/wk, 3 cr)*

Introduces the concepts of formal quality systems operating within an organization to manage and control processes and the delivery of services. Historical reference and basic understanding of ISO 9001, 9002 and 9003 Standards with an emphasis on ISO 9001:2000. The practical consideration of implementation of such a formal system within an organization is reviewed. In addition to the system and standards, the student is introduced to specifics pertaining to quality manuals, various levels of documentation, as well as the system auditing and registrar accreditation process. Students

will be provided with theory and practical experience to become an effective quality system auditor. Students completing the course will have a basic understanding of the tools and techniques used in internal auditing.

ME 6.281 Magnetic Particle Testing and Penetrant Testing: Level I and II*(5 class hrs/wk, 3 cr) F*

An introductory course in the theory and applied techniques of liquid penetrant and magnetic particle inspection. Provides training on hazardous materials safety data sheets (MSDS). Students perform hands-on exercises with visible and fluorescent liquid penetrants and a variety of magnetic particle testing instrumentations. Meets minimum training requirements as recommended by SNT-TC-IA practices for Level I and II certification.

ME 6.282 Ultrasonic and Electromagnetic Testing: Level I*(5 class hrs/wk, 3 cr) W*

Introduces basic principles and provides hands-on time with calibration and application of contact immersion testing, application of electromagnetic instrumentations, and data acquisition. Ultrasonics a minimum of 40 hours, and electromagnetic a minimum of 24 hours. Meets minimum training requirements in ultrasonic testing as recommended by SNT-TC-IA practices for Level I certification.

ME 6.283 Radiographic Testing: Level I*(5 class hrs/wk, 3 cr) W*

An introductory course in the theory and techniques of radiographic testing and inspection. Introduces safety practices and radiation types. Students perform hands-on exercises with X-ray equipment. Meets minimum training requirements as recommended by SNT-TC-IA practices for Level I certification.

ME 6.284 Radiographic Testing: Level II*(6 class hrs/wk, 4 cr) Sp*

Reviews basic radiographic principles and introduces film quality techniques, radiographic evaluation and interpretation, and manufacturing processes with associated discontinuities. Meets minimum training requirements as recommended by SNT-TC-IA practices for Level II certification.

ME 6.285 Ultrasonic and Electromagnetic Testing: Level II*(6 class hrs/wk, 4 cr) Sp*

Reviews basic principles and provides hands-on time with calibration and application of contact immersion testing, application of electromagnetic instrumentations and data acquisition. Ultrasonics a minimum of 40 hours, and electromagnetic a minimum of 24 hours. Meets minimum training requirements in ultrasonic testing as recommended by SNT-TC-IA practices for Level II certification.

ME 6.289 Introduction to Quality Science Principles*(5 class hrs/wk, 4 cr) W*

The first of a two-part sequence, this introductory course covers history, effects of quality, inspection processes, sampling principles, measurement techniques, conversions, reading charts and graphs, quality management concepts, problem-solving tools terminology and shop math. Prerequisite: MTH 020 Basic Mathematics or equivalent.

ME 6.291 Quality Science Principles*(4 hrs/wk, 3 cr)*

The second of a two-part sequence, this course introduces students to statistics; sampling process; geometric dimensioning and tolerancing inspection processes; sampling principles; measurement techniques; conversions; and interpreting and analyzing data, charts and graphs. Recommended as preparatory coursework for taking the Certified Quality Technician Exam or the Certified Mechanical Inspector as required by the American Society for Quality. Prerequisite: ME 6.289 Introduction to Quality Science Principles.

ME 6.293 Introduction to Metallurgy*(6 class hrs/wk, 4 cr) F*

A basic introduction of metallurgical principles, this includes a study of the crystalline and atomic structure of metals and alloys as it relates to processing of raw materials, manufacturing of metal products, fabrication, research, nondestructive inspection of materials and a measurement and evaluation of the physical and mechanical properties of materials. Students are introduced to a variety of measurement and inspection methods with many hands-on applications using state-of-the-art instrumentation. All topics introduced will be covered in greater detail during subsequent courses. Students learn to use Material Safety Data Sheets as they relate to their assignments and the disposal of hazardous materials used in the course of their activities. Working in teams of two or three, students delegate responsibilities to complete assigned tasks. A capstone term project is required.

ME 6.295 Self-auditing for the NDT Industry*(2 class hrs/wk, 1 cr)*

Provides the student with theory and practical experience necessary to become an effective quality system auditor. Students gain a basic understanding of the tools and techniques used in internal auditing.

ME 6.298 Metallography*(4 class hrs/wk, 3 cr) W*

An introduction to metallographic principles and operation of specific metallographic equipment, including specimen mounting, polishing, etching, visual examination, photomacrography and photomicrography of ferrous and non-ferrous materials. Practical applications of metallographic mounting sequences include sample preparation, mounting, grinding, etching, microscopic inspection, macroscopic study, and photography. Students are instructed on the use of Material Safety Data Sheets as they relate to their assignments and the disposal of hazardous materials used in the course of their activities. A capstone project is required.

MO: MEDICAL OFFICE**MO 5.414 Drug Classifications and Names***(3 class hrs/wk, 3 cr) W/Sp*

Introduces the top 50 drugs prescribed plus drug classifications, use and side effects. Stresses spelling and pronunciation. Prerequisite: MO 5.630 Medical Terminology I or equivalent experience.

MO 5.532 Medical Terminology/Pharmacology*(2 cr) As Needed*

Introduces the terminology of anatomy and physiology fundamental to understanding a physician's diagnosis and treatment. Includes basic root words, prefixes and suffixes. Also gives students a working knowledge of the commonly used drugs in a hospital/pharmacy.

MO 5.550 Human Relations in Health Care*(3 class hrs/wk, 3 cr) F*

Introduces human relations as they pertain to students' success in medical offices, as well as their personal lives. Follows the course content suggested by the Medical Assistant National Accreditation Guidelines.

MO 5.625 Basic Clinical Office Procedures*(8 hrs/wk, 5 cr) F*

Prepares medical assistant to prepare patient, assist medical personnel, and providing aseptic environments in ambulatory care settings. Prerequisite: Enrollment in Administrative Medical Assistant or Medical Assistant programs. Medical assistant students take this during the fall term of the second year or 90 days before MO 5.640 Medical Assisting Externship I.

MO 5.626 Clinical Office Procedures II: Medical Assistants*(8 class hrs/wk, 5 cr) W*

Continues Clinical Office Procedures I for the Medical Assisting program. Includes surgical asepsis, collection of specimens for laboratory testing, common office emergencies and pre-planned actions for coping with emergencies and administration of medications. Prerequisite: MO 5.625 Basic Clinical Office Procedures.

MO 5.630 Medical Terminology I*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Introduces the terminology of anatomy and physiology fundamental to the understanding of the physician's diagnosis and treatment. Includes basic root words, prefixes and suffixes.

MO 5.631 Medical Terminology II*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Continues MO 5.630 Medical Terminology I as applied to the human body. Body systems, pathology, diseases, laboratory tests, pharmacology and abbreviations are studied. Prerequisite: MO 5.630 Medical Terminology I.

MO 5.632 Medical Terminology III*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Continues MO 5.631 Medical Terminology II, emphasizing specific pathology and medical practice areas. Prerequisite: MO 5.631 Medical Terminology II.

MO 5.640 Medical Assisting Externship I*(9 class hrs/wk, 3 cr) F/W/Sp*

Students participate in an externship for a minimum of 90 hours for three credits. This is usually nine hours per week for 10 weeks in an approved office and clinical training site. Must meet weekly with instructor to review externship progress. Prerequisite: All administrative courses must be completed prior to entering externship. Prior work experience will be evaluated on an individual basis.

MO 5.641 Medical Assisting Externship II*(18 class hrs/wk, 6 cr) F/W/Sp*

Provides a clinical externship during the last term for the medical assisting student and continues MO 5.640 Medical Assisting Externship I. This is usually 18 hrs/wk for 10 weeks in an approved office and clinical setting. Must meet weekly with instructor to review externship progress. Prerequisite: MO 5.640 Medical Assisting Externship I.

MO 5.650 Basic Electrocardiography Techniques*(1 class hrs/wk, 1 cr) W*

Teaches the proper application of electrocardiogram (EKG) leads to a patient in order to obtain a recording of the electrical impulses of the heart. Prerequisites: Admission into the Medical Assisting Program; BI 103 General Biology: The Human Body; MO 5.625 Basic Clinical Office Procedures.

MO 5.655 Phlebotomy for Medical Assistants*(3 class hrs/wk, 2 cr) W*

Teaches skills in collecting blood specimens for laboratory testing, as well as proper labeling and preservation techniques on samples. Students perform selected tests on the blood collected. Prerequisites: Admission into the Medical Assisting Program; BI 103 General Biology: The Human Body; MO 5.625 Basic Clinical Office Procedures.

MO 5.661 Physician's Office Laboratory Procedures*(3 class hrs/wk, 2 cr) W*

Teaches the medical assistant's duties in the physician's office laboratory. Students perform basic "CLIA '88 waived" tests. Prerequisites: MO 5.631 Medical Terminology II; MO 5.625 Basic Clinical Office Procedures; enrollment in Medical Assisting Program.

MO 5.662 Preparation for Certifying Exam (Clinical)*(1 class hrs/wk, 1 cr) Sp*

Systematic review of administrative clinical medical courses taken in Medical Assistant program to prepare for National Certification Examination. Prerequisite: Must be enrolled in MO 5.641 Medical Assisting Externship II of the Medical Assistant Program.

MO 5.665 Documentation and Screening in the Medical Office*(2 class hrs/wk, 2 cr) W/Sp*

Prepares medical office personnel to answer telephone, assess and document conversation, and disseminate information in an ambulatory care setting. Develops and uses a physician-authorized telephone screening manual. Prerequisite: MO 5.630 Medical Terminology I; OA 2.671 Medical Law and Ethics; and OA 202 MS Word for Business.

MP: MUSICAL PERFORMANCE

Each MP class may be taken three times for credit.

MP 101 Symphonic Band*(3 class hrs/wk, 1 cr) W/Sp*

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.

MP 102 Concert Band*(3 class hrs/wk, 1 cr) F/W/Sp*

In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a concert band. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 103 Marching Band*(3 class hrs/wk, 1 cr) F*

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 require an audition. An unsuccessful audition will result in disenrollment.

MP 104 Pep Band*(1.5 class hrs/wk, 1 cr) F/W/Sp*

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 Pep Band in conjunction with the Oregon State University Department of Music. Note: Each class may be taken three times for credit. May require an audition. An unsuccessful audition will require disenrollment.

MP 105 Jazz Band*(2 class hrs/wk, 1 cr) F/W/Sp*

In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a jazz band. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 115 Community Chorale*(2 class hrs/wk, 1 cr) F/W/Sp*

Provides performance-oriented class for major choral works.

MP 122 Concert Choir*(3 class hrs/wk, 2 credits) F/W/Sp*

Concert choir is a traditional choral performance class that includes the singing and performing of a broad historical spectrum of choral music. Note: May require audition. An unsuccessful audition will result in disenrollment.

MP 131 Chamber Choir*(3 hrs/wk, 2 credits) F/W/Sp*

Small, select vocal group that studies and performs early to contemporary literature. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 141 Symphony Orchestra*(3 hrs/wk, 1 credits) F/W/Sp*

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. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 151 Rehearsal and Performance*(3–20 class hrs/wk, 1–3 cr) F/W/Sp/Su*

Offers credit for music rehearsal directly related to Performing Arts Department performance. Prerequisite: Instructor approval.

MP 171 Individual Lessons: Piano*(1 cr) F/W/Sp/Su*

Provides individual instruction in piano. Note: Requires additional tutorial fee.

MP 174 Individual Lessons: Voice*(1 cr) F/W/Sp*

Provides individual instruction in voice. Prerequisite: Instructor approval required. Note: Requires additional tutorial fee.

MP 181 Individual Lessons: Flute*(1 cr) F/W/Sp/Su*

Provides individual instruction in flute. Note: Requires additional tutorial fee.

MP 186 Individual Lessons: Trumpet*(1 cr) F/W/Sp*

Provides individual instruction in trumpet. Note: Requires additional tutorial fee.

MP 201 Symphonic Band*(3 class hrs/wk, 1 cr) W/Sp*

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.

MP 203 Marching Band*(3 class hrs/wk, 1 cr) F*

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 require an audition. An unsuccessful audition will result in disenrollment.

MP 204 Pep Band*(1.5 class hrs/wk, 1 cr) F/W/Sp*

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 Pep Band in conjunction with the Oregon State University Department of Music. Note: Each class may be taken three times for credit. May require an audition. An unsuccessful audition will require disenrollment.

MP 205 Jazz Band*(2 class hrs/wk, 1 cr) F/W/Sp*

In conjunction with the Oregon State University Department of Music, provides an opportunity for participation in a jazz band. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 215 Community Chorale*(2 class hrs/wk, 1 cr) F/W/Sp*

Provides performance-oriented class for major choral works.

MP 222 Concert Choir*(3 class hrs/wk, 2 credits) F/W/Sp*

Concert choir is a traditional choral performance class that includes the singing and performing of a broad historical spectrum of choral music.

Note: May require audition. An unsuccessful audition will result in disenrollment.

MP 231 Chamber Choir*(3 hrs/wk, 2 credits) F/W/Sp*

Small, select vocal group that studies and performs early to contemporary literature. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 241 Symphony Orchestra*(3 hrs/wk, 1 credits) F/W/Sp*

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. Note: May require an audition. An unsuccessful audition will result in disenrollment.

MP 242 Chamber Orchestra*(2 class hrs/wk, 1 cr) F/W/Sp*

Provides an opportunity for participation in a strings orchestra. The group performs repertoire from the 18th, 19th and 20th centuries.

MP 251 Rehearsal and Performance*(3–20 class hrs/wk, 1–3 cr) F/W/Sp/Su*

Offers credit for music rehearsal directly related to Performing Arts Department performance. Prerequisite: Instructor approval.

MP 271 Individual Lessons: Piano*(1 cr) F/W/Sp/Su*

Provides individual instruction in piano. Note: Requires additional tutorial fee.

MP 274 Individual Lessons: Voice*(1 cr) F/W/Sp*

Provides individual instruction in voice. Prerequisite: Instructor approval required. Note: Requires additional tutorial fee.

MP 281 Individual Lessons: Flute*(1 cr) F/W/Sp/Su*

Provides individual instruction in flute. Note: Requires additional tutorial fee.

MP 286 Individual Lessons: Trumpet*(1 cr) F/W/Sp*

Provides individual instruction in trumpet. Note: Requires additional tutorial fee.

MS: MILITARY STUDIES**MS 111 Military Science I: Leadership Development***(1 class hr/wk, 1 cr) F*

Introduction to ROTC and its relationship to the U.S. Army. Role of the army officer, including leadership and management fundamentals. Types of jobs available to army officers.

MS 112 Military Science I: Military Skills*(1 class hr/wk, 1 cr) W*

Basic rifle marksmanship; military first aid; customs and traditions of the U.S. Army; unit organization and missions.

MS 113 Military Science I: Land Navigation*(1 class hr/wk, 1 cr) Sp*

How to read a topographic map and use a magnetic compass; includes practical exercises.

MS 211 Military Science II: Effective Team Building*(2 class hrs/wk, 2 cr) F*

An examination of effective leadership. Development of interpersonal skills using practical exercises and case studies.

MS 212 Military Science II: American Military History*(2 class hrs/wk, 2 cr) W*

History of the American soldier from 1775 to 1919; weaponry and tactics of the American Army. Use of battle analysis and wargaming included.

MS 213 Military Science II: Fundamentals of Military Operations*(2 class hrs/wk, 2 cr) Sp*

Basic U.S. Army tactics at the individual, team, and squad levels. Integration of military skills in offensive and defensive operations.

MTH: MATH

Eligibility to enroll in math courses is based on demonstrated skill level through completing the appropriate prerequisite with a "C" grade or higher or achieving an appropriate test score on the Computerized Placement Test (CPT). Many math courses require a calculator. Please see your instructor to determine the type of calculator that is appropriate.

MTH 020 Basic Mathematics*(4 class hrs/wk, 4 cr) F/W/Sp/Su*

Provides a thorough review of arithmetic, including fundamental operations with whole numbers, fractions, decimals, percentages, geometry and measurement. Provides a basis for MTH 060 Introduction to Algebra. Note: A minimum competency level is required to pass this course.

MTH 060 Introduction to Algebra*(4 class hrs/wk, 4 cr) F/W/Sp/Su*

A first course in algebra for students who have no previous algebra experience or who need a thorough review. Assumes no familiarity with algebra. Introduces basic operations with integers, exponents, algebraic expressions, linear equations, graphing, dimensional analysis, scientific notation, ratio and proportion, realistic percent problems and other problems that lend themselves to one-variable solutions and introduces statistics, including bar graphs, mean, median, mode and range. 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. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 020 Basic Mathematics or equivalent.

MTH 061 Survey of Mathematical Fundamentals*● (3 class hrs/wk, 3 cr) F/W/Sp/Su*

Survey course for the Associate of Applied Science degree. Includes applications of basic algebra, ratio and proportion, charts, tables, graphs, data analysis and problem solving, and provides an introduction to practical geometry. Emphasis is on applications. Application problems are realistic with some data to be collected, analyzed and discussed in a group setting with results submitted in written form. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 060 Introduction to Algebra or equivalent.

MTH 062 Occupational Trigonometry

● (1 class hrs/wk, 1 cr) F/W/Sp/Su

Introduces right triangle trigonometry and its applications. Occupational formulas and applications are used. Note: A minimum competency level is required to pass this class. Prerequisite: MTH 061 Survey of Mathematical Fundamentals or instructor's approval.

MTH 063 Industrial Shop Math

● (1 class hrs/wk, 1 cr) Sp

Acquaints students with measuring tools in the industrial shop and the types of computations and problem-solving methods frequently needed in industrial settings. Note: A minimum competency level is required to pass this course. Prerequisite: MTH 061 Survey of Mathematical Fundamentals or instructor's approval.

MTH 064 Business Applications of Math Fundamentals

● (1 class hrs/wk, 1 cr) F/W/Sp/Su

Covers the mathematics of finance, including simple interest and compound interest as applied to bank loans, installment buying, credit purchases and annuities. Prerequisite: MTH 061 Survey of Mathematical Fundamentals or instructor's approval.

MTH 065 Elementary Algebra

● (4 class hrs/wk, 4 cr) F/W/Sp/Su

A nontraditional algebra course that incorporates some geometry, statistics and trigonometry. Designed for the student who is familiar with beginning algebra concepts (see MTH 060). 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.

MTH 095 Intermediate Algebra

● (4 class hrs/wk, 4 cr) F/W/Sp/Su

Designed for the student who is familiar with elementary algebra, as well as basic geometry and statistics (see MTH 065). Topics include graphing quadratic, exponential, logarithmic 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. A minimum competency level is required to pass this course. Note: Students use graphing calculators in this course. Prerequisite: MTH 065 Elementary Algebra or equivalent.

MTH 097 Practical Geometry

● (4 class hrs/wk, 4 cr) F/W/Sp/Su

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.

MTH 105 Introduction to Contemporary Mathematics

● (4 class hrs/wk, 4 cr) W/Sp

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 art. 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 and MTH 097 Practical Geometry or equivalent.

MTH 111 College Algebra

● (5 class hrs/wk, 5 cr) F/W/Sp/Su

Explores relations and linear, quadratic, exponential, polynomial, rational and logarithmic functions. Includes theory of equations, matrices and determinants, and may introduce sequences and series. Prerequisites: MTH 095 Intermediate Algebra and MTH 097 Practical Geometry or equivalent.

MTH 112 Trigonometry

● (5 class hrs/wk, 5 cr) F/W/Sp/Su

Introduces trigonometric functions, trigonometric identities, inverse trigonometric functions, trigonometric equations, right triangle trigonometry, complex numbers and polar coordinates. Includes parametric equations, vectors, 3-D geometry and conic sections. Prerequisites: MTH 111 College Algebra and MTH 097 Practical Geometry or equivalent.

MTH 199 Mathematics: Special Studies

● (1-3 class hrs/wk, 1-3 cr) As needed

Allows the student to investigate, with supervision from a faculty member, a topic of his or her interest at an individualized pace. Credits and projects will be determined jointly by the instructor and the student.

MTH 211 Fundamentals of Elementary Mathematics I

● (4 class hrs/wk, 4 cr) F/W

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.

MTH 212 Fundamentals of Elementary Mathematics II

● (4 class hrs/wk, 4 credits) W/Sp

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.

MTH 213 Fundamentals of Elementary Mathematics III

● (4 class hrs/wk, 4 credits) Sp

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 and MTH 097 Practical Geometry or equivalent.

MTH 231 Elements of Discrete Mathematics

● (4 class hrs/wk, 4 cr) W

The first course in discrete mathematics for mathematics and computer science majors. Topics include elementary logic, mathematical induction, functions and sequences, finite and infinite sets, counting techniques, basic matrix algebra, relations, graphs and trees. Prerequisite: MTH 112 Trigonometry or equivalent. MTH 251 Differential Calculus recommended.

MTH 232 Elements of Discrete Mathematics

● (4 class hrs/wk, 4 cr) Sp

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.

MTH 241 Calculus for Biological/Management/Social Sciences

● (4 class hrs/wk, 4 cr) F/W/Sp

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.

MTH 243 Introduction to Statistics

● (4 class hrs/wk, 4 cr) As needed

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.

MTH 245 Math for Biological/Management/Social Sciences

● (4 class hrs/wk, 4 cr) F/W/Sp

A survey course of discrete mathematics for non-physical science majors. Topics include systems of inequalities, linear programming and the simplex method, probability and probability distributions, and an introduction to descriptive statistics. Prerequisite: MTH 111 College Algebra.

MTH 251 Differential Calculus

● (5 class hrs/wk, 5 cr) F/W/Sp/Su

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.

MTH 252 Integral Calculus

● (5 class hrs/wk, 5 cr) F/W/Sp/Su

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.

MTH 253 Calculus

● (4 class hrs/wk, 4 cr) F/Sp

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. Prerequisite: MTH 252 Integral Calculus.

MTH 254 Calculus

● (4 class hrs/wk, 4 cr) F/W

The fourth course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include vectors in 2- and 3-space, multivariable functions and partial derivatives, vector functions, directional derivatives, Lagrange multipliers, cylindrical and spherical coordinates, multiple integrals and their applications, and an introduction to vector calculus. Prerequisite: MTH 252 Integral Calculus.

MTH 255 Vector Calculus

● (4 class hrs/wk, 4 cr) W

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.

MTH 256 Applied Differential Equations

● (4 class hrs/wk, 4 cr) Sp

Beginning course in differential equations for students majoring in mathematics, sciences or engineering. Covers ordinary differential equations, series solutions and Laplace transforms. Prerequisite: MTH 254 Calculus or instructor's approval.

MTH 265 Statistics for Scientists and Engineers

● (4 class hrs/wk, 4 cr) W

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. Prerequisite: MTH 252 Integral Calculus.

MTH 280 CWE Mathematics

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

Designed to give students practical experience in supervised employment related to mathematics. 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.

MTH 299 Mathematics: Special Studies

(1–3 class hrs/wk, 1–3 cr) As needed

Allows the student to investigate, with supervision from a faculty member, a topic of his or her interest at an individualized pace. Credits and projects will be determined jointly by the instructor and the student.

MUS: MUSIC**MUS 101 Music Fundamentals**

➤ (3 class hrs/wk, 3 cr) F/W/Sp

Includes music reading, basic music theory, study of scales, interval, chord recognition and music analysis.

MUS 161 Music Appreciation

➤ (3 class hrs/wk, 3 cr) F/W/Sp

Studies music through the elements or language of music, musical forms and the history of music.

MUS 205 Introduction to Jazz

➤ (3 class hrs/wk, 3 cr) F

Provides a listener's approach to the development of jazz through its various styles and its place in Afro-American and 20th century socio-political history.

MUS 280 CWE Music

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

An instructional program designed to give students practical experience in supervised employment related to music. 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.

NFM: NUTRITION AND FOOD MANAGEMENT

NFM 225 Nutrition

(4 class hrs/wk, 4 cr) F/W/Sp

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. Note: A background in chemistry is recommended.

NU: NURSING ASSISTANT

NU 5.403 Introduction to Nursing

(4 credits) As needed

This laboratory class allows students to practice and perform the skills of the nursing assistant before entering the Nursing program. The skills include: vital signs, hygiene measures, comfort measures, special procedures, bedside nursing, mobility measures, safety measures, nutrition measures, elimination measures and restorative care device use.

NU 5.406 Nursing Assistant

(30 hrs/wk, 9 cr) F/W/Sp/Su

150 hours fulfilling the Oregon State Board of Nursing requirements (75 hours of classroom/skills laboratory instruction and 75 hours of clinical experience). Course includes instruction in basic bedside nursing skills, basic restorative services, mental health and social service needs, personal care skills and resident rights. Students will learn the knowledge and skills necessary to care for convalescing residents and residents in nursing facilities. Following successful completion of the course, the student may take the Board of Nursing Nurse Assistant Competency Exam (NACE) and apply for certification as a Nursing Assistant. Prerequisite: Students are urged to have a high school diploma and to be physically able to lift and turn dependent residents, see and hear residents in distress, therapeutically communicate, intervene in stressful situations, make judgements under stress. Take and pass LBCC College Placement Reading test at 31st percentile or higher. Show proof of negative TB test with in last nine months and measles immunizations #1, and #2 if born after Jan. 4, 1957. Prior to resident care the student must be deemed "qualified" by Senior and Disabled Services Division following a criminal history check.

NU 5.570 PN Role Transitions

(1 class hr/wk, 1 cr)

The PN transition course is a requirement for nursing students currently enrolled in the AD Nursing Program who wish to seek licensure as an PN in the state of Oregon. Students participate in a theory experience whose emphasis is on guidance regarding vocational nursing opportunities. This exploration covers the responsibilities in making the transition to the provider of care and member of the practical nurse profession, and an in-depth view of the practical nurse's scope of practice as it relates the Oregon Board of Nursing's Nurse Practice Act and the legal and ethical issues that occur in the practice of the PN. In addition, an overview of the principles of management, leadership and supervision skills required for practical nursing in a structured health care setting is discussed. Prerequisite: Completion of NUR 101 Nursing I, NUR 102 Nursing II, and/or concurrent enrollment in NUR 103 Nursing III.

NUR: NURSING

NUR 101 Nursing I

(16 class hrs/wk, 9 cr) F

NUR 101 is the first course in the nursing sequence. The course prepares the beginning nursing students to learn about the skills and core concepts required to perform the professional roles of care provider, communicator, and critical thinker in the context of a health care system. Students begin the socialization process into the role of the nurse. Issues related to health-illness continuum, communication, health promotion, and patient care management theory is explored within the context of the health care delivery system. This course will focus on assessing, developing, implementing and evaluating a plan of care that respects the individual's beliefs related to variations in concepts of health and illness and with communication differences. Other content will include the pathophysiology, nursing assessment, nursing implications and related pharmacology to patient with changes in functional status and the care of patients with an infection, a fluid imbalance, and psychosocial and mental health needs. Simulated practice of fundamental nursing skills is included. Clinical application of both theory and skills occurs in a hospital setting. Prerequisite: WR 121 English Composition, MTH 065 Elementary Algebra and admission to the Nursing program.

NUR 102 Nursing II

(16 class hrs/wk, 9 cr) W

Second in the core nursing sequence. The focus of this course is the advanced topics in nursing care of the surgical patient experiencing physical and psychological changes in body image related to wounds, and general surgery. The content also includes concepts and problems of nursing care related to patients confronted with airway disorders, musculoskeletal disorders, metabolic disorders, digestive and intestinal disorders, reproductive disorders and stable neurological disorders. Simulated practice of nursing skills in the multimedia setting. Clinical application of both theory and skills occur in the hospital setting.

NUR 103 Nursing III

(17 class hrs/wk, 9 cr) Sp

Third course in the nursing sequence. The initial focus of this course is related to concepts in nursing care of the patient experiencing physical and psychological changes as they relate to childbearing, child rearing and children as patients. The nursing roles of provider of care, teacher, member of a profession are explored in meeting the needs of patients in the labor and delivery, postpartum, newborn nursery and pediatric unit. Content includes pathophysiology, nursing implications, diagnostic test, and related pharmacology. Student assess patients, identify nursing diagnosis, implement and evaluate nursing interventions to promote adaptive responses in pediatric and obstetric patient experiencing alterations in physiologic and psychosocial modes. This course also focuses on problems of nursing care related to patients confronted with neurological and cardiac disease. Simulated practice of fundamental nursing skills is included with application of both theory and skill in the hospital and community setting.

NUR 110 Nursing Transitions

(1 class hr/wk, 1 cr) F

Offers incoming freshmen an opportunity to receive help and support while entering the Nursing program. Provides a variety of topics on stress management, study skills and review of curriculum content. Provides a support group through informal discussions and opportunity for problem solving.

NUR 122 Contemporary Nursing I*(1 class hrs/wk, 1 cr) Sp*

Defines the nursing role based on the history of the profession, current theories on the nature of health and disease, and selected responsibilities of the nurse in society and as a practitioner. Reciprocal influences between society and nursing are identified as they relate to biological, sociological, psychological and therapeutic settings. Current issues, trends and practices in nursing are identified. Prerequisite: Instructor approval required.

NUR 201 Nursing IV*(17 class hrs/wk, 9 cr) F*

Nursing 201 is the fourth course in the nursing sequence. The focus of this course is on comprehensive nursing interventions to promote positive patient response to health and illness issues. Content includes pathophysiology, nursing assessment, nursing implications of related diagnostic tests and pharmacology for patients with acute pulmonary disorders, degenerative neurological disorders, cardiac disorders, and immune system disorders. Students will utilize the nursing process to promote positive outcomes in patients experiencing complex physiologic and psychosocial alterations in those body systems. Emphasis is placed on the roles of the nurse as care giver, communicator, educator and critical thinker. Issues surrounding chronicity and nursing care of high risk populations in the community including issues related to the care given and patient. Emphasis is on critical thinking and nursing process as it relates to patient care in the hospital setting. Simulated practice of nursing skills in the multimedia setting. Clinical application of both theory and skills occurs in the hospital and community setting. Prerequisites: NUR 101, 102, 103 (Nursing I, II and III); NUR 268A and NUR 268 B Drug Therapy and Nursing Implications or completion of all advanced placement requirements.

NUR 202 Nursing V*(17 class hrs/wk, 9 cr) W*

Nursing 202 is the fifth course in the core nursing sequence. The focus of this course is on comprehensive nursing interventions to promote positive patient response to health and illness issues. Critical thinking will be promoted by assisting the student to interrelate pathophysiology, nursing assessment, nursing implications of related diagnostic tests and pharmacology for patients with blood disorders, cancer, renal disorders, hepatic and exocrine disorders, neurological disorders, shock and multisystem disorders, as well as acute mental health issues. A final emphasis is in applying nursing theory to issues surrounding the complicated perinatal patient and the family. Students will utilize the nursing process to promote positive outcomes in patients experiencing complex physiologic and psychosocial alterations in those body systems. Emphasis is on critical thinking and nursing process as it relates to patient care in the hospital setting. Simulated practice of nursing skills in the multimedia setting. Clinical application of both theory and skills occurs in the hospital and community setting. Prerequisites: NUR 101, 102 and 103 and NUR 201 (Nursing I, II, III and IV); NUR 268A, B and C (Drug Therapy and Nursing Implications) or completion of all advanced placement requirements.

NUR 203 Nursing VI*(15 class hrs/wk, 7 cr) Sp*

Nursing 203 is the final and sixth course in the core nursing sequence. The focus of this course is on the comprehensive nursing care and first level patient care management skills in caring for small groups of hospitalized patients. The registered nurse preceptor directly supervises the student under the guidance of the nursing faculty liaison. The student will practice delegation and evaluation of health team members from a variety of backgrounds. Theory development focuses group and individual case study presentations of patient scenarios with complicated clinical presentations

where pathological factors interplay. Clinical application of theory and skills occurs in the hospital setting. Prerequisites: NUR 101, 102, 103, NUR 201 and 202 (Nursing I, II, III, IV and V); NUR 268A, B and C (Drug Therapy and Nursing Implications) or completion of all advanced placement requirements.

NUR 215A Health and Physical Assessment*(2 class hrs/wk, 2 cr)*

Provides the fundamental knowledge and technical skills necessary to obtain a complete health history and a head-to-toe physical assessment for patients who are of early adult to older adult age groups in a variety of clinical settings. Prerequisite: NUR 102 (Nursing II) or a licensed nurse (LPN, RN). Those wishing to use this course as a transfer course must complete the course for two credits plus NUR 215B Health and Physical Assessment in order to meet the three-credit transfer requirement.

NUR 215B Health and Physical Assessment*(2 class hrs/wk, 1 cr) Sp*

Provides the technical skills necessary to complete a sequences head-to-toe physical assessment for patients who are of early adult to older adult age groups in a lab setting. Prerequisites: NUR 102 Nursing II and NUR 215A Health and Physical Assessment, or a licensed nurse (LPN or RN) with NUR 215A. Those students wishing to use this course as a transfer course must complete this course and NUR 215A Health and Physical Assessment in order to meet the three-credit transfer requirement.

NUR 222 Contemporary Nursing II*(1 class hrs/wk, 1 cr) W*

Continuation of NUR 122. Introduces students to and enables discussion of ethical, legal and professional responsibilities in relation to employment, licensure, professional organizations and changing trends in health care. Includes job search skills. Prerequisite: Instructor approval.

NUR 268A Drug Therapy and Nursing Implications*(1 class hrs/wk, 1 cr) F*

Introduces basic pharmacology for nurses. Students gain an understanding of individual variations in response to drugs, drug metabolism, adverse reactions and drug interactions. Nursing interventions to prevent adverse reactions to drugs are discussed. Includes the study of major drug classifications and prototype drugs in each group.

NUR 268B Drug Therapy and Nursing Implications*(1 class hrs/wk, 1 cr) W*

Introduces basic pharmacology for nurses. Students gain an understanding of individual variations in response to drugs, drug metabolism, adverse reactions and drug interactions. Nursing interventions to prevent adverse reactions to drugs are discussed. Includes the study of major drug classifications and prototype drugs in each group. Prerequisite: NUR 268A Drug Therapy and Nursing Implications.

NUR 268C Drug Therapy and Nursing Implications*(1 class hrs/wk, 1 cr) F*

Introduces basic pharmacology for nurses. Students gain an understanding of individual variations in response to drugs, drug metabolism, adverse reactions and drug interactions. Nursing interventions to prevent adverse reactions to drugs are discussed. Includes the study of major drug classifications and prototype drugs in each group. Prerequisites: NUR 268A and NUR 268B Drug Therapy and Nursing Implications.

NUR 280S Service-Learning Nursing*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their service-learning approved by the appropriate faculty coordinator.

OA: BUSINESS TECHNOLOGY**OA 121 Keyboarding***(5 class hrs/wk, 1–2 cr) F/W/Sp/Su*

Teaches the correct reaches, posture and techniques to prevent computer-related injuries for touch keying on the alphabetic and top-row number keys. Designed for those with no previous keyboarding instruction or those needing a review of touch techniques. Self-paced six-week class.

OA 122 Formatting*(5 class hrs/wk, 1–2 cr) F/W/Sp/Su*

Student will correctly format business memos, letters, tables and reports using word processing software. Six-week class. Prerequisite: OA 121 Keyboarding or touch typing at 25 wpm minimum.

OA 123A Typing Skillbuilding*(5 class hrs/wk, 2 cr) F/W/Sp/Su*

Beginning typing skillbuilding course designed to build speed and accuracy on the alphabetic computer keyboard. Program determines current typing speed; prescribes appropriate practice, including alphabetic reviews, individual finger drills, concentration drills, number drills, and alternate-hand drills; and evaluates progress. Six-week class. Prerequisite: OA 121 Keyboarding or touch typing at 25 wpm minimum.

OA 123B Advanced Typing Skillbuilding*(5 class hrs/wk, 2 cr) F/W/Sp/Su*

Designed to further build speed and accuracy on the alphabetic computer keyboard. Software determines current typing speed, prescribes appropriate practice including alphabetic reviews, vertical and horizontal reaches, double-letter words, numbers and right-/left-hand drills; and evaluates progress. Six-week class. Prerequisite: OA 123A Typing Skillbuilding.

OA 124 Typing Speed and Accuracy Development*(5 class hrs/wk, 3 cr) F/W/Sp*

Full-term typing skillbuilding course designed to build accuracy first and then build speed on the alphabetic computer keyboard. Each week the program diagnoses the student's problem areas based on five-minute timings, prescribes individual practice materials, and evaluates skill development. Prerequisite: OA 121 Keyboarding or touch typing at 25 wpm minimum.

OA 201 WordPerfect for Business*(5 class hrs/wk, 1–3 cr) F//Sp/Su*

An in-depth course for learning how to create and revise a variety of business documents using the commands and features of WordPerfect for Windows. Prerequisite: OA 121 Keyboarding or touch typing at 25 wpm minimum.

OA 202 MS Word For Business*(5 class hrs/wk, 1–3 credits) F/W/Sp/Su*

An in-depth course for learning Microsoft Word features to create, edit, proofread, and format a variety of business documents including letters, memos, envelopes/labels, long manuscripts, newsletters and tables. Includes Microsoft Word power tools such as mail merge, styles, graphics, macros, program integration and Web page development. Prerequisites: OA 121 Keyboarding or touch typing at 25 wpm minimum; CIS 1250 Introduction to Windows or equivalent.

OA 203 Advanced Word Processing*(5 class hrs/wk, 3 cr) F/Sp*

Explores advanced functions of the popular word processing packages for the windows environment. Using a project and hands-on approach, learn how to apply concepts and software functionality to job-related projects. Topics include basic and advanced merges, macros, document management features, inserting and layering graphics, form design and Internet applications. Prerequisite: OA 201 WordPerfect for Business or OA 202 MS Word for Business.

OA 2.500 Business Orientation*(1 class hr/wk, 1 cr) F*

Combines lecture and field trips to help students become familiar with the services offered at LBCC and to acquaint students with different types of positions available in administrative, legal and medical offices. Workplace skills, such as stress, time management and self-esteem, are covered.

OA 2.505 Voice Recognition*(5 class hrs/wk, 2 cr) W/Sp*

Students will use speech recognition software and voice commands as tools to control computer operations and create professional documents. Prerequisite: CIS 1250 Introduction to Windows or equivalent.

OA 2.515 Business Math with Calculators*(3–4 class hrs/wk, 1–2 cr) F/W/Sp/Su*

Learn to operate a desk-model electronic calculator including all function keys and the numeric 10-key pad. Calculator operation is applied in performing business mathematics for bank records, petty cash, payroll, interest, discounts and invoices. Self-paced. Prerequisite: MTH 020 Basic Mathematics or placement test score.

OA 2.515C Electronic Calculator*(4 class hrs/wk, 1 cr) F/W/Sp/Su*

Learn to operate the electronic calculator covering addition, subtraction, multiplication and division; dividing with constants; mixed operations; memory key; and base, rate and percentage. Five-week class. Prerequisite: MTH 020 Basic Mathematics or placement test score.

OA 2.515M Business Math with Calculators: Medical*(4 class hrs/wk, 1–2 cr) F/W/Sp/Su*

Learn to operate the electronic calculator. This knowledge is applicable in medical areas such as measurements, metrics, income, medical dosages (intake and output) and vital signs. Students advance at their own rate. Prerequisite: MTH 020 Basic Mathematics or placement test score.

OA 2.524 Medical Transcription I*(5 class hrs/wk, 1–3 cr) F/W/Sp/Su*

Introduces the transcription of medical terminology in word lists and paragraphs, as well as preparation of basic medical forms. Covers the typing of radiology, history and physical, and pathology reports. Prerequisites: OA 2.527 Applied Document Processing; MO 5.630 Medical Terminology I; OA 2.656M Medical Information Processing.

OA 2.525 Medical Transcription II*(5 class hrs/wk, 1–3 cr) F/W/Sp/Su*

Further develops student's skill in preparing medical forms and records from dictated material. Covers the typing of operation, discharge summary and autopsy reports. Prerequisites: MO 5.631 Medical Terminology II; OA 2.524 Medical Transcription I.

OA 2.527 Applied Document Processing*(5 class hrs/wk, 3 cr) F/W/Sp/Su*

Learn to apply editing, word processing, formatting and transcribing skills to produce a variety of business documents. Prerequisites: OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; OA 122 Formatting; and OA 201 WordPerfect for Business or OA 202 MS Word for Business.

OA 2.529 Applied Medical Transcription*(10 class hrs/wk, 1–5 cr) F/W/Sp/Su*

Introduces transcription of medical terminology in word lists and paragraphs, followed by preparation of medical forms and records from dictated material. Covers the typing of radiology, pathology, history and physical, operation, discharge summary and autopsy reports. Prerequisites: MO 5.631 Medical Terminology II; OA 2.527 Applied Document Processing; OA 2.656M Medical Information Processing.

OA 2.544 Medical Insurance Procedures*(3 class hrs/wk, 3 cr) F/W*

Introduces the basic concepts of health insurance as needed by the medical insurance billing professional. Covers all major insurance types, both institutional and private. Learn to navigate the complicated process of obtaining reimbursement for medical services.

OA 2.551 Office Communications*(6 class hrs/wk, 4 cr) F/Sp*

Covers both the written and verbal communication needs of a typical office. Practice writing business letters, memos and reports, as well as training in presenting material orally in a clear, concise and convincing manner. Prerequisite: OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; and OA 122 Formatting. Corequisite: OA 201 WordPerfect for Business or OA 202 MS Word for Business or equivalent.

OA 2.557 Advanced Business Math Applications*(4 class hrs/wk, 1 cr) F/W/Sp/Su*

Reviews the operation of the 10-key electronic calculator. Covers calculating interest, maintaining bank records, and computing markup and markdown. Five-week class. Prerequisite: MTH 061 Survey of Mathematical Fundamentals or equivalent.

OA 2.579 Integrated Software Applications*(4 class hrs/wk, 3 cr) Sp*

Examines office information and decision support systems. Teaches procedures related to the import/export functions of technology and software as they relate to producing business documentation. Analyzes supporting electronic technology and its applied use, applies integration techniques, and uses these analyses and application techniques to complete business-related projects. Includes use of software, local area networks, the World Wide Web, electronic communications, and peripheral devices. Prerequisites: CIS 125D Introduction to Databases; CIS 125O Introduction to Windows; CIS 125S Introduction to Spreadsheets; CIS 125P Introduction to Presentations; and OA 202 MS Word for Business.

OA 2.588 Editing Skills for Information Processing*(3 class hrs/wk, 3 cr) F/W/Sp*

Basic review of English grammar, punctuation, style, and usage. Emphasizes proofreading and editing. Prerequisite: WR 090 The Write Course or writing CPT score of 40 or higher.

OA 2.590 Readings and Conference: Secretarial Skills*(2–10 class hrs/wk, 1–5 cr) F/W/Sp/Su*

Individualized course covering subject areas of particular interest to the student or areas where additional work is needed. Note: Number of credits is determined by amount of time spent. Prerequisite: Instructor permission.

OA 2.612 CWE Seminar*(1 class hr/wk, 1 cr) F/W/Sp*

Provides a forum for students to discuss their CWE training experiences.

OA 2.613 CWE (Cooperative Work Experience) for Office Professionals*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Provides supervised employment in a medical, legal or business office, primarily for second-year students to gain practical experience in their chosen field. Thirty hours of work equals one college credit. Prerequisite: GPA of 2.0 and approval of supervising faculty.

OA 2.616 Job Success Skills*(1 class hr/wk, 1 cr) Sp*

Covers techniques for marketing "your skills" to a prospective employer. Includes employability traits, job research techniques, résumé writing, job applications, employment tests, cover letters, mock interviews, and professional dress and grooming.

OA 2.645 Administrative Procedures I*(8 class hrs/wk, 6 cr) Sp*

Designed for students in the Administrative Assistant TPAD, Legal Administrative Assistant and Office Specialist programs to incorporate general office procedures with functions relating to a high performance office setting. Prerequisites: CIS 125O Introduction to Windows; OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; OA 201 WordPerfect for Business; OA 202 Word for Business.

OA 2.646 Administrative Procedures II*(6 class hrs/wk, 4 cr) W*

Building on the teamwork, self-management and problem-solving skills acquired in Administrative Procedures I, students participate in a simulated office environment. This is a capstone course that emphasizes personal qualities and skills needed by office personnel as a foundation for a career in business. Prerequisite: OA 2.645 Administrative Procedures I.

OA 2.652 Filing*(4 class hrs/wk, 1 cr) F/W/Sp/Su*

Self-paced, comprehensive filing course that teaches the 20 ARMA (American Records Management Association) rules. Apply rules in exercises and practical applications to alphabetic correspondence, geographic, numeric, and subject filing systems.

OA 2.656M Medical Information Processing*(4 class hrs/wk, 3 cr) W/Sp*

Prepares student to develop, practice and apply editing and transcription skills to produce accurate medical documents for use in a health care setting. Prerequisites: MO 5.630 Medical Terminology I; OA 122 Formatting or OA 202 MS Word for Business; and OA 2.588 Editing Skills for Information Processing with a minimum "C" grade.

OA 2.662 Legal Transcription*(5 class hrs/wk, 1–3 cr) F/W/Sp/Su*

Stresses the ability of students to take instructions via transcribing machines using cassette tapes as well as typing legal documents verbatim. Prerequisites: OA 2.527 Applied Document Processing and OA 2.675 Legal Practices, Procedures and Terminology I.

OA 2.670 Medical Office Procedures*(6 class hrs/wk, 4 cr) F/Sp*

Stresses the specifics of working in a medical office, including insurance, medical records, administrative office procedures, receptionist techniques and communications. Prerequisites: OA 2.588 Editing Skills for Information Processing with a minimum of a "C" grade; OA 201 WordPerfect for Business or OA 202 MS Word for Business; MO 5.630 Medical Terminology I and OA 2.671 Medical Law and Ethics and OA 2.544 Medical Insurance Procedures.

OA 2.671 Medical Law and Ethics*(2 class hrs/wk, 1-2 cr) W*

Includes licensing, confidentiality, legal relationship of physician and patient, and legal and ethical responsibilities of medical personnel.

OA 2.672 Basic Coding*(3 class hrs/wk, 3 cr) W/Sp*

Introduces basic concepts of medical coding for the purpose of health insurance claims and data capture, as needed by the beginning medical office professional. Covers major coding types will be covered as applied to both institutional and private carriers.

OA 2.675 Legal Practices, Procedures and Terminology I*(4 class hrs/wk, 3 cr) W*

Introduces law office procedures, responsibilities, and standards of a legal secretary including work ethics, analytical and organizational skills, written communications and daily law office routines. Includes qualifications, ethics, teamwork, calendaring and docketing, correspondence, records management, general legal documents, court structure and procedures, Oregon rules of civil procedure and Oregon statutes, civil practice and procedure overview, notary public and bankruptcy. Prerequisite: OA 122 Formatting and OA 201 WordPerfect for Business or OA 202 MS Word for Business. Corequisite: OA 2.588 Editing Skills for Information Processing.

OA 2.676 Legal Practices, Procedures and Terminology II*(4 class hrs/wk, 3 cr) Sp*

Continues OA 2.675 Legal Practices, Procedures, and Terminology I and the legal secretary's role. Topics include personal and real property, corporations and other businesses, family law (including divorce, mediation and adoptions), estate planning and probate, civil procedures and litigation, criminal procedures and litigation, and legal reference materials and citations. Prepare documents, applying and practicing what has been learned. Prerequisites: OA 2.588 Editing Skills for Information Processing and OA 2.675 Legal Practices, Procedures and Terminology I.

OA 2.679 Basic Medical Coding*(1 cr) F/Sp*

Teaches basic concepts of medical coding systems including: ICD-9 coding systems; CPT-4 codes for the insurance claim forms (HCFA 1500/UB92 forms); and physician reports for outpatient and inpatient services. Intended for students enrolled in the Medical Unit Secretary Training Program.

OA 2.680 Advanced Coding*(3 class hrs/wk, 3 cr) F/Sp*

Builds upon the basic concepts of medical coding taught in OA 2.672 Basic Coding, as needed by the advanced medical office professional and the specialized insurance billing professional. Covers all major coding types in depth for both institutional and private carriers. Prerequisite: OA 2.672 Basic Coding.

OA 2.682 Desktop Publishing*(4 class hrs/wk, 3 cr) W*

Extends traditional word processing to encompass the use of page layout of documents for the office, including designing forms, Web pages and Web site layout. Work with presentation software and PageMaker. Prerequisite: OA 201 WordPerfect for Business or OA 202 MS Word for Business.

OA 2.683 Computerized Records Management*(5 class hrs/wk, 3 cr) W*

Introduces filing and database management (manually using the ARMA simplified rules and electronically using MS Word or WordPerfect word processing programs). Explores the fundamentals of managing all phases of the records life cycle. Prerequisites: OA 2.652 Filing and OA 201 WordPerfect for Business or OA 202 MS Word for Business.

OA 2.690 Preparation for IAAP Certifying Exam*(1 class hr/wk, 1 cr) F/W/Sp*

Reviews topics covered in the IAAP (CPS) Certification Examination. Prerequisite: Near completion of two-year Administrative Assistant Program.

OA 2.691 Preparation for Certifying Exam (Administrative)*(1 class hrs/wk, 1 cr) W*

Systematic review of Administrative Medical courses taken in Medical Assistant program to prepare for National Certification Examination. Prerequisite: Must be enrolled in MO 5.640 Medical Assisting Externship I of the Medical Assistant Program.

OST: OCCUPATIONAL SKILLS TRAINING**OST 202 Occupational Skills Training Seminar***(1 class hr/wk, 1 cr) F/W/Sp/Su*

Designed to provide opportunities for students involved in an OST course to share training-related experience with their OST coordinator.

OST 280 Occupational Skills Training*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

A site-based training program designed to give students experience in a supervised training position related to their occupational goals. Students identify learning objectives, train a specified number of hours during the term and attend a related seminar. Credits earned are based upon completion of identified objectives and the number of hours spent in training.

PD: PUBLIC SAFETY DISPATCHER**PD 5.100 Introduction to Emergency Services***(3 class hrs/wk, 3 cr) As needed*

Introduces the field of emergency communications. Includes history, role of the dispatcher, field operations (police, fire and emergency medical), radio broadcasting, telephone techniques, radio codes and equipment operation. Presents an overview of federal, state and local law enforcement computer systems.

PD 5.105 Transcription for Telecommunicators*(1 class hr/wk, 1 cr) As needed*

Covers how to transcribe information received orally using actual tape recorded radio transmissions or recorded scripted exercises. Emphasizes accuracy, spelling and completeness of message. Also introduces two versions of the "phonetic alphabet" commonly used in the public safety industry.

PD 5.115 Public Safety Emergency Telecommunications (Police)*(3 class hrs/wk, 3 cr) As needed*

Study the basic principles of call taking and radio broadcasting as it applies primarily to police dispatching. Includes types and classifications of crimes, criminal and civil complaints, interrogation of callers, assignment and direction of field units. Stresses use of departmental policy and procedures, and application of chain of command rules as they pertain to communications.

PD 5.116 Public Safety Emergency Telecommunications (Fire and Medical)*(3 class hrs/wk, 3 cr) As needed*

Develops communication skills necessary to deal with fire and medical emergencies. Focuses on fire terminology, knowledge of fire apparatus, department protocols, triage principles, and medical pre-arrival instructions. Emphasizes the use of resource materials. Includes the interrelationship between field units, police, fire and medical and their roles at incident scenes.

PD 5.120 Emergency Medical First Responder*(3 class hrs/wk, 3 cr) As needed*

Designed for those who may arrive first on scene of a medical emergency. Provides necessary background information and procedures needed to provide basic care to patients suffering from sudden illness, traumatic injuries and environmental emergencies. Emphasizes patient and scene evaluations and accessing the Emergency Medical Services (EMS) system.

PD 5.125 Communication Center Operations*(5 class hrs/wk, 5 cr) As needed*

Introduces operational procedures used in emergency communications and hands-on use of communications center equipment such as two-way radios, multi-line phones, recorders and computers, including record keeping and data retrieval. Focuses on use of the Oregon LEDS, DMV. May include hands-on use of Computer Aided Dispatch system, non-emergency call handling and dispatching of police and fire units.

PD 5.130 Tactical Fire Dispatch*(3 class hrs/wk, 3 cr) As needed*

In-depth study of fire response protocols, laws governing fire responses. Covers fire department approaches and different functions of each apparatus and firefighting teams. Firefighter safety, safety hazards, passport system and incident command will be examined. Also includes identification and responses to weapons of mass destruction.

PE: PHYSICAL EDUCATION**PE 131 Introduction to Health and Physical Education***(3 class hrs/wk, 3 cr) F/W*

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 180B Advanced Basketball: Women*(3 class hrs/wk, 1 cr) F/Sp*

Provides a detailed presentation of individual basketball skills and on-court strategy for team play. Prerequisite: PE 180D Basketball Conditioning: Women and instructor's approval.

PE 180C Basketball Skills: Women*(3 class hrs/wk, 1 cr) Sp*

Continued emphasis on conditioning for overall efficiency of basketball skills. Provides a detailed presentation of basketball skills and a plan for overall improvement. Prerequisite: PE 180D Basketball Conditioning: Women and instructor's approval.

PE 180D Basketball Conditioning: Women*(3 class hrs/wk, 1 cr) F*

Emphasis is on development of strength conditioning, aerobic fitness and agility drills needed in improving basketball skills.

PE 180G Advanced Volleyball: Women*(3 class hrs/wk, 1 cr) W/Sp*

Emphasizes the development of skills for team play. Prerequisite: Instructor approval.

PE 1851 Beginning Volleyball*(3 class hrs/wk, 1 cr) F/W/Sp*

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 Volleyball*(3 class hrs/wk, 1 cr) F/W/Sp*

Emphasizes increasing a player's abilities within a team situation. Designed for the player who has mastered beginning volleyball skills.

PE 1851 Advanced Volleyball*(3 class hrs/wk, 1 cr)*

Increases skill levels and mental strategies, with emphasis on increasing a player's abilities within a team situation.

PE 1852 Walk for Health*(3 class hrs/wk, 1 cr) F/W/Sp*

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 1853 Cardio Kick Boxing*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides the students with the techniques of kick boxing. This includes benefits, safety precautions, and specific fitness principles.

PE 1854 Advanced Weight Training*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides instruction and practices in conditioning programs specific to sports participation.

PE 1855 Relaxation and Massage*(3 class hrs/wk, 1 cr)*

Designed to provide the student with 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 1856 Ski Conditioning*(8 class hrs/wk, 1 cr) As needed*

Improves personal fitness for downhill and cross-country skiing specifically.

PE 1856 Skiing/Snowboarding*(8 class hrs/wk, 1 cr) As needed*

Provides opportunity for students to have on-slope instruction at local ski facility by ski instructors. Note: Eight-week class.

PE 1857 Intermediate Basketball*(3 class hrs/wk, 1 cr) F/W/Sp*

Emphasizes basketball conditioning, skill development and game situations. Features game format.

PE 185A Circuit Weight Training*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides instruction and participation in circuit training routines designed to improve muscular strength, muscular endurance, flexibility and body composition.

PE 185E Beginning Ballet*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides an exercise program choreographed to music and designed to study the basic elements of dance as well as mechanics of ballet movements, alignment, balance and terminology.

PE 185E Intermediate Ballet*(1 class hrs/wk, 1 cr) F/W/Sp*

Provides an exercise program choreographed to music and designed to study the intermediate elements of dance as well as mechanics of ballet movements, alignment, balance and terminology. Prerequisite: One year of beginning ballet.

PE 185G Body Conditioning*(3 class hrs/wk, 1 cr) F/W/Sp*

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 185H Body Toning*(3 class hrs/wk, 1 cr)*

Provides instruction to develop total body tone, including strengthening and firming of stomach, legs, hips, thighs, arms and upper body. Instructor will lead floor exercises and hand weight routines. Time will be provided for some general weight room use.

PE 185J Beginning Aerobic Dance*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides an exercise program choreographed to music and designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

PE 185J Intermediate Aerobic Dance*(3 class hrs/wk, 1 cr) F/W/Sp*

Provides an exercise program choreographed to music and designed to tone, trim and firm all body muscle groups as it strengthens and conditions the cardiovascular system.

PE 185K Beginning Step Aerobics*(3 class hrs/wk, 1 cr) F/W/Sp*

Introduces students to stepping techniques, including proper and safe movement on and off the bench. Students increase their skill level to enter step classes offered at any level. Students also build on all stepping techniques, including "adding on" to patterns and transitioning into new combinations.

PE 185K Intermediate Step Aerobics*(3 class hrs/wk, 1 cr) F/W/Sp*

Designed to meet the needs of experienced step aerobic participants. Students learn to execute more advanced combinations, plus improve their fitness level by learning power moves designed to increase the intensity level of their workout.

PE 185M Beginning Golf*(6 class hrs/wk, 1 cr) F/Sp*

Introduces the mental and physical needs involved in golf, including grip, stance, swing techniques, rules, strategy and etiquette. Note: Five-week class.

PE 185M Intermediate Golf*(6 class hrs/wk, 1 cr) F/Sp*

Provides a more detailed presentation of golf techniques and strategy to improve and correct basic swing errors. Prerequisite: PE 185M Beginning Golf recommended or intermediate skill. Note: Five-week class.

PE 185M Advanced Golf*(6 class hrs/wk, 1 cr)*

Provides a detailed presentation of golf technique and strategy to improve and correct basic swing errors. Also includes on-course play. Prerequisite: PE 185M Beginning Golf. Note: Five-week class.

PE 185P Jogging*(3 class hrs/wk, 1 cr) F/W/Sp*

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 Beginning Karate*(3 class hrs/wk, 1 cr) F/W/Sp*

Introduces basic Tae Kwon Do (Korean Karate). Includes blocks, kicks, punches, forms and some freestyle. Emphasizes establishing and maintaining good body condition.

PE 185Q Intermediate Karate*(3 class hrs/wk, 1 cr) F/W/Sp*

Teaches karate skills in blocking, kicking, punches and forms. Emphasizes body condition and physical fitness. Prerequisite: Basic skills acquired in Tae Kwon Do or Beginning Karate course or instructor's approval.

PE 185Q Freestyle Karate*(3 class hrs/wk, 1 cr) F/W/Sp*

A course designed to deal with freestyle techniques of the martial arts including several different styles and philosophies. Prerequisite: PE 185Q Beginning Karate.

PE 185S Beginning SCUBA*(4 class hrs/wk, 2 cr)*

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*(4 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.

PE 185T Flag Football*(3 class hrs/wk, 1 cr) F*

Emphasizes playing flag football for fun and fitness. Instruction focuses on key points of the game, including safety, equipment, rules, strategy, conditioning, injury prevention, team leadership, as well as development of stance, blocking, passing, catching, flag tackling and kicking skills.

PE 185U Sand Volleyball*(3 class hrs/wk, 1 cr) F/Sp*

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*(3 class hrs/wk, 1 cr)*

Introduces the skills and techniques basic to ultimate frisbee, including offensive and defensive play, strategies, etiquette and rules of the game.

PE 185Y Beginning Tennis*(3 class hrs/wk, 1 cr) F/Sp*

An elective course for the novice or beginning student that will provide instruction, playing experience and knowledge of the basic stroke fundamentals of ground strokes, volleys, lob, serve and overhead smash. Playing rules, scoring, court etiquette, conditioning, equipment and playing strategy for singles and doubles will be discussed.

PE 185Y Intermediate Tennis*(3 class hrs/wk, 1 cr) F/Sp*

Covers advanced tennis strategies and skills.

PE 185Y Advanced Tennis*(3 class hrs/wk, 1 cr) Sp*

Prepares students for competition, emphasizing development of skills for competitive play.

PE 190A Baseball Conditioning*(3 class hrs/wk, 1 cr) Sp*

Emphasizes physical conditioning that develops strength and agility for better efficiency in baseball skills. Team concepts are taught through offensive and defensive strategies to improve team play. Prerequisite: Beginning Baseball and instructor's approval.

PE 190B Baseball Skills: Hitting and Pitching*(3 class hrs/wk, 1 cr) W*

Enables student to refine basic baseball skills in hitting, pitching and catching. Provides instruction and practice in team offensive hitting concepts and pitching philosophies. Prerequisite: Beginning baseball and instructor's approval.

PE 190C Beginning Baseball*(10 class hrs/wk, 1 cr) F*

Introduces fundamental baseball skills. Some aerobic conditioning skills are used to develop general stamina. Learning is enhanced through scrimmage format.

PE 190D Advanced Baseball*(3 class hrs/wk, 1 cr)*

Helps develop the advanced student in the game of baseball. Individual and team concepts are taught to ensure a high level of play from its participants. Prerequisite: Beginning baseball and instructor's approval.

PE 190E Baseball Conditioning and Hitting*(3 class hrs/wk, 1 cr)*

Refine students baseball hitting skills through the use of hitting theory and power hitting circuits. Helps students recognize and prescribe remedies for common hitting faults through video taping.

PE 190H Advanced Basketball: Men*(3 class hrs/wk, 1 cr) F/Sp*

Provides a detailed presentation of individual basketball skills and on-court strategy for team play. Prerequisite: PE 190J Basketball Conditioning: Men, and instructor's approval.

PE 190J Basketball Conditioning*(3 class hrs/wk, 1 cr) F*

Emphasis is on development of strength conditioning, aerobic fitness and agility drills needed in improving basketball skills.

PE 190K Basketball Skills: Men*(3 class hrs/wk, 1 cr) F*

Continued emphasis on conditioning for overall efficiency of basketball skills. Provides a detailed presentation of basketball skills and a plan for overall improvement. Prerequisite: PE 190J Basketball Conditioning: Men, and instructor's approval.

PE 194K Defensive Tactics*(3 class hrs/wk, 2 cr) F/W/Sp*

Includes a comprehensive defensive tactics plan of instruction. Students will be required to participate in both lecture and lab exercises.

PE 231 Lifetime Health and Fitness*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Evaluates selected areas of the student's present health and fitness level. Provides information on each of the seven wellness dimensions as they relate to physical fitness, back care, heart health, 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.

PE 232 Backpacking: Map and Compass Skills*(3 class hrs/wk, 3 cr)*

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 280A CWE Physical Education*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

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*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

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 291 Lifeguard Training*(3 class hrs/wk, 2 cr) F/Sp*

Introduces students to the necessary minimum knowledge and skills training for a person to qualify to serve as an entry-level lifeguard and Red Cross certification. Prerequisite: swimming pretest.

PE 292 Water Safety Instruction*(6 class hrs/wk, 2 cr) F/Sp*

Trains students to teach swimming and other water safety skills. Emphasis is on skill proficiency, knowledge, attitudes and behaviors concerning water safety and teaching skills. Practice teaching will include lesson planning, teaching methods, teaching to diverse groups of students and student evaluations.

PH: PHARMACY TECHNICIAN**PH 5.901 Pharmacy Technician***(30 hrs, 3 cr) As needed*

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.

PH 5.905 Pharmacy Laws and Ethics*(30 hrs, 3 cr) As needed*

Covers the rules and regulations that govern pharmacies in the state of Oregon. Students will be exposed to all the rules and regulations governing pharmacies. 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.

PH 5.910 Pharmacy Math*(48 hrs, 4 cr) As needed*

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: Math 020 Basic Mathematics or equivalent score on the CPT.

PH 5.915 Pharmacology for Pharmacy Technicians*(20 hrs, 2 cr) As needed*

Gives students a working knowledge of the commonly used drugs in the pharmacy. This includes a knowledge of pharmacokinetics, drug classifications, indications and routes of administration, and the skills to calculate drug doses. Prerequisite: Math 020 Basic Mathematics or equivalent score on the CPT.

PH 5.920 Pharmacy Operations: Retail and Institutional*(35 hrs, 2 cr) As needed*

Focuses on drug distribution systems, record management and inventory control, and ambulatory and institutional practices. Students will learn how hospital and retail pharmacies operate.

PH: PHLEBOTOMY**PH 5.301 Health Care Delivery System***(10 hrs, 1 cr) As needed*

Introduces students to allied health profession with emphasis on the role of the health care team and discussion of health-related social concerns.

PH 5.310 Phlebotomy*(100 hrs, 8 cr) As needed*

Provides skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection, arterial specimen collection, devices syringes, capillary skin punctures, radial artery punctures for blood gasses, 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.

PH 5.320 Anatomy and Physiology for Phlebotomists*(20 hrs, 2 cr) As needed*

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.

PH 5.330 Communication and Customer Service for Phlebotomists*(30 hrs, 2 cr) As needed*

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; and telephone skills.

PH: PHYSICS**PH 104 Descriptive Astronomy***● (5 class hrs/wk, 4 cr) F/Sp*

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.

PH 201 General Physics*● (7 class hrs/wk, 5 cr) F*

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. The group of topics covered is called mechanics and includes measurement and analysis, motion on one dimension, motion in two dimensions, force and motion, circular motion, gravitation, work and energy, linear momentum, angular

momentum, and fluids at rest and in motion. Prerequisites: Completion of MTH 111 College Algebra with a grade of "C" or better and completion of MTH 112 Trigonometry with a grade of "C" or better.

PH 202 General Physics*● (7 class hrs/wk, 5 cr) W*

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 group of topics covered is vibrations, wave motion, sound, temperature, heat, thermodynamics, electrostatic force, field, potential, capacitors and resistors. Prerequisite: Completion of PH 201 General Physics with a "C" or better.

PH 203 General Physics*● (7 class hrs/wk, 5 cr) Sp*

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. Prerequisites: Completion of PH 201 General Physics with a grade of "C" or better and completion of PH 202 General Physics with a "C" or better.

PH 211 General Physics with Calculus*(7 class hrs/wk, 5 cr) F*

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; work and energy; conservation of energy; center of mass; impulse and linear momentum; conservation of linear momentum and gravitation. Prerequisites: Completion of MTH 251 Differential Calculus and MTH 252 Integral Calculus with a grade of "C" or better. Corequisite: MTH 253 Calculus.

PH 212 General Physics with Calculus*● (7 class hrs/wk, 5 cr) W*

The second 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 the physical principles of rotational kinematics and dynamics; static equilibrium; fluid mechanics; simple harmonic motion; waves; sound; and geometric and physical optics. Prerequisites: PH 211 General Physics with Calculus and MTH 253 Calculus with a "C" or better. Corequisite: MTH 254 Calculus.

PH 213 General Physics with Calculus*● (7 class hrs/wk, 5 cr) Sp*

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. Prerequisites: PH 212 General Physics with Calculus and MTH 254 Calculus with a "C" or better.

PH 265 Scientific Computing*(3 class hrs/wk, 3 cr) As needed*

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.

PH 299 Special Studies*(2–6 hrs/wk, 1–3 cr) As needed*

Allows the student to investigate, with supervision from a faculty member, a topic of his or her interest at an individualized pace. Credits and projects will be determined jointly by the instructor and the student.

PHL: PHILOSOPHY**PHL 198 Independent Studies***(1 class hr/wk, 1–3 cr)*

Offers selected philosophy topics for independent research. Prerequisite: Instructor approval.

PHL 201 Introduction to Philosophy*► (3 class hrs/wk, 3 cr) F*

Introduces the philosophical task, the major areas of philosophical speculation and the role critical thinking plays in everyday life.

PHL 202 Elementary Ethics*► (3 class hrs/wk, 3 cr) W*

Develops the idea of humans as moral agents and considers critically various interpretations of the ideals and standards of moral conduct.

PHL 215 History of Western Philosophy*► (3 class hrs/wk, 3 cr) Sp*

Studies Western philosophy from the ancient Greeks to the 20th century.

PHL 298 Independent Study: Logic*► (1 class hr/wk, 1–3 cr)*

Offers individual study of patterns of logic, rules of inference through formalized logical language and techniques of deductive and predicate logic.

PS: POLITICAL SCIENCE**PS 104 Problems in American Politics***■ (3 class hrs/wk, 3 cr) As needed*

Explores current policy issues in American politics, which may range from international to national to local topics. Examples include unemployment, military affairs, civil rights and education.

PS 198 Research Topics*(1 class hr/wk, 1–3 cr) F/W/Sp*

Examines in-depth selected political science topics for independent research. Corequisite: WR 123 English Composition.

PS 200 Introduction to Politics*■ (3 class hrs/wk, 3 cr) F*

Basic introduction to the central themes and fundamental issues of political life. Examines the nature and meaning of politics; relation between politics and society and politics and economics; the basic concepts associated with the organization and operation of different systems of government; and the major political ideologies of the modern world: liberal-capitalism, socialism, communism, fascism.

PS 201 Introduction to American Politics and Government*■ (3 class hrs/wk, 3 cr) F/Sp*

Introduces and analyzes American politics. Studies the development of American national government, the character of American political thought and the relationship between democracy and capitalism. Includes case studies of federalism, corporate welfare, and environmental regulation debates.

PS 203 State and Local Government in Oregon*■ (3 class hrs/wk, 3 cr) Sp*

General introduction to the role, organization and functions of government at the state and local level in the United States. Special emphasis will be placed on the use of Oregon state and local government as a source of examples and case studies.

PS 204 Introduction to Comparative Politics*■ (3 class hrs/wk, 3 cr) W*

Major governmental, economic and social concepts applied comparatively to a variety of political settings including the United States, Western Europe, former communist states and developing nations. Emphasizes political analysis, including the comparative study of political behavior, institutions and social movements.

PS 205 Introduction to International Relations*■ (3 class hrs/wk, 3 cr) F/Sp*

Analysis of the international system and factors affecting world politics. Focuses on current world events. Topics include problems of poverty and economic development, imperialism, environmental and resource issues, and current international conflicts and sources of war and peace.

PS 211 Peace and Conflict*■ (3 class hrs/wk, 3 cr) W*

Examines a variety of concepts and theories that seek to explain violent behavior in actions involving individuals, groups, states and the global community. Focuses on alternatives to oppressive behavior, undemocratic institutions, and the violent resolution of conflict by following the evolution of ideas and strategies of nonviolence.

PS 220 U.S. Foreign Policy*■ (3 class hrs/wk, 3 cr) As needed*

Analyzes selected U.S. foreign policy problems and experiences through case studies. Places foreign policy in the perspective of history and the context of international political, economic and strategic issues. Explores the diversity of perceptions about U.S. foreign relations. Note: Course is offered alternate years only.

PS 252 Constitutional Law*■ (3 class hrs/wk, 3 cr) W*

Introduction to the basic principles of the U.S. Constitution with emphasis on leading Supreme Court cases in civil liberties and civil rights. Focus is on current constitutional controversies including: privacy rights, school choice, government regulation of private property, school prayer, search and seizure, and free speech and press.

PS 280 CWE Political Science*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to political science. 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.

PS 280S Service-Learning Political Science*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their Service-Learning approved by the appropriate faculty coordinator.

PSY: PSYCHOLOGY**PSY 101 Psychology and Human Relations****■** *(3 class hrs/wk, 3 cr) F/W/Sp*

Focuses on the practical application of psychology to relations with people in everyday situations. Topics include self-concept, social perception, emotions, needs, values, healthy relationships, interpersonal communications, conflict and behavioral change.

PSY 198 Independent Studies: Research Topics*(1 class hr/wk, 1 cr) F/W/Sp*

Provides in-depth examination of a selected psychological topic to develop skills in independent research. Intended primarily for the psychology major. Prerequisite: WR 123 English Composition. Corequisite: PSY 203 General Psychology to be taken prior to or concurrently.

PSY 201 General Psychology**■** *(3 class hrs/wk, 3 cr) F/W/Sp*

Covers history, methodology, brain and nervous system, body rhythms and mental states, sensation and perception, and development over the life span.

PSY 202 General Psychology**■** *(3 class hrs/wk, 3 cr) F/W/Sp*

Covers learning, memory, thinking and intelligence, evolution, genes and behavior, motivation, and emotion.

PSY 203 General Psychology**■** *(3 class hrs/wk, 3 cr) F/W/Sp*

Covers health and well-being, personality theories, psychological disorders, approaches to treatment and therapy, principles of social life, and the cultural context.

PSY 215 Introduction to Developmental Psychology**■** *(3 class hrs/wk, 3 cr) F/W*

Outlines cause of psychological/physical development from conception to death. Emphasizes how and why human beings change (or remain the same) from their beginnings to their last years of life.

PSY 219 Introduction to Abnormal Psychology**■** *(3 class hrs/wk, 3 cr) F/Sp*

Discusses theories, diagnosis, and treatment of the major psychopathological syndromes. Specific disorders such as anxiety, depression, schizophrenia, psychophysiological disorders, personality disorders, and sexual variations and dysfunctions are covered.

PSY 231 Human Sexuality**■** *(3 class hrs/wk, 3 cr) F/W/Sp*

Discusses the biological, social and psychological aspects of human sexual functioning. Emphasizes sexual response patterns, sexual attitudes, sexual myths and fallacies.

PSY 280 CWE Psychology*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to psychology. 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.

R: RELIGION**R 101 Introduction to Religious Studies****►** *(3 class hrs/wk, 3 cr)*

Examines the nature of religion as experienced historically and globally. Explores the nature of religious experience and the divine; the compatibility of science and religion; and the nature of religious language, myth and symbol.

R 102 Religions of Western World**►** *(3 class hrs/wk, 3 cr)*

Investigates religion in the Western World. Includes discussion of Judaism, Christianity and Islam. Focuses on how the outward forms of religious expression integrate with other cultural traditions.

R 103 Religions of Eastern World**►** *(3 class hrs/wk, 3 cr)*

Investigates religion in the Eastern World. Includes discussion of Hinduism, Buddhism and Taoism. Focuses on how the outward forms of religious expression integrate with other cultural traditions.

R 198 Independent Studies: Research Topics*(1–3 class hrs/wk, 1–3 cr)*

Offers selected topics of study in religion with individual research and/or field study. Corequisite: WR 123 English Composition.

R 211 The Old Testament: Historical Background**►** *(3 class hrs/wk, 3 cr) As needed*

Describes the history and culture of the Hebrew people, including conditions affecting the production of the Old Testament.

R 212 The New Testament: Historical Background**►** *(3 class hrs/wk, 3 cr) As needed*

Discusses the historical developments of the New Testament, including development of Christianity and its significance in human experience.

RD: READING**RD 070 Foundation Reading Skills***(4 class hrs/wk, 4 cr) F/W/Sp*

Introduces sound-to-letter pattern relationships, syllabication and other comprehension strategies to improve reading competence. Students record and apply the strategies in a reading reference notebook designed to help them decode unfamiliar words in the future. Prerequisite: Appropriate score on the reading portion of the College Placement Test.

RD 080 Building College Reading*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Develops fundamental reading skills for students. Students learn to recognize important ideas, build vocabulary, and use strategies for successful comprehension and recall. Prerequisite: Appropriate score on reading portion of the College Placement Test.

RD 090 Strategies for Effective Reading*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Develops key skills for reading introductory-level college textbooks. Students apply effective reading strategies to improve comprehension, analyze text, build vocabulary, and develop memory strategies. Prerequisite: Appropriate score on reading portion of the College Placement Test.

RD 115 Advanced College Reading*(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Develops students' ability to analyze, comprehend, and retain information in college textbook material from various disciplines. Students integrate text analysis skills and create effective study tools to assist in learning content. Prerequisite: Appropriate score on reading portion of the College Placement Test.

RD 120 Critical Reading and Thinking*(3 class hrs/week, 3 cr) F/W/Sp*

Improves analytic and reasoning skills. Students use critical thinking strategies to evaluate reasoning, synthesize concepts and differing viewpoints, and critically respond to information from a variety of sources. Prerequisite: Appropriate score on reading portion of the College Placement Test.

RH: REFRIGERATION, HEATING AND AIR CONDITIONING

RH 3.552 Electrical Systems Troubleshooting*(20 class hrs/wk, 2 cr) W*

Skills learned include: safety, troubleshooting with Ohm's law, wiring parallel and series circuits, tracing electrical distribution systems, determining power consumption, determining the correct ampacity, and taking phase-to-phase measurements. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.553 Electrical Problems*(22.5 class hrs/wk, 4 cr) W*

Skills learned include: safety; finding shorts and high resistance shorts to ground; testing contacts, transformers, coils, relays and power supplies; taking voltage drop tests. Note: Three-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.580 RHVAC Brazing and Fitting*(20 class hrs/wk, 2 cr) F*

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. Note: Two-week class.

RH 3.581 Recovery and Charging*(20 class hrs/wk, 2 cr) F*

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. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.584 Refrigeration Troubleshooting*(22.5 class hrs/wk, 4 cr) F*

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 cleaning a contaminated system. Note: Three-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.585 Heating Systems*(20 class hrs/wk, 2 cr) F*

Skills learned include: operation and servicing of oil and gas heating systems. Introduction to troubleshooting heating systems, troubleshooting heat pumps. All relevant safety and energy efficient concerns are covered. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.586 Sheet Metal*(20 class hrs/wk, 2 cr) Sp*

Skills learned include: Understand air movement and balancing, essential sheet metal installation and repair skills, and understand layout and design. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.587 Troubleshooting Motors*(20 class hrs/wk, 2 cr) W*

Skills learned include: troubleshooting, maintenance and repair of single- and three-phase motors, maintenance and basic troubleshooting of variable speed drives and testing capacitors. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.588 Motor Control Troubleshooting*(20 class hrs/wk, 2 cr) W*

Skills learned include: safety, testing motor control circuits, and troubleshooting with electrical schematics. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.590 Control Circuit Troubleshooting*(20 class hrs/wk, 2 cr) W*

Skills learned include: safety, troubleshooting and repairing mechanical and digital control circuits; wiring and setting timers; troubleshooting input and output faults; testing 4-20 mA, 1-5 VDC and 1-10 volt DC circuits; and testing diodes, thermistors and thermocouples, programming programmable thermostats. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.594 RHVAC Skills Lab*(3-12 class hrs wk/ 1-6 cr) Variable credit*

Individual lab practice to improve RHVAC understanding and skills. May also be used for special projects. To be offered every term subject to instructor approval. Prerequisite: Instructor's approval.

RH 3.595 Licensing*(20 class hrs/wk, 2 cr) F*

Skills learned include: working according to environmental concerns and regulations. Earn EPA refrigerant handling certification. Note: Two-week class. Prerequisite: Enrolled in RHVAC or possessing verifiable experience.

RH 3.596 Mechanical Systems*(20 class hrs/wk, 2 cr) Sp*

Skills learned include: safety, managing lubrication systems, maintaining and repairing belt and chain drives, pump maintenance, understanding mechanical processes, and completing selected essential mechanical maintenance tasks. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.597 PM and Troubleshooting*(20 class hrs/wk, 2 cr) Sp*

Skills learned include: starting and operating a computerized maintenance program, inventory control, customer service, and job search skills. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RH 3.599 Boiler Operation*(1.5 hrs/wk, 1 cr) 8-week class*

Students will learn the operating and safety procedures to successfully operate both low- and high-pressure boilers and hot water boilers in industrial and commercial buildings. This course is offered on closed circuit TV at various locations including other community colleges and branch campuses, during a regular class at LBCC, and through videotapes on reserve at LBCC and other libraries.

RH 3.602 HVAC System Controls*(22.5 class hrs/wk, 4 cr) Sp*

Skills learned include tracing and analyzing HVAC ducting systems, troubleshooting of mechanical controls, maintenance of pneumatic controls, maintenance, installation and troubleshooting of DDC systems, using computerized DDC systems, and troubleshooting indoor air quality problems. (Computer) Note: Three-week class. Prerequisite: Instructor's approval required. Enrolled in RHVAC or possessing verifiable experience.

RH 3.610 Workplace Safety*(1 class hr/wk, 1 cr)*

Essential workplace safety practices are studied. Electrical safety, lockout and tagout, RHVAC safety, confined space entry, fire safety, burn prevention, hazmat and personal safety. To be offered every term subject to entering students. Prerequisite: Instructor's approval.

RH 3.615 Industrial Electronics I: Motors and Controls*(4 class hrs/wk, 3 cr)*

An in-depth study of the theory and operation of motors, generators, transformers, and industrial motor controls. A special emphasis is placed on safety in AC circuits and using electronic control circuits in industrial applications.

RH 3.618 RHVAC Systems Review*(20 class hrs/wk, 2 cr) Sp*

Designed for the completion of projects not completed or needing upgrading. It is a time for review of essential job skills and preparation for the final certification offered through the RHVAC program. Note: Two-week class. Prerequisite: Instructor's approval. Enrolled in RHVAC or possessing verifiable experience.

RT: RADIOLOGY TECHNOLOGY**RT 5.750 Introduction to Radiology***(20 hrs, 2 cr) As needed*

Designed to introduce students to the profession of Radiologic Technology, its history, future, professional and accrediting organizations, and the relationship between radiographer and the patient. Incorporated in this course is introductory information regarding OSHA requirements, HIPAA, blood borne pathogens, and basic rules and regulations.

RT 5.755 Radiographic Positioning with Lab I*(40 hrs, 3 cr) As needed*

Focuses on radiographic positioning techniques for the chest, abdomen, and chest/abdomen portables. Lab portion includes peer positioning, film critiques, anatomy and an energized section using phantoms.

RT 5.756 Radiographic Positioning with Lab II*(40 hrs, 3 cr) As needed*

Focuses on radiographic positioning techniques for the upper and lower extremities. Lab portion includes peer positioning, film critiques, anatomy, and an energized section using phantoms. Prerequisite: RT 5.755, Radiographic Positioning with Lab I.

RT 5.757 Radiographic Positioning with Lab III*(40 hrs, 3 cr) As needed*

Focuses on radiographic positioning techniques for the spine and the pelvis and hip. The lab portion includes peer positioning, film critiques, anatomy, and an energized section using phantoms. Prerequisite: RT 5.756 Radiographic Positioning with Lab II.

RT 5.758 Radiographic Positioning with Lab IV*(40 hrs, 3 cr) As needed*

Focuses on radiographic positioning techniques for fluoroscopic procedures, operating room procedures, and sterile technique. The lab portion includes peer positioning, film critiques, anatomy, and an energized section using phantoms. Prerequisite: RT 5.757 Radiographic Positioning with Lab III.

RT 5.759 Radiographic Positioning with Lab V*(40 hrs, 3 cr) As needed*

Focuses on radiographic positioning techniques for the skull. The lab portion includes peer positioning, film critiques, anatomy, and an energized section using phantoms. Prerequisite: RT 5.758 Radiographic Positioning with Lab IV.

RT 5.765 Clinical Radiography I*(160 hours, 8 credits) As Needed*

A planned clinical experience is provided which gives the student the opportunity to observe and apply theoretical principles while performing radiographic 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.

RT 5.766 Clinical Radiography II*(180 hours, 9 cr) As needed*

A planned clinical experience is provided, which gives the student the opportunity to observe and apply theoretical principles while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on specified number of competency evaluations. Prerequisite: RT 5.765 Clinical Radiography I.

RT 5.767 Clinical Radiography III*(180 hours, 9 cr) As needed*

A planned clinical experience is provided which gives the student the opportunity to observe and apply theoretical principles while performing radiographic 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. Prerequisite: RT 5.766 Clinical Radiography II.

RT 5.768 Clinical Radiography IV*(180 hours, 9 cr) As needed*

A planned clinical experience is provided which gives the student the opportunity to observe and apply theoretical principles while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on specified number of competency evaluations. Prerequisite: RT 5.767 Clinical Radiography III.

RT 5.769 Clinical Radiography V*(180 hours, 9 cr) As needed*

A planned clinical experience is provided which gives the student the opportunity to observe and apply theoretical principles while performing radiographic procedures under supervision of the clinical staff. Progression in the program is dependent on the student demonstrating clinical competence on specified number of competency evaluations. Prerequisite: RT 5.768 Clinical Radiography IV.

RT 5.771 Principles of Exposure*(30 hrs, 3 cr) As needed*

Reviews the fundamentals of radiographic quality, prime exposure factors, image production and accessory exposure devices, including processing methods, quality assurance procedures and laboratory experiments.

RT 5.775 Patient Care and Management*(30 hrs, 3 cr) As needed*

Provides the basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Content is also designed to provide a fundamental background in ethics. The student will examine a variety of ethical issues and dilemmas found in clinical practice. Course is designed to promote better understanding of patients, the patients' families, and professional peers through comparison of diverse populations based on their value system, cultural and ethnic influences, communication styles, socioeconomic influences, health risks, and stages.

RT 5.777 Radiation Biology*(30 hrs, 3 cr) As needed*

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 represented. Factors affecting biological response are presented, including acute and chronic effect of radiation.

RT 5.779 Radiation Protection*(30 hrs, 3 cr) As needed*

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.

RT 5.783 Radiographic Equipment and Maintenance*(35 hrs, 3 cr) As needed*

Establishes a knowledge base in radiographic, fluoroscopic, mobile, and tomographic equipment requirements and design. Content is also designed to introduce knowledge in computing and information processing. Computer applications in radiologic sciences related to image capture, display, storage, and distribution are presented. The content will also provide a basic knowledge of quality control. Covers generators, timers, processors, laser cameras, recording devices, image intensifiers, monitors, digital radiography, and teleradiography.

RT 5.786 Radiographic Pathology*(30 hrs, 3 cr) As needed*

Introduces theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems will be presented.

RT 5.791 Radiation Physics*(30 hrs, 3 cr) As needed*

Introduces students to units of measure, electrostatics, magnetism, electromagnetism, elements of electricity, electrical power, current, resistance and measurement instruments, construction and principles of x-ray tubes including the study of the production and characteristics of X-ray and their interaction with matter.

RT 5.796 Pharmacology*(30 hrs, 3 cr) As needed*

Provides basic concepts of pharmacology. The theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medications is included. Emphasizes radiographer's role regarding patient care with regard to contrast administration and contrast media reactions. Concepts of pharmacology including modes of action, uses, modes of excretion effects, side effects and patient care required for specific pharmacologic agents.

SD: SUPERVISORY MANAGEMENT**SD 101 Supervision: Fundamentals***(3 cr) F/W/Sp*

Introduces current management theory in the areas of motivation; leadership; organization and planning; team building; and decision making. Examines the skills necessary to be an effective supervisory leader within a diverse workplace.

SD 102 Supervision: Effective Communication*(3 cr) F/W/Sp*

Focuses on the supervision skills that are used in effective communications in the workplace. Learn the basis of communication, including styles of communication, listening skills and non-verbal communication. In addition, learn meeting management and business presentation skills.

SD 103 Issues in Supervision*(3 cr) F/W/Sp*

Provides an understanding of ethical theories and decision making with an emphasis on how management decisions affect the organization, staff, and environment. Covers the supervisor's responsibility for conservation and environmental issues within the workplace. Gain knowledge of contemporary employment laws, effective job search techniques, and legal and ethical methods of staff recruitment and performance evaluations. Ethical skills learned are incorporated into methods for resolving conflict in the workplace.

SD 104 Supervision Skills*(3 cr) W/Sp*

A series of one-credit classes on topics designed to improve the students' supervision skills. Study topics such as stress and time management, improving productivity in a changing environment, and effective customer skills.

SD 107 Business and Society*(3 cr)*

Study the basis of American business ethics. Compare and contrast western and non-western culture systems and examine the part culture plays in the formation of a nation's business values. Explore the relationships between business and contemporary society, including such topics as government regulation of business, business responsibility to consumers and the environment, and the role and responsibility of American business in the global community.

SD 280 CWE Supervisory Development*(6-42 class hrs/wk, 2-14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to supervisory 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. Prerequisite: CWE coordinator approval.

SOC: SOCIOLOGY

SOC 198 Research Topics

(1 class hrs/wk, 1 cr)

Requires an in-depth review of current knowledge about a sociological topic. Intended primarily for the sociology major to develop skills in independent research. Prerequisite: WR 123 English Composition.

SOC 204 General Sociology

■ (3 class hrs/wk, 3 cr) F/W/Sp

Introduces the sociological perspective: the components of society and social organization, culture, socialization and stratification.

SOC 205 General Sociology

■ (3 class hrs/wk, 3 cr) F/W/Sp

Applies sociological perspectives to the study of social change and trends in family, religion, education, economics and politics. Prerequisite: SOC 204 General Sociology or instructor's approval.

SOC 206 General Sociology

■ (3 class hrs/wk, 3 cr) W/Sp

Surveys social problems and movements. Stresses application of basic concepts to contemporary problems in group life.

SOC 211 Sociology of Deviance and Social Control

■ (3 class hrs/wk, 3 cr) Sp

Three parallel intents have determined the contents and organization of this course: to present a comprehensive coverage of the major sociological theories of deviance; to show how these different perspectives might be brought together to obtain a more complete understanding of deviance causation; and to emphasize that the social processes that produce and maintain deviance are essentially the same ones that produce and maintain conformity.

SOC 222 Marriage Relationships

■ (3 class hrs/wk, 3 cr) F

Examines intimate relationships, courtship, marriage and family patterns — old, new and unconventional. Focuses on how relationships are built, maintained, changed and terminated. Prerequisite: SOC 204 General Sociology or instructor's approval.

SOC 280 CWE Sociology

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

Gives students practical experience in supervised employment related to sociology. 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.

SOC 280S Service-Learning Sociology

(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their Service-Learning approved by the appropriate faculty coordinator.

SP: SPEECH

SP 100 Introduction to Speech Communication

(3 class hrs/wk, 3 cr) F/W/Sp

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.

SP 111 Fundamentals of Speech

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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. Emphasis is on topic selection and creativity, language and content, style and delivery techniques, and organizational schemes.

SP 112 Introduction to Persuasion

(3 class hrs/wk, 3 cr) F/W/Sp

Studies the theory and practice of persuasion and persuasive techniques. Students learn to analyze and develop persuasive messages designed to influence an audience. Introduces the nature and logic of reasoning, persuasive propositions, issues and claims, the use of evidence and rational discourse that influence attitudes and behavior. Also emphasizes speaker credibility, audience motivation and the practical use of persuasion in everyday life.

SP 199 Special Studies in Speech

(3–9 class hrs/wk, 1–3 cr) F/W/Sp/Su

Offers individual and special studies arranged with an instructor. Note: May be repeated for a maximum of nine credits.

SP 218 Interpersonal Communication

(3 class hrs/wk, 3 cr) F/W/Sp/Su

Explores communication in various types of one-to-one relationships and develops skills essential for maintaining those associations. Competencies enhanced involve relational communication and self concept, perceptual understanding, gender and multicultural differences, verbal usage, nonverbal behavior, empathy in listening, self-disclosure, development of a positive climate and conflict resolution.

SP 219 Small Group Communication

(3 class hrs/wk, 3 cr) F/W/Sp

Investigates interaction at the small-group level. Many interesting aspects of group communication are experienced and explored. Both the process and dynamics of groups will be important, as well as group tasks and outcomes. Small-group communication is viewed from historical, sociological and cultural perspectives. Students gain insight as to the critical role groups and group communication plays in the structure and functioning of civilization.

SP 280 CWE Speech

(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su

Gives students practical experience in supervised employment related to speech. 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.

SP 280S Service-Learning Speech*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their service-learning approved by the appropriate faculty coordinator.

SPN: SPANISH**SPN 101 First-Year Spanish I***(4 class hrs/wk, 4 cr) F/W/Sp/Su*

Introduces basic structures of Spanish in order to help students communicate basic ideas in written and oral speech. The class stresses all language skills (listening, speaking, reading and writing) as well as grammar. This is NOT a conversation class, but there is an emphasis on oral communication. Students with previous knowledge of Spanish are encouraged to take the placement examination.

SPN 102 First-Year Spanish II*(4 class hrs/wk, 4 cr) W/Sp/Su*

Introduces new tenses and uses of Spanish, and expands students' ability to deal with different situations in Spanish. Further development of vocabulary, all language skills, and culture. Prerequisite: SPN 101 First-Year Spanish I or instructor's approval.

SPN 103 First-Year Spanish III*(4 class hrs/wk, 4 cr) Sp*

Stresses oral and written communication and explores more complex forms of communication. Further development of all language skills towards proficiency and cultural understanding. Prerequisite: SPN 102 First-Year Spanish II or instructor's approval.

SPN 198 Independent Studies*(1–4 class hrs/wk, 1–4 cr) F/W/Sp*

A special Spanish class tailored to improve writing skills in the language. Includes research in preparation for individual professional needs. Prerequisite: Instructor's approval.

SPN 201 Second-Year Spanish I*► (4 class hrs/wk, 4 cr) F*

Prepares students to use Spanish in more academic settings, and to use the language for more critical and analytical purposes. As a result of this, more language structures and verbal tenses are introduced. The four main skills of the language are emphasized (reading, writing, speaking, and listening). Acquaints students with Hispanic cultures through authentic materials. (Latin American, Iberian and Hispanic in the USA). There is a heavy emphasis in presenting different cultural perspectives through foreign films and videos, literature, visitors, music, and other cultural representations. Prerequisite: SPN 103 First-Year Spanish III or three years of high school Spanish equivalent or instructor's permission.

SPN 202 Second-Year Spanish II*► (4 class hrs/wk, 4 cr) W*

Prepares students to use Spanish in more academic settings, and to use the language for more critical and analytical purposes. As a result of this, more language structures and verbal tenses are introduced. The four main skills of the language are emphasized (reading, writing, speaking, and listening). Acquaints students with Hispanic cultures through authentic materials. (Latin American, Iberian and Hispanic in the USA). There is a heavy

emphasis in presenting different cultural perspectives through foreign films and videos, literature, visitors, music, and other cultural representations. Prerequisite: SPN 201 Second-Year Spanish I, or four years of high school Spanish equivalent or instructor's permission.

► SPN 203 Second-Year Spanish III*(4 class hrs/wk, 4 cr) Sp*

Prepares students to use Spanish in more academic settings, and to use the language for more critical and analytical purposes. As a result of this, more language structures and verbal tenses are introduced. The four main skills of the language are emphasized (reading, writing, speaking, and listening). Acquaints students with Hispanic cultures through authentic materials. (Latin American, Iberian and Hispanic in the USA). There is a heavy emphasis in presenting different cultural perspectives through foreign films and videos, literature, visitors, music, and other cultural representations. Prerequisite: SPN 202 Second-Year Spanish II, or five years of high school Spanish equivalent or instructor's permission.

SPN 280 CWE Spanish*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to Spanish. Students identify job performance objectives, work a specified number of hours during the term, and attend a CWE-related seminar. Note: Credits are based on identified objectives and number of hours worked. Prerequisite: CWE coordinator approval.

SPN 280S Service-Learning Spanish*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their Service-Learning approved by the appropriate faculty coordinator.

SS: STUDY SKILLS**SS 090 Study Skills***(3 class hrs/wk, 3 cr) F/W/Sp/Su*

Introduces students to the study skills needed to be successful in a community college. These include note taking, reading and studying textbooks, using the library, time management, and preparing for and taking tests. These skills are taught in combination with understanding attitude, motivation, and student behavior. Prerequisite: Appropriate reading competence as indicated by college placement test.

SS 1.134 Study Skills: Vocational*(2–6 class hrs/wk, 0–3 cr) As needed*

Provides individualized instruction to develop specific skills in various vocational programs. The instruction is supplemental to the regular course offerings and does not substitute for that instruction. Diagnosis of deficiencies and interests of students determines the level of instruction.

SS 1.150 Techniques of Studying*(1–3 class hrs/wk, 0–3 cr)*

Develops study skills and college success skills for students in designated programs. Emphasizes the materials used in the particular program.

SS 1.180 Lecture Readiness/Study Preparation*(5 class hrs .25 cr) F/W/Sp/Su*

Self-paced pre-note taking mini-course. Prepares students for effective note taking by providing an overview of concentration and pre-lecture preparation skills. Includes self-analysis of skills and problem solving for different classroom lecture situations.

SS 1.181 Taking Lecture Notes*(15 class hrs .75 cr) F/W/Sp/Su*

Self-paced mini-course. Covers learning about effective listening techniques, outlining skills, and the Cornell method of note taking and studying. Application activities reinforce concepts in each area.

SS 1.182 Studying Notes/Mapping*(5 class hrs .25 cr) F/W/Sp/Su*

Self-paced mini-course. Introduces students to a variety of mapping models and their use. Presents reviewing and recitation strategies to improve retention of information from the student's notes. Explanation of skills and application practice are included.

SS 1.183A How to Read a Textbook: Part 1*(10 class hrs .5 credit) F/W/Sp/Su*

Self-paced mini-course. Students learn to determine the main idea of a paragraph by learning the differences between a topic sentence and a main idea. Students also practice identifying and developing support for ideas. Students become better able to remember and understand textbook material.

SS 1.183B How to Read a Textbook: Part 2*(10 class hrs .5 cr) F/W/Sp/Su*

Self-paced mini-course. Prepares students to take textbook notes, including answering questions, outlining, mapping, underlining, and highlighting. Students also learn to review for short-term and long-term memory.

SS 1.184 Test Anxiety Reduction*(6 class hrs 0 cr) F/W/Sp/Su*

Self-paced mini-course. Assists students in understanding the nature of test anxiety and provides practice in relaxation and desensitization techniques. Students also learn methods of tension management to use before and during a test.

SS 1.184A Studying for Tests*(15 class hrs .75 cr) F/W/Sp/Su*

Self-paced mini-course. Presents strategies for test preparation. Students learn how to anticipate course requirements and plan study time. The methods for identifying, organizing, and actively learning the important information in a course are taught.

SS 1.184B Test-Taking Tips*(5 class hrs .25 cr) F/W/Sp/Su*

Self-paced mini-course. Helps students evaluate their test-taking attitude, develop successful test-taking strategies, manage time during test taking, evaluate test performance and feel more confident with the test-taking process.

SS 1.184C Taking Objective Tests*(5 class hrs .25 cr) F/W/Sp/Su*

Self-paced mini-course. Helps students understand and practice strategies appropriate for taking the three major types of objective tests.

SS 1.184D Taking Essay Tests*(5 class hrs .25 cr) F/W/Sp/Su*

Self-paced mini-course. Helps students understand and practice organizational strategies and techniques appropriate for taking different types of essay tests.

SS 1.185 Speed Reading*(10 class hrs .5 cr) F/W/Sp/Su*

Self-paced mini-course. Provides students with strategies and practice to increase reading speed without significant loss in comprehension. Utilizes the computer to provide opportunities to improve eye movement. Note: Vocabulary pre-test required.

SS 1.186A Vocabulary Improvement I*(20 class hrs, 1 cr) F/W/Sp/Su*

Self-paced mini-course. Teaches students who need basic vocabulary development or students of limited English proficiency to use context clues to determine the meaning of unfamiliar words. Students learn to use words in various contexts. Note: Placement is by pre-test.

SS 1.186B Vocabulary Improvement II*(20 class hrs, 1 cr) F/W/Sp/Su*

Self-paced mini-course. Teaches students who need vocabulary improvement to use context clues to determine the meanings of unfamiliar words. Students learn to use the words in various contexts. Note: Placement is by pre-test.

SS 1.186C Vocabulary Improvement III*(20 class hrs, 1 cr) F/W/Sp/Su*

Self-paced mini-course. Teaches students who want to enrich their vocabulary to use context clues to determine the specific meanings of a word in a given context. Students learn to determine the meanings of words in various contexts. Note: Placement is by pre-test.

SS 1.186D Vocabulary Improvement IV*(20 class hrs, 1 cr) F/W/Sp/Su*

Self-paced mini-course. Teaches students who want to improve their vocabulary to determine the meanings of unfamiliar words by using context clues. Students encounter the unfamiliar words in various contexts to learn various meanings. Note: Placement is by pre-test.

SS 1.186E Vocabulary Improvement V*(20 class hrs, 1 cr) F/W/Sp/Su*

Self-paced mini-course. Teaches students who want to improve their vocabulary to determine the meanings of unfamiliar words by using context clues. Students encounter the unfamiliar in various contexts to learn various meanings. Includes words typically found on standardized tests such as the LSAT, CBEST, GRE and SAT. Placement is by pre-test.

SS 1.187 Step-by-Step Pattern for Library Research*(10 class hrs .5 cr) F/W/Sp/Su*

Self-paced mini-course. Provides students with guided instruction in learning about a variety of research options and how to implement them. Through exercises and videotape information, students learn to evaluate the quality and appropriateness of research sources and how to cite resources appropriately.

SS 1.188 Time Management for Students*(10 class hrs .5 cr) F/W/Sp/Su*

Self-paced mini-course. Students learn systems and structures to manage their time efficiently for greater success in classes. Topics include breaking large projects into smaller parts, improving concentration, and structuring homework assignments.

SS 1.190A Writing Documentation for Research Papers: MLA*(5 class hrs, .5 cr) As needed*

Introduces students to the MLA documentation methods needed to be successful in writing research papers. These skills include in text citation, practice with summaries, paraphrasing, quoting and creating careful notes to avoid plagiarism. Students also study common errors in citing sources, MLA proper format, and the special rules for citing sources from the Internet. Prerequisite: Appropriate score on the writing portion of the College Placement Test. Note: Two-week class.

SS 1.190B Writing Documentation for Research Papers: MLA
(10 class hrs, 1 cr) *As needed*

Introduces students to the MLA documentation methods needed to be successful in writing research papers. These skills include in text citation, practice with summaries, paraphrasing, quoting and creating careful notes to avoid plagiarism. Students also study common errors in citing sources, MLA proper format, and the special rules for citing sources from the Internet. Prerequisite: Appropriate score on the writing portion of the College Placement Test. Note: Two-week class.

SS 1.191A Writing Documentation for Research Papers: APA
(5 class hrs, .5 cr) *Sp*

Introduces students to the APA documentation methods needed to be successful in writing research papers. These skills include in text citation, practice with summaries, paraphrasing, quoting and creating careful notes to avoid plagiarism. Students also study common errors in citing sources, APA proper format, and the special rules for citing sources from the Internet. Prerequisite: Appropriate score on the writing portion of the College Placement Test. Note: Two-week class.

SS 1.191B Writing Documentation for Research Papers: APA
(10 class hrs, 1 cr) *Sp*

Introduces students to the APA documentation methods needed to be successful in writing research papers. These skills include in text citation, practice with summaries, paraphrasing, quoting and creating careful notes to avoid plagiarism. Students also study common errors in citing sources, APA proper format, and the special rules for citing sources from the Internet. Prerequisite: Appropriate score on the writing portion of the College Placement Test. Note: Two-week class.

TA: THEATRE

TA 106 Introduction to Theater

► (3 class hrs/wk, 3 cr) *W/Sp*

A lecture/discussion course that surveys, from an audience's point of view, the place of theater in our culture; theatrical production styles and personnel involved in creating a live theatrical event.

TA 121 Acting I

(3 class hrs/wk, 3 cr) *F/W*

Introduces the art and craft of acting and teaches an appreciation of acting as an art form and its place in world culture. Students are exposed to a variety of theatrical literature from both an analytical and historical perspective. TA 121 develops basic techniques to help students establish a personal acting style suitable for public performance. Prior experience is not required.

TA 122 Acting II

(3 class hrs/wk, 3 cr) *As needed*

Continues the instruction begun with TA 121. TA 122 teaches the art and craft of acting as a performance activity and its place in world culture. Students are exposed to a variety of theatrical literature from both an analytical and historical perspective. TA 122 helps the student develop a personal acting style suitable for public performance. Prerequisite: Either TA 121 Acting I; TA 144, 145 or 146 Improvisation; or instructor's approval.

TA 144 Improvisation

(3 class hrs/wk, 3 cr) *F*

Introduces the basic strategies of developing spontaneous responses and critical thinking skills to manage unexpected situations. Improvisational training develops group cohesion, self-esteem, self-confidence and self-discipline, as well as enhancing creativity and acting skills. TA 144 emphasizes theater games, scene development and role-playing. Prior experience is not required.

TA 145 Improvisation

(3 class hrs/wk, 3 cr) *W*

Introduces the basic strategies of improvisational training. TA 145 emphasizes performance improvisation. Prior experience is not required.

TA 146 Improvisation

(3 class hrs/wk, 3 cr) *Sp*

Introduces the basic strategies of improvisational training. TA 146 emphasizes improvised storytelling through the use of controlled and narrated scenes. Prior experience is not required.

TA 180 Rehearsal and Performance

(2–6 class hrs/wk, 1–3 cr) *F/W/Sp*

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. Prerequisite: Instructor's approval.

TA 185 Production Workshop

(2–6) class hrs/wk, 1–3 cr) *F/W/Sp*

Offers practical experience in the preparation of scenery, costumes, properties, sound and publicity for a college theatrical production. May be repeated for up to nine credits.

TA 190 Projects in Theater

(2–6 class hrs/wk, 1–3 cr) *F/W/Sp/Su*

Offers individually arranged projects in the theater. May be repeated for up to nine credits. Prerequisite: Instructor's approval.

TA 198 Independent Studies: Theater

(2–6 class hrs/wk, 1–3 cr) *F/W/Sp/Su*

Offers individually arranged projects in the theater. Prerequisite: Instructor permission.

TA 240 Creative Drama for Teachers

(3 class hrs/wk, 3 cr) *Sp*

Explores philosophy, literature, activities and teaching methods of creative dramatics for children. Students experience, evaluate and teach each other by using techniques that tap the child's innate, imaginative potential. Prior experience is not required.

TA 280 CWE Theater Arts

(6–42 class hrs/wk, 2–14 cr) *F/W/Sp/Su*

Gives students practical experience in supervised employment related to theater arts. 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.

TA 282 Rehearsal and Performance

(2–6 class hrs/wk, 1–3 cr) *F/W/Sp*

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 9 credits. Prerequisite: Three credits of TA 180 Rehearsal and Performance and instructor's approval.

TA 285 Production Workshop

(2–6 class hrs/wk, 1–3 cr) *F/W/Sp*

Offers practical experience in the preparation of scenery, costumes, properties, sound and publicity for a college theatrical production. Prerequisite: 3 credits of TA 185 Production Workshop.

TA 290 Projects in Theater*(2-6 class hrs/wk, 1-3 cr) F/W/Sp/Su*

Offers individually arranged projects in the theater. May be repeated for up to 9 credits. Prerequisite: Three credits of TA 190 Projects in Theater and instructor's approval.

TA 298 Independent Studies: Theater*(2-6 class hrs/wk, 1-3 cr) F/W/Sp/Su*

Offers individually arranged projects in the theater. Prerequisite: Instructor approval.

TD: TRACTOR TRAILER OPERATOR**TD 4.601 Class A Advanced Tractor Trailer Operator Course***(180 class hrs, 14 cr) Offered monthly*

Prepares students to meet the requirements of the National Commercial Driver's License Examination. The course is an active experience consisting of classroom time and field training. Students spend at least 44 hours driving on highways, in cities and under heavy traffic conditions. Emphasis is placed on developing a thorough knowledge of federal Department of Transportation (DOT) rules and regulations. Students completing this course and successfully passing the Commercial Driver's License Examination have the qualifications necessary to enter the trucking industry as entry-level diesel tractor trailer drivers.

VT: BASIC VETERINARY TECHNOLOGY**VT 8.601 Foundation Sciences***(33 hrs, 2 cr) As needed*

Provides students with knowledge and skills in basic biological sciences, including a knowledge of microbiology, virology, anatomy, physiology and parasitology.

VT 8.605 Veterinary Medicine*(78 hrs, 7 cr) As needed*

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.

VT 8.610 Standard Hospital Practices*(17 hrs, 1 cr) As needed*

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.

VT 8.615 Clinical Sciences*(29 hrs, 2 cr) As needed*

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.

VT 8.620 Surgery and Anesthesia*(43 hrs, 2 cr) As needed*

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.

VT 8.625 Radiology*(20 hrs, 2 cr) As needed*

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.

VT 8.630 Pharmacology*(20 hrs, 2 cr) As needed*

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.

WD: WELDING**WD 4.151 Welding I***(4 class hrs/wk, 2 cr) F/W/Sp*

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*(4 class hrs/wk, 2 cr) F/W/Sp*

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: WD 4.151 Welding I.

WD 4.153 Welding III*(4 class hrs/wk, 2 cr) F/W/Sp*

A continuation of Welding II. Provides a higher degree of welding competency in trade applications. Includes additional experience in out-of-position manual stick-electrode welding (SMAW), and an introduction to out-of-position welding with the TIG and MIG processes. Prerequisite: WD 4.152 Welding II or instructor's approval.

WD 4.156 Machinery Operation and Maintenance*(3 class hrs/wk, 3 cr)*

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 4.158 Collision Welding I*(4 class hrs/wk, 2 cr) F*

Covers the safety and use of the oxyacetylene outfit; heating, shrinking, and cutting; Basic Gas Metal Arc Welding (GMAW), also called MIG; fusion welding and different types of metal.

WD 4.159 Collision Welding II*(4 class hrs/wk, 2 cr) W*

Covers Gas Metal Arc Welding (GMAW), also called MIG. Welds are inspected for penetration, defects, bead height and bead width. Demonstrations and supervised practice are provided on plasma arc cutting equipment. Prerequisite: WD 4.158 Collision Welding I.

WD 4.240 Basic Arc Welding (SMAW)*(12 class hrs/wk, 6 cr) F*

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, previous welding classes or experience, or instructor's approval.

WD 4.241 Intermediate Arc Welding (GMAW and GTAW)*(12 class hrs/wk, 1–6 cr) W*

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. Prerequisite: WD 4.240 Basic Arc Welding or instructor's approval.

WD 4.242 Fabrication and Repair Practices I*(8 class hrs/wk, 4 cr) F*

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. Prerequisite: WD 4.151 Welding I, previous welding classes or experience, or instructor's approval. Corequisite: WD 4.240 Basic Arc Welding.

WD 4.243 Fabrication and Repair Practices II*(8 class hrs/wk, 1–4 cr) W*

Covers fundamentals of welding fabrication and repair. Introduces basic procedures in planning, sketching, cost evaluation, ordering, layout, metal preparation, tack-up and final welding. Prerequisite: WD 4.240 Basic Arc Welding; WD 4.242 Fabrication and Repair Practices I or instructor's approval.

WD 4.245 Layout Procedures for Welding*(4 class hrs/wk, 3 cr) Sp*

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: WD 4.247 Interpreting Metal Fabrication Drawings; WD 4.258 Basic Blueprint Reading; or instructor's approval.

WD 4.246 Advanced Arc Welding (SMAW and FCAW)*(12 class hrs/wk, 1–6 cr) Sp*

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 or instructor's approval.

WD 4.247 Interpreting Metal Fabrication Drawings*(4 class hrs/wk, 3 cr) W*

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 Blueprint Reading.

WD 4.250 Fabrication and Repair Practices III*(8 class hrs/wk, 4 cr) Sp*

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: WD 4.243 Fabrication and Repair II or instructor's approval.

WD 4.251 Fundamentals of Welding Inspection*(4 class hrs/wk, 3 cr) Sp*

Covers general duties and responsibilities of the welding inspector, including the essential subject knowledge required to judge the quality of welded products to meet the requirement of specifications and code standards. The course offers a comprehensive review of welding processes, codes specifications, qualification of welders and welding procedures,

metallurgical considerations, materials control, weld defects testing and examination methods, and inspection techniques. Prerequisite: Previous occupational/training experience with direct relationship to weldments, design production, construction-inspection or NDT testing.

WD 4.255 Fabrication of Structural Systems*(8 class hrs/wk, 4 cr) W*

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 Blue Print Reading and WD 4.245 Layout Procedures for Welding, or instructor's approval.

WD 4.256 Basic Pipe Welding Skills*(8 class hrs/wk, 4 cr) F*

Introduces and provides hands-on skill development in basic 5 G and 6 G butt-joint pipe welding techniques on carbon steel pipe with the Shielded Metal Arc Welding and the Gas Tungsten Arc Welding (TIG) processes. Includes technical information lectures in related subjects. Prerequisite: WD 4.152 Welding II or instructor approval.

WD 4.257 Fabrication and Repair: Applied Problem Solving*(8 class hrs/wk, 4 cr) Sp*

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.

WD 4.258 Basic Blueprint Reading*(4 class hrs/wk, 3 cr)*

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.

WD 4.280 Aluminum Welding GTAW and GMAW*(4 class hrs/wk, 2 cr)*

Provides additional hands-on skill development with the Gas Tungsten-Arc Welding process on aluminum alloys beyond the introduction provided in prerequisite WD 4.152 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: WD 4.152 Welding II or instructor's approval.

WE: COOPERATIVE WORK EXPERIENCE

WE 1.280 Cooperative Work Experience*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

An instructional program designed to give students practical experience in supervised employment related to their program. 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.

WE 202 CWE Seminar*(1 class hr/wk, 1 cr) F/W/Sp/Su*

A seminar, reading program and research paper providing students enrolled in SFE/CWE an opportunity to discuss issues involved in field work, such as ethics, issues, supervision, career opportunities and resume writing. Note: May be repeated for up to four credits.

WR: WRITING

WR 050 Writing 050

(3 class hrs/wk, 3 cr) F/W/Sp

This course is for students whose CPT scores do not place them into Writing 090 or above and who need work on basic grammar, sentence construction, verb tenses, punctuation and paragraphs. It includes spelling, personal writing, and some reading strategies for comprehension. It is appropriate for ESOL students who have very high-level speaking and listening skills and for college students. Prerequisite: Placement determined by college placement testing or by referral from ABE or ESOL classes.

WR 075 Spelling

(3 class hrs/wk, 3 cr) W/Sp

Introduces students to a highly interactive approach to eliminate the most common spelling errors. Includes developing a bank of tools and strategies that enable students to continue to improve. Prerequisite: RD 070 Foundation Reading Skills or appropriate score on reading portion of College Placement Test.

WR 090 The Write Course

(4 class hrs/wk, 4 cr) F/W/Sp/Su

Introduces writing required for effective communication coursework and in the workplace by reviewing and teaching English conventions, sentence structure, and fundamental strategies used to convey written information clearly and accurately. Focuses on sentences and basic paragraph writing. Also available online. Prerequisite: Appropriate minimum score on the writing portion of the College Placement Test.

WR 095 College Writing Fundamentals

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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 ("C" or better grade) or appropriate score on the College Placement Test.

WR 115 Introduction to College Writing

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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.

WR 121 English Composition

(3 class hrs/wk, 3 cr) F/W/Sp/Su

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. Emphasizes developing critical thinking skills. Note: Placement determined by pre-enrollment testing.

WR 122 English Composition: Argumentation

(3 class hrs/wk, 3 cr) F/W/Sp/Su

Emphasizes the logical means of developing ideas in argumentative essays, thesis statements and reasoning. Includes logic, style and research. Prerequisite: WR 121 English Composition.

WR 123 English Composition: Research

(3 class hrs/wk, 3 cr) W/Sp

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.

WR 185 Understanding Grammar

(3 class hrs/wk, 3 cr) W

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.

WR 214 Business Communications

(3 class hrs/wk, 3 cr) F/W/Sp

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 Report Writing

(3 class hrs/wk, 3 cr) F/W/Sp/Su

Introduces gathering, evaluating, organizing and presenting technical information to professional and technical audiences. Emphasizes revision, problem solving and teamwork; includes writing instructions, proposals, progress reports and formal reports. Note: Keyboarding skills encouraged. Prerequisite: WR 121 English Composition.

WR 228 Advanced Technical Report Writing

(3 class hrs/wk, 3 cr) W

Advances student knowledge of producing technical documents to meet a variety of industry standards for reports and record keeping with professional editing skills. Student must complete an advanced capstone project in his or her main interest area. Keyboarding and design program knowledge encouraged. Prerequisite: "C" or better in WR 227 Technical Report Writing or comparable and demonstrable workplace training and experience.

WR 240 Personal Journal Writing

(3 class hrs/wk, 3 cr) On Demand

Practices the use of journals to record and reflect on personal experiences, to experiment with different writing techniques, and to gather and develop material for other writing projects. Emphasizes learning to write freely. Note: May be repeated for up to six credits.

WR 241 Creative Writing: Fiction

(3 class hrs/wk, 3 cr) F/W/Sp

Studies 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: College level reading and writing skills (WR 121 English Composition) are strongly recommended for success in this course.

WR 242 Creative Writing: Poetry

(3 class hrs/wk, 3 cr) Sp

Studies basic elements of poetry, types of poetry, uses for poetry and the process of creating poetry. Emphasizes fostering individual style. Note: May be repeated for up to six credits.

WR 246 Publishing and Editing: Graphic Arts for Writers

(3 class hrs/wk, 3 cr) Sp

Develops the publishing and graphics skills of students with previous writing experience. Introduces hands-on application of current software and design principles. Prerequisite: WR 227 Technical Report Writing or equivalent.

WR 247 Literary Publication

(3 class hrs/wk, 3 cr) W

Provides practical application of composition and literature instruction through work on The Eloquent Umbrella, a student creative arts publication. Note: May be repeated for credit. Prerequisites: WR 121 English Composition or instructor approval. ENG 104 Literature: Fiction or ENG 106 Literature: Poetry strongly recommended.

WR 280 CWE English/Writing*(6–42 class hrs/wk, 2–14 cr) F/W/Sp/Su*

Gives students practical experience in supervised employment related to writing. 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.

WR 280S Service-Learning English/Writing*(3–42 class hrs/wk, 1–14 cr) F/W/Sp/Su*

An instructional program, using contextual learning, designed to promote critical thinking, citizenship and civic responsibility as students work with community partners in addressing real community needs. Students identify learning objectives, work a specified number of hours during the term, and engage in faculty-led guided reflection activities. Prerequisites: Students must have taken or must be currently taking appropriate course or courses in their major field of study. They must also have their Service-Learning approved by the appropriate faculty coordinator.

WW: WATER WASTEWATER TECHNOLOGY**WW 6.154 Process Control I***(6 class hrs/wk, 4 cr) F*

First course of a two-course sequence addressing advanced level monitoring, operation and control concepts for biological treatment processes. Introduces identification of process monitoring tools, data collection, process control calculations and interpretation for biological process evaluation and problem solving. The activated sludge wastewater treatment process is the application for this class. Computer applications including e-mail, world wide web browsers, and spreadsheet programs are used for communication and data analysis.

WW 6.155 Process Control II*(4 class hrs/wk, 3 cr) W*

Second course in the two-course sequence addressing advanced level monitoring, operation and control concepts for biological treatment processes. Continues the monitoring and computer-aided data interpretation for biological process evaluation and problem solving. Both suspended growth processes and attached growth processes are the applications for this class. Advanced control topics, including filamentous bacteria identification, biological nitrogen removal and biological phosphorus removal, are covered. Special topics and current issues are discussed as time allows.

WW6.156 Industrial Electricity*(4 class hrs/wk, 3 cr) F/W*

Introduces basic DC electrical theory, safety, and multimeter use. Introduction to single and three phase concepts and measurements. Prepares the student for basic electrical troubleshooting required in other industrial trades. Prerequisite: MTH 065 Elementary Algebra.

WW 6.164 Water Sources*(4 class hrs/wk, 3 cr) F*

A basic class for 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 Water Distribution and Collection Systems*(2 class hrs/wk, 2 cr) Sp*

Describes the management, operation and maintenance of water distribution and sewage collection systems.

WW 6.166 Water Purification Systems*(5 class hrs/wk, 4 cr) F*

An advanced-level course covering the theory, application and operation of potable water treatment systems. Theory and operation of mixing systems, coagulation chemistry, optimization of chemical applications, flocculation, sedimentation and water filtration are covered. Special related topics in potable water supply may be added as time permits.

WW 6.167 Water Distribution and Collection Lab*(2 class hrs/wk, 1 cr) Sp*

This laboratory course is designed to parallel the topics covered in WW 6.165 Water Distribution and Collection Systems. Covers the description and application of materials and design practices used in the construction of roads, water distribution systems and sewage collection systems.

WW 6.168 In-Plant Practicum*(40 class hrs/wk, 2–12 cr) Su*

In-Plant Practicum 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. Prerequisites: WW 6.190 Introduction to Environmental Science, WW 6.191 Water Systems Operations, WW 6.192 Wastewater Systems, HE 112 Emergency First Aid or HE 252 First Aid and instructor's approval.

WW 6.171 Industrial Water/Wastewater Treatment*(3 class hrs/wk, 3 cr) W*

An overview course covering the related applications of water and wastewater treatment in industrial installations. Covers regulatory requirements, ultra-pure water treatment systems, physical-chemical waste treatment systems, and the treatment of metal waste streams.

WW 6.181 Water/Wastewater Mechanics*(4 class hrs/wk, 3 cr) Sp*

Covers the specific equipment and mechanical skills required in the water and wastewater treatment industry. Topics include blueprint reading, drive systems, application of steel, PVC and copper pipe, valves and hydrants, backflow devices, positive displacement pumps, centrifugal pumps, chlorinators.

WW 6.190 Introduction to Environmental Science and Technology*(7 class hrs/wk, 6 cr) F*

Introduces students to field of environmental science, pollution control, and environmental technology. Provides the basic understandings of the normal ecology of the planet and the risks associated with pollution of our environment. Sources of environmental pollution and control technologies including safe drinking water, wastewater treatment, air pollution, solid waste, and hazardous waste management. Corequisites: MTH 060 Introduction to Algebra; WR 115 Introduction to College Writing.

WW 6.191 Water Systems Operation*(12 class hrs/wk, 7 cr) Sp*

Develops a basic understanding of water systems operations, including surface water source and watershed management, groundwater sources and development, raw water storage and intakes, coagulation, flocculation, sedimentation, filtration, disinfection, and finished water storage and distribution. Prerequisites: WW 6.190 Introduction to Environmental Science. Corequisite: MTH 065 Elementary Algebra.

WW 6.192 Wastewater Systems

(12 class hrs/wk, 7 cr) W

Develops a basic understanding of wastewater systems operations, including primary sedimentation, disinfection, aerobic and anaerobic sludge digestion, oxidation ponds, bio-filters and bio-reactors, and solids handling and disposal. Prerequisite: WW 6.190 Introduction to Environmental Science. Corequisite: MTH 065 Elementary Algebra.

WW 6.193 Introduction to Aquatic Chemistry and Microbiology

(8 class hrs/wk, 4 cr) F

A basic chemistry and microbiology course for water and wastewater technology students. Supports basic concepts through lab experiments relevant to the water/wastewater field.

WW 6.194 Basic Aquatic Chemistry and Microbiology

(8 class hrs/wk, 4 cr) W

A continuation of WW 6.193 Introduction to Aquatic Chemistry and Microbiology. Basic concepts are applied to common water and wastewater analytical techniques, to include: pH, temperature, dissolved oxygen, alkalinity, hardness, solids, microscopic identification, total plate count and total coliform. Prerequisite: WW 6.193 Introduction to Aquatic Chemistry and Microbiology.

WW 6.195 Intermediate Aquatic Chemistry and Microbiology

(8 class hrs/wk, 4 cr) Sp

Continues WW 6.194 Basic Aquatic Chemistry and Microbiology. Basic concepts are applied to drinking water, analytical techniques, including alkalinity, hardness, chlorine residual, iron, total dissolved solids, jar test, taste and odor, and total coliform test. Prerequisite: WW 6.194 Basic Aquatic Chemistry and Microbiology.

WW 6.197 Solids Handling

(4 class hrs/wk, 3 cr) Sp

Deals with the various processes of solids handling and management. Includes aerobic and anaerobic digestion, centrifugation, gravity concentration, gravity thickening, flotation thickening, filter presses, vacuum presses, incineration, land fill and land application. Laboratory control procedures and sludge conditioning also are covered.

WW 6.198 Instrumentation

(5 class hrs/wk, 4 cr) Sp

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 controller for these parameters are discussed.

WW 6.199 Introduction to Hydraulics

(4 class hrs/wk, 2 cr) F

Provides an introduction to hydraulics for water/wastewater treatment plant operators. Includes performing basic hydraulic computations, hydraulic measurement units, pressure, head, head loss, flow and pump calculations. Corequisite: MTH 060 Introduction to Algebra.

WW 6.235 Applied Hydraulics

(3 class hrs/wk, 3 cr) W

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. Corequisite: MTH 095 Intermediate Algebra.

More About LBCC

Philosophy

LINN-BENTON
Community College



More About LBCC

History

Linn-Benton Community College was founded in 1966 as a two-year public college to serve the educational needs of residents in Linn and Benton counties.

Establishment of the college followed a 1964 feasibility study commissioned by the Linn County Chamber of Commerce and conducted through the University of Oregon's Bureau of Educational Research. The study showed that post-secondary high school educational opportunities in the area were inadequate and that many high school students would be interested in attending a local community college. Linn County enlisted the support of Benton County leaders, and a two-county steering committee was created to promote the founding of a community college in the mid-Willamette Valley.

Linn and Benton County voters approved formation of the LBCC Community College district in a 1966 referendum, and the first classes were held in September 1967.

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

Philosophy

LBCC was established to provide fully accessible educational opportunities to members of the community based on the following beliefs:

- Individuals have different potentials for growth and self-fulfillment.
- Learning provides the means for men and women to develop their abilities, expand their knowledge and skills, and approach their potential as contributing members of a free society.
- Learning opportunities should be available to the greatest number of people with minimum restrictions, based on individual and community needs.
- Enrollment should be based on an open door policy, so as to accommodate high school graduates and other adults who are capable of profiting from the instruction offered. Through proper assessment and advising, students will be able to select appropriate courses of study.
- Appropriately high standards of performance should be maintained within each course of study.
- The educational scope of college programs should be as broad and flexible as possible, with priorities established on the basis of available resources. Within these limits, the programs should be responsive to local, state, national and global needs, as well as reflect sound educational standards.
- Tuition and fees should be maintained at a reasonable level.
- Local direction and control of the college should be maintained through the elected board of education, based on college policies that are consistent with local, state and federal laws and policies.

Mission

The college's mission is to provide accessible, quality, lifelong learning opportunities to serve the present and future needs of the community.

The college works in cooperation with public school systems and other institutions of higher education.

The college is community based and is committed to student success through responsive and flexible educational programs designed to meet individual student needs.

The mission will be accomplished by developing, implementing and updating the following comprehensive educational programs and services.

- The college shall emphasize its commitment to a high-quality teaching and learning environment that fosters creativity, critical thinking skills, leadership skills and student success.
- The college shall provide students with the opportunity to develop competencies to function as lifelong learners given the challenge of a changing world society.
- The college shall respond to the needs of business and industry by providing professional technical programs for training, retraining and upgrading the skills of those seeking entry-level employment or career advancement.
- The college shall provide lower-division transfer courses for students transferring to four-year colleges and universities, completing associate degree requirements or for broadening their educational base.
- The college shall offer developmental and remedial programs to prepare students to enter professional technical or transfer programs of their choice.
- The college shall provide the planning, services and facilities needed to provide a positive learning environment and to enhance student life.
- The college shall provide opportunities for residents of the district to appreciate and participate in cultural, recreational, civic and international activities that enhance the quality of life.
- The college and its staff shall support and participate in community service activities.

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 has been accredited by the Accrediting Commission of the Northwest Association of Schools and Colleges. Courses are approved by the Oregon State Board of Education, 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 for full-time new students that began attending LBCC fall term 1996 are available at <http://www.linnbenton.edu/righttoknow>.

Pledge to Quality Education

Any graduate of an Associate of Applied Science* degree program who is judged by his or her employer to lack communication, computation, interpersonal or technical skills normally expected of an entry-level employee will be provided further skill training up to 15 quarter credit hours by LBCC without charge.

**Special conditions apply. Contact the Academic Affairs Office for more information (541)917-4201.*

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, 917-4420, or view online at www.linnbenton.edu/drugfree.

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, Freedoms, 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/studentrights.

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, dispensation, 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, 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, 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, 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	none	\$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).

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	766-6850
Linn County Alcohol and Drug Treatment Program	967-3819
Alcoholics Anonymous, Linn & Benton counties	967-6243
Ala-Non, Linn & Benton counties	967-6262
Narcotics Anonymous Helpline	1-877-233-4287
Drug & Alcohol Abuse Hotline	1-800-621-1646
Community Outreach, Inc.	758-3000
White Oaks Outpatient and Youth Treatment, Salem	585-6278
Milestones Family Recovery Program, Corvallis	753-2230
Serenity Lane, Albany	928-9681

COLLEGE RESOURCES FOR STUDENTS:

Counseling Center, Takena Hall	917-4780
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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**. Telephone numbers for EAP include: 1-800/922-7009; Corvallis (541/754-8004) or Eugene (541/344-6929).

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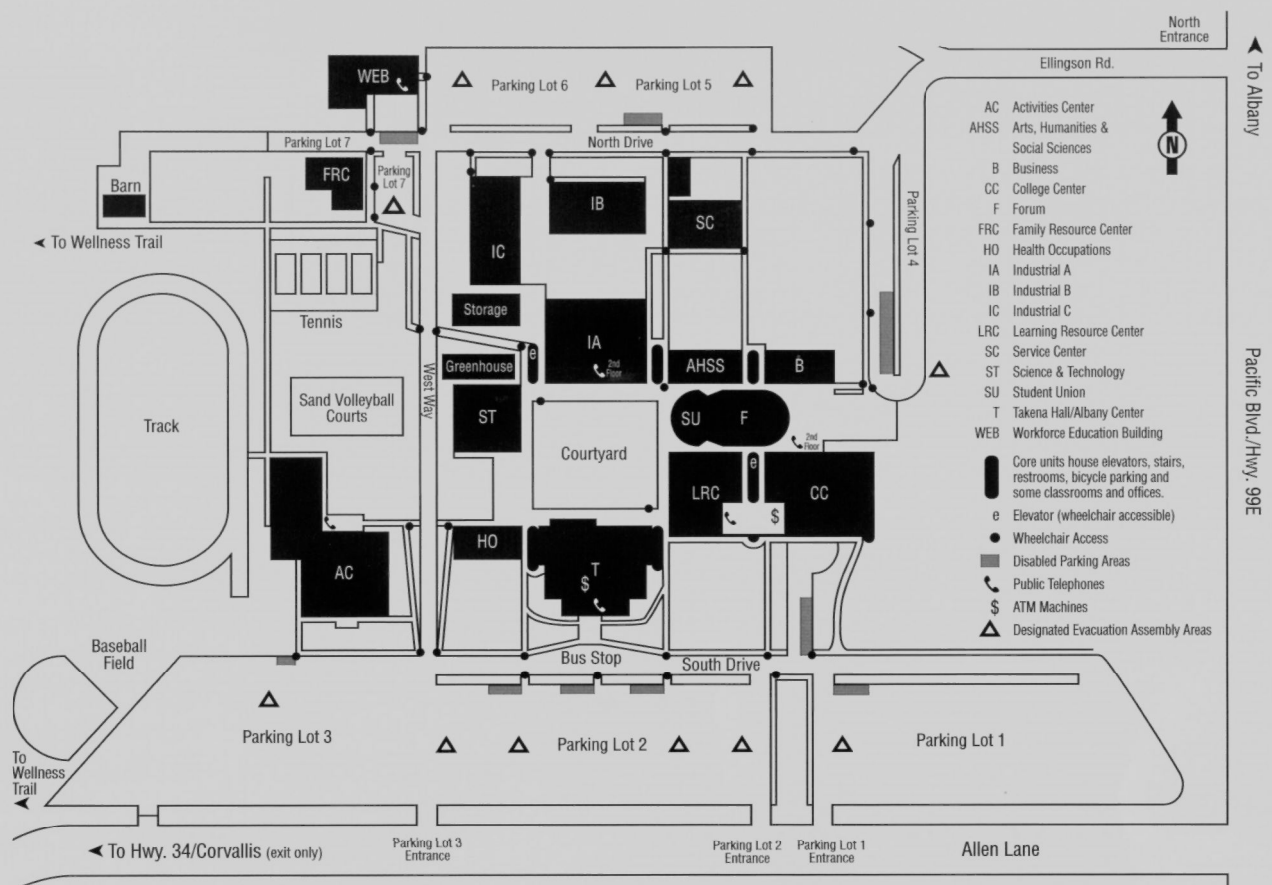
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LBCC Direct-Dial Telephone Numbers

All campus offices have direct-dial numbers for your convenience. These phone lines bypass the college switchboard and save time for you as well as for the college. Please use the direct-dial numbers whenever possible.

Admissions	917-4811
Arts and Communication	917-4530
Assessment Center (<i>testing</i>)	917-4781
Bookstore	917-4950
Business & Computer Systems	917-4258
Business Office (<i>payments, loan disbursements, etc.</i>)	917-4300
Business Technology	917-4285
Campus Security	917-4440
Conference Services/Room Reservations	917-4385
Counseling/Advising	917-4780
Engineering & Industrial Technology	917-4582
Extended Learning Centers:	
Benton/Albany Extended Learning Centers—	
Albany Extended Learning & Evening Services	917-4838
Benton Center (<i>Corvallis</i>)	757-8944
East Linn Extended Learning Centers—	
Lebanon Center	259-5800
Sweet Home Center	367-6901

Family Connections (<i>child care</i>)	917-4899
Family Resources & Education Department	917-4897
Financial Aid	917-4850
First Stop Entry Center	917-4811
Foundation/Development	917-4209
Health & Human Services	917-4235
Human Resources/Payroll	917-4420
JOBS (<i>main campus</i>)	917-4870
Math & Science	917-4741
Nursing	917-4511
President's Office	917-4200
Registration	917-4812
Student Employment	917-4780
Student Life & Leadership	917-4457
Switchboard	917-4999
Theater Box Office	917-4531
Touch-Tone Telephone Registration	917-4991
Training & Business Development/HOSEC	917-4923
Transcripts	917-4830
Workforce Education and Training/HOSEC	917-4510

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